

CA Clarity™ PPM

Change Impact and Upgrade Guide

Release 13.1.00



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

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

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

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

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

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

The manufacturer of this Documentation is CA.

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

Copyright © 2012 CA. All rights reserved. All trademarks, trade names, service marks, and logos referenced herein belong to their respective companies.

Contact CA Technologies

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
- Documentation downloads
- CA Support policies and guidelines
- Other helpful resources appropriate for your product

Providing Feedback About Product Documentation

If you have comments or questions about CA Technologies product documentation, you can send a message to 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>.

Contents

Chapter 1: About this Guide	7
Chapter 2: Installation and Upgrade	9
About Release 13.1	9
Java 7	9
Java Runtime Environment Removed From Download Software Link.....	10
New Languages Supported in the User Interface	10
Add-ins Compatibilities	10
Reports for a Release 13.1 New Installation	11
Upgrade Considerations for Reports.....	11
About Version 13.0 Installation and Upgrade Processes	13
New Log File Names	13
Complete the Upgrade Process.....	13
Upgrade Tips	15
Known Issues.....	16
Missing General Action Menu After Upgrade	16
Chapter 3: Administration	19
Time-Scaled Value Link Exports to Excel	19
Chapter 4: Financial Management	21
Financially-Enabled Roles.....	21
New Access Right	21
Role Financial Properties.....	22
Staff OBS Unit Field	22
Baseline	23
Budget Merge or Replace Option.....	23
Chapter 5: Resource Management	25
Enhancements to Resource Planning Tabs and Portlets.....	25
Chapter 6: User Interface	29
New Fixed Headers.....	29
High Contrast UI Theme	29

Chapter 7: Data Model Changes

31

Database Table Changes	31
------------------------------	----

Chapter 1: About this Guide

This guide provides the following information:

- System preparation before upgrading
- Post-upgrade tasks
- Features and enhancements for this release and upgrade actions that are required for them

Important! If you are upgrading from a release earlier than Version 13.0, carefully review the *Change Impact and Upgrade Guide* for the 13.0 release. If you are upgrading from Version 13.0 to this release, review this guide before upgrading. This guide provides insight on planning the upgrade and helps you determine the upgrade options that best suit your business needs. Use this guide to plan your training and rollout efforts.

Look for recent updates to this guide before upgrading. The most recent edition of this guide and all CA Clarity PPM documentation is available from the CA Clarity PPM (On Demand) bookshelf. The bookshelf is available on the Documentation page of [CA Support Online](#).

Chapter 2: Installation and Upgrade

This section contains the following topics:

[About Release 13.1](#) (see page 9)

[About Version 13.0 Installation and Upgrade Processes](#) (see page 13)

[Complete the Upgrade Process](#) (see page 13)

[Upgrade Tips](#) (see page 15)

[Known Issues](#) (see page 16)

About Release 13.1

This section provides information about installation and upgrade changes since Version 13.0.

Java 7

This release uses Java 7. The following software clients require Java 7:

- XML Open Gateway (XOG) client
- Open Workbench
- Connector for Microsoft SharePoint
- Service Connect

Important! 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 from the Oracle website.

Upgrade Actions: Install Java 7.

Java Runtime Environment Removed From Download Software Link

The Java Runtime Environment (JRE) is no longer available from the Software Downloads link.

Upgrade Action: Review the supporting documentation and training materials you provide to your users. Wherever these materials direct users to download the JRE from within CA Clarity PPM, update the reference to direct users to download the JRE version 7 from www.java.com.

Users can download the latest update of version 7 that is available. The latest version is what www.java.com offers by default. Eventually, when Java 8 is released, it will become the download default on the website. At that point, remind your users to download version 7, not version 8.

