IBM TRIRIGA Application Platform
Version 3 Release 6.0.6

Readme

IBM ®

Note
Before using this information and the product it supports, read the information in "Notices" on page 34.

This edition applies to version 3, release 6, modification 0.6 of IBM® TRIRIGA® Application Platform and to all subsequent releases and modifications until otherwise indicated in new editions.

Contents

Readme File for IBM TRIRIGA Application Platform 3.6.0.6 Fix Pack

This fix pack updates the IBM® TRIRIGA® Application Platform product.

Prerequisites and Supported Products

To install this fix pack, you must have IBM TRIRIGA Application Platform 3.6.0 installed. It can be installed on any of the existing 3.6.0.x fix packs.

IBM TRIRIGA Application Platform 3.6.0.6 Enhancements

The following enhancements were added to the IBM TRIRIGA Application Platform in this fix pack.

Area of Impact	Description
Accessibility	Resolved an issue where a pop-up window would obscure the user's view in the WPM tool. (Tri-58379-IJ15746)
Administrator Console	In the Administrator Console, you can now grant access to the Admin Console to any active user. In addition, access is now controlled object by object, instead of the three configuration options available in prior releases. Select the Admin Users object and use options in the Admin Console User Manager to control the display. You can change the number of users shown per page from the default 25 and show next or previous pages. You can show all active users or only active admin users. You can filter by complete or partial user name, full name, or both; the filters are not case sensitive.
	To configure a user's access to Admin Console objects, you can select Full Access to give access to all objects, Read Only to give access to non-configurable objects, and No Access to deny access to all objects. Or you can select only the desired objects. Permissions can be copied and pasted from one user to another. You can reset a user's permissions to what is saved in the database. When the access for all users on the page is the way you want it, click Save Users to update the database. Note, after you click Save Users, a subsequent reset action shows the current permissions, not any prior values.
	If you are upgrading from a prior version of the TRIRIGA Application Platform, existing users retain the level of access to the Admin Console defined in the upgraded release. New users created after upgrade do not have access to the Admin Console. (Tri-54830; RFE-123578)
Agents	If there are remaining tasks when the Platform Maintenance Agent stops because the number of minutes in the CLEAN_TIMEOUT TRIRIGAWEB.property is reached, the next run of the Platform Maintenance Agent starts with the next task after it stopped. Other tasks not previously processed when the timeout occurred are processed and cleaned up. (Tri-50267-IJ10978)

Area of Impact	Description
Agents	The WF Agent sleep time no longer defaults to 5000 ms. Now there is some variability in the sleep time to prevent multiple agents from becoming lock stepped together, overwhelming the database for requests to the same resource at the same time. (Tri-56075)
BIM Connector	The TRIRIGA code signing certificate has been renewed. The installer and jar organization will now show as WIPRO LTD. (Tri-61873)
BIM Viewer	If an object is searched from the Search bar brought up from inside the BIM tab, multiple objects are returned if they have the same name. To have the search return a unique object, click the Model Browser icon and navigate to the object. (Tri-53828)
Extended Formula	The Administrator Console's Platform Logging page now provides an Extended Formula > Formula Calculation category to help in debugging extended formula calculation issues. (Tri-57309)
Integrate Asset	With the introduction of Asset Sync, there are also changes to how Integrate Asset functions because Sync and Integrate share most of the workflows.: The Specification lookup algorithm has changed. It is now: - Match Revit Type IBM.Name - Match Revit Family Name - Use existing specification - Match Revit Category Name An existing asset that has a bar code match to an asset being integrated is now moved to its location within the model. These are workflow changes, so they will impact the 2.6.0.1 connector when used with the 3.6.0.6 Platform version. (Tri-56394)
Integration	OSLC has been updated to handle GET image requests by searching in the database where user images are now stored. (Tri-59446-IJ17180)
Integration Object	The Integration Object's outbound file scheme was enhanced to include an option called "Exceed 999 Result Limit and Return Maximum?". This will appear for XML and JSON file export types. When this option is selected, all results will be returned. Also, the Parameter Custom Task was enhanced to return all results if necessary, where in prior releases, it was limited to 1000 rows. An option called "Exceed Custom Task Parameter 1000 Result Limit and Return Maximum?" was added to the Query For Outbound section of the outbound Integration Object record. When this option is selected, all results will be returned when running the Parameter Custom Task for that Integration Object record. With this Parameter Custom Task change, an Integration Object limitation was also resolved, where no results would be returned if results exceeded 1000 rows. (Tri-53944)

Area of Impact	Description
Object Migration API	Documentation for the Object Migration API can be found online by selecting the link to the Platform API. To access this link append the following to your TRIRIGA context url in the browser address bar: /api/doc For example: http://*TririgaServer*/api/doc **Note:** *TririgaServer* in this example is your TRIRIGA context URL. (Tri-55528)
Performance Analyzer	In the TRIRIGA Application, a new feature was added to the Performance Analyzer that orders the results in the Result Summary tab. An "Order by" dropdown list will now sort the results by a selected column in descending order. (Tri-49511)
Performance Analyzer	The new Current Active Users on Server section of the Performance Analyzer in the TRIRIGA application shows the number of users that are active on the server. You can use the refresh button to check if the value has changed. (Tri-48360)
Performance Analyzer	Two new categories were added to performance logging. By default, these categories are not selected, which eliminates the volume and type of information that can cause other timings to increase. For truer results, do not use Extended Formula -> Calculation -> Add Object Labels or SQL -> Add Bind Variables. Only use these two new categories when that information is needed. (Tri-48934)
Platform Logging	A new logging category has been added to the Workflow Logging section in Admin Console > Platform Logging menu. It is called Create-Modify Task, and it will track the workflow execution whenever a Create or Modify Task is used. The additional logging information with the execution time will be added to the performance.log only when selected. This can be useful when trying to optimize workflow execution on long running business processes, for example when creating new leases. (Tri-49515)
Query and Reporting	All popup queries regardless of query display type will now have a drop shadow behind the popup dialog window. Popup queries include query section action modal dialogs and locator queries. (Tri-60207)
Query and Reporting	The enhanced query grid will now be displayed in advanced view portal sections, maximized portal sections, and portal sections displayed in a new window, for non-hierarchy, non-editable, report and query display types. (Tri-55128)
Query and Reporting	The enhanced query grid will now be displayed in navigation landing pages for non-hierarchy, non-editable, report and query display types. (Tri-55129)
Query and Reporting	The enhanced query grid will now be displayed in popup queries for non-hierarchy, non-editable, report and query display types. Popup queries include query section action modal dialogs and locator queries. (Tri-55127)
Query and Reporting	The enhanced query grid will now be displayed in query sections in forms for non-hierarchy, non-editable, report and query display types. (Tri-55125)

