

IBM TRIRIGA

Version 10.2.0.3

IBM TRIRIGA Application Platform

Version 3.2.1.3

Release Notes



Note

Before using this information and the product it supports, read the information in "Notices" on page 60.

Fourth edition, September 2013

This edition applies to version 10, release 2, modification 0.3 of IBM® TRIRIGA® and version 3, release 2, modification 1.3 of IBM TRIRIGA Application Platform and to all subsequent releases and modifications until otherwise indicated in new editions.

© Copyright International Business Machines Corporation 2011, 2013. All rights reserved.

US Government Users Restricted Rights - Use, duplication or disclosure restricted by GSA ADP Schedule Contract with IBM Corp.

Contents

RELEASE NOTES	1
What's New in This Release	1
IBM TRIRIGA 10.2.0.3 Enhancements	1
IBM TRIRIGA 10.2 Enhancements	2
IBM TRIRIGA Application Platform 3.2.1 Enhancements.....	4
IBM TRIRIGA CAD Integrator 2011 Release 2 Enhancements	4
Important Installation and Upgrade Information	5
Upgrade from IBM TRIRIGA 10.x/IBM TRIRIGA Application Platform 3.x → 10.2.0.3/3.2.1.3.....	6
Upgrade from IBM TRIRIGA 10.x/IBM TRIRIGA Application Platform 3.x → 3.2.1.3 (Platform Only)	6
Upgrade from TRIRIGA 9/Prior to TRIRIGA Application Platform 3.0 → 10.2.0.3/3.2.1.3.....	7
Upgrade from Prior to TRIRIGA 10.0/ TRIRIGA Application Platform 3.0 → 3.2.1.3 (Platform Only).....	8
IBM TRIRIGA 10.2	9
Important Information	9
Known Limitations	10
IBM TRIRIGA 10.2.0.3 Changes	11
IBM TRIRIGA 10.2.0.2 Changes	12
IBM TRIRIGA 10.2.0.1 Changes	13
IBM TRIRIGA 10.2 Changes	15
IBM TRIRIGA APPLICATION PLATFORM 3.2.1	24
Important Information	24
Known Limitations	28
IBM TRIRIGA Application Platform 3.2.1.3 Changes	30
IBM TRIRIGA Application Platform 3.2.1.3 Properties Files	30
IBM TRIRIGA Application Platform 3.2.1.2 Changes	30
IBM TRIRIGA Application Platform 3.2.1.2 Properties Files	31
IBM TRIRIGA Application Platform 3.2.1.1 Changes	31
IBM TRIRIGA Application Platform 3.2.1.1 Properties Files	31

IBM TRIRIGA Application Platform 3.2.1 Changes	32
IBM TRIRIGA Application Platform 3.2.1 Properties Files	34
IBM TRIRIGA Application Platform 3.2 Changes	34
IBM TRIRIGA Application Platform 3.2 Properties Files	50
IBM TRIRIGA CAD INTEGRATOR/PUBLISHER 2011	52
Important Information	52
Known Limitations	53
IBM TRIRIGA CAD Integrator 2011 Release 2 Changes	53
IBM TRIRIGA CAD Integrator 2011 Release 1 Changes	56
IBM TRIRIGA APPLICATION OBJECT MIGRATION PACKAGES	57
Applying the Application Object Migration Package	57
Import Patch Helper Record	57
IBM TRIRIGA SUPPORTED VERSIONS AND IBM TRIRIGA APPLICATION PLATFORM COMPATIBILITY MATRIX	59
RELATED DOCUMENTATION	59
SUPPORT	59
NOTICES	60
Privacy Policy Considerations	61
Trademarks	62

Release Notes

Welcome to the July 2013 release of IBM® TRIRIGA® 10.2.0.3. This release is only available by fix pack. You use a fix pack, or patch, to upgrade your version of IBM TRIRIGA. There is more information about the fix pack for 10.2.0.3 in the "[IBM TRIRIGA 10.2.0.3 Changes](#)" section of these Release Notes.

IBM TRIRIGA delivers application Object Migration (OM) packages using two different methodologies: incremental packages and cumulative packages. See [IBM TRIRIGA Application Object Migration Packages](#) for more information.

- Incremental Package - Each application release is a separate file. The latest incremental package is for IBM TRIRIGA 10.2.0.2.
- Cumulative Package - The entire suite of IBM TRIRIGA Applications through IBM TRIRIGA 10.1 is in one file. Cumulative packages offer a substantial time savings for customers upgrading across several releases. The latest cumulative package is for IBM TRIRIGA 10.1. The IBM TRIRIGA 10.2.0.3 OM package is cumulative and includes the files to update your 10.2, 10.2.0.1 or 10.2.0.2 environment to 10.2.0.3.

These release notes include the following:

- An overview of enhancements and changes
- A list of known limitations
- A list of documentation changes in this release

Many of the descriptions include an internal reference number (Tri-nnnnn).



Note - To request access to IBM TRIRIGA application upgrade packages or documentation for releases prior to IBM TRIRIGA 10.2, submit a ticket through the IBM Software Support site at www.ibm.com/support.

What's New in This Release

With IBM TRIRIGA 10.2 and IBM TRIRIGA Application Platform 3.2.1, IBM TRIRIGA continues to add valuable functionality, fix defects, and reduce the effort necessary for new and existing customers to implement our products. Highlights in IBM TRIRIGA 10.2.0.3, IBM TRIRIGA 10.2, and IBM TRIRIGA Application Platform 3.2.1 include the following:

IBM TRIRIGA 10.2.0.3 Enhancements

This fix pack enhances the IBM TRIRIGA Connector for ENERGY STAR Benchmarking to support the 2013 upgrade to the US EPA ENERGY STAR Portfolio Manager Data Exchange Web Services.

The enhancements to IBM TRIRIGA for this release include the following items:

Area of Impact	Description
ENERGY STAR	Added an option to exclude zero-cost energy logs for ENERGY STAR

Area of Impact	Description
	submissions.
ENERGY STAR	Added energy type unit of measure conversion to normalize the units of measure that are used for ENERGY STAR submissions.
ENERGY STAR	Added the ability to submit energy costs to ENERGY STAR.
ENERGY STAR	<p>This release adds the following fields for metrics now calculated by ENERGY STAR:</p> <ul style="list-style-type: none"> ▪ Current Site Energy Intensity ▪ Current Site Total Energy Use ▪ Current Source Energy Intensity ▪ Current Source Total Energy Use ▪ Current Weather Normalized Site EUI ▪ Current Weather Normalized Source EUI ▪ Current Direct GHG Emissions ▪ Current Indirect GHG Emissions ▪ Current Total GHG Emissions

IBM TRIRIGA 10.2 Enhancements

The enhancements to IBM TRIRIGA for this release include the following items:

Area of Impact	Description
Inventory	<p>Enhanced Inventory costing and valuation. (Tri-31883)</p> <p>Benefit: Costing of inventory items can be tied directly to the inventory item, to an inventory location, or to a group of locations and is based on the inventory valuation method.</p> <p>Summary of the Enhancements:</p> <p>The system now tracks the unit price of items in inventory by using an inventory valuation method. The following are the four valuation methods:</p> <ul style="list-style-type: none"> ▪ Average: Item Material Cost = Average Cost of purchased items ▪ FIFO (First In First Out): Item Material Cost = Cost based on the order of purchase starting from the earliest purchase incrementally to the latest purchase. ▪ LIFO (Last In First Out): Item Material Cost = Cost based on the order of purchase starting from the latest purchase incrementally to the earliest purchase.

Area of Impact	Description
	<ul style="list-style-type: none"> ▪ Standard: The cost is set by the user. <p>The FIFO and LIFO methods use inventory batches. Over time, the same inventory item might be purchased at varying costs. These costs, the purchase date, and the quantity purchased must be evaluated when calculating the 'issue' cost of the item.</p> <p>With this release, inventory costing can be done at varying levels:</p> <ul style="list-style-type: none"> ▪ Item-level costing: Inventory batches are associated with the item and costing is applied to the item based on the valuation method of the item (Average, LIFO, FIFO, or Standard). ▪ Primary Inventory Location-level costing: Batches are associated with the primary inventory location, such as the storeroom, and costing is applied to like items at the primary location based on the valuation method. ▪ Cost Group-level costing: Batches are associated with a group of primary locations, such as all storerooms in a geographic region, and costing is applied to like items in the primary locations based on the valuation method.

Lease Contracts

Supports the proposed IASB/FASB Leases Topic 840 that requires companies to include all leases on the balance sheet. Amortization calculations are provided which capitalize both real estate leases and personal property leases (asset leases) such as equipment, furniture, vehicles.

Key benefits include:

- IBM TRIRIGA automates the calculation of the lease 'Likely Term' based on IASB/FASB Leases Topic 840 requirements.
- IBM TRIRIGA automates the capture and audit of key assumptions required by IASB/FASB Leases Topic 840.
- IBM TRIRIGA delivers lease-related financial data, summarized by fiscal period, required for compliance reporting and analysis.
- Bulk update utility propagates lease assumptions to several leases in a single step, reducing the time required to maintain lease accounting data.
- An expanded Real Estate Lease Abstract which includes key lease accounting assumptions.
- Notifications and alerts assure timely review and update of critical lease accounting assumptions and create an auditable history of notifications and approvals.
- IBM TRIRIGA delivers IASB/FASB-related data required for financial

Area of Impact	Description
	reporting. IBM TRIRIGA reports and metrics deliver forward-looking views comparing the current standard to the implications of the new standard.
Real Estate Transactions	Improvements to transaction comparison, in support of IASB/FASB Leases Topic 840, and in financial analysis.
Reporting	Reports previously written in SAP BusinessObjects Crystal Reports now are IBM TRIRIGA reports, or written in BIRT (Business Intelligence Reporting Tool), or available with IBM TRIRIGA standard print preview functionality.
Strategic Facility Planning	Added asset value estimate of lease assets to improve planning scenario comparison, in support of IASB/FASB Leases Topic 840.

IBM TRIRIGA Application Platform 3.2.1 Enhancements

The enhancements to the IBM TRIRIGA Application Platform for this release include the following items:

Area of Impact	Description
Certifications	The IBM TRIRIGA Application Platform now supports IBM HTTP Server WebSphere SSO. Please see the <i>IBM TRIRIGA Support Matrix</i> for a complete list.
Globalization	In addition to US English, Brazilian Portuguese, French, Italian, and Spanish, IBM TRIRIGA 10.2 applications now have language packs available in Czech, Dutch, German, Hungarian, Japanese, Norwegian, Polish, Russian, Simplified Chinese, Swedish, and Traditional Chinese. The language pack tool ties into standard IBM globalization processes.

IBM TRIRIGA CAD Integrator 2011 Release 2 Enhancements

The enhancements to the IBM TRIRIGA CAD Integrator for this release include the following items:

Area of Impact	Description
64-Bit Operating Systems	IBM TRIRIGA CAD Integrator supports 64-bit operating systems.
General	The number of hierarchy levels displayed in CAD Integrator is now configurable from the options dialog. (Tri-18992)
Multi-Byte Character Sets	IBM TRIRIGA CAD Integrator for AutoCAD supports multi-byte character sets.

Important Installation and Upgrade Information

Please review the *IBM TRIRIGA Application Platform 3 Installation and Implementation Guide* for this release before installing. Note the following in particular:

- Stage all upgrades in a test environment and review them thoroughly before you upgrade any production environment.
- Perform a database backup before upgrading any environment.
- The user that performs an installation must have write or create access to the installation root directory.
- When you perform a platform upgrade, make sure there are no application servers running or other active connections to the database. If there are connections to the database other than the installer, the installer may fail.
- After platform new install or upgrade and before starting the application server, make sure your licenses are in the `\config\licenses` folder. All product licenses you own must be in the `\config\licenses` folder. All application servers that point to your database must have the same license set. For information about the two types of IBM TRIRIGA license files, see “IBM TRIRIGA License Files” in the *IBM TRIRIGA Application Platform 3 Installation and Implementation Guide*. If on WebSphere, create valid resource URLs for all licenses before starting the application server. Find more details in the *IBM TRIRIGA Application Platform 3 Installation and Implementation Guide*.
- After you perform a platform upgrade, only start one application server. Do not bring up any other application servers until the upgrade to the first one is complete. Often upgrades are completed during the initial startup of an application server and there may be conflicts if two application servers are started in parallel.



Note - If your database was created from a version of IBM TRIRIGA Application Platform prior to 3.1, you can use scripts that IBM TRIRIGA provides to remove unused columns from the `IBS_SPEC` and `IBS_SPEC_ASSIGNMENTS` tables in the IBM TRIRIGA database. These tables are the two largest and most used tables in the IBM TRIRIGA system. Removing unused columns from these tables could improve performance and reduce storage space requirements. An IBM TRIRIGA system functions properly without applying this upgrade. The *IBM TRIRIGA Application Platform 3.1 Post Upgrade Maintenance Specification* outlines the steps to be performed and contains scripts to be copied and used to remove the unused columns.

The following sections outline the upgrade steps for a selection of upgrade scenarios. In addition to the above, perform the steps appropriate for your company’s upgrade scenarios and according to your company’s upgrade practices. These steps are not intended to substitute for your company’s testing and validation procedures.

- [Upgrade](#) from IBM TRIRIGA 10.x/IBM TRIRIGA Application Platform 3.x → 10.2.0.3/3.2.1.3
- [Upgrade](#) from IBM TRIRIGA 10.x/IBM TRIRIGA Application Platform 3.x → 3.2.1.3 (platform only)
- [Upgrade](#) from TRIRIGA 9/prior to TRIRIGA Application Platform 3.0 → 10.2.0.3/3.2.1.3
- [Upgrade](#) from prior to IBM TRIRIGA 10.0/TRIRIGA Application Platform 3.x → 3.2.1.3 (platform only)

Upgrade from IBM TRIRIGA 10.x/IBM TRIRIGA Application Platform 3.x → 10.2.0.3/3.2.1.3

If you are upgrading from IBM TRIRIGA 10.x and IBM TRIRIGA Application Platform 3.x, it is critical to complete the upgrade to IBM TRIRIGA 10.2.0.3 and IBM TRIRIGA Application Platform 3.2.1.3 in the following sequence. Perform the following steps in addition to the above and to your company's upgrade practices. These steps are not intended to substitute for your company's testing and validation procedures.

Only follow this sequence when upgrading to IBM TRIRIGA 10.2.0.3 and IBM TRIRIGA Application Platform 3.2.1.3 from IBM TRIRIGA 10.x and IBM TRIRIGA Application Platform 3.x:

Additional Steps for Installations Upgrading from IBM TRIRIGA 10.x and IBM TRIRIGA Application Platform 3.x → 10.2.0.3 and 3.2.1.3

- Step 1** Upgrade the platform to IBM TRIRIGA Application Platform 3.2.1.3. Follow the *IBM TRIRIGA Application Platform 3 Installation and Implementation Guide* to run the installer.
- Step 2** Start the server and allow the server startup processes to run.
- Step 3** If your system is on IBM TRIRIGA 10.0, perform the [steps required](#) to upgrade to the IBM TRIRIGA 10.1 application.
- Step 4** Restart the application server.
- Step 5** If your system is on IBM TRIRIGA 10.1, perform the [steps required](#) to upgrade to the IBM TRIRIGA 10.2.0.3 application.

Upgrade from IBM TRIRIGA 10.x/IBM TRIRIGA Application Platform 3.x → 3.2.1.3 (Platform Only)

If you are upgrading an IBM TRIRIGA 10.x environment, it is critical to complete the upgrade to IBM TRIRIGA Application Platform 3.2.1.3 in the following sequence. Perform the following steps in addition to the above and to your company's upgrade practices. These steps are not intended to substitute for your company's testing and validation procedures.

Only follow this sequence when upgrading an IBM TRIRIGA 10.x environment to IBM TRIRIGA Application Platform 3.2.1.3 from IBM TRIRIGA Application Platform 3.x:

Additional Steps for Installations Upgrading an IBM TRIRIGA 10.x Environment Platform Only from IBM TRIRIGA Application Platform 3.x → 3.2.1.3

- Step 1** Upgrade the platform to IBM TRIRIGA Application Platform 3.2.1.3. Follow the *IBM TRIRIGA Application Platform 3 Installation and Implementation Guide* to run the installer.
- Step 1** Start the server and allow the server startup processes to run.