New Languages Supported in the User Interface

The product user interface supports the following new languages:

- Korean
- Simplified Chinese
- Traditional Chinese

Upgrade Action: None

Add-ins Compatibilities

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

- If you are upgrading from Version 13.0 to Release 13.1, the following add-ins are upgraded:
 - PMO Accelerator
 - CA Clarity PPM Solution Pack of Dashboards and Reports
 - Note:** To see the documentation for this add-in, see the [CA Clarity PPM Solution Pack Index page](#) on CA Support Online.
 - Earned Value Manager
 - Connector for CA Unicenter Asset Portfolio Management
 - Connector for CA Unicenter Service Desk and CA Software Change Manager for Distributed

Reports for a Release 13.1 New Installation

The following action indicates how to get reports up and running for a new installation.

After the installation, run the Create Business Objects Users job to synchronize the user lists in BusinessObjects and CA Clarity PPM. If the job is not run, a CA Clarity PPM user cannot run or open a report unless a BusinessObject account is created explicitly for the user.

The job creates a BusinessObjects user for every user in CA Clarity PPM. The user created in BusinessObjects is given an encrypted password. If users want to log in to the BusinessObjects server using the assigned password, the user ID and password must be reset under BusinessObjects Administration.

Upgrade Considerations for Reports

Use this section as a guideline to plan your upgrade. The following installation and upgrade use cases are covered:

- Upgrade from an installed version earlier than Release 12.1
- Upgrade from Release 12.1 or Service Pack 12.1.1

Upgrade Actions:

- If you customized or changed any out-of-the-box reports, make a backup copy of the modified reports. Place the copies in a separate custom folder under the Public Folders/CA Reports/CA Clarity directory. The out-of-the-box reports are overwritten when the new Release 13.1 reports are installed.
- If you used any CA Clarity PPM universe objects, create a custom universe and link it to the CA Clarity PPM universe. The CA Clarity PPM universe is overwritten when the new Release 13.1 universes are installed.

Upgrade from a Version Installed Earlier than Release 12.1

BusinessObject report instances created in a version earlier than Release 12.1 can be viewed only as a PDF file after the upgrade.

Upgrade Actions:

Preupgrade:

- If you modified any out-of-the-box reports, move the modified reports to a custom report folder on the BusinessObjects server before upgrading.

Post-Upgrade:

- Use BusinessObjects Central Administration to reset passwords for multiple users.

- Manually restart the scheduled reports. Scheduled reports that were configured before the upgrade to Release 13.1 will not automatically run after the upgrade.
- Synchronize the user lists in BusinessObjects and CA Clarity PPM by running the *Create Business Objects Users* job. If the job is not run, a CA Clarity PPM user cannot run or open a report unless a BusinessObjects account is created explicitly for the user.

The job creates a user in BusinessObjects for every user in CA Clarity PPM. The user created in BusinessObjects is given an encrypted password. If users want to log in to the BusinessObjects server using the assigned password, the user ID and password must be reset under BusinessObjects Administration.

Upgrade from Release 12.1 or Service Pack 12.1.1

If you previously purchased the GSE Universes from CA Services, these universes are not overwritten by the Release 13.1 out-of-the-box universes.

There are no new user or security configurations; Release 13.1 uses the same CABI requirements and trusted authentication integration with CA Clarity PPM as Release 12.1 and Service Pack 12.1.1.

Upgrade Actions:

Pre-Upgrade:

- If you modified any out-of-the-box reports, move the modified reports to a custom report folder on the BusinessObjects server before upgrading.

Post-Upgrade:

- Manually restart scheduled reports. Scheduled reports that were configured before the upgrade to Release 13.1 will not automatically run after the upgrade.
- Synchronize the users that are not already in Business Objects, and run the *Create Business Objects Users* job. If the job is not run, a CA Clarity PPM user cannot run or open a report unless a BusinessObject account is created explicitly for the user.

The job creates a user in BusinessObjects for every user in CA Clarity PPM. The user created in BusinessObjects is given an encrypted password. If users want to log in to the BusinessObjects server using the assigned password, the user ID and password must be reset under BusinessObjects Administration.