Area of Impact	Description
Query and Reporting	The enhanced query grid will now be displayed in query sections in the Form Builder for non-hierarchy, non-editable, report and query display types. (Tri-55126)
Query and Reporting	The enhanced query grid will now be displayed in reports that are run directly from the Report Manager for non-hierarchy, non-editable, report and query display types. (Tri-55116)
Query and Reporting	Where the enhanced query grid is used, all pagination functionality will appear on a frozen pagination bar at the bottom of the query results. (Tri-59273)
Query and Reporting	Where the enhanced query grid is used, image fields that do not contain an image will be displayed with a light gray image placeholder in the query results for that field. (Tri-55283)
Query and Reporting	Where the enhanced query grid is used, text wrapping will not occur if the text in the query cell is longer than the column width. The displayed text will be a single line and an ellipsis (...) will indicate that there is additional text that could not fit in the column width. Users can either hover over the query cell to see the entire text in a tool tip or can manually drag the column to a larger size that will fit the entire text. (Tri-55151)
Query and Reporting	Where the enhanced query grid is used, the check box / radio button column will initially display as a frozen column on the left side of the query results. (Tri-56142)
Query and Reporting	Where the enhanced query grid is used, the show more filters and show less filters links have been replaced with a toggle icon. (Tri-55145)
Security	jQuery libraries are upgraded to version 3.4.1. (Tri-59719)
System Setup	An issue was resolved where DataConnect and CBA integrations incorrectly allowed non-midnight adjusted timestamp values to be entered as date-field values. This fix also ensures that non-relative and relative date-field midnight adjustments occur with consistent behavior as the rest of the platform. To keep the date-field integration behavior the same as it was prior to this release, select the Date Field Processing Options > Integration Processing option in the System Info page of the Administrator Console. (Tri-53231)
System Setup	Three new TRIRIGA Admin Console date field specific properties have been added to the System Info page. (TRIRIGA Admin Console - > System Info -> Date Field Processing Options). General Processing - This option uses pre-3.6.0.6 platform handling for date field entry including relative date fields in formula calculations. Integration Processing - This option uses pre-3.6.0.6 platform handling for date field entry via integrations using DataConnect or Connector for Business Applications (CBA). This option is automatically selected if General Processing is selected. Default Value Processing - This option uses pre-3.6.0.6 platform handling for current date default values. This option uses the server time zone for processing the current date when it is defined as the default value for a date field.

Area of Impact	Description
	With these new properties there is also a new Environment Properties Cache listing in the Cache page of the TRIRIGA Admin Console (TRIRIGA Admin Console -> Cache). The cached values for the date processing selections above will be controlled by Environment Properties Cache. (Tri-55814)
UX Framework	"A new CSS mixin named ""--triplat-select-input-input"" was added to triplat-select-input. When used, you can change the style of the input field. For example, you can change the font size, font color, and font weight. This change was only made for the Polymer 3 version of triplat-select-input. (Tri-59507)
UX Framework	A new property named noFloatLabel was added to triplat-select-input. When used, this property disables the floating label. This change was only made for the Polymer 3 version of triplat-select-input. (Tri-59326)
UX Framework	Added new icons in the triplat-icon ibm-icons-glyphs library: bar-code and qr-code. This change was only made for the Polymer 3 version of triplat-icon. (Tri-59331)
UX Framework	IBM's Carbon-design icons were added to the UX Framework (for accessibility, avatar, desktop, filter, mobile, presentation, restaurant, and video-on). For more information, refer to the UX component documentation for the Polymer 3 triplat-icon component. (Tri-60650)
UX Framework	In triplat-code-scanner, you can use the new "hasCamera" function to determine whether the current device that is running a code-scanner component has a camera. (Tri-59482)
UX Framework	The Component Link Fix action was removed from the UX development page, since it is no longer needed. The WebViewSync.jar was removed as well. You can download the WebViewSync.jar file from the UX Framework wiki at https://www.ibm.com/developerworks/community/wikis/home?lang=en#!/wiki/IBM%20TRIRIGA1/page/UX%20App%20Designer%20Tools. (Tri-49903)
UX Framework	The Polymer 3 version of the triplat-query component was enhanced to support the "IN" operator. (Tri-55601)
UX Framework	The triblock-overflow-text component is now available. (Tri-57333)
UX Framework	The UX Framework now supports the compilation or packaging of UX Views to JavaScript ES5 by using the NPM-based tri-bundler tool. (Tri-60373)
UX Framework	There is a new URL path for accessing a UX app inside a Microsoft Outlook add-in, as follows: `/<context_path>/p/web/outlook/<app_name>` When a Polymer 3 UX app is opened by using this URL, the application main page loads the Microsoft Office JavaScript library, and the application is loaded after the Office library is initialized. (Tri-60342)
UX Framework	To disable the automatic detection of screen size changes, the disableScreenSizeDetection property was added to the UX behavior named TriBlockViewResponsiveBehavior. For more information, refer to the UX component documentation for the Polymer 3 version of this UX behavior. (Tri-59962)

Area of Impact	Description
Workflow	A new option has been added as a workflow instance save option and should be used in conjunction for large data loads: DATA_LOAD It is best practice to use this setting when mass/batch loading many records. This will bypass and never save any instances, which increases performance and decreases database size. This can be used in production environments as well, especially if the production environment has many workflows that error out or have STOP tasks but there are no app developers that are able to correct the problems in the workflows. (Tri-56382)
Workflow	Dynamic workflows can now pass and return parameters. Validation is minimal because the workflow is not known at design time. For debugging and enhanced runtime validation, you can turn on workflow instances and debug logging. Turn off workflow instances and debug logging in production. Parameters and return parameters are not required with dynamically called workflows. (Tri-55721)
Workflow	The BIM Connector can now log into TRIRIGA servers with a context root of "/" (forward slash). (Tri-62009)
Workflow	The Query task can now be set to return the number of records instead of the records. One way to use this feature is when you want to execute different code when records exist versus when they do not, and you do not need the actual records. This may improve performance as no data is fetched from the database, only the count. By default, the Query task returns the records. (Tri-56322)
Workflow	You can now set the Trigger Action task in workflow to run the asynchronous event that occurs after the transition by a user other than the currently logged in user. This distribution of asynchronous events may improve performance in an environment with multiple workflow agents. This also works for Future Trigger Actions. (Tri-54955; Tri-56364)
Workplace Reservation Manager	TRIRIGA Workplace Reservation Manager now supports integration with Exchange 2019 server. (Tri-61286)

Installing the IBM TRIRIGA Application Platform 3.6.0.6 Fix Pack

To install the TRIRIGA Application Platform 3.6.0.6 fix pack, refer to the following general instructions.