Upgrade from TRIRIGA 9/Prior to TRIRIGA Application Platform 3.0 → 10.2.0.3/3.2.1.3

If you are upgrading from TRIRIGA 9 and a platform release prior to TRIRIGA Application Platform 3.0, it is critical to complete the upgrade to IBM TRIRIGA 10.2.0.3 and IBM TRIRIGA Application Platform 3.2.1.3 in the following sequence. In order to upgrade your target system to IBM TRIRIGA Application Platform 3.2.1.3, the target system must be on TRIRIGA Application Platform 2.5.0 or later.

Perform the following steps in addition to the above and to your company's upgrade practices. These steps are not intended to substitute for your company's testing and validation procedures.

Only follow this sequence when upgrading to IBM TRIRIGA 10.2.0.3 and IBM TRIRIGA Application Platform 3.2.1.3 from TRIRIGA 9 and a platform release prior to TRIRIGA Application Platform 3.0:

Additional Steps for Installations Upgrading from TRIRIGA 9 and a Platform Release Prior to TRIRIGA Application Platform 3.0 → 10.2.0.3 and 3.2.1.3

- Step 1** Shut down the application server.
- Step 2** Upgrade the platform to IBM TRIRIGA Application Platform 3.2.1.3. Follow the *IBM TRIRIGA Application Platform 3 Installation and Implementation Guide* to run the installer. Do not start the application server.
- Step 3** Set the `BYPASS_PORTAL_MENU_UPGRADE` property in `TRIRIGAWEB.properties` to `Y`, which will bypass the portal and menu upgrades that typically run with an upgrade to IBM TRIRIGA Application Platform 3.2.1.3. Your system receives the portal and menu upgrades when you import the IBM TRIRIGA 10.1 cumulative object migration package (which you will do in Step 7). Review and revise the other properties files as appropriate for your implementation. See the *IBM TRIRIGA Application Platform 3 Installation and Implementation Guide* for more information.
- Step 4** Start the server and allow the server startup processes to run.
- Step 5** Starting with TRIRIGA 10.0, IBM TRIRIGA applications place standard actions, such as Copy, Apply Template, and Delete, under a More action in the form. Upgrading customers can apply this change to previous forms that were not updated or changed by new functionality. To do this you must run a SQL script against your database. Run this script AFTER the latest platform upgrade but BEFORE importing the TRIRIGA 10.1 object migration package. The SQL files are located in your install folder under `\userfiles\upgrades`. Use either file `STATE_ACTION_updates_oracle.sql` or file `STATE_ACTION_updates_mssqlserver.sql`. (Tri-29957)
- Step 6** Perform the [steps required](#) to upgrade to the IBM TRIRIGA 10.1 application.
- Step 7** Restart the application server.
- Step 8** Perform the [steps required](#) to upgrade to the IBM TRIRIGA 10.2.0.3 application.

Upgrade from Prior to TRIRIGA 10.0/ TRIRIGA Application Platform 3.0 → 3.2.1.3 (Platform Only)

If you are upgrading from releases prior to TRIRIGA 10.0 and TRIRIGA Application Platform 3.0, it is critical to complete the platform upgrade to IBM TRIRIGA Application Platform 3.2.1.3 in the following sequence. In order to upgrade your target system to IBM TRIRIGA Application Platform 3.2.1.3, the target system must be on TRIRIGA Application Platform 2.5.0 or later.

Perform the following steps in addition to the above and to your company's upgrade practices. These steps are not intended to substitute for your company's testing and validation procedures.

Only follow this sequence when upgrading a pre-TRIRIGA 10.0 environment to IBM TRIRIGA Application Platform 3.2.1.3 from releases prior to TRIRIGA Application Platform 3.0:

Additional Steps for Installations Upgrading Platform Only from Releases Prior to TRIRIGA Application Platform 3.0 → 3.2.1.3

- Step 1** Shut down the application server.
- Step 2** Upgrade the platform to IBM TRIRIGA Application Platform 3.2.1.3. Follow the *IBM TRIRIGA Application Platform 3 Installation and Implementation Guide* to run the installer. Do not start the application server.
- Step 3** Set the `BYPASS_PORTAL_MENU_UPGRADE` property in `TRIRIGAWEB.properties` to `N`, which allows the portal and menu upgrades that typically run with an upgrade to IBM TRIRIGA Application Platform 3.2.1.3. Review and revise the other properties files as appropriate for your implementation. See the *IBM TRIRIGA Application Platform 3 Installation and Implementation Guide* for more information.
- Step 4** Start the server and allow the server startup processes to run.
- Step 5** TRIRIGA 9 customers need to import the object migration package that contains the form and workflow changes for the new navigation and portals. This file is located in the install directory under `\userfiles\upgrades\Portal BO Upgrade.zip`. See the *IBM TRIRIGA Application Platform 3 Object Migration User Guide* for information about importing object migration packages.

IBM TRIRIGA 10.2

This chapter details important information, known limitations, and changes to IBM TRIRIGA.

Important Information

Important information concerning IBM TRIRIGA for this release includes the following items:

Area of Impact	Description
ENERGY STAR	<p>ENERGY STAR only made the following energy spaces eligible for 1-100 score:</p> <ul style="list-style-type: none">▪ Bank Branch▪ Courthouse▪ Data Center▪ Distribution Center▪ Financial Office▪ Hospital (General Medical & Surgical)▪ Hotel▪ K-12 School▪ Medical Office▪ Non-Refrigerated Warehouse▪ Office▪ Refrigerated Warehouse▪ Residence Hall/Dormitory▪ Retail Store▪ Senior Care Community▪ Supermarket/Grocery Store▪ Wastewater Treatment Plant▪ Wholesale Club/Supercenter▪ Worship Facility <p>For more information, see http://www.energystar.gov/ia/business/evaluate_performance/List_of_86_Functions.pdf?95ef-4a93</p>
ENERGY STAR	<p>Follow these steps if you receive the following certificate error when you attempt to communicate with ENERGY STAR: ERROR: sun.security.validator.ValidatorException: PKIX path building failed: sun.security.provider.certpath.SunCertPathBuilderException</p>

Area of Impact	Description
	<p>: unable to find valid certification path to requested target</p> <ol style="list-style-type: none"> 1. Download the ENERGY STAR certificate from a web browser or from the ENERGY STAR site and name it <code>energyStar.cer</code>. 2. Find the Java home directory <ul style="list-style-type: none"> on Linux: <code>run echo \$JAVA_HOME\$</code> on Windows: <code>run echo %JAVA_HOME%</code> 3. Either copy the <code>energyStar.cer</code> file to the <code>JAVA_HOME/jre/lib/security</code> directory or reference the <code>cacerts</code> file in that directory when you run the following command: <ul style="list-style-type: none"> From <code>sudo</code> on Linux: <pre>sudo keytool -import -keystore cacerts -file energyStar.cer</pre> From IBM TRIRIGA Administrator Console on Windows: <pre>keytool -import -keystore cacerts -file energyStar.cer</pre> 4. You can verify with the following command: <pre>keytool -list -keystore cacerts</pre>

Real Estate Abstract	The Lease ID of a Lease Abstract record should be unique.
----------------------	---

Real Estate Lease	Users may experience extended processing times when using the Bulk Create Review Assumptions Request across a large number of leases. To process more efficiently, instead of selecting all of the leases at one time for bulk update, select a few at a time. (Tri-36007)
-------------------	--

Known Limitations

Known limitations concerning IBM TRIRIGA for this release include the following items:

Area of Impact	Description
Checklist Manager	To retire a Checklist Category record or Checklist Item record from a Checklist when the Retire action is not visible, first select Save to reveal the Retire action, then select Retire. (Tri-17643, Tri-17645)
Language Packs	Some list values might not display translated values. If you find a list with values that require translation, use the Label Manager to export the list values for translation, then import back into the system.
Real Estate Lease	<p>In real estate lease payment schedules:</p> <ul style="list-style-type: none"> ▪ When the total is not evenly divisible by the frequency, rounding causes the sum of the payment line items (PLI) to be greater than the total. For

Area of Impact	Description
	<p>example, if the frequency is semi-annual and the annual amount is \$1,000.47, two PLIs are created in the amount of \$500.24. This value is rounded up from \$500.235. When you add up the PLIs, the total is \$1,000.48, which is one cent greater than the annual amount.</p> <ul style="list-style-type: none"> ▪ When the frequency is weekly or bi-weekly, the number of PLIs created is based on the number of weeks in the calendar for that year. For example, 2012 has 52 weeks and 2 days, which results in 53 PLIs, each with a weekly payment based on 52 weeks. When you add up the PLIs for that year, the amount is too large by one payment because of the 53rd PLI representing the extra two days. The same result occurs when the frequency is bi-weekly and there are more than 52 weeks in the calendar for that year, because the calculation is based on 26 payments. ▪ The values displayed in the Cost / Unit (Year) column and in the Cost per Unit field have two decimal places; however, the values stored in the database have six decimal places. The database value with six decimal places is used to calculate the value of the Period Amount field and the Annual Amount field. For example, the formula is Annual Amount = Cost / Unit (Year) * Contract Rentable. A manual calculation using the two-decimal precision displayed is \$137.81 Cost / Unit (Year) * 20000 Contract Rentable = \$2,756,200.00 Annual Amount. However, when the six-decimal precision stored in the database is used, the calculated Annual Amount displayed is \$2,756,250.00. This is a difference of \$50.00. ▪ The Charge Amount Basis values of per Area (Annually) and of per Area (Monthly) do not apply to an asset lease. Because the Generate Payment Schedule wizard is a standard form, it is possible for a user to select these values; however, the value of the Expected Cash Amount field on the generated Payment Schedule form will be zero.

IBM TRIRIGA 10.2.0.3 Changes

You upgrade your version of IBM TRIRIGA for the 10.2.0.3 release by fix pack. The IBM TRIRIGA 10.2.0.3 fix pack updates your 10.2.x system to support the 2013 upgrade to the US EPA ENERGY STAR Portfolio Manager Data Exchange Web Services. You must be on IBM TRIRIGA 10.2.x and on IBM TRIRIGA Application Platform 3.3.x before you apply this fix pack. The TRIRIGA_10_2_0_3_EnergyStarRESTChanges.zip file also includes the updates in IBM TRIRIGA 10.2.0.1 and IBM TRIRIGA 10.2.0.2. For more information, see the 10.2.0-TIV-PDM-FP0003-README.

To download the 10.2.0.3 fix pack, go to Fix Central at the following link: <http://www.ibm.com/support/fixcentral>. In the Find product tab, select **IBM TRIRIGA Portfolio Data Manager, 10.2.0.3**, and your platform. Download the 10.2.0-TIV-PDM-FP0003-README and the 10.2.0-TIV-PDM-FP0003 package. Follow the directions in the readme file.

The changes to IBM TRIRIGA for this release include the following items:

Area of Change	Description
ENERGY STAR	Added fields to multiple objects to support the new ENERGY STAR API as described in the 10.2.0.3 readme.
ENERGY STAR	Added new Energy Space Type classification records to match the building types now supported by ENERGY STAR.
ENERGY STAR Migration	<p>You use this form to migrate existing Energy Space types that are no longer supported by ENERGY STAR to new Energy Space types. The tool also copies the attribute values from an old Energy Space to a new Energy Space when the attribute names are identical.</p> <p>The object migration package includes a default migration record. Before using the default migration record, you must update it to match your portfolio. For more information about the changes that ENERGY STAR made to Energy Space types, see the following ENERGY STAR site: http://portfoliomanager.supportportal.com/link/portal/23002/23010/Article/34128/How-will-space-types-for-buildings-currently-in-Portfolio-Manager-migrate-to-the-new-property-uses-in-the-upgraded-Portfolio-Manager</p> <p>The object migration package also includes new navigation items named Master Detail - Energy Star Migration and Master Detail - Energy Star Migration - Sustainability. You must manually add them into your navigation collection.</p>
ENERGY STAR Settings	<p>The Energy Star classification record is no longer used to store account credentials.</p> <p>The Energy Star Settings form is used to store account credentials for the Portfolio Manager Live Environment and the Portfolio Manager Test Environment. You can create new test accounts for the ENERGY STAR Test Environment with the Create Account action.</p>
ENERGY STAR Validation Tool	Updated the validation tool to work with the new ENERGY STAR schema. If navigation is not available in your environment, manually add the navigation items from the object migration package to your navigation collection. The new navigation items are named Master Detail - Energy Star Migration and Master Detail - Energy Star Migration - Sustainability.
TRIRIGA Integration Object	Updated the TRIRIGA Integration Object to communicate with the ENERGY STAR REST API.

IBM TRIRIGA 10.2.0.2 Changes

You upgrade your version of IBM TRIRIGA for the 10.2.0.2 release by fix pack. You must be on IBM TRIRIGA 10.2.0.1 before you apply this fix pack. To download the 10.2.0.2 fix pack, go to Fix Central at the following link: <http://www.ibm.com/support/fixcentral>. In the Find product tab, select **IBM TRIRIGA Portfolio Data Manager, 10.2.0.2**, and your platform. Download the 10.2.0-TIV-PDM-FP0002-README and the 10.2.0-TIV-PDM-FP0002 package. Follow the directions in the readme file.

The changes to IBM TRIRIGA for this release include the following items:

Area of Change	Description
Real Estate Lease	In the Payment Amount Calculations section of the Payment Terms form, the label "Monthly Amount" has been changed to "Period Amount". (Tri-73383)
Real Estate Lease	In the Payment Parameters section of the Generate Payment Schedule form, the label "First Payment Amount" has been changed to "Amount Per Basis". (Tri-72940)
Real Estate Lease	In the Payment Schedule section of the Generate Payment Schedule form, the label "Monthly Amount" has been changed to "Period Amount". (Tri-72931)
Real Estate Lease	Resolved rounding inconsistencies between the calculation of the Annual Amount in the Payment Schedule query section and the Cost/Unit (Year) * Contract Rentable calculation. The value displayed in the form has two decimal places; however, the value stored in the database has six decimal places. The database value with six decimal places is used for calculations. (Tri-76750)
Real Estate Lease	When a lease is amended, the value for Charge Amount Basis is now correctly mapped to the History record of the payment schedule. (Tri-78043)
Real Estate Payment Schedules	Frequency payment calculations now include the option to calculate with a frequency of 13 periods per year. (Tri-72937)
Real Estate Payment Schedules	When the Frequency is Monthly and the Charge Amount Basis is per Area (Monthly) or per Area (Annually), then the Cost per Unit field on the Payment Schedule form is now calculated correctly. When the Frequency is other than Monthly and the Charge Amount Basis field is other than per Month, then the calculations of Period Amount, Annual Amount, and Cost / Unit (Year) in the Payment Schedule query section of the Generate Payment Schedule wizard are now calculated correctly. (Tri-72929-IV34303)

IBM TRIRIGA 10.2.0.1 Changes

You upgrade your version of IBM TRIRIGA for the 10.2.0.1 release by fix pack. You must be on IBM TRIRIGA 10.2 before you apply this fix pack. To download the 10.2.0.1 fix pack, go to Fix Central at the following link: <http://www.ibm.com/support/fixcentral>. In the Find product tab, select **IBM TRIRIGA Portfolio Data Manager, 10.2.0.1**, and your platform. Download the 10.2.0-TIV-PDM-FP0001-README and the 10.2.0-TIV-PDM-FP0001 package. Follow the directions in the readme file.

