

CA Clarity™ PPM

Release Notes - On Premise

Release 13.3.00



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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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Chapter 1: Welcome to the New Release

This document provides information about the new release of CA Clarity PPM, including the new and enhanced features and system requirements.

Note: At publication time, the product supports the operating systems and third-party software listed in [Compatibilities](#) (see page 23).

This section contains the following topics:

[Training](#) (see page 7)

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

[Published Fixes](#) (see page 8)

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

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

[Add-ins Compatibilities](#) (see page 9)

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

[CA Business Intelligence \(CABI\) Release 3.3 Service Pack 1](#) (see page 11)

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

[Enhanced Features](#) (see page 19)

[Documentation](#) (see page 19)

[Compatibilities](#) (see page 23)

[Accessibility Features](#) (see page 43)

[Third-Party Acknowledgements](#) (see page 51)

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

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

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

Published Fixes

We recommend that you review the certification matrix for the product and the Solutions and Patches that Technical Support provides at <http://ca.com/support>. You can review the solutions and patches and any prerequisite published fixes that are required for the product release.

Known Issues and Resolved Defects

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, search for the Change Impact, Installation and Upgrade content.

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

For information about supported upgrade paths, search for the Change Impact, Installation and Upgrade content.

Add-ins Compatibilities

The following section describes important information about upgrading installed add-ins, accelerators, and connectors for Release 13.3.

- The Microsoft SharePoint Connector Release 3.0.0 is new. If you have the Connector for Microsoft SharePoint Release 2.0.2 or earlier installed, you cannot upgrade the existing connector.

Note: For information about installing this connector, search the Microsoft SharePoint Connector content.

- If you are upgrading from Version 13.0, 13.1, or 13.2 to Release 13.3, the following add-ins are upgraded:
 - PMO Accelerator
 - Clarity Solution Pack (CSP)
 - CA Clarity Agile

- If you are upgrading from any version before Version 13.0 to Release 13.3, upgrade all installed add-ins.
- A new installation process is available for add-ins, accelerators, connectors.

Note: For more information, search the Installation content.

The following table shows the accelerator and connector releases that are compatible with Release 13.3.

Accelerator or Connector	New Installation 13.3	Upgrade from 12.x to 13.3	Upgrade from 13.x to 13.3
PMO Accelerator	3.3.00	3.3.0	3.3.0
Clarity Solution Pack (CSP)	3.3.0	3.3.0	3.3.0
Earned Value Manager	2.0.1	2.0.1	2.0.1
Accelerator for PRINCE2	2.0.1	2.0.1	2.0.0 or 2.0.1
Accelerator for the PMBOK	2.0.1	2.0.1	2.0.0 or 2.0.1
Accelerator for New Product Development	2.0.2	2.0.2	2.0.2
PPM Essentials Accelerator	2.0.2	2.0.2	2.0.0, 2.0.1, or 2.0.2
BRM Accelerator	3.0.2	3.0.2	3.0.2
Connector for CA Unicenter Service Desk 12.7 & CA Software Change Manager™ 12.1.0.3	2.0.1	2.0.1	2.0.1
Connector for CA Unicenter Asset Portfolio Management 11.3.4	2.0.2	2.0.2	2.0.2
Connector for Microsoft SharePoint 2013	3.0.0	3.0.0	3.0.0
Service Connect	2.0.0	2.0.0	2.0.0
Catalyst Connector	2.5.0	2.5.0	2.5.0
CA Clarity Agile	13.2 or 13.3	13.2 or 13.3	13.2 or 13.3

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.

CA Business Intelligence (CABI) Release 3.3 Service Pack 1

This release of CA Clarity PPM uses CABI Release 3.3 Service Pack 1 for reports.

If you do not have CABI installed or if you have an older version, you have two steps to complete. First, you download and install CABI, and then you download and install Service Pack 1.

If you already have a CABI Release 3.3 installation, you only have to download and install Service Pack 1.

The following procedure describes how to complete the installation for all customers.

Follow these steps:

1. Download and install CABI Release 3.3 by completing these steps:

Note: This step is for new customers or upgrading customers with an older version of CABI.

- a. Log in to the [CA Clarity PPM support page on CA Support Online](#).
- b. At the top of the page, click the Downloads link.
- c. Under Search Products in the Select a Product field, select the product for which you are licensed (for example, CA Clarity Creator User License or CA Clarity PPM Core License).

The Download Center page appears.

- d. In the *Please narrow your search results for "Products" below* section, select the appropriate release number.
- e. Click Go.

The Product Download page appears.

- f. Click the Download link next to the appropriate CA Business Intelligence 3.3 download for your installation.

The Download Method page appears.

- g. Select the appropriate download method to complete the download request,
- h. Install CABI Release 3.3.

2. Download and Install Service Pack 1 on the CABI Release 3.3 installation.

- a. Download the CABI Release 3.3 Service Pack 1 and the Release Notes from the CA FTP site:

Windows:

ftp://ftp.ca.com/caproducts/CABI/CABI-3.x/boeXIR3_SP6/Windows/

Note: Download both the zip file and the *CABI 3.3 SP1 Release Notes*.

Linux:

ftp://ftp.ca.com/caproducts/CABI/CABI-3.x/boeXIR3_SP6/Linux/

- b. Follow the instructions in the *CABI 3.3 SP1 Release Notes* to install Service Pack 1 on the CABI Release 3.3 instance.

Chapter 2: New Features

This section contains the following topics:

- [Portfolio Cost and Resource Balancing](#) (see page 13)
- [Financially Enabled Ideas](#) (see page 13)
- [Login Page Can Be Rebranded](#) (see page 14)
- [Gantt View Can Be Printed](#) (see page 15)
- [CA Microsoft Project Interface Changes](#) (see page 15)
- [Task Duration on the Gantt View Is Editable](#) (see page 17)
- [XOG Governor Limits](#) (see page 17)
- [Inactive Resources in Cost Plan Population](#) (see page 18)
- [Checkinstall Improvements](#) (see page 18)

Portfolio Cost and Resource Balancing

The Waterlines view has been enhanced to display aggregated time-varying totals for selected portfolio constraints. The aggregates provide details about how the cost and resource constraints are affecting the portfolio. The aggregation details let you narrow down your problem areas and balance out your cost and resource constraints.