Procedure

1. Ensure that no database configuration changes are pending and there are no entries in the WF_EVENT or EF_QUEUE tables. You can check the status of these tables by running the following SQL statements: `select count(*) from WF_EVENT` and `select count(*) from EF_QUEUE`.

2. For IBM WebSphere® Application Server Liberty Core profile, stop all application servers before continuing the installation.

3. For IBM WebSphere Application Server and Oracle® WebLogic Server, confirm that this server is started and stop all other application servers.

4. Take a backup of the database and the existing TRIRIGA install directory for each server. If necessary, you can use the backups to revert the system.

5. Download the 3.6.0-TIV-TAP-FP006 file.

6. Extract the file. You can extract the fix pack file into any directory.

7. Run one of following patch executable files: fixpack_tririga_v3.6.0.6_Windows.exe, fixpack_tririga_v3.6.0.6_Linux.bin, or fixpack_tririga_v3.6.0.6_AIX.bin.

8. In the Introduction pane, select **Next** or **Enter**.

9. In the license agreement, accept the terms and select **Next** or **Enter**.

10. Choose the directory where IBM TRIRIGA is installed. For example, the following directories: `c:\ibm\tririga\` or `/opt/ibm/tririga/`.

11. Review the information and select **Next** or **Enter**.

12. The fix pack process patches the WAR file and runs any platform database fix pack scripts.

> (i) **Note** – In the patch folder for the 3.6.0.6 fix pack, when the fix pack installer backs up the ibm-tririga.war file, the backup .war file appears as the ibs-tririga.war.bak file.

13. For WebSphere Application Server Liberty Core profile, the WAR file deploys and the cache directories are removed. You must restart Liberty.

14. For WebSphere Application Server, the WAR file redeploys and starts automatically. If it fails, you need to manually redeploy the WAR file. The WAR file is located in one of the following root TRIRIGA install directories: `c:\ibm\tririga\ibm-tririga.war` or `/opt/ibm/tririga/ibm-tririga.war`. Refer to IBM's instructions for deploying a .war application.

15. For Oracle WebLogic Server, delete all of the `cache`, `tmp`, and `.wlnotdelete` directories under WebLogic's TRIRIGA domain after the fix pack installation is complete, as these directories might contain files that are left over from the previous application/ear installation. For example:

`<weblogic>\user_projects\domains\tririga10domain\servers\tririgaServer\tmp`

`<weblogic>\user_projects\domains\tririga10domain\servers\tririgaServer\cache`

16. For Oracle WebLogic Server, the fix pack process attempts to redeploy the WAR file into the managed server. However, because of conditions in the server environment outside of IBM TRIRIGA's control, you might need to manually redeploy the WAR file. Restart the application server when the fix pack completes and check the build number in the IBM TRIRIGA Administrator Console. If the old `.war` file still shows, redeploy the .war file. Refer to Oracle's instructions for deploying a `.war` application into the managed server.

What to Do Next

After the fix pack install completes, check the platform release in the IBM TRIRIGA Administrator Console. Verify that the fix pack you just installed is listed.

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 Release Notes IBM Support page.

Area of Impact	Description
BIM Connector	Before creating a new asset, the connector attempts to match each asset to an existing TRIRIGA asset record. First, it attempts to match the Revit Component ID to an ID in a triBIM staging record. This is useful if the building is being re-attached. Second, it tries to match the IBM.Barcode parameter value to the barcode of existing asset records. If a match is found, the asset is linked to the existing record. The barcode match is not restricted to the building being linked. If an asset is matched by barcode, the integration workflows move the asset in TRIRIGA from wherever it is, including a different building, to its location in the Revit model. (Tri-56692)
BIM Connector	The workflows used by the BIM Connector asset integration tool to find specifications to use to create assets rely on specification form names. If as part of TRIRIGA configuration, the form names have been changed or additional forms added and the target specification uses a new or altered form, asset import fails with an error that a specification is required to create an asset. This can be resolved by running the system report triBIMSupportedSpecTypes - Dev and updating the Specification Type Form field, or by adding additional records to the table with the added form names. (Tri-60843)
Query and Reporting	In certain circumstances, queries opened from bookmarks or other methods may not have a horizontal scroll bar when you use Microsoft Internet Explorer. In order to have the horizontal scroll bar functionality, use any "Evergreen" browser. (Tri-56545-IJ12498)
Query and Reporting	Where the enhanced query grid is used, any customized styles such as customized colors that were previously applied to query components may not appear out of the box. You will need to submit a customized style spreadsheet via Style Manager to have your desired styles to appear on the enhanced query grid. More details on applying styles to the enhanced query grid can be found in the NRTE videos for the Enhanced Report Renderer. Links to NRTE videos can be found in the Media Library. (Tri-55141)
TreeGrid / Gantt	If your users will be using TreeGrid / Gantt for Project or Reservation functionality in a non-US English language, you must rename the following directory: <server installation directory>/userfiles/Translations/TreeGrid/3.5.3 to <server installation directory>/userfiles/Translations/TreeGrid/3.6.1 To obtain the latest language files, follow the instructions at: https://www.ibm.com/support/pages/node/1284424

Area of Impact	Description
Upgrade	The first time a model that has previously been integrated with TRIRIGA is used with the new BIM Connector, it must be upgraded. The ribbon only enables tools that are needed for the upgrade or are valid without upgrading including an upgrade tool. Upgrading may involve the following steps: 1. Add additional name generation configurations from Project Settings. 2. Run Populate Parameters. This can be done with all parameters set to update only if blank. 3. Upgrade the model and possible server data using the Upgrade tool. (Tri-55471)
UX Framework	In an SSO-enabled TRIRIGA environment, when you add a UX application home screen shortcut on iOS Safari/macOS Safari or add a bookmark in Edge, the TRIRIGA favicon is not displayed. Instead a default general icon is generated that is specific to the browser. The shortcut can still be used to launch the UX application. (Tri-53388)

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 [Release Notes](#) IBM Support page.