The changes to IBM TRIRIGA for this release include the following items:

Area of Change	Description
Contracts > Leases	Corrected a timing issue between asynchronous and synchronous workflows in the calculation of partial payments for payment schedules. (Tri-40622)

Area of Change	Description
Contracts > Leases	Corrected an issue that caused a duplicate payment line item to be generated for the first month of a lease. (Tri-40623)
Contracts > Leases	Corrected the calculation of the Straight Line/Month field on the RE Lease form by dividing by the accounting period instead of by the number of PLIs. (Tri-40655)
Contracts > Leases	On the Payment Schedule form, when a user selects One-time payment ("Other" in Frequency), only "Frequency", "First Payment Date" and "First Payment Amount" are shown in the Payment Parameters section, with the Frequency field as the first field in the section. Also, the Payment Schedule section is now hidden. Relabeled "Covenant Frequency" to "Frequency" on the Generate Payment Schedule and Payment Schedule forms. (Tri-40649)
Contracts > Leases	Resolved an issue that caused an extra payment line item to be created. (Tri-40624)
Contracts > Leases	Resolved several issues that caused missing payment line items when the payment schedules started or ended in the middle of the month. (Tri-40647)
Contracts > Leases	When a lease is revised and the proportionate share is modified in the clause, the change is now carried into the Scheduled OPEX/CAM reconciliation. Added the Refresh OPEX/CAM Details action on the Premise Location section of the RE Lease and on the Services Included section of the Lease Clause to update the proportionate share value on Lease Clause and Reconciliations. (Tri-40657)
Contracts > Leases	When the Lease Treatment is Operating, the value of the Operating Portion of Capital Lease field is not used in the Straight Line Rent Liability calculation. (Tri-40645)
Contracts > Leases	When the Payment is Straight Line/Month, accrual values on PLIs when the expected accrual value should be 0 are now calculated correctly. (Tri-40660)
Contracts > Leases	When the sum of the Straight Line Rent Capital Portion PLIs does not add up to the necessary total due to rounding, the additional PLI that is created is now created with the correct value. (Tri-40646)
Contracts > Leases	Within the same month and year, regardless of payment types, the PLIs are split proportionally. (Tri-40641)
Generate Payment Schedules	Resolved an issue that caused a partial year schedule created by modifying the end date of the last scheduled year to stay in processing status. (Tri-40650)
Real Estate Lease	For Straight Line/Month calculation and Expected Accrual, the status of a Payment Schedule that is added from the Generate Payment Schedule form changes to Scheduled when the RE Lease is activated. (Tri-40651)

IBM TRIRIGA 10.2 Changes

The changes to IBM TRIRIGA for this release include the following items:

Area of Change	Description
Administration	Added Brazilian Real to Currency and corrected the formatting of Euro. (Tri-35426)
Administration	The dependent record Comment on the Notes & Documents tab becomes read only when the parent Checklist Template record is retired. After unretiring the parent Checklist Template record, the dependent record Comment becomes editable again. (Tri-35555)
Contracts	A new City created from the Lease Abstract now includes the Country Code from the parent. (Tri-20776)
Contracts	Guarantor, landlord, management, and tenant section of Lease Abstract now allows you to create new organizations more than once and the data will map correctly. (Tri-33334)
Contracts	Parking Clause Parking Space Item now is populated from the template. (Tri-21027)
Contracts	Payment Line Items for Partial First Payment and Partial Last Payment now have the Processed Mode field value set to Process Payments to be more easily found later on the Process Payments form. (Tri-30196)
Contracts	Resolved a number of inconsistencies in the Percentage Rent Setup sub-tabs on the Lease Abstract, Lease Abstract Template, and Lease Clause Template forms. (Tri-21133)
Contracts	Resolved a number of issues around populating data from Lease Clause Template to Co-Tenancy tab of Lease Abstract form. (Tri-21023)
Contracts	Resolved an issue with Clause Reconciliations/Payment Audits where the Start Date for each period was not being properly calculated when the First Billing End Date was set to the end of the month. (Tri-35306)
Contracts	The Abstracted By and Abstracted Date fields on Lease Abstract are the user creating the Lease Abstract and the current date instead of coming from Lease Abstract Template. (Tri-21400)
Contracts	The area UOM and Currency UOM now correctly map from Lease Abstract Template to Lease Abstract when a user applies a template. (Tri-21248)
Contracts	The Expiration Date (Current) field on an RE Lease is mapped with the Renewal Expiration Date field on the Option form only when the Renewal Option is exercised and is not mapped when the Renewal Option is expired, terminated, or voided. (Tri-32555)
Contracts > Set Up	Removed Show More Filters for Accounting Service Codes query from the Service Code Reference field lookup. (Tri-34223)

Area of Change	Description
Contracts > Set Up	The Report tab no longer shows on the Lease Clause Template. (Tri-34523)
Data Utilities Manager	ID field now is auto-populated during the Create action on the OSCRE XML Import and OSCRE XML Export forms. (Tri-21265)
Environmental Data	The default in Application Settings for Energy Reporting UOM now is kilowatt-hours to be consistent with the UOM on other environmental metric reports. Energy Use Intensity metrics now are available under System Reports for reporting in both kilowatt-hours and megajoules. (Tri-32879)
Inventory	Resolved a number of issues with Inventory processes, such as purchasing and receiving, where Currency and Quantity UOMs were not being handled correctly within the Inventory Transaction Items.
Inventory	The following fields now allow 1000 characters: <ul style="list-style-type: none"> ▪ Comments on the Inventory Quick Fill Ticket form (Tri-35349) ▪ Description on the Purchase Order form (Tri-35345) ▪ Description on the Purchase Requisition form (Tri-35344)
Inventory	The system no longer displays an Attention message on the Inventory Count Work Task form when the Planned Start Date and Planned End Date are the same when the user selects Create Draft. The user needs to enter Planned Working Days or Planned Working Hours in order to change the value of Planned End Date. (Tri-21652)
Inventory > Order/Receive	Inventory Item action now is visible on the Line Items tab of Purchase Requisition and Purchase Order forms. (Tri-35141)
Inventory > Order/Receive	On the Receiving form, the Comment field now allows 1000 characters. (Tri-35346)
Inventory > Order/Receive	The Clear action on the Blanket Purchase Order section of the Purchase Order form now works properly. (Tri-35356)
Lease Abstract	When the user saves a Responsibility Service and activates the Lease Abstract, the system updates the Service and correctly displays the responsibility service under clauses in the real estate lease. (Tri-35825)
Lease Abstract Template	The Generate Payment Schedule for Percentage Rent Schedule, CAM, Tax Schedule, and Insurance Schedule now maps the Currency UOM and Area UOM from the parent record. (Tri-35541)
Lease Clause Template	In the Units section, the Area Units field now is editable. (Tri-35179)
Lease Clause Template	Removed the Number of Key Co-Tenants field and the Number of Listed Co-Tenants field from the Lease Clause Template. (Tri-33088)
Lease Clause	The validation while saving the Lease Clause was changed to update

Area of Change	Description
Template	dependent currencies according to the Currency set on the Units section. (Tri-35177)
Lease Options	The system now calculates the correct Renewal Term when the user selects the Create Option action in the Option Wizard. (Tri-34007)
Leases	Added the Is Notice Required Before Monetary Grace Period Begins? Field to the Lease Clause Template form. (Tri-33551)
Leases	Added the Lease Abstracts - Upload Review sub-query as a Related Report to all sub-queries under Lease Abstract. (Tri-34829)
Leases	After using the Apply Template action on a Lease Abstract, the record that was added has its radio button selected by default. This affected the following clauses: Default Clause, Security Deposit Clause, Alterations Clause, Other Rights Clause, Allowance Clause, OPEX/CAM Clause, Insurance Clause, Co-Tenancy Clause, Green Lease Provision Clause, Responsibilities Clause, and Other Clauses. (Tri-33552)
Leases	All fields in the Default Clause section on the Default tab of a Lease Abstract now are mapped with the fields from the Lease Abstract Template. (Tri-33556)
Leases	Changed the Options query on the Clauses, Options & Terms tab of a Lease to display the Option Text field from the Option instead of the Comment. (Tri-32924)
Leases	Corrected the present value calculation in the FASB 13 section. It was incorrectly multiplied by a factor of 1.01. (Tri-33343)
Leases	Document Type entered on the General tab of a Lease Abstract now populates the Option form launched using the Option Wizard. (Tri-32740)
Leases	Late Fee section now shows on Payment Schedule form when the Late Fees? field is checked on Generate Payment Schedule form. (Tri-32738)
Leases	Lease Abstract Attention section for the date validation now shows on all tabs. (Tri-33903)
Leases	Lease Abstract Tenant data is populated in the Paid By section of the Payment Schedule's Payment Instruction that is created from the Monthly Schedule Wizard and by the one created from the Add action. (Tri-32795)
Leases	Lease Clause Find Template query no longer displays the Status field runtime filter under Show More Filters on the Real Estate because the status is always Template. (Tri-35488)
Leases	Navigation Item labels for RE Invoices and Asset Lease Invoices in the Leases Related Links section have been changed to "My Work In Progress RE Invoices" and "My Work In Progress Asset Invoices". The queries are filtered based on the logged in user and only bring records in Draft, Review In Progress, or Revision In Progress status. (Tri-34535)

Area of Change	Description
Leases	On a new Payment Schedule, the Related Documents query section does not contain data. (Tri-32857)
Leases	On a RE Lease, Actual Payment section, The AR Receipt Delta field on the Payment Line Item now shows the same currency as defined on the General tab of the RE Lease. (Tri-35288)
Leases	Removed the Abstract Notifications and Lease Notifications sections from the Lease Abstract Template and Real Estate Lease Template forms. Notifications can be added manually from the main lease record and functionality exists to generate a Lease Notification on activate. (Tri-35519)
Leases	Removed the Copy action from the Comment form from the Notes & Documents tab of a Payment Line item. (Tri-32876)
Leases	Removed the Copy and Delete actions from the Data Attribute Value form. Records can be added to the Lease Abstract using the section Find action. (Tri-34851)
Leases	Removed the links on the Services Included and Services Excluded sections on a Lease Abstract OPEX/CAM tab. Updated the appearance of the Payment Audit Item - Services Excluded form and made it read-only. (Tri-32989)
Leases	Responsibility Services section no longer shows a document reference. The document reference is present in the clause itself. Also removed Document Reference and Clause Summary from the Responsibility Services section as this information is part of the clause itself. (Tri-35742)
Leases	The Accounting Type and Post Type defaults are no longer cleared when the user clicks the Create Schedule(s) action on the Generate Payment Schedule form using the Generate Payment Schedules wizard. (Tri-32807)
Leases	The Amendment History section on the Real Estate Lease History tab now shows the revision data for History records. (Tri-35589)
Leases	The Calculate Amounts action now is available on the Payment Schedule section of the Generate Payment Schedule record for the TRIRIGA RE Contract Manager Group. (Tri-32106)
Leases	The Copy action on the Real Estate Lease Amendment record now resets the Revision number to zero and removes the data in History tab from the original record. (Tri-32651)
Leases	The Covenant Frequency Type field in a Payment Schedule record now maps when the user clicks Copy on a Real Estate Lease record. (Tri-35730)
Leases	The currency UOM for the Amount Due field now shows on both Lease Abstract and Lease Abstract Template forms, Rent tab. (Tri-32809)
Leases	The Document Type field on Lease Abstract Template now propagates to the corresponding fields on Lease Clauses, Payment Schedules, Monthly Schedule Wizard, and Option Wizard when the field does not have a value. (Tri-32775)

Area of Change	Description
Leases	The Find action on the Clause - Payment Schedule section now filters out Void payment schedules. (Tri-34438)
Leases	The Find action on the Clause section of the Payment Schedule form was filtering for Clauses associated to the current Real Estate Lease as the current record. This query has been superseded with a new query that includes Clauses associated to either Asset Lease or Real Estate Lease as the current record. (Tri-34689)
Leases	The Lease Abstract Copy action now copies the Document Type onto each Clause tab. (Tri-32739)
Leases	<p>The Lease Abstract Security Deposit Clause Cash Cost Code and Expense Cost Code Find section action returns the associated child cost codes filtered based on the Accounting Cost Center entered on the Accounting tab.</p> <p>The Real Estate Security Deposit Lease Clause Cash Cost Code and Expense Cost Code Find section action returns the associated child cost codes filtered based on the cost code entered in the Location Cost Code section on the General tab. (Tri-34409)</p>
Leases	The Monthly Schedule Wizard action was relabeled to Generate Payment Schedules throughout the application because it now supports recurring frequencies in addition to monthly. (Tri-34631)
Leases	The Options Wizard on the Options tab of a contract (real estate or asset lease) now properly increments the option number and properly calculates the renewal expiration date, effective date, and notice dates for each option created. (Tri-35073)
Leases	The Real Estate Leases section no longer shows on the Lease Abstract Template. (Tri-35673)
Leases	The Sales Exclusion amount now is factored into the Net Sales Less Tax Exclusion calculated value under the Percentage Rent Detail Summary section on the Percentage Rent Reporting form. (Tri-35553)
Leases	The Soft Open Date and Grand Open Date fields now are visible and populated in the Critical Dates section of a Lease Abstract record created by applying the Lease Abstract Template when Primary Use = Retail. (Tri-32774)
Leases	The Umbrella Excess, Workers Comp, Auto Liability, and Other Coverage currency fields on the Insurance tab of the Lease Abstract form now retain their saved values based on the selected Insurance Clause. (Tri-32873)
Leases	Updated the Percentage Rent section in the Lease Abstract Offline Form. (Tri-32986)
Leases	When a lease clause template is applied the correct mappings are populated in the Lease Abstract and the Lease Clause. (Tri-21030)
Leases	When adding premise locations to either a Real Estate Contract or a Lease

Area of Change	Description
	Abstract, by default the Included in Rent check box is checked. (Tri-33381)
Locations	Added an Add action to the Notes & Documents tab of the Checklist Category form. (Tri-32840)
Locations	Removed the Copy action from the Comment form on the Checklist. (Tri-32839, Tri-32841)
Maintenance > Set Up	On a request class Service Plan, if you change the Assignment Rule from Create Task to Do Nothing and create a request for that request class, the system no longer creates a task or a project for that request. (Tri-32891)
Manage Inventory	The Primary Work Location now is populated on a Material Order Task. (Tri-33739)
Manage Requests	Changed the Comment form to not allow a copy of the Comment record itself. A Comment is unique to the record to which it belongs. (Tri-34425)
My Requests	Users will receive two emails for notifications when an action (for example, an Approval) is required, one email for the Notification and the other for the Approval Action. (Tri-35279)
Opportunities	Cost Sigma Total Defects replaces Costs Defects Total Defects field label on the following forms: triRETransactionScenario, triREProjectAcquisition, triREProjectCurrentTerms, triREProjectDisposition, triREProjectLease, and triREProjectSubLease. (Tri-34266)
Payables	The Bill To section for RE Invoice no longer shows when Invoice Type is Accounts Payable (AP). (Tri-33457)
Permits	After a Permit Application record with Response Required checked goes through its internal review process and the user clicks Complete, the record goes to the To person of the record. After that person opens the Please Respond link from the Action Items and clicks the Respond action on the record, the record correctly displays a Response Log for the user to send a response to the submitter of the record. (Tri-12220)
Portals	Restored the links to queries for Receipts and Returns in the Related Links section on the Contracts landing page in a project container context. (Tri-33446)
Projects > Progress	On the Closeout Report Change Orders tab, the Change Order section now shows completed change orders for the active project and the Change Order Outstanding section now shows change orders for the active project other than completed, retired, and history. (Tri-35744)
Projects > Set Up	The default Capital Project Template record now has the word DEFAULT in ID and Name to identify it as a delivered record. (Tri-32790)
Real Estate Project	On CTQ tabs, removed the ID column from the display and changed the sort to CTQ Need. ID on CTQ records is an auto-generated number and not helpful to the user. (Tri-34758)

Area of Change	Description
Real Estate Project	Removed the Delete action from Critical To Quality (CTQ) Item record when opened from Transaction Plan. Use the Remove action on the section to remove CTQ Items. (Tri-35243)
Real Estate Project	Removed the prefix Fa from the Proposed Space Commitment (Imperial) label on Active RE Projects query column. (Tri-34308)
Real Estate Project	The new Executive Summary tab and some of the new information added to the Financial Terms tab replace information previously visible on the Financial Summary tab. (Tri-33880)
Receivables	Changed the form label for Process Tenant Invoices to Generate Lease Invoices to match the label of the corresponding Navigation Item. (Tri-34709)
Requests	The system no longer creates extraneous tasks when a user resubmits a request after adding an asset with a warranty. (Tri-32324)
Security Groups	In the TRIRIGA RE Contract Manager group, the following actions are now visible on RE Lease records: <ul style="list-style-type: none"> ▪ Add and Remove on the Other Dates section. (Tri-35537) ▪ Remove on the External Lease Documents section. (Tri-35754) ▪ Find and Remove on the Client Attributes tab. (Tri-35678)
Security Groups	The following Security Groups now have access to all section actions on the Move Services form in the Request module: <ul style="list-style-type: none"> ▪ TRIRIGA Application Administrator ▪ TRIRIGA Business Unit Manager ▪ TRIRIGA Contact Center Agent ▪ TRIRIGA Contact Center Agent - Retail ▪ TRIRIGA Contact Center Manager ▪ TRIRIGA Contact Center Manager - Retail ▪ TRIRIGA Facilities Executive - Retail ▪ TRIRIGA Move Manager ▪ TRIRIGA Move Planner ▪ TRIRIGA Request Central ▪ TRIRIGA Space Manager ▪ TRIRIGA Space Planner (Tri-35705)
Space	Adding a person in the People - Secondary Location section on the Allocation tab and then removing that person no longer causes the system to loop. (Tri-33012)
Specification	Changed the following forms to show Manufacturer name instead of full path: <ul style="list-style-type: none"> ▪ Building Equipment Spec ▪ Consumable Spec ▪ Core Spec ▪ Fixture Spec

