# **IBM TRIRIGA**

Version 10.5.0

# IBM TRIRIGA Application Platform Version 3.5.0

# Release Notes



Note Before using this information and the product it supports, read the information in "Notices" on page 38.
This edition applies to version 10, release 5, modification 0 of IBM® TRIRIGA® and version 3, release 5, modification 0 of IBM TRIRIGA Application Platform and to all subsequent releases and modifications until otherwise indicated in new editions.
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## **Release Notes**

Welcome to the December 2015 release of IBM® TRIRIGA® 10.5.0, IBM TRIRIGA Application Platform 3.5.0, and IBM TRIRIGA CAD Integrator/Publisher 12.1.3.

This release includes the following two installation options:

- 1. A new installation of IBM TRIRIGA Application Platform 3.5.0 and IBM TRIRIGA Applications 10.5.0.
- 2. An IBM TRIRIGA Application Platform-only upgrade installation from 3.0.x or higher to IBM TRIRIGA Application Platform 3.5.0.

The IBM TRIRIGA Applications can be incrementally upgraded to 10.5.0 Applications after the platform upgrade is completed. For more information about specific scenarios, view the <a href="Upgrading">Upgrading</a> page on the IBM TRIRIGA wiki.

These release notes include the following:

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

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



Note - To request access to IBM TRIRIGA application upgrade packages or documentation for releases before 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 10.5.0, IBM TRIRIGA Application Platform 3.5.0, and IBM TRIRIGA CAD Integrator/Publisher 12.1.3, 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 10.5.0, IBM TRIRIGA Application Platform 3.5.0, and IBM TRIRIGA CAD Integrator/Publisher 12.1.3 include the following features.

IBM TRIRIGA 10.5.0 introduces the new Perceptive applications and also includes various enhancements for lease accounting.

#### Perceptive applications

Built upon our UX framework, the Space Assessment and Space Management apps are Perceptive applications that feature rapid deployment to tablet devices and simplified user interfaces according to role-based tasks.

#### Space assessment app -

By using this Perceptive application on your tablet device, you can easily create an assessment for a floor plan, select a space, add or remove people or assets from that space, and move on to the next space.

#### Space management app -

By using this Perceptive application on your tablet device or desktop, you can easily review completed assessments, accept or reject any suggested actions for a space, and move on to the next space.

#### Lease accounting enhancements

Support has been added for the following calculation types:

- Partial payment calculations for special location specific quarters
- Partial payment calculations for annual and semi-annual frequencies
- Retail monthly frequency net rent calculations enhancements for straight-lining
- Adjust payment for general clauses and options

- Lease Accounting chart enhancements
- Straight-lining enhancements for non-monthly frequencies

IBM TRIRIGA Application Platform V3.5.0 includes a new UX framework for building UX applications. Also included are platform enhancements to our classic tools to support the UX framework, an AnyChart upgrade, an installer change, and a new look & feel.

#### **UX framework for Perceptive applications**

The IBM TRIRIGA Application Platform introduces a modular and flexible architecture for building metadata models and designing responsive HTML5 views with the Google Polymer library. For more information, see the Polymer website at <a href="https://www.polymer-project.org">www.polymer-project.org</a>. Here are several definitions to clarify some of the new concepts:

#### **UX** framework

Used generically as our "user experience" (UX) application framework, or more specifically as our IBM TRIRIGA UX Framework for Perceptive applications, this term refers to our MVC-based approach for UX applications.

The model-view-controller (MVC) approach separates the application into three components or layers: the model, view, and controller. The view layer is built upon the Polymer library of reusable web components.

#### **UX** application

During the app-designing process, this term refers to the application metadata that pulls together related model metadata and view metadata in the MVC-based approach, all of which are built upon our UX framework.

The model metadata defines the data sources that retrieve the data and trigger the business logic, while the view metadata defines the HTML components that render the interfaces.

#### Perceptive application

This term refers to an advanced type of UX application that is designed, developed, and delivered exclusively by our IBM TRIRIGA software team.

Built upon the Polymer library of reusable web components, Perceptive applications enable organizations to more easily meet business requirements with an intuitive user interface, compatibility with touch interfaces, and improved performance.

#### Classic application

This term refers to our familiar form-based type of IBM TRIRIGA application that is built upon our classic IBM TRIRIGA Application Platform.

#### **UX** designers

The IBM TRIRIGA Application Platform introduces new tools that enable you to design apps in a new UX framework. Here are the new UX app designer tools:

#### Model designer

This designer is used to define your model metadata and assemble your data sources. The data sources pull your data from business objects, queries, or other source types.

#### Web view designer

This designer is used to define your view metadata and assemble your HTML files. The HTML files are built with Google Polymer and standard web components.

#### Model and view designer

This designer is used to tie together your model metadata and view metadata. Any number of views can be tied to a model, and any number of models can be tied to a view.

#### Application designer

This designer is used to define your application metadata or final layer that pulls the model-and-view metadata. At this point, the UX application can be finally shown to users.

#### WebViewSync

This tool is used to populate the HTML files in your view metadata and to automatically sync your HTML changes with the HTML files in your TRIRIGA environment. You can download the tool from IBM developerWorks.

#### Changes to our classic tools to support the UX framework

The classic tools also include the following changes:

#### **Administrator Console**

You can select the new **Translated UX File Cache** option in the Cache Manager to refresh the Polymer-based components and HTML files that make up the translated UX views. This regenerates the translated UX views the next time they are requested from the server.

Similarly, you can select the new **Translated Dictionary Cache** option in the Cache Manager to refresh the translatable and translated text that is stored as records of the triDictionaryEntry business object in the System module. This regenerates the translated UX views the next time they are requested.

#### Globalization Manager

You can select the new **Dictionary** option to export the labels and tooltips from your HTML views as XLIFF files of unique translatable text. So, if a specific label appears in multiple views, only one unique entry appears in the dictionary.

The translatable text is stored as records of the triDictionaryEntry business object in the System module. When you open the UX view, the platform checks the language setting in your profile. If the language is not US English, the platform generates a translated version of the HTML files and components, and pushes the translated UX view to your web browser.

#### **Navigation Builder**

You can select the new **Application** option to open a UX app from a navigation item such as a menu item. For example, if you created a new customized Space or Move app, you can add a new item to your main menu to directly open your new app.

#### **Object Migration**

You can select the new **Application** option to search for and add UX applications to your export package. During export, all UX metadata related to the application, such as the model-and-view, model, and data sources, plus all UX application view files related to the web view metadata with a **Component Type** of **VIEW**, such as HTML and CSS files, are automatically added to the package.

Similarly, you can select the new **Web Component** option to search for and add UX web components to your export package. During export, only the selected web view metadata with a **Component Type** that is not equal to **VIEW**, such as **APPLICATION**, **BUILDING\_BLOCK**, **CORE**, and **PLATFORM** are added to the package.

Additionally, you now have the option of including dependent objects that the application may have references to (i.e., Module, BO, Form, List, Query, and Workflow). This also applies to the Web Component.

#### Security manager

You can open the new **Models** tree from a security group and assign permissions to a UX model. In effect, a user will inherit the model permissions from all of the security groups to which that user belongs. Also, the permissions for a model apply to all of the data sources associated with that model.

The Security Manager operates on the database table APP\_OBJECT\_PERMISSION, which stores module-level and form-level permissions. But as part of the UX framework, the System module introduces a new triModelPermission business object that stores instance-level permissions for each individual UX model.

#### **AnyChart Upgrade**

The 3rd party framework to display charts via Metric Reports, and Chart Reports has been upgraded from AnyChart 6.x to AnyChart 7.x. Please see the Known Limitations section for the Application Platform, for details on known AnyChart 7.x issues affecting IBM TRIRIGA.

#### Installer Changes

The IBM TRIRIGA Application Platform V3.5.0 installer no longer runs platform-specific SQL scripts. The platform update scripts were moved to the application server start. There now is a new lock in the database while an application server starts. This lock causes other application servers that start around the same time to wait for the first application server to finish. After the first application server finishes the application server and database synchronization scripts, the second and subsequent application servers start. If an application server has an issue, the lock might remain in the database. To remove this lock, run the statement: delete from environment\_properties where property = 'upgrade.lock'; and do not forget to commit. (Tri-195594)

#### New Look & Feel

IBM TRIRIGA Application Platform V3.5.0 includes a new Look & Feel. For instructions on how to apply the new skin, see the IBM TRIRIGA wiki.

IBM TRIRIGA CAD Integrator/Publisher V12.1.3 an AnyChart upgrade and defect fixes.

### IBM TRIRIGA 10.5.0 Enhancements

The following enhancements to IBM TRIRIGA are in this release:

Area of Impact	Description
Perceptive Applications	The following perceptive applications have been added:  Space Assessment app  By using this Perceptive application on your tablet device, you can easily create an assessment for a floor plan, select a space, add or remove people or assets from that space, and go to the next space.
	Space Management app By using this Perceptive application on your tablet device or desktop, you can easily review completed assessments, accept or reject any suggested actions for a space, and go to the next space.