The time-varying values for the individual investments can also be displayed overlaying the Gantt bars for a selected constraint.

Financially Enabled Ideas

This release includes financially enabled ideas. The changes include:

- The ability to create cost plans, benefit plans, and budget plans for an idea.
- A Financial Plans tab for any idea that you open in CA Clarity PPM. This tab provides access to cost plans, benefit plans, and budget plans for the idea.
- New access rights for the following Idea pages: Financial (subpage), Cost Plan, Benefit Plan, and Budget Plan.
- A new check box named Copy Financial Properties and Financial Plans on the conversion page for an idea. The conversion page lets you convert an idea into an investment. The check box lets you copy the financial data from an idea to a target investment.
- New views for the Idea Cost Plan object which make the Actual attributes unavailable to add to the view.
- New views added for the Idea Benefit Plan Detail object which make the Actual attributes unavailable to add to the view.

- The configuration of workflow processes on idea cost plans.

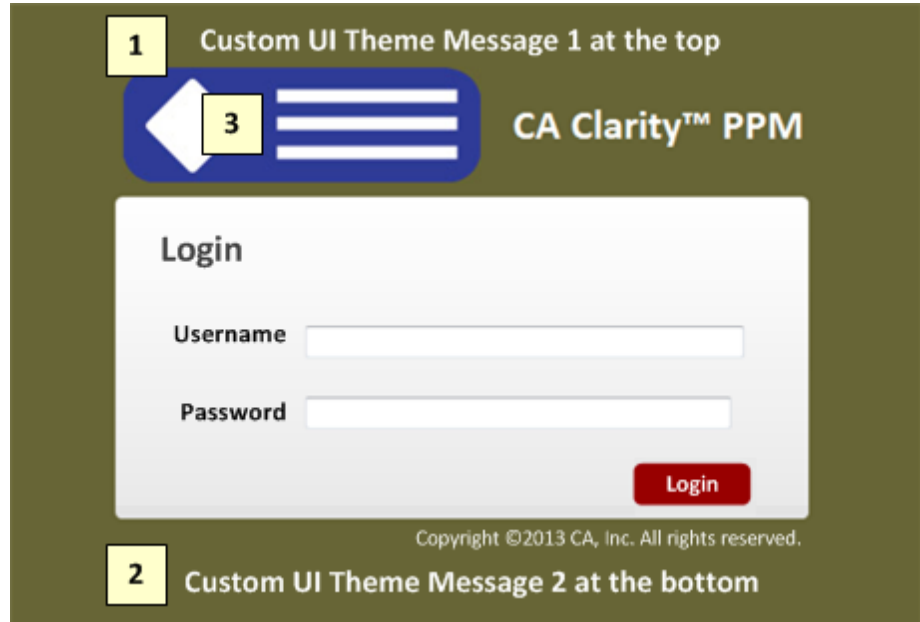
The following limitations exist for a financial plan on an idea:

- Actuals using transactions are not possible.
- Only a manually created cost plan (plan of record) can be converted to a target investment. A cost plan that you create using the methods *Populated from Investment Team* or *Task Assignment* is not converted.
- A budget plan will not be converted to a target investment.
- A workflow system action is not available to convert an idea financial plan to a target investment. An idea financial plan can only be converted through the user interface.

Login Page Can Be Rebranded

You can use the UI theme CSS to customize the appearance of the login page. For example, set a custom logo for an organization or set a message for all users to view when they log in. A sample system maintenance message appears as follows:

The system will be unavailable from Sun April 15 at 11:30 pm until Mon April 16 at 3:30 am.



1. Login Page Top Message

You can add a service announcement or custom message at the top of the login page.

2. Login Page Bottom Message

You can add a service announcement or custom message at the bottom of the login page.

3. Login Page Logo

You can insert a custom logo on the login page.

Note: Search the Studio Developer's content for more information.

Gantt View Can Be Printed

You can now print a Gantt view. The Printable View icon on the Gantt chart displays a read-only view of the tasks you want to print in a new window. You can view a maximum of 300 tasks at a time. The page height automatically fits the tasks, and the page width automatically fits the column and period configuration.

Before you print the Gantt view, select the background colors and images option in the browser menu.

Browser	Action to Take
Internet Explorer, Firefox	Use the Page Setup option in the browser menu.
Google Chrome	Use the Print option in the browser menu.

Note: Use the Alt key to enable the browser menu for Internet Explorer and Firefox.

CA Microsoft Project Interface Changes

The following Release 13.3 changes were made for the Microsoft Project Interface:

Resource Leveling

The CA Microsoft Project Interface supports the Microsoft Project Resource Leveling feature. If you do resource leveling in Microsoft Project and save the project into CA Clarity PPM, the resource leveling information is kept in the CA Clarity PPM database. The next time that you open the project in Microsoft Project from CA Clarity PPM, the resource leveling information that you entered is available.

Note: See the Microsoft Project documentation for more information about resource leveling.

Performance Tuning

The Microsoft Project Interface was tuned to improve performance in the following areas:

- Exporting a project from CA Clarity PPM to Microsoft Project
- Importing a project from Microsoft Project to CA Clarity PPM

Smaller projects show performance improvements for the import and export actions. Projects that have large time-scaled value data such as Assignment Actuals and ETC, or Baseline Cost and Usage Curve may not show the expected improvement.

Java Runtime Environment Is Provided

CA Clarity PPM provides a specific Java Runtime Environment (JRE) for use by Microsoft Project. The JRE is copied to the hard drive in the Microsoft Project Interface installation directory on the end-user workstation. The JRE is used for the Microsoft Project Interface integration and is independent of the JRE used for the Windows workstation.

The Microsoft Project Interface uses only the internal JRE version that is provided which we certify to be compatible. This approach eliminates issues that arise when the workstation Windows installation of the JRE is not the correct version or the JRE is missing. An IT department no longer has to update a JRE version when deploying the Microsoft Project Interface.

Silent Installation Support

In this release, the Microsoft Project Interface can be installed silently without any user intervention.