Area of Change	Description
	<ul style="list-style-type: none"> ▪ Food Service Equipment Spec ▪ Furniture Spec ▪ Key Spec ▪ Lock Spec ▪ Office Equipment Spec ▪ Point of Sale Equipment Spec ▪ Security Equipment Spec ▪ Software License Spec ▪ Space Standard Spec (Manufacture section is invisible) ▪ Specification (Base form) ▪ Technology Spec ▪ Telephone Spec ▪ Tools and Equipment Test Spec ▪ Vehicle Spec ▪ Work Area Outlet Spec (Tri-30200)
System Setup	Removed the following classifications: Coldmatic, Clow Canada, Aldelo, Acroprint, Baltimore Aircoil, Bunn, and Trane. (Tri-33983)
Task Manager	<p>To get Inventory Item records to show up in the Equipment query section on the Condition Assessment Work Task:</p> <ol style="list-style-type: none"> 1. Select the Primary Work Location on the General Tab of the Facility Assessment Work Task form. This Primary Work Location must be an Inventory location that has items added. 2. On the Facility Assessment Work Task form Resource tab, click the Find action on the Equipment section. (Tri-26724)
Templates	After applying a Lease Abstract Template, the quantity of records in each query section should be the same as the quantity on the Lease Abstract Template regardless of how many times a user applies the template. (Tri-21063)
Templates	Manual Approvers on a Lease Abstract Template Notifications tab now are created and associated to the Lease Abstract record after applying the Lease Abstract Template. (Tri-21058)
Templates	Parking Space records on Parking tab now are created and associated to a Lease Abstract after applying a Lease Abstract Template record. (Tri-21061)
Templates	Payment Schedules on the Insurance Schedules sub-tab of the Lease Abstract Template now are copied over to the Lease Abstract. (Tri-21068)
Templates	Resolved a number of issues with mapping data from Lease Abstract Template Rent tab to Lease Abstract. (Tri-21059)
Templates	The data from the template selected from the Find Template action on the Lease Abstract now is correctly copied to the lease clause. (Tri-20999)
Templates	The system now generates the Lease Template ID value on Lease Abstract Template, similar to Lease Abstract. The Lease Name field is no longer

Area of Change	Description
	copied from Lease Abstract Template to Lease Abstract. (Tri-20770)

IBM TRIRIGA Application Platform 3.2.1

This chapter details changes important information, known limitations, and property file changes for the IBM TRIRIGA Application Platform.


Important Information

Important information concerning the IBM TRIRIGA Application Platform for this release includes the following items:

Area of Impact	Description
Branding	If you are upgrading from a version of IBM TRIRIGA Application Platform prior to 3.0, due to significant changes in the portal, IBM TRIRIGA does not map previous branding styles to the new style classes in the Style Manager. The upgrade to IBM TRIRIGA Application Platform 3.x preserves header details, but you need to rebrand the rest of the page. Find the Style Manager in the Utilities portal section or by selecting Tools > Administration. The Style Manager is described in the <i>IBM TRIRIGA Application Platform 3 User Experience User Guide</i> .
Duplicate Portal Sections	IBM TRIRIGA Application Platform 3.x does not allow duplicate portal section names. The upgrade process from IBM TRIRIGA Application Platform versions prior to 3.0 updates the first portal section found and logs information about subsequent portal sections with the same name in the <code>portalupgrade.log</code> located in the install root.
Duplicate Portals	IBM TRIRIGA Application Platform 3.x does not allow duplicate portal names. The upgrade process from IBM TRIRIGA Application Platform versions prior to 3.0 renames any portal with a duplicate name by attaching a sequence number to the end of the duplicated name. For example, the second portal named "Employee Portal" becomes "Employee Portal1" and the third becomes "Employee Portal2".
Excel	The Office Web Components (OWC) library that IBM TRIRIGA uses for Excel sections is not available in Office 2007. You can use the link on the following Microsoft website to download the OWC library and install it as a separate component: http://blogs.office.com/b/microsoft-excel/archive/2006/07/17/office-web-components-roadmap.aspx . If you upgrade Office 2003 or Office 2000 to Office 2007, the OWC library is available. If you have a clean install of Office 2007, the library is missing and you need to install it for Excel sections to work.
Graphics	<ul style="list-style-type: none">Exporting very large graphics could require configuring the web server with a larger maximum post size. (Tri-28770)Exporting from a Graphics section does not work properly on WebSphere with SSL. By default, WebSphere adds additional caching headers to responses that already contain cache control, which causes issues in IE when trying to stream application data like PDF files back to the client.

Area of Impact	Description
	<p>This can be disabled via a custom property for your application server in the WebSphere Integrated Solutions Console. Note that this change merely prevents WebSphere from automatically adding headers; you are then left with the cache control headers that IBM TRIRIGA intends to be there. Please reference the following guide: http://publib.boulder.ibm.com/infocenter/wasinfo/v6r1/index.jsp?topic=%2Fcom.ibm.websphere.express.doc%2Finfo%2Fexp%2Fae%2Frun_chain_httpcustom.html</p> <p>Following the steps in that guide, add a custom property named <code>CookiesConfigureNoCache</code> with a value of <code>False</code> to your secure HTTP transport channels.</p> <p>Once completed, restart the server, and the Export will work properly. (Tri-34664)</p>
Internet Explorer	<ul style="list-style-type: none"> ▪ Although Microsoft has improved memory leaks in Internet Explorer (IE) 7 and IE 8, users should close all browser windows from time to time. ▪ IE 8 includes a "Preserve Favorites website data" option. This property is selected (on) by default in IE 8. This property retains temporary Internet files from sites that are in your Favorites even if you have set the flag to delete all temporary files. Clear this property. If left on and a user's IBM TRIRIGA server is in their Favorites, the cache is not cleared, which can cause js, jsp, and style sheet issues after an upgrade. If you want to clear your cache, uncheck the "Preserve Favorites website data" option. ▪ Query sections do not display correctly if the browser zoom is set to a custom value that is less than 100%. The default browser zoom is 100%. (Tri-33883) ▪ Some builder tools do not load or work correctly if the browser zoom is set to a custom value that is less than 100%. The default browser zoom is 100%. (Tri-28866) ▪ When a user exports a PDF file from a graphics section, Internet Explorer may display a security message in the browser window. To prevent this security message from displaying, add the IBM TRIRIGA application URL to IE's Internet Security list of Trusted Sites zone. In the Security Settings for Trusted Sites Zone, set the Download permission to not display the warning message. (Tri-31024) ▪ When a user running IE 8 with "Smart Screen Filters" turned ON tries to load more than 1000 records on a page, IE 8 verifies the response it is getting back and crashes, since the response is too large. To avoid this circumstance, turn off the "Smart Screen Filters". For more information refer to http://www.microsoft.com/security/filters/smartscreen.aspx (Tri-27698)
Microsoft SQL Server	<ul style="list-style-type: none"> ▪ For an MSSQL database, running the MBCS conversion process during upgrade to 3.2 can take several hours. The duration depends on many factors, such as hardware, database size, and disk speed. (Tri-32051)

Area of Impact	Description
	<ul style="list-style-type: none"> ▪ If the upgrade of an MSSQL database with Multi-Byte Character Support (MBCS) enabled fails and you see in the <code>ant.log</code> that there were invalid views during the NVarchar Conversion process, use the following recovery steps: <ol style="list-style-type: none"> 1. Review the <code>ant.log</code> to identify the invalid views. 2. Run the upgrade with MBCS Support turned off. 3. Log into IBM TRIRIGA and republish the business objects identified in the <code>ant.log</code> as having invalid views. 4. Run upgrade with MBCS Support turned on. (Tri-32284) ▪ If you are upgrading an MSSQL database with MBCS enabled, prior to the upgrade to 3.2 you must (1) back up your database, and (2) republish the <code>triRealEstateContract</code> business object in the <code>triContract</code> module (10.x, 9.x) or the <code>Real Estate Lease</code> business object in the <code>Contract</code> module (8.x). This is to avoid a possible MSSQL error on the backing table of that business object during the upgrade. The error that might occur if the business object is not republished is as follows: "Cannot create a row of size xxxx which is greater than the allowable maximum row size of 8060". If this error occurs, the table is not configured correctly for MBCS. In this case, restore the database and contact the IBM TRIRIGA team at IBM Software Support for additional instructions. (Tri-31926) ▪ If you have custom tables in the IBM TRIRIGA table space and you are upgrading to MBCS on Microsoft SQL Server, these tables may not convert correctly depending on the table definition (for example, if <code>IDENTITY_INSERT</code> is set). These tables need to be either deleted or converted manually prior to running the 3.2 MBCS upgrade. <p>To convert these tables manually, alter all <code>varchar</code> fields to be <code>nvarchar</code> and alter their collation to the collation used during the conversion during install. For example, for field <code>xxx</code> in table <code>yyy</code> when your desired collation is <code>Japanese_CS_AS</code> and the <code>SIZE</code> of the <code>varchar</code> field is 100, the script is as follows: <code>alter table yyy alter column xxx nvarchar(100) collate Japanese_CS_AS</code> (Tri-32702)</p> ▪ Microsoft SQL Server has a row size limit of 8060 bytes. On MSS2005 and MSS2008, there is an overflow mechanism that transparently enables a row to logically exceed 8060 bytes while physically overflowing some of the extra data into a separate part of the database. More information about the 8060 byte limit can be found at the following link: http://msdn2.microsoft.com/en-us/library/ms186981.aspx.
Object Migration	Some object types in object migration packages from a pre-3.0 environment will not import into a 3.x environment. The object types that will not import into 3.x are as follows: managers; pre-3.0 portals; pre-3.0 scorecards; and shortcut list, quick add list, query list, and action items query portal sections.

Area of Impact	Description
Oracle	<ul style="list-style-type: none"> ▪ If you are installing a new Oracle database and wish to support multi-byte characters, make sure your instance character set is UTF-8 or UTF-16 and your <code>NLS_LENGTH_SEMANTICS</code> is set to <code>CHAR</code>, not <code>BYTE</code>. Follow the instructions in the <i>IBM TRIRIGA Application Platform 3 Installation and Implementation User Guide</i> to ensure your platform will support multi-byte characters properly. (Tri-32998) ▪ If you are upgrading an Oracle database and are considering changing the instance character set to UTF-8 or UTF-16 to support multi-byte characters, it is imperative that you carefully follow the instructions in the <i>IBM TRIRIGA Application Platform 3 Installation and Implementation User Guide</i>. Failure to do so could compromise your data.
Security Exception	<p>You can find instructions for managing issues with applets such as Gantt where the applet console reports a security exception under CVE-2010-3560 at http://www.oracle.com/technetwork/java/javase/6u22releasenotes-176121.html.</p>
Software Licenses	<p>Starting with IBM TRIRIGA Application Platform 3.2, IBM TRIRIGA distributes software licenses in a separate license file for each product. The license file names are in the format <code>LICENSE_IBM_TRIRIGA_{productname}.properties</code> (for example, <code>LICENSE_IBM_TRIRIGA_Application_Platform.properties</code>).</p> <p>You may continue to use your existing <code>TRIRIGALICENSE.properties</code> file if you have one. You do not need to replace your <code>TRIRIGALICENSE.properties</code> file until it expires or your software requirements change.</p> <p>At the end of an install, your <code>config\licenses</code> directory should contain either your <code>LICENSE_IBM_TRIRIGA_{productname}.properties</code> files or your <code>TRIRIGALICENSE.properties</code> file, but not both.</p> <p>After you start using the <code>LICENSE_IBM_TRIRIGA_{productname}.properties</code> files, do not revert to the <code>TRIRIGALICENSE.properties</code> file. (Tri-33449)</p> <div style="background-color: #ffe6e6; padding: 10px; border: 1px solid #ccc;">  <p>Attention - All application servers accessing a database must have the same license set. The only exception is the license for IBM TRIRIGA Connector for Business Applications since it may be licensed only on a limited number of servers and should only be placed on that number of servers to stay in compliance.</p> </div>
System Configuration	<p>IBM TRIRIGA Application Platform 3.2 can consume more resources than previous releases. Monitor database connections and memory consumption, increasing values if needed.</p>
WebLogic	<p>When running an upgrade to 3.2 for WebLogic, the previously saved settings from the old directory will be set in the installer. (Tri-28939)</p>
WebSphere	<p>When using WebSphere, an additional MIME Type is required for certain</p>

Area of Impact	Description
	pages in the application to display properly. You must add a new extension, <code>phtml</code> , as <code>text/html</code> . Please refer to the <i>IBM TRIRIGA Application Platform 3 Installation and Implementation Guide</i> for step-by-step instructions. (Tri-29060)

Known Limitations

Known limitations concerning the IBM TRIRIGA Application Platform for this release include the following items:

Area of Impact	Description
BIRT	If you experience display issues when exporting a report to PDF, you might need to download and install the correct font package from adobe.com . (Tri-40917)
Document Management	Double-byte characters do not display when previewing Unicode or UTF-8 txt files. You must download the file to see the content. (Tri-36352)
Extract, Transform, and Load (ETL)	<ul style="list-style-type: none"> The as-shipped ETL scripts are written against the standard IBM TRIRIGA database and its database columns, but after an upgrade, a small number of your implementation's database column names that were auto-generated during the upgrade may be slightly different and not match the names in the released ETL scripts. The majority of the column names will match, but a small number may not. Review your ETL scripts and change them as needed to ensure the column names match the generated column names in your database. (Tri-27625, Tri-27705) If you use any of the IBM TRIRIGA Workplace Performance Management products, any of the IBM TRIRIGA Real Estate Environmental Sustainability products, the OSCRE features, or ETL Job Items, the name of your IBM TRIRIGA installation directory and the location of the application server cannot contain spaces. These applications use Pentaho to run ETLs. Pentaho is a third-party application that has a startup issue when the name of the directory where the application resides has a space in it. For more information, see the Pentaho issue database for PDI 2689 at http://jira.pentaho.com/browse/PDI-2689.
Gantt	The following Gantt project tasks move backward in time when the Gantt section is saved and reloaded: Asset reservation, location reservation, and vehicle reservation. (Tri-36757)
Globalization	<p>The following areas are not fully globalized and translated:</p> <ul style="list-style-type: none"> Application builder pages are not fully translated, including Form Builder, Data Modeler, and Workflow Builder. Moreover, these builder pages only support English data when used. Pages to which only an Admin user has access may not be fully translated. This includes Application Setup pages, Administrator Console,

Area of Impact	Description
	<p>and data utilities.</p> <ul style="list-style-type: none"> ▪ The following instance data is partially translated: Classification, UOM types and values, user messages, notification content, and lists. Other instance data is not translated. ▪ Translated filter values must be entered exactly into the report runtime filter input fields so the report engine can properly filter the results (equivalent to an Equals filter), even when the filter is set to Contains. ▪ My Calendar page does not adhere to locale date format. ▪ Line breaks in some messages may not be applied to corresponding translated messages. ▪ File statuses and document statuses of Document record are not translated. ▪ Some flyover labels are not translated in metric report pages. ▪ Document Manager is not fully translated like ROOT, Object Attachments, and some messages. ▪ Some Business Object fields in display columns of Report Manager may not be translatable. ▪ CAD Integrator is not translatable. ▪ Brava! Viewer labels are not translatable. ▪ GIS section labels are not translatable. ▪ Excel sheet templates for offline forms are not translatable. ▪ Installer labels and messages are not translatable. ▪ Document paths in BIRT reports are not translatable.
IBM TRIRIGA SVG Viewer	The IBM TRIRIGA SVG Viewer is not well suited for design-time work and not supported for working on very large workflows. Use the Adobe SVG Viewer Plug-In for design-time work. (Tri-20731)
Language Packs	Some messages may not import correctly the first time you import a language pack. If you find an <code>org.springframework.dao.DuplicateKeyException</code> error in your <code>LabelManager.log</code> , import the language pack a second time. Review the log after the second import to confirm that it does not contain error messages.