Area of Impact	Description
Real Estate Asset Lease Real Estate Lease	IBM TRIRIGA now uses the payment type "Rent" payment instruction for a One Time Payment (payment line item) generated from the Percentage Rent Reporting record. When creating the Payment Voucher, TRIRIGA now uses the Rent Payment Instruction to create the voucher. Assumptions include:
	<ul> <li>A rent payment schedule will exist covering to the end of the lease period.</li> <li>Customer wants percentage rent payment to go to the same organization as rent payment.</li> <li>If the due date of the generated percentage rent payment line item does not fall within the rent payment instruction dates, the last percentage rent reporting record processed at the end of the lease will extend the last payment instruction for rent.</li> <li>(Tri-186917-IV76941)</li> </ul>
Real Estate Asset Lease Real Estate Lease	On the lease form, on the Accounting tab, the Balance Sheet Effect - Operating vs. Type A section and the Balance Sheet Effect - Operating vs. Type B section are now visible.
Real Estate	Support has been added for the following types of calculations:
Asset Lease Owned Property (Fee) Agreement Real Estate Abstract Real Estate Lease	<ul> <li>Partial payment calculations for special location specific quarters</li> <li>Partial payment calculations for annual and semi-annual frequencies</li> <li>Retail monthly frequency net rent calculations enhancements for straight-lining</li> <li>Adjust payment for general clauses and options</li> <li>Lease Accounting chart enhancements</li> <li>Straight-lining enhancements for non-monthly frequencies</li> </ul>
	See the <u>IBM TRIRIGA wiki</u> for information about best practices for lease accounting with IBM TRIRIGA.
Reporting	There are six reports created to capture the information of the user load and license usage in the system.  • Hourly License Usage Report for Selected Day • Hourly User Load Report for Selected Day • Daily License Usage Report for Selected Month • Daily User Load Report for Selected Month • Monthly License Usage Report for Selected Year • Monthly User Load Report for Selected Year (Tri-197225)

# IBM TRIRIGA Application Platform 3.5.0 Enhancements

The following enhancements to the IBM TRIRIGA Application Platform are in this release:

Area of Impact	Description
AnyChart	Chart rendering tool is upgraded to AnyChart 7. (Tri-173978)
Builders	Modified By is now supported for Modules, Business Objects, and Forms. It is also visible in the Workflow Builder, Report Builder, Data Modeler and Form Builder along with Modified Date and can be used in Object Migration as a search filter in the Object Finder.
Globalization	You no longer need to restart the server after you import a language pack for hierarchy action buttons to be updated in the view. After the import, clear object metadata cache in the Administrator Console and clear browser cache. (Tri-174265)
Graphics	Images are no longer stored in the userfiles/images or userfiles/Company-1 directories on the application server. A startup process moves the current images into the database, moving the existing files into a backup directory on the application server. This allows multiple application servers access to images from the same source. (Tri-164588)
Installation	Platform SQL scripts and stored procedure updates now run at the start of the application server. This is now referred to as the server and database synchronization process. If multiple application servers are started at the same time, the first one up locks the database so that the synchronization process does not run into concurrency problems. The other application servers wait until the first completes the synchronization process and then resume after the lock has been removed. To allow another server to start if the first server crashes, run: DELETE FROM ENVIRONMENT_PROPERTIES WHERE ENVIRONMENT = 'com.tririga.platform.upgrade.UpgradeScriptsImpl'; commit; (Tri-173802)
Installation	You can now specify a licenses directory from the TRIRIGA installer. This option is only available for upgrade installs when the old installation /config/licenses directory is empty or for new installs. The licenses are copied from the specified directory into the /config/licenses directory in the new installation. In an upgrade install, if the old /config/licenses directory contains at least one license, the installer does not prompt for the licenses directory. (Tri-148551)
Integration Object	Integration Object File To DC scheme now allows for the selection and use of the DC_PROJECT field in the Data Map. (Tri-180545)
Licensing	TRIRIGA licenses now have SLM tag files. For concurrent user licenses, every 10 minutes an active session_user snapshot is taken and the user count values are appended to the SLM files. (Tri-171924)
Look & Feel	IBM TRIRIGA Application Platform V3.5.0 includes a new Look & Feel. For instructions on how to apply the new skin, see the <a href="IBM TRIRIGA wiki">IBM TRIRIGA wiki</a> .

Area of Impact	Description
Object Labeling	Modules, Business Objects, Forms, Workflows, Queries and UX Metadata have been labeled with either the Root Label or the 10.5 Label depending on the type of install (new install or upgrade install). If an object is modified it will get the In Progress Label. Labels will be used in the future to help with Upgrades and dealing with customizations.
	For Business Objects, Forms, and Workflows, modified means that the object is published. For Modules and Queries, modified means that the object is saved. For UX Metadata, modified means that the object is snapshotted.
Object Migration	Object Migration now supports automatically running a workflow after successful import of a package. The workflow must be defined in the package and import must be successful.
Offlining	The third-party API for reading and writing Excel documents was upgraded from Apache POI 3.11 to Apache POI 3.13. (Tri-194036)
Performance	The call to PKG_CLEANUP was moved into JDBC database calls to improve cleanup performance. (Tri-153809)
Record Runtime	Some images were moved from the ibm-tririga.war file to the server's userfiles/images/icons directory. Now you can replace these images with custom images. The images include Arrow_StepBack.gif, date.png, list-drop-downlrg.png, negative.png, positive.png, repeatingEvent.png, table-smart-section-record.png, upload-image.png, and url-preview.png. (Tri-178156)
Reporting	A new feature tracks report execution. You can now track who ran the report, when the report was run, and how long the report took to execute. This data can be seen on the new S manager. (Tri-178243)
Reporting	Report titles are now word-wrapped. Long report titles no longer stretch out the display window. (Tri-178242)
Reporting	Threshold records are no longer ignored for metric reports. (Tri-195766)
Reporting	You can select additional tokens when building a query in the Report Manager. These tokens are available for date and date time filter types. The tokens included give you today's date, the current week, month and year. In addition, you can subtract decimal values to these tokens. For example, subtracting one day from today will return yesterday's date. (Tri-176663)
Security	Enhanced security.log logging when a user is denied access to an object because of security or license.
System Setup	Removed IBM branding from various web page titles that were still displaying "IBM-TRIRIGA" despite custom user configuration. (Tri-191221; RFE-76805)

# IBM TRIRIGA CAD Integrator/Publisher 12.1.3 Enhancements

The following enhancements to IBM TRIRIGA CAD Integrator/Publisher are included in this release:

Area of Impact	Description
Installation	CAD Integrator is updated to support AutoCAD 2016 and AutoCAD Architecture 2016. Support for AutoCAD 2013 has been removed. (Tri-177448)

# Important Installation and Upgrade Information

Before installing, go to the IBM TRIRIGA Application Platform 3 Knowledge Center and read *Installing IBM TRIRIGA Application Platform*.

Before upgrading, go to the Upgrading page of the IBM TRIRIGA wiki and read the IBM TRIRIGA Application Platform 3 Upgrade Installation Guide and the procedures that outline the upgrade steps for a selection of upgrade scenarios at the following link:

www.ibm.com/developerworks/community/wikis/home?lang=en#/wiki/IBM+TRIRIGA1/page/Upgrading.

If you are upgrading from a previous version of the Application and have not previously done so, apply the SQL script to update the system fields with sub-attribute type of CreatedDateTime to CreatedDateTime (Number) and ModifiedDateTime to ModifiedDateTime (Number). Scripts for Oracle and Microsoft SQL Server are located on the upgrade disk in the \Scripts folder. Instructions are within the scripts.

For Oracle, run SetVarcharColsToNumeric\_ORCL.sql.

There are two scripts for MSSQL, SetVarcharColsToNumeric\_MSSS.sql and SetVarcharColsToNumeric\_MSSS\_Publish\_BO.sql. Run SetVarcharColsToNumeric\_MSSS.sql first. When it completes, run SetVarcharColsToNumeric\_MSSS\_Publish\_BO.sql.

# 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.

# IBM TRIRIGA 10.5.0

This release includes information, known limitations, and changes to IBM TRIRIGA.

# Important Information

The following items are important information concerning IBM TRIRIGA that are newly added for this release. For Important Information related to previous releases, see the Release Notes page of the IBM TRIRIGA wiki.

Area of Impact	Description
Classifications	On the Space Class Current classifications, you can now select either Exclude from Usable or Exclude from Rentable.
	To correct existing data, an admin should run a special patch helper ("triPatchHelper - triCalculate - 10.5 SPACE CLASS CURRENT - Update when NoUsable/NoRentable"). The start condition for this patch helper is: "10.5 SPACE CLASS CURRENT". When running this patch helper, if the Space Class Current record has both options checked, it keeps the most restrictive option "Exclude from Usable" checked and unchecks "Exclude from Rentable". (Tri-174233)
Real Estate Asset Lease Real Estate Lease	To correct the accrual liability sign for straight-line schedules that were present before the 10.4.2 release, an admin should run a special patch helper. The string to use in this case is: 10.5 REVERSE ACCRUED LIABILITY SIGN  For more details, see the Patch Helper section of these release notes.
System Setup Application Settings	The triCurrencyUO field has been added to Units section of triApplicationSettings form. The value for this field should be in sync with the BaseCurrency on TRIRIGAWEB.properties file.  This currency value should be set at the time of installation by an administrator. Changing the currency after the transaction records have been created is not
	recommended as previously created records will not be updated. (Tri-171980-IV73217)

# **Known Limitations**

The following items are known limitations concerning IBM TRIRIGA and are newly added for this release. For Known Limitations related to previous releases, see the <u>Release Notes</u> page of the IBM TRIRIGA wiki.