In previous releases, when you ran the Microsoft Project add-in setup, the Windows operating system displayed a message that the publisher could not be verified. You were then asked if you wanted to install the customization.

This message is no longer displayed. You receive a confirmation message after the add-in is successfully installed. The Microsoft Project Interface add-in setup closes the installer window automatically.

Task Duration on the Gantt View Is Editable

The task duration on the Gantt view represents the number of working days between the task Start date and task Finish Date. The duration is auto calculated based on the task Start Date and task Finish Date after you save. Starting this release, you can edit the task duration on the Gantt view. This helps project managers to schedule tasks based on the task duration and not only the task start and finish dates.

The following table explains the interactive changes that you see when you edit the task attributes on the Gantt view:

Field Edited	Result
Task Duration	The Task Finish Date and the Gantt bar change.
Task Finish Date	The Task Duration changes.
Task Start Date	The task Finish Date changes, but the task Duration does not.

However, you cannot edit the task duration in the following cases:

- When a task is a Milestone or Summary Task.
- Timesheet is already submitted for that period.

Note: For more information, search the Project Management content.

XOG Governor Limits

When you import or export a large number of instances through XOG, you may encounter Out of Memory (OOM) or time-out exceptions. To handle these issues, you can now configure the Maximum XML Nodes option available under the Application tab in the CSA. The Maximum XML Nodes is referred as nodes limit in the document. The default value for the Maximum XML Nodes is 150,000 for both the On-Demand and On-Premise environments.

Before this release, for a XOG read request, the entire requested information was sent in a single response which resulted in the OOM or time-out exceptions. Starting this release, the server processes the instances until the node limit is reached. After processing the response is sent back to the client in chunks using pagination. A new read request should be sent to the server with the appropriate information using pagination for the next set of instances. The number of the processed instances for a read request is updated in the skip element of the XOG output.

When you import instances, the server processes 20 instances per iteration. If the node limit is reached even before the 20 instances are loaded, the server processes only those instances that have loaded until that point for the current iteration. The remaining instances are considered automatically for the next iteration.

Note: For more information about setting the XOG Governor limit, search the XML Open Gateway Developer's content.

Inactive Resources in Cost Plan Population

Starting with this release, information for both active and inactive resources appears in cost plan detail and is used for the rate calculation. The values for resource attributes are pulled for the rate calculation regardless of the active status if the attributes are specified in the resource profile.

For example, if the transaction class is defined for a resource, the resource transaction class appears in the cost plan. The transaction class is used to pull the rate from the rate matrix. Setting the resource to inactive on the general properties page or the financial properties page does not change this behavior.

If the resource does not have a defined transaction class but does have an allocation, ETC, or actuals on a project, the rate is pulled from the rate matrix. The active status does not change this behavior.

Checkinstall Improvements

The Installation Checker (checkinstall) utility assesses an installation or an upgrade. The utility runs automatically at the start of an installation or upgrade and at the end of an upgrade attempt. However, you can run it as a standalone utility. The utility produces a report results file, precheck-results.html, in the <install-root>/checkinstall/check-logs directory.

Chapter 3: Enhanced Features

This section contains the following topics:

[Connector for Microsoft SharePoint Changes](#) (see page 19)

[Bubble Chart Improvement](#) (see page 19)

Connector for Microsoft SharePoint Changes

The Microsoft SharePoint Connector Release 3.0.0 is new. If you have the Connector for Microsoft SharePoint Release 2.0.2 or earlier installed, you cannot upgrade the existing connector. You are required to install the new Release 3.0.0 connector. The existing connector was based on SharePoint 2010, and the new Release 3.0.0 connector is based on SharePoint 2013.

Bubble Chart Improvement

Starting with this release, the bubbles in a bubble chart are translucent. This change allows smaller bubbles that appear behind larger bubbles to be viewed. Previously, smaller bubbles were not visible when hidden because the bubbles appeared as solid objects in the chart.

Documentation

The CA Clarity PPM documentation has been improved with these changes to help you find information faster.

- **CA Clarity PPM Cookbook.** Select CA Clarity PPM technical content is available on the mobile device platform Flipboard. [Watch this video](#) and use the cookbook today. Happy flipping!
 - To add the CA Clarity PPM Cookbook to your RSS feed folder, add this URL:
<http://cookbooks.ca.com/cacppm/?feed=rss2>
 - To view the CA Clarity PPM Cookbook in your browser, rather than the mobile app, access this URL:
<https://flipboard.com/section/ca-clarity-ppm-cookbook-bgk99n>
- **Online Help Bookshelf.** To help simplify and improve how you find content, the bookshelf available from the product only includes the product documentation. Additional information such as release notes, green books, KB articles, social media, and so forth is available in the On Premise and On Demand bookshelves on CA Support Online.

- **Accelerator, Add-in, and Connector Content.** To help improve how you find content, the release notes for the accelerators, add-ins, and connectors are now found in their associated product content.
- **Basics and Personalizing CA Clarity Content.** To help improve how you find content, the Personalizing CA Clarity content is now found in the Basics User content.
- **Access Rights Reference Content.** To help improve how you find content, all access rights are now found in the Access Rights Reference content.
- **XML Open Gateway Developer Content.** The element syntax *IsComplete* and *completed* were recognized as deprecated forms and are replaced by *complete*. For example, when true, the optional *complete* element for the OBSAssocs element indicates that any OBS associations represent a complete replacement as a set. When the value is false, the operation inserts and/or updates any existing OBS associations. Sample content including sample .xsd files may continue to show the old forms. The documentation reflects this recognition of a single standard in topics that include the *complete* element with the following note:

Note: Complete replaces deprecated forms completed and IsComplete.

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.
- 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.

Appendix A: Compatibilities

This appendix contains operating environment information for this release, which is also available from the Compatibilities link on 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 29). Refer to your licensing agreement for more information.