IBM TRIRIGA Application Platform 3.2.1.3 Changes

The changes to the IBM TRIRIGA Application Platform for this release include the following items:

Area of Change	Description
BIRT	BIRT reports with required parameters now render correctly in portal sections. To enable this, you check the Show Query Header portal section property in the Portal Builder. (Tri-40293)
Currency	The currency conversion page now shows the value of the currency conversion rate field in standard decimal format instead of in exponential number format. (Tri-40760)
Document Manager	The referenced files of a document in a publication are also published when the Include Referenced Documents option of the publication is checked. (Tri-40933)
Globalization	Resolved an issue that prevented non-US English users from exporting query results. (Tri-40914)
Metric Reports	Resolved an issue that caused ETLs in some cases to not run in a WebSphere environment. (Tri-40557)
Record Runtime	Locators within smart sections now can be enabled. (Tri-39667)

IBM TRIRIGA Application Platform 3.2.1.3 Properties Files

The properties files did not change with this release.

IBM TRIRIGA Application Platform 3.2.1.2 Changes

The changes to the IBM TRIRIGA Application Platform for this release include the following items:

Area of Change	Description
Graphics	Resolved an issue that caused a Drawing Not Found error to be displayed to users viewing a drawing that uses XRef drawings in a graphics section at the same time that another drawing that uses one or more of the same XRef drawings is published. (Tri-37621)
Query and Reporting	Field names with special characters such as /, \, and % now can be added to the display columns in the Report Manager. (Tri-37634)
Record Runtime	Multi-line text fields mapped into notifications no longer cause email clients to display the raw HTML in the email message. (Tri-37767)
Scheduling Engine	Monthly scheduled events with no end dates and using the first, second,

Area of Change	Description
	third, and fourth options are no longer skipping future months when regenerating new events. (Tri-37851)

IBM TRIRIGA Application Platform 3.2.1.2 Properties Files

The properties files did not change with this release.

IBM TRIRIGA Application Platform 3.2.1.1 Changes

The changes to the IBM TRIRIGA Application Platform for this release include the following items:

Area of Change	Description
License and Security	An IBM TRIRIGA Capital Projects Manager license now includes <code>triProductsAndServices</code> . With this change, users can create purchase orders containing products and services. (Tri-37037)
Query and Reporting	Resolved a query issue where system field filters that used the <code>\$\$TODAY%%</code> special value caused corrupt SQL generation when used in conjunction with filter grouping parentheses. (Tri-37058)
Projects	A newly created project is now available on the Company Project selector when the user sets security to allow access to the project for single application server configuration. (Tri-37275)
Security	Resolved a cross-site scripting vulnerability that allowed HTML execution within a text field displayed in a portal section report. (Tri-36972)

IBM TRIRIGA Application Platform 3.2.1.1 Properties Files

This section describes changes to the IBM TRIRIGA Application Platform properties files. See the *IBM TRIRIGA Application Platform 3 Installation and Implementation Guide* for more information.

Area of Change	Description
PDF_EXPORT_GRAPHIC_STROKE_WIDTH_OVERRIDE	<p>This property in <code>TRIRIGAWEB.properties</code> overrides all stroke (line) widths when a graphics section is exported to PDF. On some larger scale drawings, the width of lines can appear to be very thick when zoomed into the PDF at a high magnification. This property can be used to resolve that issue by setting the stroke width to a very small constant value such as <code>0.0000001</code>.</p> <p>The default value for <code>PDF_EXPORT_GRAPHIC_STROKE_WIDTH_OVERRIDE</code> is blank. When left blank, the exported PDF uses the stroke width defined per</p>

Area of Change	Description
	line in the graphic, which is derived from the line widths as published from CAD. (Tri-37140)

IBM TRIRIGA Application Platform 3.2.1 Changes

The changes to the IBM TRIRIGA Application Platform for this release include the following items:

Area of Change	Description
Application Server	When a user signs out, all SSO methods now display a prompt to close the tab or window. (Tri-36225)
Brava!	Oracle changed the URL to auto install the Java plugin. If your workstation does not have the JRE installed, the JRE will prompt to download and will not show an Internet Explorer security warning. (Tri-36616)
Brava!	The IBM TRIRIGA Application Platform now supports Brava! 5.5j. (Tri-36740, Tri-36753, Tri-36754)
Financial Tokens	A Financial Token definition has a new property that enables the token to be defined with a currency of <code>SYSTEM_BASE</code> . When this currency is selected, the Financial Rollup system treats the token as having the currency that is specified in the <code>BaseCurrency</code> property in <code>TRIRIGAWEB.properties</code> . (Tri-36809)
Financial Tokens	Resolved an issue causing the source unit of measure on a Financial Rollup to have no affect on the rollup behavior. (Tri-36201)
Formula Engine	Resolved an Extended Formula performance issue that caused the Extended Formula Agent to look at an association from one record (left-hand side) to another (right-hand side) and potentially recalculate formulas on many of the records associated to the right-hand record. With this fix, the Extended Formula Agent only calculates the single record that is affected by the change, the one on the left-hand side of the association. (Tri-36789)
Graphics	The formatting of the total value in the legend of a graphics section is based on the definition of the field in the business object. (Tri-36508)
Graphics	The report title and column headers now are translated in the legend of a graphics section. (Tri-36452, Tri-36453)
Installer	Language and <code>triLanguage</code> system lists in the <code>triCommon</code> module now include all languages with as-delivered language packs. (Tri-36627)
Label Manager	Due to limitations such as date and number format issues when exporting or importing TXT and CSV file types, language export and import now only supports XLIFF and XML file types. (Tri-35134)
Label Manager	The message displayed when importing a ZIP of XLIFF (*.zip) file type now refers the user to the correct log file. (Tri-36166)

Area of Change	Description
List Manager	UOM types now are translated. (Tri-36477)
My Reports	An error message is no longer shown when a non-English user attempts to filter on a query field that is not on the General section of the business object. (Tri-36214)
My Reports	Multi-byte characters now display correctly in action buttons in the Report Manager. (Tri-36678)
Object Migration	Exporting an object migration package with a filename that contains multi-byte characters no longer creates a filename that is different from the object migration package name and no longer displays boxes instead of the correct multi-byte characters. (Tri-33047, Tri-33048)
Portal	Query report with a group by field now renders correctly when displayed in a portal. (Tri-36619)
Portal	Resolved an issue that prevented the vertical scroll bar from working correctly when a query header was not visible. (Tri-36554)
Query and Reporting	Entering a backslash into the static filters in the Report Manager no longer causes an error. (Tri-36860)
Query and Reporting	Exponential numbers now export correctly for Excel export and html export. (Tri-36349)
Query and Reporting	Query runtime filters now display in the number format from the user's My Profile. (Tri-36525)
Query and Reporting	Resolved a reporting issue where Pie, Pyramid, and Doughnut charts were not displaying when calendar period grouping was set. (Tri-36620)
Query and Reporting	Resolved an issue with tooltips not translating in report values. (Tri-36732)
Query and Reporting	Selecting the option to restrict a display to 500 or 1000 records in a query for a custom action no longer causes the query to lock up. (Tri-36531)
Query and Reporting	The date in an exported report header now is in the date format from the user's My Profile instead of always in the TRIRIGA default format. (Tri-36685)
Record Runtime	The selected value of a date field no longer moves back one day after the on-change workflow is fired. (Tri-36665)
Record Runtime	When a business object's Audit Access field is checked in the Data Modeler, a Read entry displays in the Audit Actions tab for the records. (Tri-36387)
UOM	The display of a Financial Rollup field on a TRIRIGA form now is formatted based on the value's currency. (Tri-33915)

Area of Change	Description
UOM	UOM data now can be entered in the user preferred format after the Display Mask, UOM Decimal, and UOM Delimiter properties have been set on the UOM Value record. (Tri-36286)
Workflow Builder	Email sent via the User Action workflow task no longer contains record names or usernames prepended with a slash. (Tri-36896)

IBM TRIRIGA Application Platform 3.2.1 Properties Files

This section describes changes to the IBM TRIRIGA Application Platform properties files. See the *IBM TRIRIGA Application Platform 3 Installation and Implementation Guide* for more information.

Area of Change	Description
BRAVA_VERSION	Updated the default value for BRAVA_VERSION to 5.5.

IBM TRIRIGA Application Platform 3.2 Changes

The changes to the IBM TRIRIGA Application Platform for this release include the following items:

Area of Change	Description
Administrator Console	In the Users Manager, improved how the Licensed Products popup displays names containing single and double quotes. (Tri-31033)
Administrator Console	In the Workflow Agent Manager, if the value for Run Workflows Triggered By Scheduled Events As has been changed, it now can be reverted to Default User. (Tri-33273)
Administrator Console	Renamed the header of the Database Query Tool from "Admin Console User Manager" to "Database Query Tool". (Tri-32648)
Administrator Console	The Admin Summary and the System Manager now display the correct value for the Database Server. (Tri-32010)
Agents	Optimized the <code>sp_Check_Associations</code> stored procedure to provide slight performance improvements. (Tri-33108)
Agents	Resolved an issue causing deadlocks in the Workflow agent when multiple agents were run against the same database under heavy load. (Tri-28990)
Agents	Resolved an issue that allowed two workflow agents to be started on the same server at the same time. (Tri-34892)
Application Server	Changed end of session cleanup to avoid a deadlock condition in WebSphere.

Area of Change	Description
	(Tri-33447)
Application Server	Increased the default idle timeout for JBoss from 15 minutes to 60. This will even out connection spikes on very heavily used systems. (Tri-33020)
Application Server	JBoss has been removed from the installer. You must download JBoss and install it prior to installing IBM TRIRIGA. Please see the <i>IBM TRIRIGA Support Matrix</i> and the <i>IBM TRIRIGA Application Platform 3 Installation and Implementation Guide</i> . (Tri-33139)
Application Server	JBoss startup no longer displays a <code>com.arjuna</code> warning message in the server log that this transaction is unsafe and should not be relied upon. (Tri-33066)
Application Server	Lease Abstracts sent through OSCRE XML with multi-byte characters now send properly. (Tri-35648)
Application Server	Logging should no longer sporadically fail to roll the daily logs. The log4j library has been updated to version 1.2.16, release 4/6/2010. (Tri-31891)
Application Server	Resolved an issue where a user that signed in then out then back in was not shown the normal home portal. (Tri-35640)
Application Server	SSO authentication information now is shared with the Gantt section. When a user selects Open Gantt In New Window, the user must enter login credentials one time to save. (Tri-23438)
Application Server	The installer now saves the production mode setting in <code>TRIRIGAWEB.properties</code> . (Tri-33605)
Application Server	The platform now creates a Java Heap Dump file if JBoss encounters an out of heap space situation. This heap dump file can be sent to the IBM TRIRIGA team and IBM Software Support for additional analysis. (Tri-34286)
Application Server	Updated the shipping alternate sign in page to be consistent with the standard sign in page. (Tri-35708)
Application Server	When there is an alternative sign in page specified, users are redirected to that page. (Tri-35596)
Application Server	When upgrading from version 3.2 or later, the file named <code>login_image_175x175.png</code> in the <code>[[old install directory]]/userfiles/images</code> folder will be copied into the <code>[[new install directory]]/userfiles/images</code> folder. This means that a custom login page image will be kept after upgrades. (Tri-35607)
Association Manager	Loading the Association Manager and selecting a query to sort the results no longer causes a JavaScript error. (Tri-33642)
Brava!	IBM TRIRIGA does not provide Brava! with the installer. Complete the following steps before running the IBM TRIRIGA installer: <ul style="list-style-type: none"> Obtain <code>Brava54J.exe</code> from Brava!

Area of Change	Description
	<ul style="list-style-type: none"> ▪ Run Brava54J.exe ▪ Select Install Brava! Enterprise 5.4J ▪ Select Install Brava! Client ▪ You can use localhost as your server to extract the files. ▪ Make note of your Web Server Root's Destination folder. The Destination folder should contain an IGC folder. This is the folder you will point to from the IBM TRIRIGA installer. <p>Note: Linux users should run Brava54J.exe on a Windows computer and then copy the IGC folder to the Linux computer to finish the IBM TRIRIGA install.</p> <p>When you complete the Brava! install, start the IBM TRIRIGA install. During the IBM TRIRIGA install, check the Enable Brava box and browse to the IGC folder that contains a SupportFiles directory and brava.css. The install then verifies you have selected the correct folder. (Tri-34723)</p>
Currency	A currency field in a single smart section now displays the user's currency UOM setting when there is no record yet on that smart section. (Tri-34268)
Currency	Resolved an issue where UOM conversion was incorrectly converting multiple times when a UOM field was included in a dependent section and also mapped in a workflow. (Tri-33333)
Data Modeler	A user now can now tab through the elements of the Object Browser. (Tri-31902)
Data Modeler	By default, a new business object has the Stand Alone property selected. (Tri-31747)
Data Modeler	Changed the escape HTML code to treat nulls as blanks. (Tri-35282)
Data Modeler	The Sub Attribute Type property of a System Read Only field is no longer editable after the field is saved and created. This property is now a required property when creating a System Read Only field. For more details of this change, see <i>Application Building for the IBM TRIRIGA Application Platform 3</i> . (Tri-33769)
Data Modeler	Where Used now finds Business Object fields referenced by regular and extended formulas. (Tri-33402)
Data Modeler	Where Used on a System Read Only field no longer displays false positive results for Workflow Map Target or Source. (Tri-32919)
Database	If the database is using a UTF-8 or UTF-16 character set, you must have the NLS_LENGTH_SEMANTICS set for CHAR. The Administrator Console and startup now show if there is an inconsistency. If this is not resolved, IBM TRIRIGA will not handle multi-byte characters correctly and data maybe lost.