Area of Impact	Description
Real Estate Asset Lease Real Estate Lease	In the 10.5 release, straight-line calculations are not implemented for Annual and Semi-Annual frequency when Net Rent Basis = Actual Day Basis and Straight Line Calculation Basis is either Actual Day Basis or 30 Day Basis.
Real Estate Asset Lease Real Estate Lease	Rent Daily and Monthly Rate fields will not display for existing Rent Payment Schedules that were created prior to 10.4.2 release. The fields are populated and used correctly, however, for calculations for straight line schedules. The fields will display correctly if the user cancels or closes out of the Payment Schedule and re-opens.

Area of Impact	Description
UX	All app buttons in Internet Explorer 11 show dotted lines around them, due to a known limitation in Internet Explorer 11.
UX	The latest changes in Space Management do not appear in corresponding tabs when the user switches tabs ("In Progress", "Pending Review"). To view the changes, you can refresh the browser to see the new assessment or logout and log back in. (Tri-203978)
UX	The Space apps in the UX framework exhibit UI issues such as text overlap if you load the apps on a tablet device horizontally and then rotate it to portrait. The apps view properly if they are loaded initially in portrait. (Tri-201906)
UX	When a Space Assessment user adds a person or asset to a space, they have the option to filter through records they have access to. When the user filters, the selected record is not maintained correctly. For example, the user selects Alex who is the 1st person on the list. The user then filters the list to look for Zach. The first result is Zach and it is highlighted. The user taps "Done" and in the Assigned People list for the selected space but notices that Alex was added instead of Zach, even though Zach was the last record that showed as selected before tapping "Done". The workaround for this is to tap the record you want to select if you didn't see it previously unselected.  This issue is caused by a known underlying Google Polymer issue with iron-selector. (Tri-197048)
UX	When a new assessment is created from Space Management, it will not appear on the "In Progress" tab as it should. To display the new assessment, refresh the browser or log out and log back in. (Tri-203938)

# IBM TRIRIGA 10.5.0 Changes

The following changes to IBM TRIRIGA are in this release:

Area of Change	Description
Assets	The service spec now shows correctly associated services under Services tab > Services sub tab. (Tri-189722)
Assets	The Warranty record is de-associated from an Asset if the associated Specification does not have a Warranty on it. (Tri-191767-IV77011)
Classifications	On the Space Class Current classifications, the user can now select either Exclude from Usable or Exclude from Rentable. (Tri-174233)
Data Load	In the Data Load application, there are no longer any duplicate values on the List, Classification, and Locator sheets on data load spreadsheets. (Tri-176593)
Document Management	The field size of DM_FILE_TYPE is increased in the Document business object in the Document module to 150. (Tri-190247)
Graphics	Fixed an issue where a Graphic section in a Supply Floor record did not render correctly. (Tri-188218)
Locations	The Space Rollup Summary BIRT reports used on Property, Building, and Floor records no longer return null errors when there are no child records. (Tri-183381-IV75374)
Maintenance	The Copy action on all five procedure forms - Inspection, Lock-Out / Tag-Out, Safety Hazards, Safety Procedures, and Work now copy all the information from original record to copy record. Also, the Copy action is no longer available on Procedure Step form. (Tri-176531-IV73922)
Maintenance	When Reading Class is selected on the Procedure Step record, the Reading Units will be updated with the Default Reading Units set up in the PM Reading Class Classification record. Also, the Reading Units are defaulted to blank for a new Procedure Step record. (Tri-176537-IV74218)
Mobile - Work Task Management	Two issues related to time entry were resolved:  1. When a time log is created in a mobile app, Actual start date is updated in the Work task > General tab > Actual section > Actual field. Before the fix, Actual field was updated only when work task was completed. Now, as soon as the first time log is created in mobile app, the Actual field is updated.  2. When a time log is created from mobile and a work task is completed, the Actual Duration in the work task is updated correctly (End time- start time). (Tri-185832-IV75726)
Real Estate Asset Lease Real Estate Lease	A lease that includes payment schedules with partial first payment and partial last payment that span across two payment schedules now populates with the correct amount. Total rent payments for the payment line items on the Payments sub tab now equal the Net Rent Payments column total for the fiscal line items under Schedule Straight Line section on the Accounting tab. (Tri-205152)
Real Estate Asset Lease	Asset Lease-Bypass Date Gap Validation Attention! message now displays on the Assets and Clauses, Options & Terms tabs when the user attempts to Activate an Asset Lease with invalid dates. (Tri-139006)

Area of Change	Description
Real Estate Asset Lease Real Estate Lease Owned Property (Fee) Agreement Real Estate Abstract	Existing Quarterly payment schedules that were created prior to the 10.4.2 release did not have the Calculation Method set. The Calculation Method can now be set to Daily by running triPatchHelper - triCalculate - 10.5 - Retro Quarterly Payment Schedule. (Tri-204361)
Real Estate Asset Lease Owned Property (Fee) Agreement Real Estate Abstract Real Estate Lease	Field alignment of the Payment Due On, Current Period Start Date, and Calculation Method fields for Quarterly schedules that were created prior to 10.4.2 was not correct. This issue can be fixed by running the 10.5 Patch helper WF: triPatchHelper - triCalculate - 10.5 - Retro Quarterly Payment Schedule. (Tri-204360)
Real Estate Asset Lease Owned Property (Fee) Agreement Real Estate Lease	Fixed an issue where a lease or owned property record might get stuck in processing status if there was a combination of monthly and non-monthly payment schedules associated and the system processed the non-monthly schedules first before processing the monthly schedules. (Tri-204975)
Real Estate Asset Lease Owned Property (Fee) Agreement Real Estate Abstract Real Estate Lease	For existing Frequency = Other payment schedules created prior to 10.4.2 release, the Payment Due On, Current Period Start Date, and Calculation Method were not hidden. The fields can now be hidden by running triPatchHelper - triCalculate - 10.5 - Retro Other Payment Schedule. (Tri-204331)
Real Estate Asset Lease Owned Property (Fee) Agreement Real Estate Lease	On Payment Adjustment, the message displayed when the user attempts to enter an Adjust Amount less than the Expected Cash Before Tax is now translated. (Tri-172858)
Real Estate Asset Lease Real Estate Lease	On Stop and Void Payment, the Payment section Find query was fixed to display the Contract name for payment line items associated to Asset Lease records. (Tri-172189)
Real Estate Asset Lease Owned Property (Fee) Agreement Real Estate Abstract Real Estate Lease	Payment Due On, Current Period Start Date, and Calculation Method are now hidden on monthly payment schedules. Payment Due Day field is realigned. Field display is fixed by running triPatchHelper - triCalculate - 10.5 - Retro Monthly Pending Payment Schedules Hide/Show. (Tri-190261)

Area of Change	Description
Real Estate Asset Lease Owned Property (Fee) Agreement Real Estate Abstract Real Estate Lease	Payment Schedules created from Generate Payment Schedule now default the Accounting Type to Accounts Payable (AP) regardless of the accounting type that is set on the General tab of the parent record. (Tri-196375-IV78805)
Real Estate Asset Lease Real Estate Lease	The monthly rate/daily rate required for straight-lining are now calculated based on payment schedules that are between Accounting Start/End Date. (Tri-191946)
Real Estate Asset Lease Real Estate Lease	The storage precision on the fields triCurrentTermSLRentNU and triRentSLExpenseNU in the triFiscalLineItem Business Object is changed to six so that the Impact Report displays properly. (Tri-204153)
Real Estate Asset Lease Real Estate Lease	The straight line schedule on the Accounting tab is no longer generated after a payment adjustment splits a payment schedule that has the Include In Amortization Schedule check box unchecked. (Tri-173255)
Reporting	Added condition to handle Base Currency for Future Rent Obligation and Future Rent Obligation for Asset Lease. (Tri-159395)
Reporting	Corrected an issue where the related report section on a metric report was not correctly filtered when a different Capture Period was selected. (Tri-135346-IV73045)
Reporting	Corrected an issue where the Year range was limited on the following reports: Location - BIRT - Emissions Report Location - BIRT - Environmental Impact Report Location - BIRT - Environmental Summary Report (Tri-183158)
Reporting	On the Funding Analysis Summary report, changed the initial FCI condition to the value defined by the user when zero and fixed the second column to the FCI value. (Tri-191345)
Reporting	Resolved an issue that caused charts to not group correctly. The Group By column has been removed from Order By section in the following chart reports: triAccidentReport - Portal - Aggregate Accident Reports grouped by Status triSpace - Space Occupancy Status by Building triCapitalProject - Aggregate Capital Project Budget, Invoiced, Forecast for PM triCapitalProject - Aggregate Projects grouped by Type where Manager equals to Joe Black triSpace - Space records of Seat Capacity per Building (Summary) triNoticetoComplyAdmin - Graph of Notices to Comply grouped by To Organization triSpace - Space records of Seat Capacity per Building by Space Class triBuildingSystemItem - Graph - Percent of Building Cost triBuildingSystemItem - Graph - Replacement Cost triBuildingSystemItem - Graph - Risk Rating - All Items triBuildingSystemItem - Graph - Condition Rating - All Items triBuildingSystemItem - Graph - Condition Rating - All Items triSurvey - Graph - Move and Service Satisfaction - Overall