This section contains the following topics:

[CA Clarity PPM Servers](#) (see page 23)

[Integrated Servers](#) (see page 26)

[Clients](#) (see page 27)

[Clarity Mobile Time Manager](#) (see page 29)

[Products Included with CA Clarity PPM](#) (see page 29)

[Change History](#) (see page 30)

[FIPS Operating Mode Restrictions](#) (see page 36)

[IPv6 Network Compatibility Restrictions](#) (see page 36)

[CA Business Intelligence Release 3.3 SP1 - \(SAP BusinessObjects Enterprise XI 3.1 Service Pack 6\) Supported Configurations](#) (see page 39)

CA Clarity PPM Servers

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

New Installations

	Microsoft Windows	Linux	IBM AIX
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Operating System¹⁾	<ul style="list-style-type: none"> ■ Windows Server 2008 R2 SP1 64-bit (Standard, Enterprise Edition) ■ Windows Server 2008 SP2 64-bit (Standard, Enterprise Edition) ■ Windows Server 2012 64-bit (Standard) 	<ul style="list-style-type: none"> ■ Red Hat Enterprise Linux 5.5 64-bit for x86 chipsets: any newer update release ■ Red Hat Enterprise Linux 6.0 64-bit for x86 chipsets: any newer update release ■ SUSE Linux Enterprise Server 10 SP4 64-bit for x86 chipsets; any maintenance release²⁾ ■ SUSE Linux Enterprise Server 11 SP2 64-bit for x86 chipsets: any newer service pack release²⁾ ■ Oracle Enterprise Linux Server 6u2 64-bit for x86 chipsets any newer update release.³⁾ 	<ul style="list-style-type: none"> ■ AIX 7.1; TL0: any maintenance release ■ AIX 6.1; TL2: any maintenance release
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Additional Support for Upgrading Customers

	Oracle Solaris	Hewlett-Packard HP-UX
Operating System	<ul style="list-style-type: none"> ■ Solaris 10 SPARC64 64-bit: any maintenance release^{4,5)} 	<ul style="list-style-type: none"> ■ HP-UX 11iv3 IA64: any maintenance release⁶⁾

Notes:

- ¹⁾CA Clarity PPM is supported on any localized version of the supported operating systems.
- ²⁾CA Clarity PPM on SUSE Linux connecting to a Microsoft SQL Server database is not currently supported.
- ³⁾CA Clarity PPM on OEL connecting to Microsoft SQL Server database is not currently supported.
- ⁴⁾The Oracle UltraSPARC T2, T3, T4, and T5 processors are not supported. Solaris (x86) is not supported.
- ⁵⁾Solaris support will be dropped in the next major Clarity release (i.e. CA Clarity PPM v14.0.00).
- ⁶⁾HP-UX support will be dropped in the next major Clarity release (i.e. CA Clarity PPM v14.0.00).

Components

Virtualization	See the CA Support Statement for Virtualization. To find this document, log in to CA Support Online , 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 ⁷⁾ under notes.
Database ⁷⁾	<ul style="list-style-type: none"> ■ Oracle 11.2 Standard and Enterprise Edition: version 11.2.0.2.x or higher patch level^{7a, 7b)} ■ Oracle 11.2 Standard and Enterprise Edition: version 11.2.0.3.x or higher patch level^{7a, 7b)} ■ Microsoft SQL Server 2008 Enterprise Edition: Any service pack^{7c), 7d)} ■ Microsoft SQL Server 2008 R2 Enterprise Edition: Any service pack^{7c), 7d)} ■ Microsoft SQL Server 2012 Enterprise Edition: Any service pack^{7d)}
Database Interface	<ul style="list-style-type: none"> ■ CA Clarity PPM DataDirect Type 5 (v5.0.1) Drivers for Oracle and SQL Server (included in CA Clarity PPM distribution).
Java Runtime	<ul style="list-style-type: none"> ■ Oracle Java SE JDK 1.7 update 25 (64-bit) or higher patch level⁸⁾ ■ HP JDK 7 (64-bit): 7.0.01 or higher patch level⁸⁾ ■ IBM Java 7 (64-bit): 7.0.0.100 (SR5) or higher patch level⁸⁾
Application Server ⁹⁾	<ul style="list-style-type: none"> ■ Apache Tomcat 7.0.42 or higher patch level (64-bit) ■ Oracle WebLogic Server 12.1.1: Any service pack (64-bit) ■ IBM WebSphere Application Server 8.5.5^{9a)}
Report Server	CA Business Intelligence™ Release 3.3 SP1 (BOXI 3.1 SP 6). For more information, see CA Business Intelligence Release 3.3 (see page 39).
Mail Server	Any SMTP/IMAPI/POP3 mail server can be used. CA Clarity PPM does not explicitly support any one vendor.

Notes:

- ⁷⁾Databases can be run on any vendor-supported operating system. Production databases are not supported on software virtualized operating systems; examples include VMware vSphere, Microsoft Hyper-V, and Citrix XenServer. AIX LPARS, HP-UX VPARS and Solaris containers do not fall into this category and remain supported. It is also recommended that any downstream environments that are intended for performance or high concurrency testing match what is used in production.
- ^{a)}Oracle Real Application Cluster (RAC) is supported.

- ^{b)}Where (x) represents the patch level supported. (For example, 11.2.0.4 is a new release and is not inherently supported).
- ^{c)}SQL Server Named Instances are supported. SQL Server Clustering is supported with manual intervention after a database failure to restart failed background processes.
- ^{d)}Any Microsoft SQL Server deployment that expands beyond five thousand users must be approved by CA Technologies, otherwise Oracle is a requirement due to scalability limitations associated with Microsoft SQL Server and how it handles OLTP (Online Transaction Processing) products like CA Clarity PPM.
- ⁸⁾CA recommends running the latest patch level.
- ⁹⁾CA Clarity PPM is supported on any localized version of the supported application servers.
 - ^{a)}Existing installations of WebSphere will only be supported on AIX in the next major release.
- WebLogic will not be supported in CA Clarity PPM v14.0

Integrated Servers

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

Single Sign On Server	CA SiteMinder 12.0 SP3 ²⁾
LDAP Server	Supports any LDAP v3 compliant directory server (such as CA Directory, Microsoft Active Directory, Novell eDirectory, Oracle Directory Server, Sun One Directory).
SharePoint Server	SharePoint Server 2010, 2013 (64-bit), Enterprise Edition ¹⁾

Notes:

- ¹⁾SharePoint Connector version 2.3.
- ²⁾CA SiteMinder 12.0 SP3 is the certified version. Additionally, SiteMinder 12.51 CR1 is also supported.