Area of Change	Description
	(Tri-33000, Tri-33458)
DataConnect	Resolved a DataConnect issue that caused a StackOverFlowError during extremely large data imports (10,000+ rows of staged data). The affected data imports involved smart sections that were flagged for DataConnect, yet no data was staged to actually be imported into those sections. The issue only surfaced on extremely large data imports. (Tri-35125)
Document Manager	Document names containing multi-byte characters now can be downloaded. (Tri-33346)
Document Manager	Entering a long description or comment when uploading a new document no longer causes an error to display to the user. (Tri-33279)
Document Manager	Folders with multi-byte characters in their name now can be used when uploading a folder and data. (Tri-35380)
Document Manager	In a MBCS environment, uploading a file with MBCS characters in file name to a binary field and then downloading the file no longer causes random characters in the file name. (Tri-32992)
Document Manager	The Document Manager now applies the time zone and date time format when displaying the Revision Date field. (Tri-33118)
Document Manager	The document number of a newly uploaded document no longer displays question marks instead of double-byte characters. (Tri-32666)
Document Manager	Uploading a new document that is a text file with HTML content no longer displays the HTML. (Tri-33281)
Email Notifications	Users should no longer receive duplicate notifications through email. (Tri-32996)
Extended Formulas	Extended formula fields now are recalculated when triggered from a Modify Records workflow task with Formulas set to Recalculate As Needed. (Tri-34224)
Form Builder	Date, Date Time, and Boolean fields are no longer editable in the Form Wizard. (Tri-6037)
Form Builder	Made the scrollbars of a vertical smart section visible. (Tri-33485)
Form Builder	Removed the Show Title Bar and Title Bar Color properties from multi tab sections. (Tri-28296)
Form Builder	Smart section find actions now only show the Erase URL icon if the user has modified the default URL to point to a query. (Tri-21443)
Form Builder	The Active property displays consistently for all field types when add a field to a section. (Tri-31803)
Form Builder	The field list now loads correctly when a user clicks a section in the layout

Area of Change	Description
	window. (Tri-28162)
Form Builder	The Start Row property of a section's properties no longer accepts negative numbers. Instead, it uses the absolute value of the number entered. (Tri-24146)
Form Builder	Updated the Group By section type drop-down options to be consistent between new and edit operations. (Tri-31437)
Form Builder	Vertical table sections, table sections, and group by sections now have the correct width when placed next to another section. (Tri-32543)
Form Builder	When a user changes the default form for a business object, the system displays a message indicating changing the default form might cause an issue in displaying workflow task properties. (Tri-32988)
Form Builder	When using Display Type = Radio in the Form Builder for a dynamic list, values now appear in the form and the values are translated. (Tri-33310)
Form Builder	Where Used on a form now finds reports with System Add or System Delete that may use the form. This helps when determining how a specific record can be created by a user. (Tri-33487)
Gantt	Exporting a translated capital project to Microsoft Project when the file name contains multi-byte characters in the file name no longer results in garbage characters in the file name. (Tri-32014)
Gantt	Gantt charts now add a triangle pattern to the critical path. (Tri-32956)
Gantt	The Info Window now displays the start and end date in the format defined in the user's profile. (Tri-33124)
Gantt	The labels for Planned Duration, Type and Status are now translated for the tasks in the Gantt. (Tri-33542)
Graphics	A graphics section legend now displays FALSE if the Boolean field value is FALSE. (Tri-33076)
Graphics	Auto-positioned labels now use the same middle center attachment point as labels that have been derived from CAD Integrator. (Tri-31410)
Graphics	Drawings published from MicroStation now correctly display as attached and allow the record details to be displayed from the graphic. (Tri-32887)
Graphics	Enhanced web graphics to support display of attribute blocks (constant and variable). (Tri-30350)
Graphics	Reduced the number of cached drawings and drawing layers to reduce memory usage associated with viewing floor plans. (Tri-33704)
Graphics	Reference files in MicroStation were not always properly published from CAD Integrator to the platform. This has been resolved. (Tri-34400)

Area of Change	Description
Graphics	Resolved an issue that caused drawings to lose XRef information after the drawings were reprocessed. (Tri-33395)
Graphics	Resolved an issue where text labels resembling scientific notation, such as 5E30, would cause an error when exporting a graphic to PDF. (Tri-32632)
Graphics	Selecting an attached item in a graphics section now deselects the previous selection of the single-select linked report section if the new selection is in the second page of the report section. (Tri-34796)
Graphics	Some doors were flipped in MicroStation graphics. MicroStation appears to use a negative Z normal to accomplish a 180 degree rotation rather than specifying a rotation angle. The rendering code handles that for regular entities but was not handling that for a Block Insert. Added a shear/flip transform in the case of a non-positive unit Z normal. (Tri-32912)
Graphics	The window title, table columns and button labels now are translatable. (Tri-33378)
IBM TRIRIGA Connector for Energy Star Benchmarking	The following jars that were part of the Resource File objects associated to the ENERGY STAR Custom ClassLoader no longer ship with IBM TRIRIGA. If you choose to use the IBM TRIRIGA Connector for Energy Star Benchmarking, download the jars from the Automated Benchmarking System website provided by the EPA for ENERGY STAR ratings (http://estar8.energystar.gov/ESES/ABS20/ClientTools/ClientTool_Test.zip) and add them as Resource File objects to the ENERGY STAR ClassLoader within IBM TRIRIGA. This only affects new installations. CR189437_810sp4.jar, jaxrpc-api.jar, saaj-api.jar, saaj-impl.jar, saaj-ri.jar, webserviceclient+ssl.jar, webservices.jar, wsdl4j-1.6.2.jar, xercesImpl.jar, xml-apis.jar. (Tri-33567)
IBM TRIRIGA Connector for Offline Forms	Translated classification, list, and UOM values show up translated in forms used by IBM TRIRIGA Connector for Offline Forms. (Tri-32818)
Installer	Clicking certain links after the session has timed out no longer results in MID errors. (Tri-35658)
Installer	IBM TRIRIGA 10.2 implementations will find language packs for Spanish, French, Italian, and Brazilian Portuguese in the LanguagePacks folder in /userfiles. (Tri-33820)
Installer	Improved the user message related to ExternalNotificationUpgrade that displays when upgrading to 3.2. (Tri-32817)
Installer	In order to render your Crystal reports you need to replace the rowset.jar and TRIRIGACrystalClient.jar in the \win32_x86\dataAccess\connectionServer\beans directory of your Crystal Application Server. You will find the correct jar files in the /tools/Crystal directory of your IBM TRIRIGA install. (Tri-33650)

Area of Change	Description
Installer	Removed code related to WebLogic data warehouse, since it is no longer supported. (Tri-33677)
Installer	Server startup now correctly processes CAD drawings with text that is set to a height of 0. (Tri-33835)
Installer	The installer can be used on systems with non-US English regional setting. (Tri-34349)
Installer	The installer deletes temporary install directories when an install is cancelled and after a successful install. (Tri-26092)
Installer	The installer includes a script to remove Query List portal sections as they are no longer supported. (Tri-32878)
Installer	The installer no longer creates a Crystal Reports environment. Please see the <i>IBM TRIRIGA Application Platform 3 Connector for SAP BusinessObjects User Guide</i> for information about setting up Crystal manually. (Tri-33430)
Installer	The installer now copies <code>CustomLogCategories.xml</code> from the old install to the new install, since it is a file that is manually changed. (Tri-20540)
Installer	Updated the default min and max Java memory settings values to 1024. Upgrades use the previous Java memory settings. (Tri-33958, Tri-34720)
Installer	When you do an upgrade, the most current language packs are copied into the upgrade directory. If you customized your previous language packs, you need to update the new language packs manually after the upgrade.
Label Manager	Applying a language pack to the application automatically creates user message records for that language, which provides translated application user messages. (Tri-25867)
Label Manager	<p>CSV export file for classification labels, form labels, form tooltips, form tabs, list values, list messages, and system messages with line entry containing one or more commas in the column value now imports with no errors with the following limitations:</p> <ul style="list-style-type: none"> ▪ There must not be a dangling double quote inside the column value. For example, "SYSTEMLABEL", "Main Page Labels", "1", "Main Page Labels", "1", "Dangling"quote", "", "Field", "", "Translation,". The double quotes must be escaped with another double quote like "Dangling""quote". ▪ Comma must not be between double quotes inside a column value. For example, "Comma", inside"double quotes". <p>(Tri-34478, Tri-34482, Tri-34483, Tri-34495)</p>
Label Manager	For exports, the system was using an internal name as the label when the label was blank. Now blank labels are exported as blank. (Tri-33218)

Area of Change	Description
Label Manager	Previously IBM TRIRIGA only supported translations using export/import files from a single environment. Now, translatable labels in forms will update across multiple environments if they have the same name but different IDs (added through OM packages), provided that the application/platform version is the same. This does not include customizations. (Tri-33774)
Label Manager	Resized the Language Editor Manager table so that the labels remain visible even when all fields are not visible. (Tri-32899)
Label Manager	Resolved an issue where the Label Manager export of Form Labels would switch the label name and label value in the output file, resulting in an inaccurate base value to translate from. (Tri-33212)
License and Security	A user with an IBM TRIRIGA Workplace Reservation Manager license now has access to the Reserve functionality. (Tri-34173)
License and Security	Access checking for report actions now checks licensing before allowing the user to Add, Delete, or Update. (Tri-34009)
License and Security	After applying the 10.1 cumulative package, users should be able to sign in after first time restart. The context exception during startup should no longer appear. However, it is important to apply the 10.2.0.1 incremental package after restart to ensure licensing will work properly. (Tri-35821)
License and Security	Asset Lease is part of the IBM TRIRIGA Real Estate Manager license. (Tri-35861)
License and Security	IBM TRIRIGA Facility Management Enterprise license now has access to the portal action Create RE Action Request if the user is using a pre-3.2 license file. Users with 3.2 license files now need the IBM TRIRIGA Real Estate Manager license, as the IBM TRIRIGA Facility Management Enterprise license has been removed. (Tri-33482)
License and Security	The IBM TRIRIGA Real Estate Manager license now has access to Cost Index Values. (Tri-34044)
License and Security	The IBM TRIRIGA Request Central license now has access to My Reports. (Tri-32890)
List Manager	A dynamic list no longer has a space appended to the end of its values. (Tri-33311)
List Manager	A list value containing an apostrophe now can be selected as the default value for a list. (Tri-33216)
List Manager	After a user updates list values in a language other than US English, you must clear the Object Metadata Cache in the Administrator Console before the updated values will show up in record runtime. (Tri-33618)
List Manager	Fixed an issue where users were not able to change the list value if the previously selected value contained special characters. (Tri-32861, Tri-33078)
List Manager	Resolved an issue preventing a user from creating list values three levels deep.

Area of Change	Description
	(Tri-32897)
List Manager	Resolved an issue that made it appear that dynamic list sequences had not been saved. The sequences were saved. The 0 that the user saw was caused by an error in communication with the Web page, which has been corrected. (Tri-33316)
List Manager	The autocomplete functionality of a list field now is case-insensitive. (Tri-33488)
List Manager	The functionality of the Label List action for dynamic lists now matches the prior functionality for manual lists. (Tri-33308)
List Manager	The Manage By section now is refreshed when a new list is created. Also, it will automatically select and focus the new list so that the user can easily add list values to it. (Tri-668)
List Manager	When a record that is the source of a dynamic list is deleted, the value no longer appears in the dynamic list. (Tri-33309)
Mail	Notifications no longer strip style tags from email content. (Tri-33085)
Metric Graphs	Metric graphs no longer lose their legends on sub-groups when the Show By options are changed. (Tri-32995)
Metric Reports	Resolved issue causing the Line Vertical Grouped Bar Combo chart template to show an offset, which could result in user confusion about whether or not data actually existed for that empty region on the chart. Now the offset for this type of chart is disabled. For existing installed chart templates, manually import via Object Migration the package located at <code>userfiles/upgrades/triChartTemplate_01252011.zip</code> . (Tri-35645)
Navigation	Improved the accessibility of portal buttons and images. (Tri-32958)
Navigation	Notification Action linked records display the record name in breadcrumbs instead of the word "Record". (Tri-32821)
Navigation Builder	Reworded Navigation Item Editor error messages to refer to "form" instead of "GUI". (Tri-34178)
Notifications	External notifications no longer display a Record Information title. (Tri-35384)
Object Migration	Heartbeat thread no longer has SQL-related interrupted exceptions during an import. (Tri-34652)
Object Migration	If there is an exception during query import, the exception message will be in the object migration log. (Tri-35892)
Object Migration	Resolved an Export issue where queries referenced in form action URLs were not showing up as dependencies to the form. (Tri-27426)
Object Migration	The following system portal sections now can be imported: <code>sysActionItems</code> ,

Area of Change	Description
	<code>sysLastVisited</code> , <code>sysNotifications</code> , and <code>sysSelfService</code> . (Tri-32727)
Portal	Replaced the Performance Manager tooltips with a new implementation. The new tooltips look nearly identical to the old, minimizing the impact on users. (Tri-33110)
Portal	Resolved an issue that caused some of the content of maximized HGrid portal sections to not be visible. Now maximized HGrid portal sections utilize the full height of the content viewing area. (Tri-33240)
Portal	When a user tabs to the drop-down arrow in a portal section, the user can press the Enter key to open the popup. Pressing the Esc key closes the popup. When the popup opens, the first item inside the popup will be highlighted. If there are multiple items inside the popup, the user can use arrow up or arrow down or both keys to move between items. Pressing the Enter key activates the action for a highlighted item. (Tri-33092)
Portals	When viewed in Internet Explorer 7, the Available Sections panel of the Personalize interface now displays results. (Tri-33049)
Projects	At the Project level, when a user selects the project title a new window opens to display the project. (Tri=33258)
Query and Reporting	A report now shows sub-reports when there is a Group by set on the report. (Tri-7883)
Query and Reporting	Blank is no longer a valid option in the Module drop-down list in the Report Manager. (Tri-31635)
Query and Reporting	Made the drop-down list for Type of Report Types consistent between screens. (Tri-31464)
Query and Reporting	Resolved the issue causing some field values to not be translated in report screens. (Tri-32787)
Query and Reporting	Resolved the issue preventing the Associated Options (Associations) in a report from being translated. (Tri-32671)
Query and Reporting	Running a report now displays the time stamp in the user's profile date time format. (Tri-33125)
Query and Reporting	The Count label in Summary reports now can be translated. (Tri-32853)
Query and Reporting	The Excel export feature no longer fails if the query contains a <code>\$\$PARENT\$\$</code> token. (Tri-33029)
Query and Reporting	The formats for date and date/time fields now are taken from the user's profile. (Tri-33122)
Query and Reporting	The headers of associated queries of a hierarchical query now translate consistently. (Tri-32781)

Area of Change	Description
Query and Reporting	The program now ignores leading zeros for manually entered page numbers. (Tri-31678)
Query and Reporting	UOM managed field in a metric tabular report now is formatted based on its UOM setting. (Tri-33106)
Record Functionality	Users exporting from inside a Find action no longer see an "Are you sure you want to navigate away from this page" message. (Tri-7350)
Record Runtime	A formula field now updates when its referenced field(s) from the Live Link smart section are updated. (Tri-28128)
Record Runtime	Added support for passwords containing double-byte characters. Because the size of the database fields used to hold passwords increased to support the added length of an encrypted multi-byte character password, upgrade installations need to republish the <code>triPeople:MyProfile</code> and the <code>triPeople:triPeople</code> business objects to update the password field size. Existing passwords containing characters outside of the English alphanumeric set may need to be reset and reentered. (Tri-33034)
Record Runtime	Added translations for classification names and hierarchy paths. (Tri-33104)
Record Runtime	An asynchronous workflow with the On Process Completion property checked now only will execute if other asynchronous workflows for the primary event (the initiating event) executed. Previously, the workflow with the On Process Completion property selected would execute if any asynchronous workflows executed due to the initiating event, but not necessarily for the initiating event. (Tri-35693)
Record Runtime	Changed the value of <code>DEFAULT_TITLE</code> in <code>TRIRIGAWEB.properties</code> to "X". (Tri-33979)
Record Runtime	Changing a record's form from onchange or during a synchronous workflow from a state transition causes the display to update with the new form. (Tri-33433)
Record Runtime	Classification names and hierarchy paths now translate correctly. (Tri-32023)
Record Runtime	Dates in the Audit tab of a record now display in the date format specified in the user's My Profile. (Tri-33117)
Record Runtime	Delete confirmation message is now translatable. (Tri-34565)
Record Runtime	Dependent child lists now work correctly when the parent list is not visible on the same tab as the child list. (Tri-32744)
Record Runtime	Dependent lists that contain special characters now load and set values. (Tri-32755, Tri-33324)
Record Runtime	Dynamic list values now translate correctly. For example, the name of a Group now shows in the user's language in an Employee record. (Tri-31964,

Area of Change	Description
	Tri-25803)
Record Runtime	Fixed an issue that could cause the database transaction to time out when saving a record that is part of a large hierarchy. (Tri-35137)
Record Runtime	Fixed an issue where entering a date manually and then clicking on another tab was not saving the manually entered date and was not running the on-change workflow. (Tri-34909)
Record Runtime	Form Labels fields (<code>triFormLabelSY</code>) now are translatable in a non-editable report. (Tri-33380)
Record Runtime	If you click to add a file, you must select a file for it to be added, otherwise selecting no file will behave like a cancel operation. (Tri-31484)
Record Runtime	In translated environments, when filtering against classifications, UOMs, or list values, only the exact value will work for filters in queries. The Contains operator does not work, and if the filter is set to Contains the platform will try to use Equals. For example, if filtering by a status that is translated in Italian, the Italian value must match the translated classification value exactly. (Tri-34902)
Record Runtime	Labels now properly display special characters like apostrophe on Move Projects Schedule and Move Project Tasks. (Tri-33325)
Record Runtime	Locator fields inside an editable query now give access to the Find action when the user opens the picker window. (Tri-33207)
Record Runtime	Messages, such as notifications, that contain an apostrophe will be properly formatted and rendered regardless of the message's language. (Tri-34847)
Record Runtime	New business object and field properties in the Data Modeler enable auditing any data change regardless of how the data is modified. See the <i>Application Building for the IBM TRIRIGA Application Platform 3</i> for more information. (Tri-32880)
Record Runtime	Opening the list picker and changing the multi-tab section now closes the list picker. (Tri-32762)
Record Runtime	Query section resizing now accurately reflects the definition in the Form Builder. If the number of rows returned by the query is greater than the height defined for the query section in the Form Builder, the platform produces scrollbars so the user can scroll the results. For hierarchical queries, the number of rows refers to the top-level (check box) rows, and expanding the top-level will cause the query section height to expand accordingly. For queries with Group By/Sum, the number of rows refers to data (check box) rows, not the sum rows. A query section Height = 0 defaults to Height = 10. A query section Height = -1 (set for invalid values) defaults to Height = 10. (Tri-32512)
Record Runtime	Record Audit date format now takes into account the user's profile date time format preference. (Tri-33116)