Area of Change	Description
	triTask - Graph - Open Tasks by Current Status triRequest - triOrganization - Active Service Requests by Type (Graph) triBuilding - Building records of Seat Capacity per Building (Summary) triBuildingSystemItem - Graph - Risk Rating triBuildingSystemItem - Graph - Replacement Cost - All Items triBuildingSystemItem - Graph - Condition Rating triRealEstateLease - Portal - Lease by Lease Type triServiceSurvey - Graph - Customer Service Satisfaction - Overall triRealEstateLease - Portal - Lease by Status pie graph triBuildingSystemItem - Graph - Percent of Building Cost - All Items (Tri-187618-IV76022)
Reporting	The BIRT report "triBuilding - BIRT - Building System Summary" is removed from Report Manager. You can choose to manually remove this report from My Reports in your environment. The intention of this BIRT report is to be run from Reports tab of a Building record and not from Report Manager. (Tri-185950)
Reporting	The Cost Base and Savings Base fields are now displayed on the Opportunities section of the Analyze Opportunities form. Also, the Total Estimated Cost and Total Estimated Savings fields under the Totals for Selected Opportunities section display the total of base fields from Opportunities query section. (Tri-187663)
Reporting	The currency conversion on the following BIRT reports is now working as expected: ARAgingReport AllFutureLeaseObligationReport ARAgingForAssetLeaseReport ARREContractPaymentDetailsForAssetLeaseReport ContractPaymentDetailsReport FutureARPaymentsForAssetLeaseReport FutureARPaymentsReport FutureRentObligationDetailForAssetLeaseReport PortfolioSummaryReport FutureRentObligationDetailReport AccountsPayableHistoryReport ARREContractPaymentDetailsReport (Tri-185786)
Reporting	The Plan Work Manager query now shows the Responsible Organization and Service Provider columns. (Tri-192171-IV77206)
Requests	For Equipment Request and Change Space request, the System Organization and System Geography fields are now populated from logged in user's profile data. (Tri-196092-IV78683)
System Setup	Notification Content queries now return records in the correct status. The Notification Contents - Active query render only Active status records. The Notification Contents- Review In Progress query render only Review In Progress status records. The Notification Contents - Upload Error query render only Upload Error status records. (Tri-174513)
System Setup	The Logo and Title cells on triBidOffline001, triRELeaseAbstract, triRETransOffline001 offline forms are separated to support the globalization of these forms. (Tri-132656)

Area of Change	Description
System Setup	The status filter on the following People Template queries is corrected to render query results correctly.
	triPeopleTemplate - triRetired - Editable triPeople - People Template triPeopleTemplate - triPeople Manager Query
	Also, the Unretire action on People Template form renders the records back to Template status correctly. (Tri-183689-IV75422)
System Setup Application Settings	The triCurrencyUO field has been added to Units section of triApplicationSettings form. The value for this field should be in sync with the BaseCurrency on TRIRIGAWEB.properties file.
	This currency value should be set at the time of installation by an administrator. Changing the currency after the transaction records have been created is not recommended as previously created records will not be updated. (Tri-171980-IV73217)
System Setup	The triRealEstateLeaseTemplatePopUp - triContinue workflow is retired. This workflow is available under triActionForm module and triRealEstateLeaseTemplatePopUp Business Object in Workflow Builder. (Tri-188954-IV76385)
Work Task	The Resource Allocation section is now populated when a Person resource is added to the Work Task. (Tri-181271)
Workplace Reservation Manager	After you change the start time of an existing reservation, queries no longer show a record with the old start time in addition to a record with the new start time. (Tri-134201)

# IBM TRIRIGA 10.5.0 Patch Helper Workflows

Patch helper workflows correct the record data in your IBM TRIRIGA application. A patch helper workflow can revise and update, bring new data records for a release, and recalculate records. The patch helper makes necessary changes to your IBM TRIRIGA database. You apply the patch helper workflows for a release after you install or upgrade to that release. Wait for one patch helper workflow to complete before you begin the next. Some patch helper workflows can take a long time to complete.

The following patch helper workflows are in this release:

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Name	Description	
triPatchHelper - triCalculate - 10.5 - Create Approval Rule for Space Assessment	This patch helper workflow creates Approval Template and Approval rule records and associated it to approval requirement record.	
triPatchHelper - triCalculate - 10.5 - Retro Annually Payment Schedule	Run this workflow to update existing payment schedules that are on an annual basis.	
	Current Period and Period Start Date are set to the payment schedule Start Date, so no partials would be created in 10.5.	
	IMPORTANT: If there are partials on the payment schedule using the form "X" to cancel the form will wipe out the partial	

Name	Description
	data. You should review payment schedules with partial data populated and fix the Current Period Start Date and/or the partial data as needed.
triPatchHelper - triCalculate - 10.5 - Retro Monthly Pending Payment Schedules Hide/Show	Payment Due On, Current Period Start Date, and Calculation Method are now hidden on monthly payment schedules. Payment Due Day field is realigned. Run this workflow to fix this field display.
triPatchHelper - triCalculate - 10.5 - Retro Other Payment Schedule	Run this workflow to hide the Payment Due On, Current Period Start Date, and Calculation Method for existing Frequency = Other payment schedules that were created prior to the 10.4.2 release.
triPatchHelper - triCalculate - 10.5 - Retro Payment Line Item To Set Start and End Dates	Run this workflow to set the Start Date and End Date on each of payment line item to accurately calculate the Daily Rate for straight-line calculations.
triPatchHelper - triCalculate - 10.5 - Retro Quarterly Payment Schedule	Run this workflow to update existing payment schedules that are on a quarterly basis.
triPatchHelper - triCalculate - 10.5 - Retro Semi-Annually Payment Schedule	Run this workflow to update existing payment schedules that are on a semi-annual basis.
triPatchHelper - triCalculate - 10.5 - Retro Set Period Start Date for Specific Quarter Payment Schedule	Run this workflow to update existing payment schedules that are on a location specific quarter basis.
triPatchHelper - triCalculate - 10.5 REVERSE ACCRUED LIABILITY SIGN	This workflow is a special patch helper to fix the accrual sign for straight-line schedules that are present before the 10.4.2 release. The string to utilize in this case is: 10.5 REVERSE ACCRUED LIABILITY SIGN
	Prior to 10.4.2, the triResidualNU formula = (triCurrentTermSLRentNU - triLeaseTermNetRentPaymentNU) triAccruedLiabilityNU has no formula Starting 10.4.2, triResidualNU formula = triLeaseTermNetRentPaymentNU - triCurrentTermSLRentNU triAccruedLiabilityNU has no formula
	<b>NOTES:</b> Customers who are starting on 10.4.2 do not need to run this patch helper.
	Customers who are upgrading from a prior version (10.3.2, 10.4) to 10.4.2 and have Straight-Line schedules need to run this patch helper.
	This patch helper will reverse the sign of Accrued Liability (triAccruedLiabilityNU) and Likely Term Accrued Liability (triLikelyTermLiabilityNU) by multiplying by (-1).
	The leases are that created prior to Dec 31st 2014 (checking for Created Date) are considered and for status in (Active, Revision in progress, Review in progress) with accounting Start/end date filled in.

Name	Description
	For each current Lease revision, the system gets the History (Amendments) leases.
	For each of the History lease any fiscal line items that are associated (SL schedule/Capital/Finance Schedule or Type A/B schedule) the sign is reversed by multiplying by (-1) for the following 2 fields:  - Accrued Liability (triAccruedLiabilityNU)  - Likely term liability (triLikelyTermLiabilityNU)
	Once all of the FLIs are corrected for Accrued liability then user needs to either perform a Review assumption or Activate the lease if a new Payment schedule is added.
	*All the leases should be set to Standard Calendar.
	**We do not plan to trigger the re-calculation automatically due to performance for processing SL schedule. The Recalculation will force the correct calculation of Accrual and Accrued liability for current lease revision.
	IMPORTANT: This patch helper needs to be run only 1 time. Running it more than 1 time will reverse the sign again.
triPatchHelper - triCalculate - 10.5 SPACE CLASS CURRENT - Update when NoUsable/NoRentable	On the Space Class Current classifications, the user can now select either Exclude from Usable or Exclude from Rentable, but not both.
	To correct existing data, customers should run this patch helper. The start condition for this patch helper is: "10.5 SPACE CLASS CURRENT". When running this patch helper, if the Space Class Current record has both options checked, it keeps the most restrictive option "Exclude from Usable" checked and unchecks "Exclude from Rentable".

# IBM TRIRIGA Application Platform 3.5.0

This release includes important information, known limitations, changes, and property file changes to the IBM TRIRIGA Application Platform.

# Important Information

The following items are important information concerning the IBM TRIRIGA Application Platform and are newly added for this release. For Important Information related to previous releases, see the <u>Release Notes</u> page of the IBM TRIRIGA wiki.

Area of Impact	Description
Globalization	If you receive a "List Does Not Exist" warning in the server.log after a label export, you can ignore the warning. (Tri-187222)
Globalization - UX	Use the Globalization Manager instead of Object Migration to export and import Dictionary (triDictionaryEntry) record data. If you choose to use Object Migration, make sure to remove existing Dictionary records from the target environment before you import the package that contains your Dictionary records. Because the Dictionary record name is mapped from a control number, there is no guarantee that the control number sequence in the source environment will match the sequence in the target environment. (Tri-196510)

### **Known Limitations**

The following items are known limitations concerning the IBM TRIRIGA Application Platform and are newly added for this release. For Known Limitations related to previous releases, see the <u>Release Notes</u> page of the IBM TRIRIGA wiki.