Clients

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

Note: Using multiple versions of third-party software concurrently is 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.

	Microsoft Windows	Apple Mac OS	Desktop Linux
Operating System	<ul style="list-style-type: none"> ■ Microsoft Windows XP Professional: SP3 or higher ■ Microsoft Windows 7 SP1 32-bit and 64-bit, all editions ■ Microsoft Windows 8 32-bit and 64-bit 	<ul style="list-style-type: none"> ■ Mac OS X: Release 10.8.4 or higher patch level 	<ul style="list-style-type: none"> ■ Any vendor or version with support for browsers listed under the Web Browser section.
Web Browser	<ul style="list-style-type: none"> ■ Microsoft Internet Explorer 10.0 and higher patch level (Microsoft Windows 7 and 8)¹⁾ ■ Microsoft Internet Explorer 9.0 and higher patch level ■ Microsoft Internet Explorer 8.0 and higher patch level ■ Firefox 22 and higher release level²⁾ ■ Google Chrome 31.x.x. or higher release²⁾ 	<ul style="list-style-type: none"> ■ Safari 6.0.5 and higher patch level ■ Firefox 22 and higher release²⁾ 	<ul style="list-style-type: none"> ■ Firefox 22 and higher release²⁾

	Microsoft Windows	Apple Mac OS	Desktop Linux
Client Applications⁸⁾	<ul style="list-style-type: none"> ■ Microsoft Excel 2007-2013 32-bit & 64-bit, all editions. ■ Microsoft PowerPoint 2007-2013 32-bit & 64-bit, all editions. ■ Microsoft Project 2010-2013 32-bit & 64-bit, all editions³⁾ ■ Java 7 Runtime Environment: 1.7 update 25 or higher update level⁴⁾ ■ Adobe Flash Player 11.7 or higher⁵⁾ ■ Acrobat Reader 7.0 or higher⁶⁾ ■ CA Open Workbench 2.1.1 ■ Crystal Reports 2008 Designer Client SP5⁷⁾ 	<ul style="list-style-type: none"> ■ Microsoft Excel 2011 ■ Adobe Flash Player 11 or higher⁵⁾ ■ Mac OS Preview PDF viewer⁶⁾ ■ <i>No Microsoft Project support</i> ■ <i>No CA Open Workbench support</i> ■ <i>No Crystal Reports Designer support</i> 	<ul style="list-style-type: none"> ■ Acrobat Reader 7.0 or higher⁶⁾ ■ Adobe Flash Player 11 or higher⁵⁾ ■ <i>No Excel Export support</i> ■ <i>No Microsoft Project support</i> ■ <i>No CA Open Workbench support</i> ■ <i>No Crystal Reports Designer support</i>
Third-party SOAP Integration Toolkits	<ul style="list-style-type: none"> ■ Microsoft Visual Studio 2005 (.NET Framework 2.0) ■ Apache AXIS 1.4-6 	<ul style="list-style-type: none"> ■ Apache AXIS 1.4-6 	<ul style="list-style-type: none"> ■ Apache AXIS 1.4-6

Notes:

- ¹⁾ CA Business Intelligence is not supported on Microsoft Internet Explorer 10.0.
- ²⁾ New Firefox and Chrome releases may be supported with minimal testing after being released. Google Chrome versions 29, 30 and 31 have known issues with CA Clarity PPM and it is recommended to use version 32 or higher.
- Browsers such as Firefox and Chrome update frequently. Releases will be updated as needed.
- ³⁾ Install JRE x86 for x86 Microsoft Project. Install JRE x64 for x64 Microsoft Project.
- ⁴⁾ Required for Open Workbench, CA Clarity PPM Microsoft Project interface, and XOG Client.
- ⁵⁾ For viewing Xcelsius dashboards.
- ⁶⁾ For viewing the product documentation and offline reports.
- ⁷⁾ Required only for custom report development.
- ⁸⁾ Using multiple versions of third-party software concurrently is 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.

Clarity Mobile Time Manager

The following table presents the mobile operating system platforms that are supported for the Clarity Mobile Time Management application.

	iOS	Android
Mobile Operating System	<ul style="list-style-type: none"> ■ Apple iOS 6.0 or higher ■ Apple iOS 7.0 or higher 	<ul style="list-style-type: none"> ■ Google Android OS 4.0 or higher

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.
Report Server	CA Business Intelligence Release 3.3 Service Pack 1
Client Applications	Xelsius Designer 2008 Service Pack 6, Crystal Reports Designer 2008 Service Pack 5

Notes:

- Oracle WebLogic and IBM WebSphere are not included with CA Clarity PPM. Customers wishing to use either of these servers over Tomcat must acquire their licenses independent of CA Clarity PPM.
- CA Business Intelligence Release 3.3 includes BusinessObjects Enterprise XI (BOXI) Release 3.1 Service Pack 5. BusinessObjects Web Intelligence (WEBI) is included with BOXI Release 3.1 Service Pack 5.

Change History

Changes in CA Clarity PPM Release 13.3.00

Component	Description
Operating Systems	<ul style="list-style-type: none"> ■ Added support for Windows Server 2008 SP2 64-bit (Standard, Enterprise). ■ Added support for Red Hat Enterprise Linux 5.95 64-bit i.e. support releases 5.5 to 5.9. ■ Added support for Red Hat Enterprise Linux 6.4 i.e. support releases 6.0 to 6.4 ■ Added support for SUSE Linux Enterprise Server 11 SP2 64-bit ■ Added support for Oracle Enterprise Linux Server 6.46u2 64-bit i.e. support releases 6.2 to 6.4. ■ Added support for AIX 6.1; TL82 ■ Added support for AIX 7.1; TL20 ■ Added support for Mac OS X; Release 10.8.4
Server Java Runtime	<ul style="list-style-type: none"> ■ Added support for Oracle Java SE JDK 1.7 update 25 (64-bit) ■ Updated the IBM Java version to 7.0.0.100 (SR5)
Mobile Operating Systems¹⁾	<ul style="list-style-type: none"> ■ Added support for Apple iOS 6.1.4 and iOS 7 ■ Added support for Google Android OS 4.2.2 (Jelly Bean)
Database Server	<ul style="list-style-type: none"> ■ No Changes
Application Server	<ul style="list-style-type: none"> ■ Dropped support for Apache Tomcat 7.0.33 ■ Added support for Apache Tomcat 7.0.40 ■ Added support for IBM WebSphere Application Server v8.5.5
Report Server	<ul style="list-style-type: none"> ■ Dropped support for CA Business Intelligence r3.3 ■ Added support for CA Business Intelligence r3.3 SP1 (BOXI 3.1 SP6).
Client Browser	<ul style="list-style-type: none"> ■ Added support for Firefox 19.0.2 22 for Microsoft Windows ■ Added support for Google Chrome 31.x.x.x for Microsoft Windows. Also added a footnote regarding known issues with version 29,30, and 31 ■ Added support for Safari 6.0.52 for Apple Mac OS ■ Added support for Adobe Flash Player version 11
Client Applications	<ul style="list-style-type: none"> ■ Dropped support for Microsoft Project 2007 ■ Added support for CA Open Workbench 2.1.1 ■ Dropped support for CA Open Workbench 2.1