About Version 13.0 Installation and Upgrade Processes

This section provides information about changes to the installation or upgrade processes for the Version 13.0 release.

Note: See the Version 13.0 *Change Impact and Upgrade Guide* for complete information.

New Log File Names

Log file names have changed. Previously, log files had the name format **-niku.log* (for example, *bg-niku.log*). This format has been changed to **-ca.log* (for example, *bg-ca.log*).

Complete the Upgrade Process

The following process shows what to do when the upgrade is complete.

1. Apply your current add-ins and connectors.

Notes:

- Apply the Upgrade Ready content for those items that you are actively using.

Important! Consider the configurations that you have made to items before applying them. Applying modified items overwrites your configurations. A database restore is required to restore any applied items.

Best Practice: If you modified stock CA Clarity PPM content, copy the modified content before upgrading, apply the new incoming stock CA Clarity PPM content, and then retrofit the modifications to the new content.

Note: For more information about applying add-ins and connectors, see the *Studio Developer's Guide*.

- Read the PMO Accelerator Release Notes for important information about what has changed for PMO Accelerator Release 3.1.
- Review the *System: Clarity Content* add-in for upgrade ready content (for example, Role Capacity portlet). Apply the changes to accept the new Release 13.1 upgraded content.

2. Review the Studio views and system content and manually upgrade as needed.

The upgrade preserves all preexisting Studio view configurations. If an existing view has configurations or if the object for the view is partitioned, the product does not automatically upgrade the view or the partition.

Use the Studio Views list page to determine which views were not automatically upgraded.

Here are some tips on reviewing the views:

- The Last Version column identifies changes to stock views in Release 13.1.
- If a view was automatically upgraded as part of the upgrade process, a checkmark appears in the view Upgraded column. No further action is required.
- If a view was changed in Release 13.1 but was not upgraded due to pre-existing configurations, decide if you want to apply the changed view.

Look for views with the following values:

Last Version column=13.1 and the Upgraded column= unchecked.

3. Verify your NSQL queries.

During the upgrade, the NSQL validator script automatically checks NSQL queries. Results are written to the admin.log. This log contains the following information:

- Query name
- Query ID
- Content Source
- Query ID from CMN_NSQL_QUERIES of the query that failed validation

There are database schema changes in this release. You must correct invalid NSQL queries for portlets to work.

Note: For more information about Database schema changes, see the chapter "Data Model Changes."

Upgrade Action:

If the query can be changed in Studio, complete these steps:

- a. Go to the NSQL tab for each failing query.
- b. Click the Preview button.
- c. Review the errors.
- d. Repair the broken query constructs or fields.
- e. Click the Preview button.
- f. Confirm the NSQL query is valid.

If the query is in use by active portlets and cannot be edited in Studio, complete these steps:

- g. User the XML Open Gateway (XOG) to export the failing query.
- h. Correct the broken query constructs or fields.
- i. Use XOG to import the corrected query.
- j. Click the Preview button.
- k. Confirm the NSQL query is valid.

Upgrade Tips

Preupgrade

- You must have the standard base calendar available in your CA Clarity PPM application before you upgrade. If you deleted the shipped calendar called *Standard*, you must create it before upgrading. Contact CA Support if your CA Clarity PPM instance is missing the Standard base calendar. (CLRT-63337)
- Process all "In progress" transactions into WIP.
Verify the following conditions:
 - imp_transactionimport and ppa_transcontrol are clear.
 - WIP adjustments are approved.Review and fix all "Invalid transactions."
- Review Time Slices.
Verify that the table is slicing out only the data that is required. If extra data is getting sliced, that effort adds to database size and decreases performance.
- Clear the Datamart and recreate the data post-upgrade to improve the processing time of the upgrade. Use *NBI_Clean_Datamart_sp* to clear the Datamart. The script does not clear the following tables:
 - The configuration table (NBI_CFG%)
 - Time facts tables that contain historical information (*NBI_PM_PT_FACTS* and *NBI_FM_PT_FACTS*)After the upgrade, run the following jobs to repopulate the Datamart tables:
 - Datamart Extraction job
 - Datamart Rollup job
- Complete and put on hold all processes.
- Remove or delete process history, notifications, jobs, or logs. Look for items that do not need to be retained.
- Pause all scheduled jobs.