Area of Impact	Description
BIM Connector	If an element is displayed in the property panel, then a subsequent element of exactly the same type is selected, the property panel is not updated for the new selection. If the current element is deselected before the new element is selected, the property panel works correctly. This is a known limitation of the method recommend by Autodesk to trap selection changes. (Tri-56691)
BIM Integrator	If the Revit application is open and the BIM Integrator is being updated from a previous build of version 2.6.0 to a later build of the same version, the existing revitintegrator.dll file is not overwritten. As a result, version 2.6.0 does not reflect the later build of the BIM Integrator in the Revit application. To upgrade to the later build, user should close the Revit application, delete the AR integrator folder inside C:\ProgramData\IBM\Tririga and install the later build. (Tri-55642)
BIM Viewer	If an object is searched from the Search bar brought up from inside the BIM tab, multiple objects are returned if they have the same name. To have the search return a unique object, click the Model Browser icon and navigate to the object. (Tri-53828)
BIM Viewer	Opening multiple dialog boxes from within the BIM tab in the UX Perceptive Work Task Services app can cause them to overlap. To avoid this, close the previous dialog box, such as the "Model Browser," manually before opening the next dialog box, such as "Mark Up." (Tri-53878)

Area of Impact	Description
BIRT	BIRT server implementation does not currently support params.displayText. Any BIRT report using displayText will have unexpected issues when run against a BIRT server. Reports will run against a local BIRT server. Most OOTB TRIRIGA BIRT reports have been updated. Use this wiki to help update custom BIRT reports. (Tri-60636)
Gantt	Updated Gantt translation files will be made available in a future fix pack and through a wiki with instructions on how to apply them. (Tri-62895)
Globalization	Notification emails sent upon service request submission and completion may contain a mixture of languages. The mixture may occur when a service request is raised for someone else, and the language in the profile of the user who raised the request is not the same as the language in the profile of the user for whom the request is raised. Text in an additional language may appear when the language in the profile of the user who completed the resulting work task is different. The mixture of languages is possible when the request is raised using the foundation TRIRIGA app or the UX Perceptive Service Request app. (Tri-48862)
Installation	When TRIRIGA is installed to a managed node on WebSphere ND, the TRIRIGA install reports success, yet the JDBC Data Source may not be configured correctly. If TRIRIGA does not start, you need to log into the WebSphere Admin Console. Navigate to Resources -> JDBC ->Data sources. Select the "data" data source. When the data source opens, scroll to the Security settings section. If the "Component-managed authentication alias" drop-down field is set to "(none)", change it to the appropriate "TRIRIGAData" setting. Save your changes and restart the WebSphere server. This has been reported on TRIRIGA installations involving Microsoft SQL Server databases, but may also affect TRIRIGA installations on Oracle and DB2. TRIRIGA installations to unmanaged nodes on WebSphere do not encounter this issue. (Tri-53031-IJ07701)
License and Security	After applying any OM package that may have new TRIRIGA licensed Business Objects, it is recommended to restart your application servers to make sure the internal license tables match the available Business Objects in the database. Symptoms of this being out of sync are when a user should have access to a Business Object and they do not. (Tri-63930)
Object Migration API	The Object Migration API online documentation for the addObjectToPackage and addObjectToPackageByName operations indicates the incorrect objectType parameter value to use for Forms. The Query Parameters table of the documentation indicates the parameter value GUI should be used. This is incorrect, and the correct value to use should be FORM. The online Object Migration API documentation can be found on any TRIRIGA environment at the following location: http://*TririgaServer*/api/doc **Note:** *TririgaServer* in this example is your TRIRIGA context URL. (Tri-62963)
Query and Reporting	The enhanced query grid will not support accessibility in 3.6.0.6. If accessibility is required when using reports, selecting Enable Accessibility Mode in the My Profile tab directs you to use the pre-3.6.0.6-style data grid. (Tri-55155)

Area of Impact	Description
Query and Reporting	Where the enhanced query grid is used, a processing wheel does not appear when a report is refreshed. To the user, it may appear that the report was not refreshed when it actually was refreshed. (Tri-62791)
Resource File	Although Revit does not support RTL languages like Arabic, from the BIM Connector side we have enabled the provision to support RTL languages. Once Revit support for RTL languages is available, then the BIM Connector will work as expected on RTL languages. (Tri-57394)
Upgrade	When upgrading from an older version of TRIRIGA to 3.6.0.6, an 'Error refreshing Cache [DICTIONARY]' exception, related to a triDictionaryEntry Business Object not existing may occur. If this error occurs, it is safe to disregard. The issue causing the error to occur fixes itself as a part of the upgrade. (Tri-60537)
UX Framework	Create Event is not working if there is a preferred time zone. (Tri-62166)

IBM TRIRIGA Application Platform 3.6.0.6 Changes

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

Area of Change	Description
Administrator Console	For DB2 only, the platform maintenance TRI_DO_REORG_TABLE_AND_INDEX() command now performs a reorg and runstats on any TRIRIGA table that DB2 deems needing a reorg. It also resolves an issue where the reorg command was not executed by the Platform Maintenance Agent or the Database Info page -> Cleanup Commands and Analyze when it should have been. Now, if the TRI_DO_REORG_TABLE_AND_INDEX() is set up in the Platform Maintenance Scheduler page (Maintenance Schedule object) with a cleanup schedule, the reorg and runstats runs on any TRIRIGA table that DB2 deems needing a reorg per the cleanup schedule. (Tri-58348)
Administrator Console	For DB2 only, there is a new platform maintenance command, TRI_DO_REORG_TABLE_AND_INDEX_ALL(), that performs a reorg and runstats on all TRIRIGA tables. The TRI_DO_REORG_TABLE_AND_INDEX_ALL() can be scheduled from the Maintenance Schedule object (the Platform Maintenance Scheduler page) in the Cleanup Schedule section. (Tri-60975)
Administrator Console	In Admin Users, after you click Save Users, an INFO record is written to the security.log for each user record saved. The following is an example from the security.log: 2019-01-16 16:04:59,997 INFO [com.tririga.architecture.security.logger.SecurityLogger] Account Management - Action: ADMIN CONSOLE PERMISSION VALUE [27], Account: 123456, By: 987654, From: xx.xxx.xxx.xxx, Status: SUCCESS After applying Verbose Security Logging, the following is an example from the security.log: 2019-01-16 15:58:19,491 INFO [com.tririga.architecture.security.logger.SecurityLogger] Account Management - Action: *** CHANGED - ADMIN CONSOLE PERMISSION VALUE [27] Previous permission value was 16777215, Account: 456789, By: 654321, From: Admin