Component	Description
Database	<ul style="list-style-type: none"> No Changes
Integrated Servers	<ul style="list-style-type: none"> Added support for SharePoint Server 2013 Added Sharepoint Connector 2.0.3 Added footnote "CA SiteMinder 12.0 SP3 is certified. Additionally SiteMinder 12.51 CR1 is supported."

Changes in CA Clarity PPM Release 13.2.00

Component	Description
Operating Systems	<ul style="list-style-type: none"> Added support for Microsoft Windows XP, SP3. Dropped support for Microsoft Windows XP, SP2. Added support for Microsoft Windows 8, 32-bit and 64-bit, all editions. Dropped support for Microsoft Windows Vista, all editions. Dropped support for Microsoft Windows Server 2008 (non-R2). Added support for Mac OS X 10.8.2. Dropped support for Mac OS X 10.4. Added support for Oracle Enterprise Linux 6u2.
Server Java Runtime	<ul style="list-style-type: none"> Added support for Java JDK 1.7 update 21 and higher.
Mobile Operating Systems ¹⁾	<ul style="list-style-type: none"> Added support for Apple iOS 6.0 and higher. Added support for Google Android 4.0 (Ice Cream Sandwich) and higher.
Database Server	<ul style="list-style-type: none"> Added support for Oracle 11.2.0.3 Standard and Enterprise Editions. Added support for Microsoft SQL Server 2012 Enterprise Edition.
Application Server	<ul style="list-style-type: none"> Added support for Tomcat 7.0.33 or higher patch level (64-bit). Dropped support for Tomcat 7.0.26 or higher patch level (64-bit).
Report Server	<ul style="list-style-type: none"> No changes.

Component	Description
Client Browser	<p>Note: CA Technologies only supports browser versions that are supported by their associated third-party vendors.</p> <ul style="list-style-type: none"> ■ Added support for Firefox 19.0.2. ■ Added support for Firefox ESR 17.0.4. ■ Dropped support for Firefox ESR 10.0.5. ■ Added support for Microsoft Internet Explorer 10 (Windows 8 only). ■ Added support for Chrome 25.0.1364.172m. ■ Added support for Apple Safari 6.0.2 (on Mac OS X 10.8.2 or higher).
Client Applications	<ul style="list-style-type: none"> ■ Added support for Xcelsius Designer 2008 Service Pack 6. ■ Dropped support for Xcelsius Designer 2008 Service Pack 5. ■ Added support for Microsoft Project 2010-2013 32-bit and 64-bit, all editions. ■ Added support for Microsoft Excel 2010-2013 64-bit, all editions. ■ Added support for Microsoft PowerPoint 2010-2013 64-bit, all editions. ■ Added support for CA Open Workbench 2.1. ■ Dropped support for CA Open Workbench 2.0.
Database	<ul style="list-style-type: none"> ■ Clarified support around running databases on software virtualized operating systems. ■ Dropped support for Oracle 10.2.0.5.

Notes:

- ¹⁾This support is for the Clarity Mobile Time Management application only.

Changes in CA Clarity PPM Release 13.1.00

Component	Description
Operating Systems	<ul style="list-style-type: none"> ■ Added support for OEL Server 6u2. ■ Added support for Red Hat Enterprise Linux 5.5 64-bit for x86 chipsets: any maintenance release. ■ Dropped support for Red Hat Enterprise Linux 5 64-bit for x86 chipsets: any maintenance release. ■ Added support for Microsoft Windows Server 2008 R2 Service Pack 1. ■ Dropped support for Microsoft Windows Server 2008 R2 (64-bit) Standard Edition or Enterprise Edition. ■ Dropped support for Microsoft Windows Server 2003 64-bit Standard Edition or Enterprise Edition up to Service Pack 2. ■ Added support for SUSE Linux Enterprise Server 10 Service Pack 4 (64-bit) for x86 chipsets. ■ Dropped support for SUSE Linux Enterprise Server 10 (64-bit) for x86 chipsets: any maintenance release. ■ Added support for AIX 7.1: any maintenance release. ■ Dropped support for AIX 5.3: any maintenance release. ■ Added support for Microsoft Windows Vista Service Pack 2, all editions. ■ Dropped support for Microsoft Windows Vista, all editions. ■ Added support for Microsoft Windows 7 Service Pack 1, 32-bit and 64-bit, all editions. ■ Dropped support for Microsoft Windows 7, 32-bit and 64-bit, all editions.
Server Java Runtime	<ul style="list-style-type: none"> ■ Added support for Oracle Java SE JDK 1.7.0_4 or higher patch level (64-bit). ■ Added support for HP JDK v7: 7.0.01 or higher patch level (64-bit). ■ Dropped support for HP JDK 6: 6.0.05 or higher patch level (64-bit). ■ Added support for IBM Java 7.0.0 64-bit: higher patch level (64-bit). ■ Dropped support for IBM Java 6 64-bit: SR6 or higher patch level (64-bit). ■ Dropped support for Sun J2SDK 1.6.0: version 1.6.0_20 or higher patch level (64-bit).