Area of Impact	Description
AnyChart	The following known limitations apply to AnyChart use with TRIRIGA:
	<ul> <li>AnyChart no longer supports the concept of Chart Templates in AnyChart 7.x, as they did in AnyChart 6.x. Any customized Chart Templates applied to IBM TRIRIGA will no longer work. Chart Templates are stored in Tools-&gt;System Setup-&gt;General-&gt;Chart Templates. If you need to apply a customized Chart Template, you can use the delivered IBM TRIRIGA Chart Templates as a guide. Note that due to AnyChart no longer supporting their concept of Chart Templates, the amount you can customize may be limited compared to previous releases IBM TRIRIGA.</li> </ul>
	<ul> <li>When saving a chart as PDF, the chart will shrink to fit the page, but legend remains disproportionately large.</li> </ul>
	<ul> <li>AnyChart 7.x does not yet support linear gauges. All linear gauges configured in your environment will appear as circular gauges.</li> </ul>
	<ul> <li>AnyChart 7.x does not have bidi support for pie chart labels.</li> </ul>
	<ul> <li>AnyChart 7.x does not have bidi tooltip text support.</li> </ul>

Area of Impact	Description	
	<ul> <li>AnyChart 7.x has an issue with displaying negative data points on a circular bar gauge. IBM TRIRIGA recommends using the circular (needle) gauge, if the gauge displays negative points.</li> </ul>	
	<ul> <li>AnyChart 7.x has an issue with line chart tooltips, where the series name cannot be displayed as the tooltip title. On line charts, the point name now displays as the tooltip title, and the series name displays below that.</li> </ul>	
Data Integration	When a record is updated using Data Integrator, the Created DateTime System ReadOnly field is also updated. (Tri-195237)	
Mail	You must be logged in as a US English-language user when creating or modifying Incoming Mail Config records in order for the Incoming Mail Agent to pick up the changes. (Tri-173638)	
UX	The UX Component Documentation page in the product contains a list of elements for building UX applications. See the UX Component Documentation page for details on each UX component and for any known limitations: <a href="http://[hostname]:[port]/[context_path]/p/web/doc">http://[hostname]:[port]/[context_path]/p/web/doc</a> (Tri-201999)	

# IBM TRIRIGA Application Platform 3.5.0 Changes

The following changes to the IBM TRIRIGA Application Platform are in this release:

Area of Change	Description
Administrator Console	A user can no longer log in to the Administrator Console if the application server does not have licenses. (Tri-199464)
Administrator Console	In the Administrator Console, when you go to a different part of the console, the session's data is no longer cleared. In addition, the session does not time out prematurely. (Tri-186757-IV75835)
Administrator Console	In the Workflow Agent Manager of the Administrator Console, the Run Workflows Triggered By Scheduled Events As field is now a text field. The field accepts the case-sensitive user name to use to run scheduled event workflows. To change the user, type the user name to run events as. To run workflows as the default user, type the word DEFAULT. (Tri-186860-IV75839)
Administrator Console	SMTP logging can now be enabled by adding the following three categories manually in the Administrator Console. DEBUG:  com.tririga.platform.notification com.tririga.architecture.mailer com.tririga.architecture.extmailer (Tri-185086)
Administrator Console	The System Manager now includes the TRIRIGA DB file. The TRIRIGA DB file replaced the TRIRIGA MIDDLEWARE file. (Tri-194375)

Area of Change	Description
Administrator Console	The Workflow Agent Manager has a new action that you can use to reset or remove all restricted user list settings. With this new action, you can remove settings for a server that is no longer in the current environment. (Tri-188425-IV76181)
Application Server	IBM WebSphere Liberty has been upgraded to 8.5.5.7. (Tri-181588)
Application Server	On IBM WebSphere Full Profile, the TRIRIGA_IBM_ICU4_8_1_1 is now set to isolated = true. (Tri-177206-IV75955)
Application Server	The IBM TRIRIGA log in page and warning messages have been updated to a more modern design and style. (Tri-194567)
Builder Tools	A user with no access can no longer export the where used data for an object. (Tri-193476)
Data Integrator	The system read-only Created Date/Time field value is now populated when you use the Data Integrator to create a record. (Tri-179905-IV74645)
Data Modeler	Fixed an issue with the Data Modeler and object migration where if a Microsoft SQL Server maximum row size exception was raised during publish that the platform rolled back changes to the data tables (T_ tables) to prevent duplicate field creation on a subsequent publish. This change was only made for SQL Server. (Tri-192421-IV77119)
Data Modeler	Resolved a database issue that might cause an arithmetic overflow when resizing the length of a business object text field. (Tri-186385)
Document Management	Document upload now checks for the length of the name, number, and description when uploading. (Tri-193673-IV77521)
Document Management	Removed a double slash in document upload so that certain third-party security filters do not block the upload.js and upload.css from being sent to the browser. (Tri-185841)
Document Management	The Document Management tree now adheres to the value of the TREE_PAGING_SIZE property in the TRIRIGAWEB.properties file. The default value is 1000. Note: If TREE_PAGING_SIZE is set to a high number, and there are many records at one level in the tree, performance is impacted. (Tri-183727-IV75373)
Document Management	The Toggle MultiFile link access restriction now depends on the permission on the folder record. (Tri-191576)
Document Upload	The clear action now works when uploading a record to a document. (Tri-202377)
Firefox	The refresh spinning icon in availability sections now displays properly in Firefox. (Tri-172732)
Form Builder	A user can now select a pop-up from a drop-down value after selecting a pop-up module when creating a new field action. (Tri-193992-IV77639)

Area of Change	Description
Form Builder	Creating a tab on an unpublished form no longer causes an error to be displayed. (Tri-184886)
Form Builder	When you click the Apply button, the Associated Query/Availability section property value is now saved. (Tri-180710)
Globalization	Duplicate rows no longer appear in a report when a non-US English-language user sorts the report by a dependent list field. (Tri-171429-IV72771)
Globalization	If an error occurs when you export system labels, the error is logged to the server.log and the remaining system labels are processed. (Tri-176529)
Globalization	Localized values of a locator field are now trimmed if the values are larger than the size set in the locator field. (Tri-194218)
Globalization	Multi-tab form section labels now export with correct values from the form metadata to their SECTION_NAME properties. Affected labels will appear as delta on your next export, even if they were previously exported, and their <tririga> tag will be updated with the correct values. (Tri-166184)</tririga>
Globalization	Resolved an issue that caused filtering of columns for module, business object, or form to not work correctly if the user's language was not the base language. (Tri-170457)
Globalization	When a user modifies the values of a list, the changes are now immediately reflected in forms, object migration, and globalization manager exports. There is no longer a need to first refresh the object metadata cache. (Tri-156607)
Google Chrome	A floor name that contains special characters can now be exported in Google Chrome. (Tri-189852-IV76730)
Google Chrome	Data is now saved when you right-click to paste a value into a multi-text area within Google Chrome. (Tri-189312-IV76387)
Google Chrome	Google Chrome pop-up windows within a record are positioned so that a user can interact with the window instead of scrolling to the top of the form. (Tri-188409-IV76176)
Google Chrome	Uploading BMP files to a Note field now displays the images correctly. (Tri-185394-IV75638)
Graphics	The Show Tooltip menu and hover over label now display when a theme is applied to a graphic by using the right-click menu. (Tri-169092)
Graphics	When selecting entities in a standalone graphics section, the selected objects are saved in the session. When viewing the graphic in print preview, or returning to the tab which contains the graphic section, the graphic is rendered with the entities selected that were selected before. These selections do not persist to the database, however. (Tri-192318-IV77106)
IBM TRIRIGA Connector for BIM	Increased the height of Project Settings form so that the form now renders all the form elements in Japanese language. (Tri-204038)

Area of Change	Description
IBM TRIRIGA Connector for BIM	Populate the Current Use Space Class with the correct value when new spaces are created from Revit by a non-English user.
	The user's language when creating new spaces using the Integrate-Link operation must be the same as the language of the IBM. UseClassification parameter values for the rooms being linked. This value is typically set using the Populate Parameters operation.
	The Revit Sync operation will set the room IBM.UseClassification parameter with the Current Use Space Class value of the linked space in the current Revit user's language. (Tri-204943)
IBM TRIRIGA Connector for BIM	Resolved an error that occurred when users loaded the Polish language resources for IBM TRIRIGA Connector for BIM. (Tri-191443)
IBM TRIRIGA Connector for BIM	Resolved an issue that kept the building record from being created if the location hierarchy was not in English. (Tri-189222)
IBM TRIRIGA Connector for BIM	Retain the configured default Space Use Class value (in Project settings) when using a different language than the one used when the value was configured.
	For Revit models that have been configured, this update requires that the default Space Use Class value be configured again. If a configuration was saved to the server as the default configuration, it needs to be saved again. (Tri-204944)
IBM TRIRIGA Connector for BIM	The Sync operation now updates the IBM.Name parameter in the Project (building), Levels (Floors), and Rooms (Spaces) if the name of the Building, Floor, or Space record has been changed in TRIRIGA. (Tri-187987)
IBM TRIRIGA Connector for BIM	Updated the platform to auto-import the BIM package, which is also now exposed in the userfiles directory. The BIM package will now import correctly with the 10.3 TRIRIGA application. (Tri-197211)
Installation	Clean installs no longer deliver test data in the RESOURCE_AVAILABILITY table. (Tri-182140-IV74898)
Installation	In the TRIRIGA installer, the recommended minimum and maximum Java memory sizes are based on IBM's Best Practices for System Performance. WebSphere Application Server Liberty and WebLogic application server installations also mention a recommended PermGen Java memory setting. (Tri-175575)
Installation	Metadata business object loggers are now available in debug mode only. (Tri-174687)
Installation	MSSQL VarChar to NVarChar conversion process now logs messages to server.log. (Tri-203590)