Area of Change	Description
	Console, Status: SUCCESS The number in brackets represents what the user has access to after the save. It is the decimal representation of a bitwise OR summation across all managed objects. For each of the 23 managed objects, a 1 indicates the user has access. For example, if the user has access to Admin Summary, Admin Users, Build Number, and Caches, from left to right that is binary 11011 and all others are 0. The bitwise OR of 1, 10, 1000, and 10000 is decimal 27. The number after Account is the spec_id of the user that was saved. The number after By is the spec_id of the user that clicked Save Users. (Tri-56883; Tri-56890)
Administrator Console	In the Administrator Console, a user with access to the Error Logs object can now download logs. (Tri-58059-IJ14939)
Administrator Console	In the Administrator Console, in the Workflow Agent Info object, the labels now reflect users and groups. (Tri-58081)
Administrator Console	In the Administrator Console, on the Maintenance Schedule object, the reference at the bottom of the page is now linked to the IBM TRIRIGA Best Practices for System Performance wiki on DeveloperWorks. (Tri-55961)
Administrator Console	In the Workflow Agent Info object, in the User and Group List section, after you add a group and click the Restrict to User and Group List action, the changes are now saved. (Tri-54555)
Administrator Console	In the Workflow Agent Info object, workflow agent configurations are now saved with restricted users and groups. (Tri-54554)
Administrator Console	To promote using current platform releases, adopting a continuous delivery model, and to easily show customers, IBM SaaS Support, and Wipro TRIRIGA Support that a platform install is over six months old, the Administrator Console's System Status now displays a warning if the platform build is over a half a year old. It is very important to keep up to date with platform releases and fix packs for security, stability, performance, and overall improvements. To change the time period from six months, you can add the following property to the TRIRIGAWEB.properties file: BUILD_DATE_WARNING=XXX, where XXX is the number of days before the Administrator Console starts to display the warning message. Be aware that there is a very great risk when you remain on an un-patched platform version as bug fixes and vulnerability fixes are delivered with every fix pack. (Tri-60409)
Agents	Improved the performance of the Cleanup Agent. It no longer performs a full table scan when finding unlinked reference objects to delete. (Tri-55269-IJ10910)
Agents	In the Platform Maintenance Agent, if the BO cleanup task runs into a timeout, it no longer errors out while attempting to remove the temp IBS_SPEC_CA_DELETE table. (Tri-56444)
Agents	Starting with IBM TRIRIGA Application Platform 3.6.0.6, a new Deep Cleanup option was added to the Admin Console's Database Info page. This performs a deep-clean process by examining and removing stale and invalid data from both T_tables and metadata tables. This should not be run on a regular basis, and should only be used if processes or infrastructure problems beyond the control of TRIRIGA have introduced data inconsistencies, or if staff have gone in and

Area of Change	Description
	deleted data directly from T_tables or metadata without running the normal cleanup process.

This process will take a while, and should be done on off-hours, on a very quiet database. It is a good idea to use the TRIRIGA System Lock to prevent people from logging in while the process executes. You must also backup your database before executing this action, since it will permanently delete the data in these tables. The only recovery option is to restore from backup.

The process is also available to be run via a REST/Microservice/JSON interface. The endpoints are:

```
Status (http get)
http[s]://<tririga>[:port]/[context]/ui/v1/admin/deepcleanup/status
Start (http post)
http[s]://<tririga>[:port]/[context]/ui/v1/admin/deepcleanup/start
Stop (http post)
http[s]://<tririga>[:port]/[context]/ui/v1/admin/deepcleanup/stop
```

(Tri-58164) |
Agents	Unnecessary warnings in the server.log when agents are not running on the active server are now categorized as debug information. Warnings like the following no longer appear in the server.log, unless you enable debug logging in the Administrator Console > Platform Logging > Agent Management. '2018-12-28 17:50:28,899 WARN com.tririga.platform.agent.AgentHeartbeatService Found stale registry entry [startupId = 199, agentType = DataConnectAgent, hostName = desktop-5idk61h, state = [5 - Stopped]. Removing from agent registry'. (Tri-56618)
BIM Connector	An error message no longer displays when returning to the TRIRIGA Ribbon tab after closing other dependent tools, such as the Families or Assets tools. (Tri-60141)
BIM Connector	Assets of types other than Building Equipment now have a location assigned when they are created. (Tri-63880)
BIM Connector	Closing the BIM Connector or logging out of TRIRIGA while a publish operation is in progress no longer leaves the operation incomplete in the model. Now, the process continues when you log in again. (Tri-58364)
BIM Connector	For floor plan graphics, this release improves space label positioning of spaces on floor plans that are published from the Connector for BIM. This improvement works with existing floorplans. It does not require republish. It addresses any regular polygon shaped room. It does not resolve issues with rooms with "hole-in-middle". (Tri-58768)
BIM Connector	In Project Settings, using the Remove button to remove parameters from the name rule no longer may cause the tool to crash. (Tri-59505)
BIM Connector	In the Space Use Class tool, filters for Room, Space, and Area now work correctly. (Tri-60608)