Component	Description
Application Server	<ul style="list-style-type: none"> ■ Added support for Tomcat 7.0.26 or higher patch level (64-bit). ■ Dropped support for Tomcat 6.0.35. ■ Added support for Oracle Weblogic Server 12.1.1: any service pack (64-bit). ■ Dropped support for Oracle WebLogic Server 10.3: any service pack (64-bit). ■ Added support for IBM WebSphere Application Server 8.5 (64-bit). ■ Dropped support for IBM WebSphere Application Server 7.0.0.7 (64-bit).
Report Server	<ul style="list-style-type: none"> ■ Added support for CA Business Intelligence Release 3.3 (BOXI 3.1 Service Pack 5). ■ Dropped support for CA Business Intelligence Release 3.2 (BOXI 3.1 Service Pack 3).
Client Browser	<p>Note: CA Technologies only supports browser versions that are supported by their associated third-party vendors.</p> <ul style="list-style-type: none"> ■ Added support for Firefox ESR 10.0.5 and higher release level. ■ Added support for Firefox 13.0 and higher release level. ■ Dropped support for Firefox 3.5. ■ Dropped support for Firefox 8.0. ■ Added support for Chrome 18.0.1.25.152m and higher release level.
Client Applications	<ul style="list-style-type: none"> ■ Added support for Xcelsius Designer 2008 Service Pack 5. ■ Dropped support for Xcelsius Designer 2008 Service Pack 3. ■ Added support for Crystal Reports Designer 2008 Service Pack 5. ■ Dropped support for Crystal Reports Designer 2008 Service Pack 3.
Database	<ul style="list-style-type: none"> ■ Clarified support around running databases on software virtualized operating systems. ■ Dropped support for Oracle 10.2.0.5.

Changes in CA Clarity PPM Service Pack 13.0.01

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

Changes in CA Clarity PPM Version 13.0.00

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

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 update 25
Red Hat Linux	Advanced Server 6.0	64	Oracle JDK 1.7 update 25
IBM AIX	AIX 6.1	64	IBM Java 7 (64-bit)

Notes:

- The file 'java.security' under '<JAVA_HOME>/jre/lib/security' lists all the security providers along with their preference order. CA Clarity PPM automatically places the Crypto-J provider above the SunJCE provider's location in the providers list. To use the Crypto-J provider with CA Clarity PPM, you must explicitly set the security provider entry in the first index position:
security.provider.1=com.sun.crypto.provider.SunJCE. The index numbers for the other positions must be adjusted accordingly. Verify that the SunJCE security provider is the first one.
- If you are using the IBM FIPS provider on AIX, you do not need to make the changes described in the previous bullet. AIX uses the IBM FIPS provider for FIPS mode.

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 a Microsoft Windows Configuration

Configuration	App Server	OS for App Server	Database	OS for Database	Status
1	Apache Tomcat 7.0.42 (64-bit)	Windows 2008 R2	MSSQL 2008 R2	Windows 2008 R2	Certified in IPv6 and mixed mode and supported in pure mode.
2	Apache Tomcat 7.0.42 (64-bit)	Windows 2008 R2	Oracle Enterprise Edition 11.2.0.3	Windows 2008 R2	Supported in pure IPv6 and mixed mode.
3	IBM Websphere 8.5.5 (64 bit)	Windows 2008 R2	Oracle Enterprise Edition 11.2.0.2	Windows 2008 R2	Supported in mixed mode.
4	Oracle WebLogic 12.1.1 (64-bit)	Windows 2008 R2	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 7.0.42 (64-bit)	Windows 2008 R2	Oracle Enterprise Edition 11.2.0.2	Windows 2008 R2	MIRAK ¹⁾ 10.3.1	Supported in pure IPv6 and mixed mode.

Business Objects Testing CABI 3.3 SP1 on a Microsoft Windows Configuration

Configuration	App Server	OS for App Server	Database	OS for Database	BO	Status
6	Apache Tomcat 7.0.42 (64-bit)	Windows 2008 R2	MSSQL 2008 R2	Windows 2008 R2	CABI 3.3 SP1	Certified in IPv6 mixed mode and supported in pure mode.
7	Apache Tomcat 7.0.42 (64-bit)	Windows 2008 R2	Oracle Enterprise Edition 11.2.0.3	Windows 2008 R2	CABI 3.3 SP1	Supported in pure IPv6 and mixed mode.

Upgrade from v12.1.1 to v13.3 on a Microsoft Windows Configuration

Configuration	App Server	OS for App Server	Database	OS for Database	Status
8	Apache Tomcat 7.0.42 (64-bit)	Windows 2008 R2	MSSQL 2008 R2	Windows 2008 R2	Supported in mixed mode.
9	Apache Tomcat 7.0.42 (64-bit)	Windows 2008 R2	Oracle Enterprise Edition 11.2.0.2	Windows 2008 R2	Supported in mixed mode.

Installation 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	Status
10	Apache Tomcat 7.0.42 (64-bit)	Windows 2008 R2	Oracle Enterprise Edition 11.2.0.2	RH6	Supported in pure IPv6 and mixed mode.
11	Oracle WebLogic 12.1.1 (64-bit)	RH6	Oracle Enterprise Edition 11.2.0.3	Windows 2008 R2	Certified in pure IPv6 and 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
12	Apache Tomcat 7.0.42 (64-bit)	Windows 2008 R2	Oracle Enterprise Edition 11.2.0.2	RH6	MIRAK 10.3.1 ¹⁾	Supported in mixed mode.

Note: ¹⁾MIRAK is an open source mail server used for testing purposes.

Business Objects Testing CA BI 3.3 SP1 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
13	Apache Tomcat 7.0.42 (64-bit)	Windows Server 2008 R2 SP1	Oracle Enterprise Edition 11.2.0.2/3	RH6	CA BI 3.3 SP1	Supported in mixed mode.

Upgrade from v12.1.1 to v13.3 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	Status
14	Apache Tomcat 7.0.42 (64-bit)	Windows 2008 R2	Oracle Enterprise Edition 11.2.0.3	RH6	Supported in mixed mode.