Area of Change	Description
Record Runtime	Record creation duplicate name check now reports an error to the user when there are multiple temporary workflows containing Save Permanent Record tasks. (Tri-34813)
Record Runtime	Resolved an issue that caused some prompts in smart sections to hang indefinitely. (Tri-35190)
Record Runtime	Resolved an issue where the browser made excessive calls to /blank1.html. This had a small, but noticeable impact on page load times in slow/high latency clients. (Tri-33011)
Record Runtime	Resolved an issue where the read only display of Full Path Classifications was not being translated. (Tri-34898)
Record Runtime	Sections without headers now collapse as required after onchange workflows. (Tri-34379)
Record Runtime	Tabbing through forms now skips Gantt, stacking, and availability sections so the user can continue to tab through form content. (Tri-31900)
Record Runtime	The browser title now reflects the value in the <code>DEFAULT_TITLE</code> property in <code>TRIRIGAWEB.properties</code> after the application is restarted. (Tri-33235)
Record Runtime	The select association now is removed when a child record is closed after running a popup action on a query section in a form. (Tri-33013)
Record Runtime	The system now applies custom date formats for weekly and daily time scales. (Tri-33326)
Record Runtime	The time zone no longer displays on the datetime picker. Once the user selects a value, the result displays in the user's specified time zone. (Tri-32634)
Record Runtime	The tooltip for a color displays the color's hexadecimal value. (Tri-32949)
Record Runtime	UOM Values are now translated in queries with Sum columns set. (Tri-23794)
Record Runtime	When a Text field has a default value in the Data Modeler and the corresponding form field is set to read only, the application will translate it if the translation is available. Default values now are included in Label Manager exports to provide the capability to translate them. This primarily impacts instruction fields which are often read-only with default values set. Please note that this applies to existing records and to new records. (Tri-33369)
Reports	Resolved an issue causing reports using Group By functionality to incorrectly export data to Excel when the user clicked the Export link. (Tri-33341)
Scheduling Engine	<p>When you map a Date type field into an Event start field, the platform scheduler by default reads that field as being in the user's time zone. If you want the platform to use the system's time zone instead of the user's time zone, you need to specify that as outlined below.</p> <p>The TRIRIGA Application Platform has been enhanced to allow a time zone to</p>

Area of Change

Description

be set in the Event object so it can be used in the processing of date values. When a user inputs a date value, the platform stores it in the server's time zone. However, when the scheduler processes the date value, it assumes the date value is in the user's time zone. To resolve this issue for scenarios that require the scheduler to use the server's time zone, the scheduler now processes a date value in the time zone that is specified in the `triTimeZoneId` field of the Event object.

To take advantage of this platform change, you need to update the application to include the new `triTimeZoneId` field so the scheduler will know from which time zone to process a date field. Note that if the field is not included and a value is set, the scheduler will continue to assume the value is in the user's time zone.

The following example shows how an issue identified in the TRIRIGA 9.7 Real Estate application could be addressed by implementing this new date processing. To resolve an issue when date processing may cause incorrect due dates in payment line items created when a payment schedule for a RE lease is activated requires one change to a business object in the Data Modeler and one change to a workflow in the Workflow Builder. After you make these changes, the updated scheduler will have the correct values to calculate and generate the correct start date and end date of the scheduled events.



Attention - Do not attempt the following unless you are a TRIRIGA Certified Application Developer and thoroughly understand the instructions and the effect on your implementation. If you are not comfortable making these changes in your implementation, please contact the IBM TRIRIGA team at IBM Software Support.

Step 1: In the Data Modeler, edit the Event system object found in the Mail module. Add a new text field named `triTimeZoneId`, as illustrated below:

Field List			
<input type="checkbox"/>	<u>triMayBL</u>	May	Boolean
<input type="checkbox"/>	<u>triNovemberBL</u>	November	Boolean
<input type="checkbox"/>	<u>triOctoberBL</u>	October	Boolean
<input type="checkbox"/>	<u>triOffsetDateDurationDU</u>	OffsetDate Duration (for Shadowing)	Duration
<input type="checkbox"/>	<u>triRecordStateSY</u>	Record State	System Read Only
<input type="checkbox"/>	<u>triRecurrenceDailyOptionsLI</u>	Daily Recurrence Options	List
<input type="checkbox"/>	<u>triRecurrenceEndOptionsLI</u>	End Recurrence Options	List
<input type="checkbox"/>	<u>triRecurrenceMonthlyOptionsLI</u>	Monthly Recurrence Options	List
<input type="checkbox"/>	<u>triRecurrenceYearlyOptionsLI</u>	Yearly Recurrence Options	List
<input type="checkbox"/>	<u>triSeptemberBL</u>	September	Boolean
<input checked="" type="checkbox"/>	<u>triTimeZoneId</u>	TimeZone Id	Text
<input type="checkbox"/>	<u>triUserMessageFlagTX</u>	!	Text
<input type="checkbox"/>	<u>triUserMessageTX</u>	Attention!	Text
<input type="checkbox"/>	WeeklvFridav	Fridav	Boolean

Business Object - Event (Published)	
Module	Mail
» Name	Event
» Display Name	Event
Description	Scheduled Events
Stand Alone	<input type="radio"/>
Embedded	<input type="radio"/>
Link	<input type="radio"/>
Externally Managed	<input type="radio"/>
Has Staging Table	<input type="checkbox"/>
Has Calendar	<input checked="" type="checkbox"/>
Audit Actions	<input type="checkbox"/>

The runtime values of the `triTimeZoneId` field can be the following:

- blank or null - the scheduler assumes the input is in the user's time zone.
- USER - the values are in the user's time zone.
- SYSTEM - the values are in the server's time zone.
- any valid time zone ID from the Java `TimeZone` class. Note: The values stored in the Time Zones classification are valid Java time zone ids.

Step 2: In the Workflow Editor, modify the following workflow to set the `triTimeZoneId` field to `SYSTEM`.

Module: `triPayment`

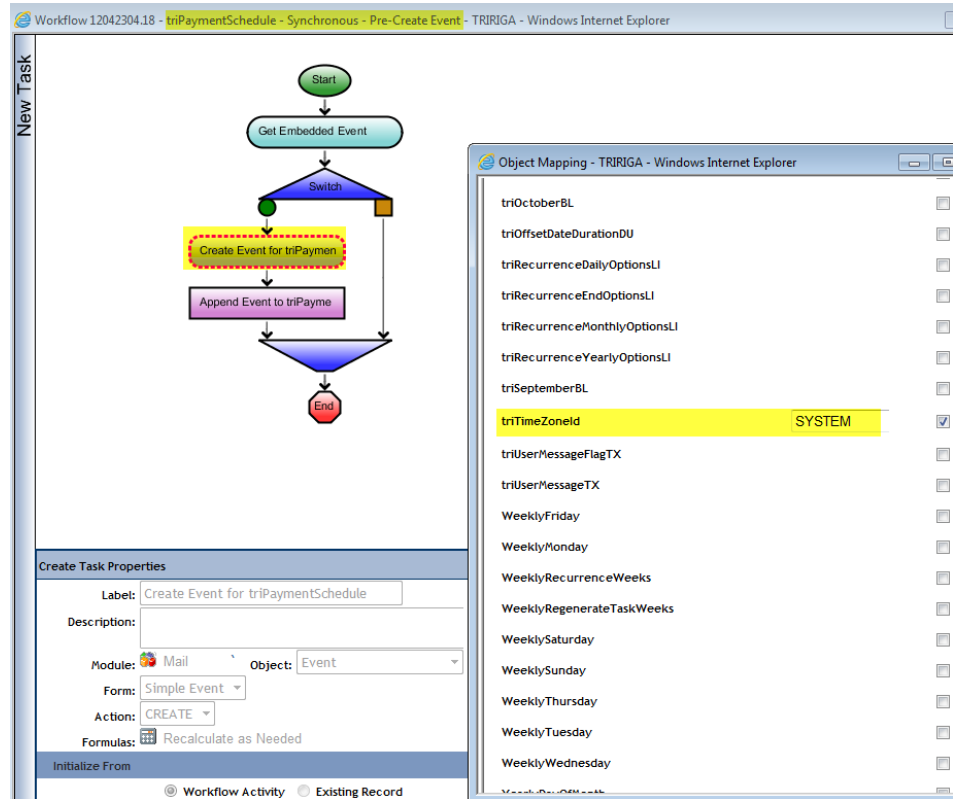
Business Object: `triPaymentSchedule`

Workflow: `triPaymentSchedule` - Synchronous - Pre-Create Event

The illustration below shows the Workflow Editor after the change has been made:

Area of Change

Description



Security Clicking the logo image on the sign in page no longer takes a user to the company level if the user's Disable Company Level field is checked in their profile record. (Tri-32785)

Security Potential XSS warning are no longer logged in security.log (Tri-32689)

Security Resolved cross-site scripting issues on Portfolio > Employees and related to labels. (Tri-33067, Tri-33073, Tri-32162)

Security The Security Manager has been updated to only allow changing of a group's access if the user has access to modify the group. (Tri-33064)

Style Manager When a user tabs out of HTML color setting using the HEX field, the user now receives a prompt when the value is empty, too long, or invalid. (Tri-33062)

Usability Importing a Language Pack supports automatic creation of notification content records so that the application can support notifications in other languages. (Tri-15992)

WebLogic A WebLogic installation must have xercesImpl.jar in the {install-dir}/tools/lib directory. Find this jar within <http://archive.apache.org/dist/xerces/j/Xerces-J-bin.2.9.1.zip>. (Tri-33660)

WebSphere You must copy the rowset.jar located in the tools/lib directory to the

Area of Change	Description
	Boot Classpath. This setting can be found in: Application servers > {servername} > Process definition > Java Virtual Machine. The properties name is Boot Classpath and the following value must be put there: {installdir}/tools/lib/rowset.jar where {servername} and {installdir} are from your WebSphere installation. (Tri-33896)
WebSphere 8	For Crystal support on WebSphere 8, the IBM TRIRIGA IBM Application needs to point to IBM ICU version 4.8.1.1. See the <i>IBM TRIRIGA Application Platform 3 Connector for SAP BusinessObjects User Guide</i> for instructions. (Tri-34093)
Workflow	Misconfigured workflow Modify Metadata tasks cause section labels to be cleared rather than setting the label with a constant. The workflow task processing now compensates for the misconfiguration and sets the section label correctly. (Tri-35747)
Workflow Builder	Changed the default for the Formulas property to Disable Auto Recalculation for the following Workflow tasks: Trigger Action, Add Child, Associate Records, Custom, Delete Reference, Save Permanent Record, DataConnect, and Create Record. (Tri-31825)
Workflow Builder	Where Used now indicates which event triggered an asynchronous workflow. (Tri-32915)
Workflows	If you are using a Custom task, copy the TRIRIGACustomTask.jar file from the TRIRIGA/tools/BusinessConnect folder into the jboss/server/all/lib folder. Copy any custom jar files you create into the same folder. (Tri-32923)

IBM TRIRIGA Application Platform 3.2 Properties Files

This section describes changes to the IBM TRIRIGA Application Platform properties files. See the *IBM TRIRIGA Application Platform 3 Installation and Implementation Guide* for more information.

Area of Change	Description
BIRT_MEMORY_USAGE_LIMIT	<p>This property defines the maximum percentage of available server memory that can be used while assembling a BIRT report's query results.</p> <p>If the memory requirement for such a task exceeds the limit, the query will error out due to insufficient resources. Such an error is likely caused by a query; however, it also is possible that other concurrent processes could have consumed memory while the query was assembling its results.</p> <p>Valid values are between 0 and 100. Values of 0 and 100 essentially disable any limit being enforced and allow a single query initiated by a single user to run the server out of memory. An empty value or an invalid value is treated as the default value.</p> <p>The default value is 35, which indicates that no set of query results can</p>

Area of Change	Description
	consume more than 35% of available memory.
BIRT_PROCESS_SERVER_HOST_NAME	The host name or IP address of the BIRT process server. Configure this value to offload the processing of BIRT reports to a separate process server. If this value is blank, all BIRT processing will be done locally. Example values include ProcessServer, ProcessServer.domain.com, and 10.1.1.1.
BIRT_PROCESS_SERVER_LISTENING_PORT	Configuring this port enables this server as a BIRT process server. The server listens for BIRT requests on this port. An example value is 47074.
BIRT_PROCESS_SERVER_PORT	The port to send BIRT requests for processing. This value needs to be configured to offload the processing of BIRT reports. This port corresponds to the value of BIRT_PROCESS_SERVER_LISTENING_PORT on the BIRT Processing Server. Leave this value blank to process BIRT reports locally.
DEFAULT_TITLE	Changed the value of DEFAULT_TITLE to "X". (Tri-33979)
EXCHANGE_ROOT_PATH	Sets the Exchange server path for IBM TRIRIGA Workplace Reservation Manager appointments. The default value is exchange. (Tri-33850)
mail.imaps.ssl.keystore	Defines the path on the network to the SSL keystore for the SSL connection. If empty and IMAPS is used for the Incoming Mail Agent, it is up to the Application Server to set the keystore.
mail.imaps.ssl.port	The default port setting for the IMAPS usage.
MEMORY_MANAGED_PROCESS_POLLING_FREQUENCY	The number of milliseconds the platform waits between polls of memory managed processes. An example of a memory managed process is running BIRT reports. The default value is 1000, which is 1 second.
ReportQueueAgentLoad	Sets the number of threads used by the Report Queue Agent in proportion to the number of connections.
ReportQueueAgentMaxThreads	Sets the maximum number of threads used by the Report Queue Agent.

IBM TRIRIGA CAD Integrator/Publisher 2011

This chapter details important information, known limitations, and changes to IBM TRIRIGA CAD Integrator/Publisher 2011.