Area of Change	Description
BIM Connector	Some of the shipping BIM workflows with Create/Modify tasks had the same map id as another task within the workflow and this caused an issue when the user tried to modify the workflow. The issue is resolved by revising the workflow and re-mapping the fields on one of the tasks with the same map id to make sure a new map id is assigned for it in the database. (Tri-63881)
BIM Connector	Users can now control where labels are placed on TRIRIGA floor plans published from Revit by positioning the room tag in Revit. Custom space labels are placed where the Revit room tags are placed. You must republish your floor plans to leverage this change. With this change, floor plans published from the BIM Connector behave the same way as those published from CAD Integrator. (Tri-55132-IJ13127)
BIM Connector	When syncing Revit Rooms to TRIRIGA Spaces, if no Revit Area is mapped with the Room, the area value of the Space was not being updated. This is resolved and the area value of the Space will now update even if no Revit Area is mapped with the Room. (Tri-61227-IJ19619)
BIRT	Non-required null parameter values are now properly handled when a BIRT report is sent to a BIRT server. (Tri-59717-IJ17491)
BIRT	Unnecessary MID Error no longer appears when executing a BIRT report locally or against a BIRT server. (Tri-59483)
BIRT	When running a BIRT report against a BIRT server, the Title, Cancel, and Close action buttons on the BIRT Parameter page and processing feedback now work. (Tri-59456-IJ16771)
CAD Integrator	The TRIRIGA code signing certificate for CAD Integrator/Publisher has been renewed. The installer and jar organization now show as WIPRO LTD. (Tri-61872)
Calendar Picker in Outlook Add In	In the Reserve Outlook add-in's "TRIRIGA Reserve" tab, the Calendar Picker no longer has issues with listing the times. (Tri-59080-IJ16567)
Connector for Business Applications (CBA)	Resolved a Connector for Business Applications (CBA) issue where the saveRecord operation did not show an error status for invalid field values, and the record would partially save. This is still the default behavior, but if you need the saveRecord operation to error when invalid field values are encountered, then set the following TRIRIGAWEB.properties setting: CBA_SAVE_RECORD_ERROR_ON_ALL_FIELD_FAILURES=Y (Tri-51606-IJ05873)
Data Load	Resolved a Data Load issue where Data Load spreadsheets failed to create. The server.log for the issue was showing an UnsupportedOperationException involving the HttpServerRequest getHeaders operation. (Tri-61585-IJ19642)
Data Load Manager	Resolved a Data Load Manager issue when creating a Data Load Sheet where one of the fields being included in the spreadsheet is a locator field with a large amount of data. (Tri-54169-IJ08745)
Data Load Manager	Resolved a Data Load Manager issue where Data Load spreadsheets failed to create. The server.log for the issue was showing an UnsupportedOperationException involving the HttpServerRequest getHeaders operation. (Tri-61034-IJ19642)

Area of Change	Description
Data Modeler	A potential issue with stored procedures on MS SQL version 2016 after CU4 while publishing BOs with column size updates is resolved. (Tri-53021-IJ08475)
Data Modeler	In the Data Modeler, when you use the Field Search capability and you specify both the Module name and Business Object name then the field that you add to your business object will have the same properties as the field you selected. If you do not search for the Module name and Business Object name, existing functionality remains the same and default values will be applied to the field properties. (Tri-54502-IJ08959)
Data Modeler	Resolved a potential issue where a BO may not publish if it has a long name (28 characters) and localizable fields. This issue did not happen all the time, especially if the Module had other BOs with localized fields. (Tri-55948-IJ12086)
Document Management	BIRT reports uploaded into CMIS/FileNet now work correctly. (Tri-53959-IJ15247)
Document Management	Document uploads now correctly use the file location chosen by the user. (Tri-53247-IJ07140)
Form Builder	After you add a state transition to a business object and form, the state transition now shows in the Security Manager. (Tri-55703-IJ10903)
Form Builder	Resolved an issue where the Display Fields in the Form Builder were not consistently controlling duration display on form runtime, query runtime, and query export to Excel. Note that if a form is specified in the query design then the display mask specified on the form will be honored in the query results as well as the query export to Excel results. Also note that metric queries are not included in this change. (Tri-56594-IJ13118)
Form Builder	The Availability Legacy section and all of its dependencies were removed from TRIRIGA. If an existing form includes an Availability Legacy section, a message displays that indicates the section is no longer supported. (Tri-57932)
Formula Engine	In Data Modeler, if an extended formula on a business object field is not created with the proper syntax, upon BO publish, an error is written to the server.log. (Tri-55908)
Formulas	The following formulas have been fixed to handle relative date fields by performing the calculation with the UTC time zone instead of the system time zone. This change does not affect relative date and time fields. AddDay AddMonth AddYear DateFromDateTime DayOfMonth DayOfWeek Hour HourOfDay IsAMPM MilliSecondOfSecond MinuteOFHour Month

Area of Change	Description
	SecondOfMinute WeekDayDate Year To keep the calculation behavior the same as it was prior to this release, select the Date Field Processing Options > General Processing check box on the System Info page of the TRIRIGA Administrator Console. (Tri-55812)
Gantt	A TRIRIGA Gantt dependency issue has been resolved when using STRICT or MINIMAL mode and tasks have different calendars. (Tri-49765-IJ00612)
Gantt	An empty date field in the Gantt now renders as a blank field. Prior to this change, empty date fields rendered as 12/31/1969 00:00:00. If 12/31/1969 is desired, use a time other than 12/31/1969 00:00:00, for example, 12/31/1969 08:00:00. (Tri-49061)
Gantt	In the Schedules tab of a capital project, printing a Gantt chart now prints the chart instead of a blank page when using the Chrome browser. (Tri-50438-IJ02624)
Gantt	The TreeGrid version was updated to 13.03.01. This affects the project scheduler in capital projects records, the time availability chart in location reservations, and the availability tab in the UX Perceptive Room Reservation app. (Tri-55166)
Gantt	When a task is created by a service request, the planned start seconds value and the seconds in planned end date value are now set to zero. (Tri-58933-IJ16659)
Globalization	A permission error message is now displayed to a user in the language in the user's My Profile record. (Tri-56938-IJ13169)
Globalization	A user with appropriate access to the Globalization Manager is not signed out when the user sets language code values. (Tri-60487)
Globalization	In a query section, when a column contains a locator field with a list field as the source, the translated value now displays to a non-US English-language user. (Tri-50485-IJ05484)
Globalization	Multi-byte characters in the title of an asynchronous BIRT report now display correctly to non-US English-language users. (Tri-53309-IJ09145)
Globalization	Platform Maintenance Scheduler now cleans record data from language (L_) tables as well as from base (T_) tables. (Tri-55626-IJ11131)
Globalization	The TRIRIGA date-picker now selects correct dates in the Brazil time zone. (Tri-64745-IJ23389)
Globalization	When a non-US English-language user runs an asynchronous BIRT report, the information about the report in the notification that the user receives is now in the user's language. (Tri-54384-IJ10152)
Globalization	When a non-US English-language user triggers a notification that contains notes fields, the notes fields in the notification are now in that user's language. (Tri-56409-IJ12559)