Area of Change	Description
Installation	Resolved an issue where two performance properties were missing from WebSphere Liberty server.xml configuration when using Microsoft SQL Server.
	These missing properties are in the datasource properties tag, and are defined as follows. sendStringParametersAsUnicode=" <true false>" prepareSQL="2"</true false>
	These properties are now automatically added to the Liberty Configuration. (Tri-187120-IV76021)
Installation	The default action links for a clean install are now set as:
	SYSTEM_SECTION_ADD_ACTION_STYLE=LIGHT_BUTTON SYSTEM_ACTION_STYLE=LIGHT_BUTTON
	For 10.5 with the updated look and feel, this is the default. If the new skin is applied to an older 10.4.2 or below database, set these properties to show links as buttons. (Tri-205283)
Installation	The installer no longer runs platform-specific SQL scripts. The platform update scripts were moved to the application server start. There now is a new lock in the database while an application server starts. This lock causes other application servers that start around the same time to wait for the first application server to finish. After the first application server finishes the application server and database synchronization scripts, the second and subsequent application servers start. If an application server has an issue, the lock might remain in the database. To remove this lock, run the statement: delete from environment_properties where property = 'upgrade.lock'; and do not forget to commit. (Tri-195594)
Installation	The installer now contains a panel that recommends checking for fix packs. (Tri-202092)
Installation	The two license panes in previous installers were combined into one license pane. (Tri-194472)
Integration Object	Integration Object Data Map does not render when you use a DB2 data source in the DC to File scheme. To resolve this issue, request an object migration package from TRIRIGA Support and import the package. (Tri-176082)
Integration Object	Resolved an Application Custom Class Loader issue. When the Class Loader delegation was to Parent-Last, class loading functionality was unexpectedly being pushed to the parent class loader when the Custom Class Loader attempted to load certain Java classes from packages such as javax.*. (Tri-171886-IV73401)
Integration Object	Resolved an Integration Object issue where the Database Inbound scheme was not correctly populating Note fields. (Tri-172159)
Internet Explorer	Fixed an issue for IE11 where modal window goes in background of parent window after opening. (Tri-194452-IV78249)
Internet Explorer	Resolved an issue in IE 11 where note sections within a form may freeze after changing a field value. (Tri-187444-IV76209)

Area of Change	Description
Log In Page	The log in page now has a new IBM TRIRIGA logo and style. (Tri-189921)
Microsoft Excel	The Excel functions that IBM TRIRIGA supports are now documented in the Application Building for the IBM TRIRIGA Application Platform 3 User Guide. (Tri-191607-IV77002)
Navigation Builder	Navigation items that were found after a search and deleted are now removed from the results pane. (Tri-200162)
Notices	Resolved an issue where the user action item count was different from the actual records for the action item. (Tri-166988-IV72045)
Notifications	After a user clicks a linked record within an email that is generated from the TRIRIGA application, and then clicks the Open In New Window icon, the record now loads properly. Before, the result was a "Please wait" message. (Tri-185842-IV75721)
Notifications	External notification emails with hyperlinks now display the hyperlink text in the language from the user's profile. (Tri-172709)
Numbers	Clearing a currency number field and then saving the form no longer displays an error message. (Tri-192769-IV77205)
Numbers	If a number display mask does not have comma in it, you cannot use a comma when you enter the value. Entering a comma in the value clears the value. To enter a number with a comma, you must change the display mask. (Tri-116106)
Numbers	Resolved an issue that caused a number that was entered into a non-currency number field to be cleared when the record was saved. The value is now saved. (Tri-195864)
Object Migration	Added a back button that appears when performing the "Find Dependents" or "Search" actions to increase general usability when using these functions. (Tri-195681)
Object Migration	An issue was fixed where the navigation tabs in the home page would disappear after importing an object migration package that contained the triPlatformMenu list. (Tri-197114)
Object Migration	Fixed an issue where a Null Pointer Exception was issued when adding a security group for object migration export. (Tri-182884)
Object Migration	OSLC resource now exports/imports correctly by Object Migration if it contains two properties with the same section name and field name. (Tri-183614)
Object Migration	Fixed an issue where read only access in a group getting changed to inherit from parent after group is imported. (Tri-194534-IV77647)
Object Migration	Importing forms with calendar sections that include calendar sets in the same import package no longer creates validation warnings about missing or invalid calendar sets. (Tri-120858)

Area of Change	Description
Object Migration	Improved the performance when adding objects after using search; the process of adding objects was kicking off the search again unnecessarily. Also improved the OM debug logging. (Tri-202276)
Object Migration	Object migration import of groups now successfully imports security settings for Calendar Set Builder, Scorecard Manager, Form Builder, Navigation Builder, and Portal Builder. (Tri-202271)
Object Migration	Resolved an object migration issue involving the import of the System Portal List that caused portals not to display. (Tri-194314)
Object Migration	The "Full Package" Create Mode export option was removed from object migration. To create a full package, do the following steps:  1. For Create Mode, select Empty.  2. For each Object Type, search for and select all objects to add to the package.  a. In the Search Parameters section of the Object Finder panel, select an Object Type and click Search.  b. In the Search Results section, select all objects of this object type by clicking the check box next to the object type.  c. Click Add Selected Objects.  3. Repeat the steps for each set of objects that you want to include in your package.  Attention: For the Record Data object type, you must select each module individually and add all of the object search results to the export package.  (Tri-173046)
OSLC	Improved the performance of OSLC queries. Improvement is visible especially when no linked resources are involved. (Tri-182052)
Performance	Added a warning if a deadlock occurs when saving workflow instances. The warning states that the process cannot save the workflow instance step list. You might be saving too many instances. Do not set Workflow Instance Saving to ALWAYS in a production environment. (Tri-189660-IV76685)
Portal	If the value of the Help property of a quick links navigation collection is empty, when the navigation collection is displayed in a quick links portal section, no extra space displays between the navigation collection label and the label of the first navigation item. (Tri-178134)
Portal	The Personalize, Open in New Window, and My Bookmarks icons have been updated.  The following icons can be updated by placing the new icon in the "userfiles/images/icon" directory.  customize-icon.png MyBookmarkslcon.png AddBookmarklcon.png open-in-new-window.png  (Tri-204723)

Area of Change	Description	
Portal	When selecting a company or project view on the main page the home page now loads. (Tri-197300-IV8336)	
Record Runtime	Resolved an issue where some form sections were spanning less than half of the screen width. (Tri-193235)	
Record Runtime	Resolved an issue where manually entering a date into a date field, which is set to relative in data modeler, would not save the correct date that was entered. (Tri-195406-IV77940)	
Record Runtime	Carriage returns are no longer using their formatting when an onChange workflow is triggered on a text area field. (Tri-200460-IV78541)	
Record Runtime	Editable query test will now save when the field did not lose focus prior to saving the form. (Tri-199425)	
Record Runtime	Resolved an issue where platform upgrade may fail to load user's profile data if the isBidiEnable field is not available. (Tri-195217)	
Record Runtime	Resolved an issue where print preview page won't load because the calendar section start date and end date are not specified. (Tri-187779)	
Record Runtime	Resolved an issue where selecting a classification value in editable query was not saving the classification value. (Tri-195774)	
Record Runtime	Locator fields in an editable query when no locator query was defined will loads. (Tri-197168-IV78335)	
Record runtime	Resolved time zone and format mismatches between form and query. Time zone now reflects Daylight Saving Time correctly. It shows the time based on the user's profile current settings. (Tri-193308)	
Record Runtime	The message "To see more, use a master-detail target" no longer appears in hierarchy trees that contain more records than the value of the TREE_PAGING_SIZE property at one level. Users now are only shown "First 1000 displayed" when the value of TREE_PAGING_SIZE=1000. As a reminder, it is best practice to have records at different levels in trees, and not all at one level. Having too many entries at one level negatively impacts performance. (Tri-184748-IV75446)	
Record Runtime	Upload from the Related Documents section of the Notes & Documents tab of a record now loads the document management tree structure in Chrome, Firefox, Internet Explorer 11, and Safari. (Tri-184770)	
Record Runtime	You can now drill into a date on a record's Calendar tab and see the details in a Day/Week/Month/Quarter/Year view. (Tri-187514-IV76097)	
Record Runtime	You can now pick a date through January 1, 4001 by using the date picker. (Tri-186465-IV75813)	