CA Business Intelligence Release 3.3 SP1 - (SAP BusinessObjects Enterprise XI 3.1 Service Pack 6) Supported Configurations

The following Business Objects configurations are supported for CA Clarity PPM. Additional information such as minimum CA Business Intelligence (CABI) release 3.3 hardware requirements can be found in the CABI documentation. For information about virtualization support, refer 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 CABI 3.3 (BOXI release 3.1 SP6) 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 CABI 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 recommends running CABI 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"> ■ Windows Server 2012 Standard or Datacenter Edition (64-bit)^{1), 2)} ■ Windows Server 2008 SP2 Standard or Enterprise Edition (32-bit and 64-bit)^{1), 2)} ■ Windows Server 2008 R2 64-bit^{1), 2)} 	<ul style="list-style-type: none"> ■ Tomcat 6.0 (OEM provided)/JDK 1.6.0_xx 	<ul style="list-style-type: none"> ■ MS SQL Server 2012/Microsoft JDBC SQL Server 2012, Microsoft ODBC SNAC (Native Client) 11, Microsoft OLEDB SNAC (Native Client) 11 ■ MS SQL Server 2008/ODBC SQL Native Client 10, MS SQL Server 2008 JDBC (Sqljdbc.jar 3.0), OLE DB SQL (Native Client) 10 ■ MS SQL Server/Microsoft JDBC 1.2 for SQL Server 2005, Microsoft ODBC SNAC (Native Client), Microsoft OLEDB SNAC (Native Client) ■ Oracle 11g R2/Oracle Net Client 11g R2, Oracle JDBC 11g R2 (Use 32-bit Oracle client installer.)
Linux	<ul style="list-style-type: none"> ■ Red Hat Enterprise Server 5 (64-bit)³⁾ ■ Red Hat Enterprise Server 6 (64-bit)⁴⁾ ■ SUSE Enterprise Linux 10 Service Pack 2 (64-bit) ■ SUSE Enterprise Linux 11 (64-bit) 	<ul style="list-style-type: none"> ■ Tomcat 6.0 (OEM provided); JDK 1.6.0_xx 	<ul style="list-style-type: none"> ■ Oracle 11g R2/Oracle Net Client 11g R2 (11.2), Oracle JDBC 11g R2 (Use 32-bit Oracle client installer.)
Solaris	<ul style="list-style-type: none"> ■ Solaris 10 (64-bit SPARC)⁵⁾ 	<ul style="list-style-type: none"> ■ Tomcat 6.0 (OEM provided)/JDK 1.6.0_xx 	<ul style="list-style-type: none"> ■ Oracle 11g R2/Oracle Net Client 11g R2 (11.2), Oracle JDBC 11g R2 (Use 32-bit Oracle client installer.)
AIX	<ul style="list-style-type: none"> ■ AIX 6.1 (64-bit)⁶⁾ ■ AIX 7.1 (64-bit)⁷⁾ 	<ul style="list-style-type: none"> ■ Tomcat 6.0 (OEM provided)/JDK 1.6.0_xx 	<ul style="list-style-type: none"> ■ Oracle 11g R2/Oracle Net Client 11g R2 (11.2), Oracle JDBC 11g R2 (Use 32-bit Oracle client installer.)
HP-UX	Not supported.		

Notes:

- ¹⁾Business Objects supports and recommends installation of all Microsoft critical patches for the operating systems listed.
- ²⁾If utilizing Query as a WebService (QaaWs), .NET Framework 2.0 is required.
- ³⁾Minimum patch level for Red Hat Enterprise Server 5: Required minimum operating system install plus RHBA-2007:0619-3
- ⁴⁾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
- ⁵⁾Minimum patch requirements for Solaris 10: SUNWgzip; SUNWzlib; SUNWscpu; SUNWbash; SUNWbcp, SUNWxcu4 XCU4 Utilities; SUNWxwft; SUNWxwplt; 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
- ⁶⁾Minimum patch requirements for AIX 6.1: Technology Level 2 SP1; IBM C++ Runtime Environment Components for AIX => xIC.aix61.rte:10.1.0.0.
- ⁷⁾Minimum patch requirements for AIX 7.1: Technology Level 7.1.0.0 / 7100-00-00-0000; IBM C++ Runtime Environment Components for AIX => xIC.aix61.rte:11.1.0.1.

Appendix B: Accessibility Features

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.

This section contains the following topics:

[Mouse](#) (see page 43)

[Keyboard](#) (see page 44)

[Sound](#) (see page 44)

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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

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.

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.

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

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
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

CA Clarity Keyboard Shortcuts (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	

Action	Key Combination	Alternate Accessibility Key Combination
Select or clear a check box Note: Focus must be on the checkbox.	Space Bar	
Expand a hierarchical list Note: Focus must be on the + in the hierarchical list.	Space Bar	

CA Clarity Keyboard Shortcuts (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)
Move to the end of a row Note: If the action is on a TSV row, repeat the keyboard combination to leave the TSV section.	Edit	Ctrl+Right Arrow
Move to the beginning of a row	Edit	Ctrl+Left Arrow
Page up or down	Display, Edit	Ctrl+Alt+Up Arrow Ctrl+Alt+Down Arrow
Move to the top or bottom of a list Note: If the action is in a TSV cell, repeat the keyboard combination to leave the TSV section.	Display, Edit	Ctrl+Up Arrow Ctrl+Down Arrow

Action	Mode	Keyboard Combination
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

Keyboard Shortcuts for Time-Scaled Value Cells

The following table shows the keyboard shortcuts for time-scaled value cells in a list.

Action	Key Combination	Alternate Accessibility Key Combination
Select a TSV row	Shift+Ctrl+Right Arrow	
Select a TSV column	Shift+Ctrl+Down Arrow	
Select a single cell to the left or right of the current cell	Shift+Right Arrow Shift+Left Arrow	
Select a single row above or below the current cell	Shift+Up Arrow Shift+Down Arrow	
Copy a TSV cell	Ctrl+c	
Paste a TSV cell	Ctrl+v	
Cut a TSV cell	Ctrl+x	
Undo a cut, copy, or paste operation	Ctrl+z	
Copy from Excel to a TSV cell	Ctrl+c and Ctrl+v	

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.

Appendix C: Third-Party Acknowledgements

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.