Post Upgrade

- Ask your functional experts to review your upgraded test system side-by-side with a working preupgrade system.
Tip: Use dual monitors for side-by-side comparison.

- Review customizations: Customer-added custom indexes and custom interfaces. Review anything that did not come out-of-the-box with CA Clarity PPM. Adjustments can be required for customizations to work with this release.

Known Issues

This section provides known issues for CA Clarity PPM.

Missing General Action Menu After Upgrade

In some cases, the General Action menu may not appear after an upgrade. This issue occurs on the Project object when the following conditions are present:

- In the edit properties view (Layout:Edit), a display condition is defined on the General subpage.
- The General object actions menu for the view is not customized.

You can correct the issue before the upgrade, or you can upgrade and then correct the issue in the new upgraded product.

To correct the issue before the upgrade:

- Remove the display conditions on the General subpage before the upgrade and redefine the display conditions after the upgrade.

Note: If the preupgrade server is on Version 13.0 or a later service pack, you can handle the issue in a different manner. Before you start the upgrade, edit the General Action menu. Move any action that is listed there from the Available Actions list to the Selected Actions list and save. After the upgrade is complete, you can remove any unwanted actions.

To correct the issue after the upgrade:

1. Create an action menu with following details:
 - Menu Name: General
 - Menu Code: general
 - Description: General
2. Move the following out-of-the-box actions from the Available Actions to the Selected Actions list:
 - Add to My Projects
 - Copy Project from Template
 - Remove from My Projects
 - Go to Links Page
 - Go to Notes Page

Note: For more information about creating an action menu, see the *Studio Developer's Guide*.

Chapter 3: Administration

This section contains the following topics:

[Time-Scaled Value Link Exports to Excel](#) (see page 19)

Time-Scaled Value Link Exports to Excel

Excel has a 64-KB limit on the number of links that are exported to a worksheet. If you have configured links within your time-scaled value (TSV) cells, you can reach the limit. An Export to Excel operation does not complete successfully when the limit is reached.

A new option named *Enable TSV links for Export to Excel* provides a way to control how TSV links are exported. The option is selected by default so that all TSV links are exported.

If the option is not selected, TSV links are exported only up to the limit. When the limit is reached, the operation continues to export TSV values but without additional links.

Upgrade Action: (Optional) Clear the option to ensure the operation to export does not stop when the limit for links is reached.

Follow these steps:

1. Open Administration and from General Settings, click System Options.
2. In the Other section, clear the Enable TSV links for Export to Excel check box.
3. Save your changes.

Chapter 4: Financial Management

This section contains the following topics:

[Financially-Enabled Roles](#) (see page 21)

[Budget Merge or Replace Option](#) (see page 23)

Financially-Enabled Roles

The Financially-Enabled Roles feature provides the following functionality:

- Assignment of Transaction Class and Resource Class financial attributes to roles. This action lets you generate cost plans that include this combination of grouping attributes.
- Generation of cost plans based on the following attributes:
 - Role and Location
 - Role and Department

You can use these attributes when the team member is a role and the Staff OBS Unit attribute on the team record contains either a department or a location.

- Ability to separately secure the Financial Properties subpage for both resources and roles.

New Access Right

Before this release, resource managers were automatically granted access to the Financial Properties subpage of the resources they managed. The automatic granting of a right is named an *autoright*. The Financially Enabled Roles feature replaced the autoright with an explicit access right that can be granted or revoked for any resource manager. This access right is named *Resource – Edit Financial*.