Area of Change	Description
Graphics	Resolved a Metric Chart Report issue where stack charts that used a Secondary GroupBy would show an invalid small stack and an invalid tool tip for data that had no value. (Tri-55696-IJ11289)
Heartbeat Event	Heartbeat clear cache events should no longer cause an exception in an environment where ENFORCE_GUI_LEVEL_QUERY_SECURITY=Y. (Tri-57567-IJ14137)
Incoming Mail	Email attachments that are of type `.eml` are now handled more efficiently. (Tri-55772)
Incoming Mail	When an email is sent to TRIRIGA that contains content taken from a web page that contains text created with TinyMCE, the email content now renders properly in the Notes field of the TRIRIGA email message. (Tri-47794)
Installation	In order to prevent data corruption, validation logic was added to the installer to verify that the build of the TRIRIGA platform and database are compatible and to lock the system during startup if they are not. (Tri-60849)
Installation	Oracle can now use more than 32 GB of space when a new TRIRIGA database is created through the installer. (Tri-54512)
Installation	The option to install IBM JDK 8 was added to the TRIRIGA installer. (Tri-59687)
Installation	The TRIRIGA code signing certificate is renewed. The installer and jar organization now show as WIPRO LTD. (Tri-61868)
Installation	The TRIRIGA installer now compares the installer's build number with the existing build number when installing on an existing database. If the installer's build number is less than the existing build number, the install stops and a message is displayed to the user. (Tri-60015)
Integration	The Servlet Proxy process now handles HttpPut and HttpDelete requests that previously resulted in an Error 405 for these request types. (Tri-58130-IJ15763)
Integration Object	During the validate data map process of an Integration Object upgrade, the server.log no longer indicates existing fields cannot be found. (Tri-54588)
Integration Object	Resolved a misspelling in an Integration Object error message for HttpPost request failures. The word 'response' was incorrectly spelled 'repsonse'. (Tri-58643)
Integration Object	Resolved Numeric Overflow in TRIRIGA that is an Integration Object issue with the File To DC scheme, where numeric overflow errors were occurring when Integration Object processing was handling very large Data Connect Job Control Numbers. (Tri-55419-IJ10841)
Integration Object	The HTTP Post scheme in Integration Object now supports SSL TLS 1.2 requests. When you select the "Enable TLS 1.2?" check box, the HTTP request supports TLS 1.2. (Tri-55798-IJ10947)

Area of Change	Description
Job Scheduler	Resolved a Job Scheduler issue where incorrect recurrence dates were being created if the time zone of the TRIRIGA AppServer and the time zone of TRIRIGA user doing the scheduling were several hours apart. For example, the issue would occur if the TRIRIGA AppServer was in the UTC time zone, and the TRIRIGA user was in the PST time zone. (Tri-51203-IJ06383)
License and Security	A new license is added for Wipro HSE Enterprise functionality. (Tri-63490)
License and Security	All licenses provide read access to the licensed triGraphic module business objects. (Tri-63437-IJ21696)
License and Security	Licensing has been updated to allow self-service users the ability to provide clarification comments in the approval process. (Tri-63319-IJ21250)
License and Security	The following licenses have been given read access to triSetup -> triNews Business Object (Tools-->System Setup-->General-->News) IBM Facilities and Real Estate Management on Cloud Approvals and Reporting IBM Facilities and Real Estate Management on Cloud Field Services Concurrent IBM Facilities and Real Estate Management on Cloud Field Services Authorized IBM TRIRIGA Field Services Concurrent IBM TRIRIGA Field Services Authorized (Tri-63318)
Licensing	License table now supports the Work Planner UX application. triTaskAllocation->triTaskResourceAllocation is now a licensed object. (Tri-57255)
Locate and WorkTask Forge Viewer	The BIM tab now correctly displays in Locate and WorkTask when the TRIRIGA server is configured with a context root of / (none). (Tri-62800-IJ22167)
Mobile - Work Task Management	When navigating through work task details on iOS Safari, the previous view of the page is no longer displayed on the bottom of the current page. (Tri-56140)
Object Labels	Resolved an Object Label Manager issue where some objects having the Root Object label could not be relabeled to a different label. (Tri-56031-IJ11729)
Object Migration	An object migration comparison now finds workflow differences when the workflow name contains a slash. (Tri-57899-IJ15483)
Object Migration	Importing an object migration package that contains a UX application no longer changes the label of a navigation item that points to the UX application. (Tri-51481-IJ04571)
Object Migration	Large object migration packages that contain UX component objects and that were created by clicking 'Copy Package' no longer take an extremely long time to open and export. Now, after doing a 'Copy Package' of an object migration package containing UX components, only the application and web component objects for the UX components appear, but the package is, in fact, complete. When the copied package is exported, all other dependent UX component objects, such as models, data sources, and data source fields, are added automatically to the object migration export package. (Tri-54577)