Area of Change	Description
Reporting	A charting issue was resolved with the upgrade of the chart rendering engine to AnyChart 7, where not all legend data was being correctly displayed. (Tri-171417)
Reporting	A privilege escalation on editing reports has been mitigated. If a user that should not have access to a particular report somehow receives the report ID, the user still should not be able to access the record. If the user intercepted and replaced the report ID in the packet header information between the client and server side of the TRIRIGA application. (Tri-171002-IV72628)
Reporting	Adds support for an additional Y-Axis in metric reports, and also fixes several issues that were related to chart colors when using thresholds and scorecards. (Tri-183741)
Reporting	Adds the following support for thresholds in metric charts rendered in AnyChart display threshold lines - display bar data in associated threshold color - display threshold data in legend. (Tri-183737)
Reporting	Date fields marked as Relative will now work properly with a runtime equals filter. (Tri-174245-IV73796)
Reporting	Date-time fields are now consistent with the time zone selected by the user when running any report. (Tri-194984)
Reporting	Resolved an issue in a query where the color's hex value was displayed in addition to the color. (Tri-200583-IV78519)
Reporting	Resolved an issue where metric chart rendering prints JavaScript on the browser window. (Tri-188279)
Reporting	For a non-US English-language user, filtering now works correctly for Form or Shared Groups. (Tri-170453)
Reporting	In outgoing mail from the TRIRIGA application that contains reports or queries with date and date-time fields, the date and date-time fields are now formatted based on the formats in the user's My Profile. (Tri-167828-IV74138)
Reporting	Metric chart reports now support Save as JPG, Save as PDF, and Save as PNG. Right-click anywhere on the chart to see a menu with the save options. (Tri-183784)
Reporting	Pie chart grouping is no longer lost when Group By fields do not also appear in the Order By list on the report design. (Tri-186660-IV76022)
Reporting	Report Manager no longer creates an error when the user saves a report twice or when the user saves and then selects a different tab. (Tri-187608)
Reporting	Resolved an error that occurred when a user attempted to save a color field that contained a '# <hex value="">' within a threshold record. (Tri-195770)</hex>
Reporting	Resolved an issue in Internet Explorer where switching to a different tab in the Performance Metric Reports lower section did not display the tab. (Tri-176532)

Area of Change	Description
Reporting	Resolved an issue where a BIRT report was sometimes displayed to a user in a language that was not theirs, but was the language of another user on the same server. (Tri-183416-IV77021)
Reporting	Resolved an issue where capture period filters on metric query reports were not showing all data if the filter value was set to the Classification root. Data corresponding to only the current capture period was displayed. With this change, all data is now displayed regardless of the record's capture period when the capture period filter value is set to the Classification root. (Tri-178020)
Reporting	SystemReport and CommunityReport strings were separated into two words each. The strings are now "System Report" and "Community Report." (Tri-174026)
Reporting	The check box that selects all records no longer remains checked after the action completes. (Tri-184447)
Reporting	The error message that displays in the report manager when an attempt to share a report with another user fails due to lack of permissions is now, "You do not have permission to share the following reports". (Tri-190309)
Reporting	The IBM TRIRIGA BIRT Features add-in site is fixed. To install the add-in from a running application server, go on an Eclipse application, go to Install New Software, and specify [app server url]/eclipse. For example, if an application server has the server url: http://localhost:8080/dev, in the installation software download site, specify: http://localhost:8080/dev/eclipse. (Tri-177572)
Reporting	The IBM TRIRIGA BIRT plug-in can now connect with HTTPS SSL servers while using Java JDK 1.7 as well as Java JDK 1.6, for both previewing and downloading the plug-in. (Tri-187111)
Reporting	The list of reports in the Report Manager now automatically refreshes after the user takes an action to modify the list in some way. (Tri-190318)
Reporting	The Security sub-tab displays when the Show As Community Report check box is cleared or selected. (Tri-188990)
Reporting	The tag is now copied when a report is copied. (Tri-171222)
Reporting	Updated pie chart labels to be in compliance with AnyChart 7. As in previous releases, the pie chart labels display the name of the data representation, its value, and the percentage of the pie chart that the data populates. (Tri-183735)
Reporting	Users in a group that has View access to a report in the report's Security tab now can see the report in their My Reports tab and run it. (Tri-184657-IV75476)
Reporting	When exporting an editable query to Excel (*.xls) with at least one group by value, currency values now show as currency or number cell values in the Excel file. (Tri-197033-IV78307)
Reporting	When you look at the underlying data in a metric report and go to the second page, an error no longer displays. (Tri-196525-IV78171)

Area of Change	Description
Reporting	With access to the My Reports tab, a user can create reports that show forms and sections on forms, even when the user's group access is no access for the section, form, or module. My Reports ignores the access restrictions in groups. (Tri-180745)
Scheduled Events	Resolved an issue where a decimal value was erroneously used in an ID field for Scheduled Events. (Tri-186410-IV76293)
Security	A cross site request forgery attack has been fixed. Now, reports can be created and saved only within the TRIRIGA application. If in a different tab in the same browser a TRIRIGA user is accessing the application, there is a way to send a new report request to the application server, that request will now be blocked. (Tri-171005-IV74599)
Security	Added a new license, LICENSE_IBM_TRIRIGA_Facilities_and_Real_Estate_Management_on_Cloud_Anywhere, and updated existing licenses to support UX. (Tri-203000)
Security	Metric technology is now used with Reserve and SaaS licenses. (Tri-204079)
Security	Report Manager access now includes a Read permission for My Reports. Users in groups where the most permissive access to My Reports is Read can only run reports, unless the report's Security tab has Edit selected, in which case users can edit the report. (Tri-181973-IV74860)
Security	Resolved a vulnerability with Injected Serialized Objects. (Tri-203597)
Security	Resolved an issue that caused a permission error for a user that had access to a linked record. (Tri-175318-IV73790)
Security	When you copy a group, the record ID of the new group is appended to the "Copy Of" name so that the new name is unique. (Tri-174747-IV73366)
SQL Server	The installer now installs a single-byte instance of MSSQL Server. (Tri-202994)
Style Manager	The style of a form's bottom action bar now matches the style of the upper navigation bar. Now, changing the style in Tools > Style Manager > Form Styles > Form Tab/Actions Bar Background Color resolves both navigation bars. (Tri-177096)
Style Sheet Editor	Manager tool bar header border style is now configurable. (Tri-178151)
Style Sheet Editor	Setting the values of the padding-bottom, padding-left, padding-right, and padding-top properties in the Style Sheet Editor now works as expected. This change might affect your forms. If you want to change the properties for forms, go to Tools > Administration > Style Manager > Style Sheet Editor. (Tri-178141)
TDI Agent	Resolved an issue with the Tivoli Directory Integrator agent that resulted in an error written to the TDI log file when the agent was started. "ERROR [tdisrvctl] - CTGDJB125E Unable to get list of all running Configs" is no longer written to tdisvrctl.log when the TDI agent starts. (Tri-169367)

Area of Change	Description
Web Graphics	Fixed an issue where graphic legend columns were not rendered Right to Left for an Arabic language user. (Tri-133282)
Workflow	A defect has been fixed where in the expression editor for workflow tasks, after selecting a system function, selecting a field in the "Tasks" section would not enter the field name at the cursor position in the expression editor. (Tri-177912)
Workflow	An issue was fixed in the workflow expression editor where it would not load if it referenced a deleted workflow task item or field. (Tri-189019)
Workflow	An issue was fixed where object mapping fields that did not have any populated data were being saved to the database anyway. Now, only object mappings with data entered by the user will be saved to the database. (Tri-189593)
Workflow	Deleting a workflow from the builder will delete the data permanently. (Tri-168175)
Workflow	Fixed an issue where clean up agent, after processing clears the schedule task properties and mapping. (Tri-189957-IV76874)
Workflow	Fixed an issue where formula mapping into note field, in workflow modify or create task, was not mapping the value. (Tri-186415-IV75838)
Workflow	When mapping objects in the Workflow Builder, the number of parameters that are sent in the URL from the client to the server was reduced. Generally, at most two parameters are now sent for each object that is mapped, instead of 7 - 10 per object. (Tri-181833-IV62154)
Workplace Reservation Manager	Improved the error message that is written to the server.log file when SMTP mail cannot be delivered. The message now includes the list of recipients to which TRIRIGA could not deliver. (Tri-188379)
Workplace Reservation Manager	In the outlook.log file, the error message, "Error converting value nnnnnnnn to type 'ReserveOutlookAddIn.DTO.Response' no longer appears under normal operating conditions. (Tri-190241)
Workplace Reservation Manager	Reserve Outlook Add-in 1.3.3 can now be installed on 32-bit Windows. (Tri-203705)
Workplace Reservation Manager	When a user's time zone is before the TRIRIGA server time zone, reservations now appear on the correct day on the calendar. For example, Central Standard Time is before Eastern Standard Time. (Tri-179225-IV74439)
Workplace Reservation Manager	When you reserve a space, the selected detail options are now displayed correctly. (Tri-181609-IV76299)

# IBM TRIRIGA Application Platform 3.5.0 Properties Files

The following changes to the TRIRIGAWEB.properties file are in this release. For more information, go to the IBM TRIRIGA Application Platform 3 Knowledge Center and select *Installing IBM TRIRIGA Application Platform > Configuring the platform > Properties files*.