Important Information

Important information concerning IBM TRIRIGA CAD Integrator/Publisher for this release includes the following items:

Area of Impact	Description
Installation	<p>In order to run IBM TRIRIGA CAD Integrator/Publisher on Windows 7, the user has to be the "owner" and have "full control" of the CI folder after installation.</p> <p>Note that in order to do this you will need Administrator rights. Typically the following steps are done by an IT department after installing CAD Integrator:</p> <p>Right click the ci folder. Select Properties. On the Properties window, click the Security tab. Then click Advanced. In the Advanced Security Setting window, select the Owner tab. Choose either yourself or (preferably) a group in which you are a member. Ideally, your IT department would have a "CAD User" group defined, in which case use this group.</p> <p>In the Advanced Security Settings for ci window, select your group, select the check box for <i>Replace owner on subcontainers and objects</i>, and click OK or Apply. Windows will inform you that you will need to close the Properties windows in order to modify permissions. Close all the windows.</p> <p>Right click on the ci folder, select Properties. In the Properties window, select the group you set as owner previously. Click Edit. Make sure your group has full control of this folder. Click OK or Apply. Close the windows.</p> <p>When you open AutoCAD 2010, it should be able to read the .cui file.</p> <p>Alternatively, you could have set yourself as the owner and given yourself permissions--just follow a similar process.</p> <p>It does not seem to have an effect if the .cui file is read-only. What is important is that the user of CAD Integrator has "Ownership" AND "has full control" of the ci folder. (Tri-28174)</p>
Installation	<p>On Windows 7, IBM TRIRIGA CAD Integrator/Publisher should be installed in the user's home directory or a directory other than Program Files to ensure sufficient file privileges. (Tri-30503)</p>

Area of Impact	Description
MicroStation	For MicroStation users of IBM TRIRIGA CAD Integrator/Publisher, the file <code>areapat.cel</code> is required in order for fills to work properly. The installer does not provide this file, and it is the responsibility of the user to provide it. The <code>areapat.cel</code> is installed by default with MicroStation V8i (Select Series 2), and IBM TRIRIGA CAD Integrator/Publisher attempts to load it. However, if IBM TRIRIGA CAD Integrator/Publisher cannot locate the file or if you are running a different version of MicroStation V8i, you need to copy the <code>areapat.cel</code> file into the CAD Integrator installation directory. (Tri-35695)
Single Sign-On	If you are using SSO through IIS, you must have the Basic authentication option selected in order for IBM TRIRIGA CAD Integrator/Publisher to sign in properly. You can use any other combination of authentication options (Basic, Digest, and Windows Integrated), provided that both Digest and Windows Integrated are not selected at the same time. (Tri-21349)
Upload Locations	If set to the default of Y, the <code>ENFORCE_REQUIRED_VALIDATION</code> property in the <code>TRIRIGAWEB.properties</code> file ensures that a record cannot be created unless all required fields are populated, regardless of the tab in which the fields appear. This behavior also occurs in IBM TRIRIGA Connector for Business Applications, where in previous releases only the required fields on the first tab were validated. This change has the potential to cause previously-working integrations to fail. To resume the previous behavior, set the <code>ENFORCE_REQUIRED_VALIDATION</code> property to N. (Tri-30614)

Known Limitations

Known limitations concerning IBM TRIRIGA CAD Integrator/Publisher for this release include the following items:

Area of Impact	Description
Data	The data used by IBM TRIRIGA CAD Integrator for MicroStation cannot contain multi-byte characters.
Publish	A graphics section does not render entities output to the DXF paper-space. (Tri-32950)

IBM TRIRIGA CAD Integrator 2011 Release 2 Changes

The changes to IBM TRIRIGA CAD Integrator for this release include the following items:

Area of Change	Description
Attach Drawing	The stored location of a drawing now is updated on sync. This allows the drawing to be opened from the Open Location dialog after the drawing is synced and saved in a new location. (Tri-18705)

Area of Change	Description
Attach Location	Some spaces that caused AutoCAD to crash when attached now attach correctly. (Tri-35595)
Attach Location	The CAD Integrator label placement failed for some drawings drawn with a base unit of meters, which caused AutoCAD to hang or crash. This has been resolved. (Tri-35874)
Batch Process	Corrected an authentication issue with resolving xrefs that caused batch process to fail to publish every drawing when xrefs were present due to the session being invalidated periodically. (Tri-32860)
CAD Labels	Selecting the General section of a business object from the Label Style Element form now works properly. (Tri-33225)
CAD Labels	The appearance of the upload locations wait dialog has changed. (Tri-19763)
Drawing Information	The Full Path field now populates when Drawing Information is opened for the first time. (Tri-33728)
Fill Style Manager	CAD Integrator now properly saves fill values for some associated organization fields that were not properly saved before. (Tri-33228)
Fill Style Manager	CAD Integrator previously displayed the record name for text and hierarchy fields on business objects other than Space. It now displays the data in text and hierarchy fields regardless of business object. (Tri-33849)
Fill Style Manager	Hierarchy fields displayed in the CAD Integrator legend now display a number of hierarchy levels dependent on the hierarchy level setting rather than the previous one level. (Tri-35122)
Fill Style Manager	The Fill Manager now uses the entire hierarchy path for fill display, rather than the path trimmed to the hierarchy set in options. Only the space hierarchy path fill settings are impacted, since support for the correct display of other hierarchy paths is added in this release. Existing fills based on the trimmed setting will be used if found and the fills will be updated as they are saved. If the hierarchy level is adjusted in the options before the space hierarchy path settings are saved, the fill settings for the space hierarchy path may be lost. (Tri-35124)
Installation	CAD Integrator now displays a list of supported applications if no supported applications are found on the machine. (Tri-24262)
Installation	If you load CAD Integrator for AutoCAD 2010 in the same client where there was a previous version of CAD Integrator for AutoCAD 2010 installed, you may see the following error message, "Unable to load customization file:..\IBM Tririga\ci\TriACAD.cui. To resolve this error: (1) Type CUI on the command line; (2) Scroll the Customize User Interface panel listing All Customization Files until you see TRIACAD (unresolved); (3) Click Unload TRIACAD.CUIX to manually unload the unresolved menu; (4) Click Ok to save your changes; (5) Exit AutoCAD; (6) Reopen AutoCAD. The menu should now load normally. (Tri-35366)

Area of Change	Description
Installation	The name of the <code>apps</code> subdirectory for IBM TRIRIGA CAD Integrator/Publisher 2011 has changed from 90 to 100. (Tri-32137)
Installation	Updated the CAD Integrator install's License folder files. (Tri-35865)
Label Manager	CAD Integrator no longer provides asset symbols, although pre-existing or user provided symbols can be used instead. Additionally, the default icons for people, assets, and crates have changed. (Tri-35548)
Label Style Manager	CAD Integrator now correctly handles attached polylines with no area. (Tri-33213)
Login	CAD Integrator no longer attempts to connect with API 1 when an IBM TRIRIGA Connector for Business Applications login fails. (Tri-32396)
Login	CAD Integrator now supports logging into multi-byte environments. (Tri-32037)
Options	In the CAD Integrator options dialog, setting the Maximum Query Results variable to an extremely low number now works correctly. (Tri-32547)
People	The Insert Person command now prompts the user to sync the drawing before it is run. (Tri-35381)
Publish	Changed drawing DXF processing to accept improper extended data entities to allow drawings containing improper XData to publish correctly. CAD Integrator publish now displays a message if the drawing publish process was not successful. (Tri-34637)
Publish	Lines from a block that was inserted with an extremely large scale factor now are properly adjusted for the line weight, no longer causing the lines to be rendered very thick. (Tri-33136)
Publish	Resolved a problem with drawings that refer to an XRef that has a non-origin base point (base point other than 0,0) that caused the drawing elements in the XRef to be displayed in the wrong location. (Tri-33022)
Publish	You now can publish a drawing with a hex handle up to 16 hex characters in length. (Tri-32994)
Query	The query menu item for CAD Integrator in MicroStation now is enabled only when an attached drawing is open. (Tri-34961)
Space Allocation	Changed the filtering in the Space Allocation dialog. This can improve performance on systems with a large number of organizations. (Tri-35123)
Space Allocation	Resolved an issue that prevented CAD Integrator from assigning a space allocation to two organizations in which one organization name was included in the other, such as "Global Finance" and "Finance". (Tri-35439)

Area of Change	Description
Upload Locations	Subspaces now retain their proper layer on publish, and all subspaces are now selectable in a Graphics section. (Tri-33233)

IBM TRIRIGA CAD Integrator 2011 Release 1 Changes

The changes to IBM TRIRIGA CAD Integrator for this release include the following items:

Area of Change	Description
Assets	Insert Asset now correctly inserts the mapped asset symbol in cases where it did not before. (Tri-32056)
Attach Asset	The search dialog in the Attach Space dialog now only displays spaces that are valid for attaching. Additionally, the dialog now properly repopulates after searching or selecting Restore Defaults. (Tri-29553)
Create Planning Drawing	The Create Planning Drawing command now works correctly when the Allow Multiple Floor Boundaries option is set to Append on Assignment. (Tri-31044)
Layer Manager	Running the Level Manager command no longer causes MicroStation V8i to fail. (Tri-31742)
Login	The API login command no longer resets the platform and applications in the login dialog on custom script migrations. (Tri-20048)
Login	The Server field in the CAD Integrator login dialog now is selectable with the tab key. (Tri-31784)
Login	Where absent, added the HTTP port to Web Services requests from CAD Integrator. (Tri-32368)
Publish	Added support for CAD file names that contain an ampersand. (Tri-32715)
Publish	Added support for rendering text with underlines in Graphic sections. (Tri-29868)
Publish	UTF-8 encoded characters on request URLs now are properly decoded with UTF-8 on the server. (Tri-31112)
Sync	In MicroStation V8i, spaces and people now correctly update with server-side changes. AutoCAD did not experience this issue. (Tri-30004)

IBM TRIRIGA Application Object Migration Packages

IBM TRIRIGA delivers application object migration packages using two different methodologies:

- Incremental Package: Each application release is a separate file named TRIRIGA_<version>.zip. The latest incremental package is for IBM TRIRIGA 10.2.0.2.
- Cumulative Package: The entire suite of IBM TRIRIGA Applications in one file named TRIRIGA_<version>_Cumulative.zip. Cumulative packages save substantial time when you are upgrading across several releases. The latest cumulative package is for IBM TRIRIGA 10.1. The IBM TRIRIGA 10.2.0.3 OM package is cumulative and includes the files to update your 10.2, 10.2.0.1, or 10.2.0.2 environment to 10.2.0.3.



Note - To request access to IBM TRIRIGA application upgrade packages or documentation for releases prior to IBM TRIRIGA 10.2, submit a ticket through the IBM Software Support site at www.ibm.com/support.

Use the method that best suits your needs. Incremental package files might be best to upgrade across one or two releases. The 10.1 cumulative file might be better when you need to update from an earlier version of the application. Be aware, however, that the 10.1 cumulative file is large and takes a long time to download, load, and import. After you have the object migration package files downloaded, follow the steps in this chapter to accomplish your application updates.

Applying the Application Object Migration Package

The 10.2.0.3 fix pack is cumulative and includes the files to update your 10.2 environment to 10.2.0.1, 10.2.0.2, and 10.2.0.3.

The IBM TRIRIGA 10.2.0.3 release includes three incremental object migration packages. The fix pack also includes five patch helper records.

If you are upgrading from IBM TRIRIGA 10.1, use the 10.2.0.1, 10.2.0.2, and 10.2.0.3 incremental packages.

If you are upgrading from TRIRIGA 9, use the 10.1 cumulative package and the 10.2.0.1, 10.2.0.2, and 10.2.0.3 incremental packages, as described in "[Important Installation and Upgrade Information](#)". Perform each package sequentially, in the order listed. Wait until all of the steps are complete for an incremental object migration package before you begin the next.

Read and follow "Importing Objects" in the *IBM TRIRIGA Application Platform 3 Object Migration User Guide* for a description of how to import application packages.

Import Patch Helper Record

You must run the patch helpers for each application version between your current application version and 10.2.0.3, including 10.2.0.3. Use the following steps to import the patch helper files for each

version, in version number sequence. The patch helper records update the Application Version record and trigger workflows that update and create other essential information within the database.

Wait for one patch helper to complete before you start the next. Some patch helpers can take a long time to complete. After a patch helper completes, either clear all application server caches or restart the application server.

How To Import the Patch Helper Record

Step 1 From the destination system, select **Tools > Administration > Data Integrator**.

Step 2 Select the following values in the Upload File section:

Module: triHelper

Business Object: triPatchHelper

Form: triPatchHelper

Import Type: Add

Action: triCalculate

Step 3 Browse to identify the *Name* of the package to be imported.

Step 4 Click **Upload File** and click **OK**.

You receive a notification in your Reminders portal section when the import process completes.

IBM TRIRIGA Supported Versions and IBM TRIRIGA Application Platform Compatibility Matrix

The *IBM TRIRIGA Supported Versions* lists information related to IBM TRIRIGA's supported products and platform and relays information about end-of-life plans for such software. The *IBM TRIRIGA Application Platform Compatibility Matrix* lists supported operating systems, databases, and related details for and about the IBM TRIRIGA Application Platform and relays information about end-of-life plans for such software. The *IBM TRIRIGA Supported Versions* and the *IBM TRIRIGA Application Platform Compatibility Matrix* may change over time. The *IBM TRIRIGA Supported Versions* and the *IBM TRIRIGA Application Platform Compatibility Matrix* can be found on the IBM TRIRIGA wiki at <https://www.ibm.com/developerworks/community/wikis/home?lang=en#/wiki/IBM+TRIRIGA1/page/Support+Matrix>.

Related Documentation

You will find copies of all current documentation in the IBM TRIRIGA Information Center (<http://publib.boulder.ibm.com/infocenter/tivihelp/v49r1/topic/com.ibm.tri.doc/welcome.html>) and the IBM TRIRIGA Application Platform Information Center (http://publib.boulder.ibm.com/infocenter/tivihelp/v49r1/topic/com.ibm.tap.doc_3.2.1/welcome.html).

Support

IBM Software Support provides assistance with product defects, answering FAQs, and performing rediscovery. View the IBM Software Support site at www.ibm.com/support.

Notices

This information was developed for products and services offered in the U.S.A.

IBM may not offer the products, services, or features discussed in this document in other countries. Consult your local IBM representative for information on the products and services currently available in your area. Any reference to an IBM product, program, or service is not intended to state or imply that only that IBM product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any IBM intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any non-IBM product, program, or service.

IBM may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not grant you any license to these patents. You can send license inquiries, in writing, to:

IBM Director of Licensing
IBM Corporation
North Castle Drive
Armonk, NY 10504-1785
U.S.A.

For license inquiries regarding double-byte character set (DBCS) information, contact the IBM Intellectual Property Department in your country or send inquiries, in writing, to:

Intellectual Property Licensing
Legal and Intellectual Property Law
IBM Japan, Ltd.
19-21, Nihonbashi-Hakozakicho, Chuo-ku
Tokyo 103-8510, Japan

The following paragraph does not apply to the United Kingdom or any other country where such provisions are inconsistent with local law:

INTERNATIONAL BUSINESS MACHINES CORPORATION PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some states do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. IBM may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.

Any references in this information to non-IBM Web sites are provided for convenience only and do not in any manner serve as an endorsement of those Web sites. The materials at those Web sites are not part of the materials for this IBM product and use of those Web sites is at your own risk.

IBM may use or distribute any of the information you supply in any way it believes appropriate without incurring any obligation to you.

Licensees of this program who wish to have information about it for the purpose of enabling: (i) the exchange of information between independently created programs and other programs (including this one) and (ii) the mutual use of the information which has been exchanged, should contact:

IBM Corporation
224A/101
11400 Burnet Road
Austin, TX 78758
U.S.A.

Such information may be available, subject to appropriate terms and conditions, including in some cases, payment of a fee.

The licensed program described in this document and all licensed material available for it are provided by IBM under terms of the IBM Customer Agreement, IBM International Program License Agreement or any equivalent agreement between us.

Information concerning non-IBM products was obtained from the suppliers of those products, their published announcements or other publicly available sources. IBM has not tested those products and cannot confirm the accuracy of performance, compatibility or any other claims related to non-IBM products. Questions on the capabilities of non-IBM products should be addressed to the suppliers of those products.

All statements regarding IBM's future direction or intent are subject to change or withdrawal without notice, and represent goals and objectives only.

This information contains examples of data and reports used in daily business operations. To illustrate them as completely as possible, the examples include the names of individuals, companies, brands, and products. All of these names are fictitious and any similarity to the names and addresses used by an actual business enterprise is entirely coincidental.

Privacy Policy Considerations

IBM Software products, including software as service solutions, ("Software Offerings") may use cookies or other technologies to collect product usage information, to help improve the end user experience, to tailor interactions with the end user or for other purposes. In many cases no personally identifiable information is collected by the Software Offerings. Some of our Software Offerings can help enable you to collect personally identifiable information. If this Software Offering uses cookies to collect personally identifiable information, specific information about this offering's use of cookies is set forth below.

This Software Offering does not use cookies or other technologies to collect personally identifiable information.

If the configurations deployed for this Software Offering provide you as customer the ability to collect personally identifiable information from end users via cookies and other technologies, you should seek your own legal advice about any laws applicable to such data collection, including any requirements for notice and consent.

For more information about the use of various technologies, including cookies, for these purposes, see IBM's Privacy Policy at www.ibm.com/privacy and IBM's Online Privacy Statement at www.ibm.com/privacy/details in the section entitled "Cookies, Web Beacons and Other Technologies" and the "IBM Software Products and Software-as-a-Service Privacy Statement" at www.ibm.com/software/info/product-privacy/.

Trademarks

IBM, the IBM logo, ibm.com, and TRIRIGA are trademarks or registered trademarks of International Business Machines Corp., registered in many jurisdictions worldwide.

Adobe, the Adobe logo, PostScript, and the PostScript logo are either registered trademarks or trademarks of Adobe Systems Incorporated in the United States, and/or other countries.

Microsoft, Windows, Windows NT, and the Windows logo are trademarks of Microsoft Corporation in the United States, other countries, or both.

Java and all Java-based trademarks and logos are trademarks or registered trademarks of Oracle and/or its affiliates.

Other product and service names might be trademarks of IBM or other companies. A current list of IBM trademarks is available on the Web at "[Copyright and trademark information](http://www.ibm.com/legal/copytrade.shtml)" at www.ibm.com/legal/copytrade.shtml.