To maintain consistency with existing functionality, the upgrade to Release 13.1 replaces the autoright with an instance-level access *Resource – Edit Financial* access right. This access right is granted to all resource managers for the resources they manage. The upgrade also sets the new Financial option *Grant Resource – Edit Financial instance right to resource manager* to True. With the option set to True, resource managers are automatically granted the new access right.

Upgrade Actions: None, if you want to preserve existing functionality.

You can remove the new *Resource – Edit Financial* access right from resource managers (granted during upgrade) and can prevent future resource managers from receiving this right. To remove the right, run a special post-upgrade script that is provided with this release.

You can always manually grant or revoke the access right, regardless of the setting of the Financial option.

Role Financial Properties

You can enter values for Transaction Class and Resource Class on a role. When the team member or task assignee is a role, these values are used on cost plans and passed to the rate matrix.

Note: A new section has been added to the Role XOG schema to accommodate Transaction Class and Resource class for a role. The following code sample shows how the new section appears:

```
<FinancialInformation>  
  <SupplementalInformation active="1" resourceClass="fmGrade3"  
  transactionClass="fm_Labor"/>  
</FinancialInformation>
```

Upgrade Action: (Optional) Populate the new Role Financial properties subpage, and enter Resource Class and Transaction Class values.

Staff OBS Unit Field

The Staff OBS Unit field on the team record is evaluated when the team member or task assignee is a role. If the field contains a department or location, that value is used on cost plans. Then the value is passed to the rate matrix for deeper granularity in financial planning. If the field contains an OBS value that is not a department or location, there is no change in the functionality.

Upgrade Action: None

Baseline

Baseline was modified to include the following items:

- Roles financial attributes
- The Department or Location value in the Staff OBS Unit field when the team member is a role

This change was done to improve the accuracy of the baseline figures.

Upgrade Action: None

Budget Merge or Replace Option

When you submit a cost plan for budget approval, you can replace the existing budget with the cost plan being submitted.

The following options are available:

Merge Option

Select this option only when the structure (grouping attributes and fiscal time period) of the cost plan is identical to the approved budget.

Replace Option

Replaces the currently approved budget. This option lets you do the following actions:

- Remove unwanted rows from the budget when the structure is the same
- Replace the structure (grouping attributes or fiscal time period) with different values

You can select this option whether the structure is the same or different.

The Budget XOG schema has been updated to support the option to replace current budgets. The Budget Plan XOG includes the following new required fields:

- forceReplace
- sourceCostPlanCode

Note: The Budget Plan XOG schema is not backwards compatible with the Version 13.0 schema because the new required fields were added.

Upgrade Action: None

Chapter 5: Resource Management

This section contains the following topics:

[Enhancements to Resource Planning Tabs and Portlets](#) (see page 25)

Enhancements to Resource Planning Tabs and Portlets

The tabs and out-of-the-box portlets under the Resource Planning menu option have changed. For a summary of the functional changes, see the *Release Notes*.

For new installations, the new Resource Planning page layout is automatically available.

If you are upgrading, additional steps are necessary after the upgrade to finalize the installation of the changes. During the upgrade, the changed portlet page layout, the portlets, and the Resource Planning Group are installed into an upgrade ready state. If you previously modified the out-of-the-box configurations of the portlet page, the existing portlets, or both, you can make one of the following choices:

- Do nothing. You can continue to use the old Resource Planning portlet page and tabs with your existing portlets.
- Manually add the new portlets onto your existing Resource Planning tab set.
- Complete the upgrade of the new content by applying the new portlet page and all of the updated portlets, the Resource Planning Group, and the Menu Manager.

Upgrade Actions: (Optional) Apply the new portlet page and updated portlets (the last option in the preceding list).

Follow these steps:

1. Log in as an Administrator user with appropriate access rights to install and upgrade CA Clarity PPM portlets and portlet pages.
2. Apply the changes for the new tabs and portlets by completing the following actions:
 - a. Open Administration, and from Studio, click Add-Ins.
 - b. Click System: Clarity content.
 - c. Review the list of items with an Upgrade Ready status and clear the checkmark for any line items that you do not want upgraded.
 - d. Click Apply.