Area of Change	Description
TRIRIGADB.properties	The TRIRIGADB.properties file has been added.
TRIRIGAMIDDLEWARE.properties	The TRIRIGAMIDDLEWARE.properties file has been removed.
TRIRIGAWEB.properties	Updated the comment for the FRONT_END_SERVER to make it clear that only the port is optional. (Tri-184733-IV75483)
TRIRIGAWEB.properties	With the upgrade of the chart rendering engine to AnyChart 7, the property CHART_RENDERING_TYPE was removed from TRIRIGAWEB.properties. (Tri-188599)
TRIRIGAWEB.properties	You can now customize report actions with the SYSTEM_ACTION_STYLE property in TRIRIGAWEB.properties. Actions can be displayed as a link or button. (Tri-178150)
TRIRIGAWEB.properties	A new property, SSO_DISABLE_UNAUTHORIZED_STATUS, has been added to the TRIRIGAWEB.properties. This property tells the unauthorized.jsp page to send the 401 Unauthorized response in the HTTP Header. The default is N, which means that the 401 header is sent. Setting the property to Y disables the header, so that no 401 is sent. (Tri-191707-IV77052)
TRIRIGAWEB.properties	The 'QUERY_CHART_IMAGE_URL' and 'ENABLE_CHART_ANIMATION' properties have been removed from TRIRIGA_WEB.properties as they are no longer used with AnyChart 7. (Tri-183799)
TRIRIGAWEB.properties	The documentation for INSTANCE_ID and INSTANCE_NAME was updated to indicate that each property is optional and can be used in any environment configuration as an easy-to-remember name for the different instances connecting to the database. (Tri-182764)
TRIRIGAWEB.properties	You can now preserve all object migration (OM) package metadata for audit purposes. This feature can be enabled by setting OM_AUDIT_TRAIL_ENABLED to TRUE in the TRIRIGAWEB.properties file. This enhancement also adds the ability to configure how many days the metadata of deleted OM packages are kept in the database. This feature can be configured by setting the OM_AUDIT_TRAIL_RETENTION_DAYS property in the TRIRIGAWEB.properties file. After this property is set, all deleted OM Package metadata older than the desired number of days are purged by the cleanup agent. (Tri-177797)

# IBM TRIRIGA CAD Integrator/Publisher 12.1.3

This release includes important information, known limitations, changes, and property file changes to IBM TRIRIGA CAD Integrator/Publisher.

# Important Information

There is no new important information concerning IBM TRIRIGA CAD Integrator/Publisher for this release. For important information related to previous releases, see the Release Notes page of the IBM TRIRIGA wiki.

### **Known Limitations**

The following item is a known limitation concerning IBM TRIRIGA CAD Integrator/Publisher and is newly added for this release. For known limitations related to previous releases, see the <u>Release Notes</u> page of the IBM TRIRIGA wiki.

Area of Impact	Description
Browser	In CAD Integrator/ Publisher, when you edit a record, the selected record opens in IBM TRIRIGA. In Chrome and Firefox, the Save & Close action and other actions that close the record as part of the operation appear to cause the record to hang. The operation works, but you must close the record yourself. (Tri-195592-IV78163)

# IBM TRIRIGA CAD Integrator/Publisher 12.1.3 Changes

The following changes to IBM TRIRIGA CAD Integrator/Publisher are in this release:

Area of Change	Description
General	Attached design files now display the login prompt when starting MicroStation. (Tri-174148-IV73453)
Installation	Resolved an issue where the CAD Integrator and Revit installers would not launch on a Windows machine with Java 8 update 60 or higher. (Tri-198001)
Login	A new check box option is added to the Environments form to Always Trust SSL Certificate when user login. Always Trust SSL Certificates option is unchecked by default. (Tri-171482-IV74437)
Login	Resolved an issue on environments with multiple forms with the same name that can cause the application definition to fail to load when referencing these forms. (Tri-193160-IV77547)
Menu	The default AutoCAD drawing is not a valid drawing, so the IBM TRIRIGA menu items are not enabled. To enable the menu items, save the drawing. (Tri-192890)
Planning Process	The create planning process in AutoCAD now correctly saves the planned drawing immediately after creation. (Tri-172626)

Area of Change	Description
Smart Attach	Resolved an issue in CAD Integrator where an upload in Smart Attach created records based on the default gui, not the gui specified in the CI Application Definition. (Tri-194495-IV77662)
Sync	Running the Sync Full command in MicroStation now inserts new cells to account for updated people or asset associations correctly. (Tri-176229-IV74743)

# IBM TRIRIGA CAD Integrator/Publisher 12.1.3 Properties Files

The ci.properties file did not change in this release.

# **Related Documentation**

You will find the documentation for this release in the IBM TRIRIGA 10 Knowledge Center at <a href="http://www.ibm.com/support/knowledgecenter/SSFCZ3\_10.5.0/com.ibm.tri.doc/product\_landing.html">http://www.ibm.com/support/knowledgecenter/SSFCZ3\_10.5.0/com.ibm.tri.doc/product\_landing.html</a> and in the IBM TRIRIGA Application Platform 3 Knowledge Center at <a href="http://www.ibm.com/support/knowledgecenter/SSHEB3\_3.5.0/com.ibm.tap.doc/product\_landing.html">http://www.ibm.com/support/knowledgecenter/SSHEB3\_3.5.0/com.ibm.tap.doc/product\_landing.html</a>. The documentation can be found in online IBM Knowledge Center topics, or in PDF files, or both.

This release updates the following documentation:

<sup>&</sup>quot;Administering IBM TRIRIGA" (online topics) or IBM TRIRIGA 10 Application Administration User Guide (PDF)

<sup>&</sup>quot;Administering with the Administrator Console" (online topics) or IBM TRIRIGA Application Platform 3 Administrator Console User Guide (PDF)

<sup>&</sup>quot;Assessing and improving the physical condition of facilities" (online topics) or IBM TRIRIGA 10 Facility Assessment User Guide (PDF)

<sup>&</sup>quot;Authenticating users by using single sign-on" (online topics) or IBM TRIRIGA Application Platform 3 Single Sign-On Setup User Guide (PDF)

<sup>&</sup>quot;Configuring the user experience" (online topics) or IBM TRIRIGA Application Platform 3 User Experience User Guide (PDF)

<sup>&</sup>quot;Getting started" (online topics) or IBM TRIRIGA 10 Getting Started User Guide (PDF)

<sup>&</sup>quot;Installing IBM TRIRIGA Application Platform" (online topics) or IBM TRIRIGA Application Platform 3 Installation and Implementation Guide (PDF)

<sup>&</sup>quot;Integrating data by using OSLC" (online topics) or IBM TRIRIGA Application Platform 3 OSLC Integration Guide (PDF)

<sup>&</sup>quot;Integrating data with external applications" (online topics) or Application Building for the IBM TRIRIGA Application Platform 3: Data Management (PDF)

<sup>&</sup>quot;Integrating data with the TRIRIGA integration object," "Integrating data with the TRIRIGA connector for Esri Geographic Information Systems (GIS)," and "Extending connector functions" (online topics) or IBM TRIRIGA Application Platform 3 Connector User Guide (PDF)

<sup>&</sup>quot;Integrating, publishing, and reporting on CAD drawing information" (online topics) or IBM TRIRIGA CAD Integrator/Publisher User Guide (PDF)

<sup>&</sup>quot;Localizing applications" (online topics) or IBM TRIRIGA Application Platform 3 Localization User Guide (PDF)

<sup>&</sup>quot;Managing graphics" (online topics) or IBM TRIRIGA Application Platform 3 Graphics User Guide (PDF)

<sup>&</sup>quot;Managing inventory" (online topics) or IBM TRIRIGA 10 Inventory Management User Guide (PDF)

- "Managing leased and owned property contracts" (online topics) or IBM TRIRIGA 10 Lease and Owned Property Contract Management User Guide (PDF)
- "Managing portfolio data" (online topics) or IBM TRIRIGA 10 Portfolio Management User Guide (PDF)
- "Managing procurement" (online topics) or IBM TRIRIGA 10 Procurement Management User Guide (PDF)
- "Managing real estate environmental sustainability" (online topics) or IBM TRIRIGA 10 Real Estate Environmental Sustainability User Guide (PDF)
- "Managing reservations and reservable resources" (online topics) or IBM TRIRIGA 10 Reservation Management User Guide (PDF)
- "Managing services" (online topics) or IBM TRIRIGA 10 Maintenance and Service Management User Guide (PDF)
- "Managing spaces and moves" (online topics) or IBM TRIRIGA 10 Space and Move Management User Guide (PDF)
- "Migrating Objects" (online topics) or IBM TRIRIGA Application Platform 3 Object Migration User Guide (PDF)
- "Performance Framework" (online topics) or Application Building for the IBM TRIRIGA Application Platform 3: Performance Framework (PDF)
- "Planning real estate transactions and projects" (online topics) or IBM TRIRIGA 10 Real Estate Transaction Management User Guide (PDF)
- "Requesting corrective maintenance" (online topics) or IBM TRIRIGA 10 Request Central User Guide (PDF)
- "Reporting in IBM TRIRIGA" (online topics) or IBM TRIRIGA Application Platform 3 Reporting User Guide (PDF)
- "Strategic facility planning" (online topics) or *IBM TRIRIGA 10 Strategic Facility Planning User Guide* (PDF) Application Building for the IBM TRIRIGA Application Platform 3 (PDF)

Application Building for the IBM TRIRIGA Application Platform 3: Calculations (PDF)

IBM TRIRIGA Application Platform 3 Connector for SAP BusinessObjects User Guide (PDF)

IBM TRIRIGA Application Platform 3 Upgrade Installation Guide (PDF), which can be found at <a href="https://www.ibm.com/developerworks/community/wikis/home?lang=en#/wiki/IBM+TRIRIGA1/page/Upgrading">https://www.ibm.com/developerworks/community/wikis/home?lang=en#/wiki/IBM+TRIRIGA1/page/Upgrading</a>

IBM TRIRIGA Connector for Business Applications 3 Technical Specification (PDF)

# Support

IBM Software Support provides assistance with product defects, answering FAQs, and performing rediscovery. View the IBM Software Support site at <a href="https://www.ibm.com/support">www.ibm.com/support</a>.

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