This action replaces the current configurations with the new content for each selected item.

- e. Review the confirmation page and click Yes.

3. Refresh the Home menu definition by completing the following steps:

- a. Open Administration, and from Studio, click Menu Manager.
- b. Click Application Menu.
- c. Click Resource Management in the menu hierarchy list.
- d. Click Save and Return.

This action accepts the menu order.

Note: Instruct all users with access rights to Resource Planning in the Home menu to click the Refresh icon located in the Home menu. This action updates the Home menu to reflect the newly upgraded menu.

4. Complete the adjustment of the portlets and tabs by complete the following steps:

- a. Open Administration, and from Studio, click Portlet Pages.
- b. Open the Resource Planning portlet page.
- c. Click Tabs.

As part of the upgrade, the following existing out-of-the-box portlets appear on new tabs:

- Unfilled Requirements portlet is now on the Unfilled Allocations tab. This portlet also remains on the Allocations tabs, the preupgrade location.
 - Booking Status portlet is now on the Bookings tab. This portlet also remains on the Allocations tabs, the preupgrade location.
 - OBS Resource Allocation portlet is now on the Organizational Demand tab. This portlet also remains on the Capacity tab, the preupgrade location.
- d. Decide which tab the portlets are to appear on and remove the portlets from one of the tabs.

Note: To remove a portlet, click a tab name, then click the Content tab to add or remove portlets.

5. (Optional) The menu entry for Resource Planning continues to default to the Workloads tab, which is now in the center of the tabs. If you prefer to start on the first tab when you select Resource Planning from the Home menu, complete the following steps:

- a. Open Administration, and from Studio, click Menu Manager.
- b. Click Application Menu.

- c. Click Resource Management in the menu hierarchy list.
The properties page appears.
- d. In the Page Name field, select Capacity.
- e. Save your changes.

Chapter 6: User Interface

This section contains the following topics:

[New Fixed Headers](#) (see page 29)

[High Contrast UI Theme](#) (see page 29)

New Fixed Headers

This release includes a new fixed header for list pages. When you are scrolling in a long list or grid, the header remains visible as you scroll. The header is available in both the user and administration areas of the user interface. The fixed header is also available in pop-up pages, and it works when there are multiple grid portlets on a portlet page.

This feature is not available for Internet Explorer 8.

Upgrade Action: None

High Contrast UI Theme

A new UI theme named High Contrast is available for resources who need additional contrast when viewing the user interface. When the High Contrast Color Mode field is selected on the resource properties page, the new High Contrast UI theme is applied for the resource. Previously the Black and White UI theme was applied when the field was selected.

Upgrade Action: None

Chapter 7: Data Model Changes

This section contains the following topics:

[Database Table Changes](#) (see page 31)

Database Table Changes

The following tables have fields that were updated, added, or removed. Update custom queries or reports that use these fields.

Note: CLASS_CODE is no longer used. The CLASS_CODE column has been removed from all tables where it appeared before this release. For information about all changes to the database tables since the last release, see the *Technical Reference Guide*.

Table	Column
BIZ_COM_PERIODS	Removed: <ul style="list-style-type: none">■ P_QUARTER■ PERIOD
FIN_PLANS	Added: <ul style="list-style-type: none">■ SOURCE_COST_PLAN_ID■ BUDGET_SUBMIT_OPTION
NAMEOPTIONS	Added: <ul style="list-style-type: none">■ RES_FIN_EDIT_RIGHT_AUTO
NBI_DIM_FISCAL_TIME	Updated: <ul style="list-style-type: none">■ PERIOD_KEY■ QUARTER_KEY■ TIME_KEY
PAC_MNT_RESOURCES	Updated: <ul style="list-style-type: none">■ RESOURCE_CLASS■ TRANSCCLASS