Area of Change	Description
Object Migration	The object migration tool now ensures the user has license access to any tool being accessed while within OM. This includes, but is not limited to, the Data Modeler, Form Builder, and Workflow Builder. (Tri-54824-IJ09321)
Object Migration	The 'Show Print Preview Tab Flag' label is now changed to 'Show Reports' in order to clarify the difference being reported. (Tri-55750)
Offline	Offline forms are now processed correctly when an email is sent through the Outlook desktop client and the email includes other document extensions along with Excel. The workflow was modified to add a filter to only look only for Excel files attached to the email. (Tri-54936-IJ11200)
Offline	When an offline form with validation on more than five rows of data is populated, the offline form is now populated without error. (Tri-53202-IJ07875)
OSLC	OSLC has been updated to handle GET image requests by searching in the database, which is where user images are now stored. (Tri-55415)
Performance	After records are added to a hierarchy, such as documents/folders, geographies, or organizations, a heartbeat event is now sent to all servers in the environment letting them know of the event, so they can cache the newly added records. Improvements have been made to the hierarchy rebuild event so that users are not locked/blocked while the tree is refreshed. (Tri-55620-IJ16034)
Performance Analyzer	Application security SQL now appears in debug SQL logging and in performance SQL logging. (Tri-59630)
Performance Analyzer	The new Current Active Users on Server section of the Performance Analyzer in the TRIRIGA application shows the number of users that are active on the server. You can use the refresh button to check if the value has changed. (Tri-48360)
Performance Logging	Performance logging for extended formulas no longer causes calculations with in-memory records to have unexpected results or to write com.tririga.platform.smartobject.util.formula.FormulaEvaluationException warnings in the log file. With this fix, the calculations work as expected with or without performance logging on. (Tri-54670-IJ09613)
Portals	A constraint that restricted the portal to 1500px was removed, and the portal can now be maximized to the full screen. You can now use all of your monitor's real estate. For example, 4k monitors can now use all the screen real estate. (Tri-61046)
Portals	An issue that would cause portal sections to not resize dynamically after selecting a related report has been resolved. (Tri-59438-IJ17179)
Portals	If you select to open a portal section in a new window, the portal section now renders full height. (Tri-53746)
Portals	The action buttons on portal sections are now clearly visible. (Tri-57508-IJ14579)
Portals	The Action Items portal section now displays the correct number of items for the user. (Tri-56346-IJ12583; Tri-59656-IJ17986)

Area of Change	Description
Portals	The page title is no longer updated when you view a hierarchy report in a portal section or when you expand the report. (Tri-57774-IJ15059)
Portals	Users of Safari on Macintosh or Firefox on Windows 10 no longer see an Adobe Flash warning when the user clicks My Reports. (Tri-32511)
Powershell Scripts in TRIRIGA Exchange Resource Admin	When you generate Windows PowerShell scripts from the TRIRIGA Exchange Resource Admin form, the resulting PowerShell script to create a room resource now explicitly sets AutomateProcessing to AutoUpdate. This enables TRIRIGA to accept or decline meeting requests for the managed room. (Tri-60992)
Query and Reporting	A portal section that displays a hierarchy report now has a horizontal slider so you can see the data that is not initially displayed in the portal section. (Tri-54115)
Query and Reporting	An issue that could cause metric tabular report exports to fail or have escape code character sequences in their file names has been resolved. (Tri-62181)
Query and Reporting	BIRT reports in the Reports tab of records now render with a larger height, making each report easier to read and work with when viewing records through the main TRIRIGA window, as bookmarked pages, or as pop-up views. (Tri-55371-IJ09777)
Query and Reporting	For non-US English-language users, reports in the Report Manager are now sorted alphabetically on the Title column. (Tri-48894)
Query and Reporting	If an extra white space is appended to a report header, it does not cause an error when the report is exported to an Excel file. (Tri-56469-IJ12587)
Query and Reporting	If the Prompt Before Query option is selected in a report or a query, when the report or query runs, the "Please type in the appropriate filter values and press the "Enter" key or click on "Apply Filters" to perform a query." text in the result now renders according to the window size. (Tri-56518-IJ12499)
Query and Reporting	Improved the load time for the Report Manager landing pages (My Reports, Community, System Reports, Administration). When the forms in a Form Builder landing page have several revisions, improved the load time for the Form Builder landing page. The Object Label column on the Form Builder landing page now displays the In Progress object label for new but not yet published forms. (Tri-56439-IJ13137)
Query and Reporting	In a query section, you no longer need to scroll the list of results to the top of the section to select from the drop-down list of Related Reports. (Tri-53649-IJ07695)
Query and Reporting	In the Filters tab, sorting the Columns list now preserves the fields that were selected as User and System filters. (Tri-57178)
Query and Reporting	Internet Explorer users will be automatically directed to the classic report renderer. The enhanced report renderer does not support Internet Explorer 11. (Tri-57192)

Area of Change	Description
Query and Reporting	Multi-BO metric queries where the resulting record does not have a parent will no longer error out. (Tri-53496)
Query and Reporting	On a page that has a collapsed query section, if you expand the query section, the expected content now appears regardless of whether the query section is collapsed by default or expanded by default. (Tri-57274-IJ13987)
Query and Reporting	Optimized some association queries when working with records in their forms, Association tab, and some workflow Retrieve Records tasks. (Tri-59374-IJ17547)
Query and Reporting	Queries that have a Group By clause, have data, and appear in portal sections and form query sections can now be exported. (Tri-55832-IJ11780)
Query and Reporting	Query rendering enhancements resolved issues where, depending on the window size, data would be partially hidden by either the vertical or horizontal scroll bars. (Tri-61291-IJ20069)
Query and Reporting	Reserve and Reserve Legacy reports that have no data no longer contain data when exported to Excel spreadsheets. (Tri-53254)
Query and Reporting	Resolved a Report Manager issue introduced in 3.6.0 fixpacks where users were not able to select columns from Smart Sections under both the Columns and Filters tab for Report and Query types. Although Report Manger allows the for selection and deselections of columns from Smart Sections under both the Columns and Filters tab for Report and Query types, for Live Link Smart Section types TRIRIGA recommends using the Add Business Object functionality under the General tab when adding Smart Section fields to reports. (Tri-60543)
Query and Reporting	Resolved an issue where the Add To Bookmark button was incorrectly showing in form query sections whenever a selection was made from the Related Reports dropdown. The Add To Bookmark button is now always hidden in form query sections. (Tri-58056-IJ14922)
Query and Reporting	SQL that run in a batch will now sort with DELETE done first followed by UPDATE and then INSERT SQL. Previously the SQL was not sorted in any order. (Tri-56492)
Query and Reporting	Sub tabs now clearly display on the Manage Task Performance Metrics scorecards when viewing at 100%. (Tri-57307-IJ13901; Tri-57585-IJ14561)
Query and Reporting	The Add and Delete system actions now appear properly to a non admin user for queries that either have multiple forms selected or where the All Forms option is used. The Form action will only appear for admin users. The functionality can be accessed through the Report tab on the record. (Tri-57334-IJ16983)
Query and Reporting	The column "!", which is the attention flag, now shows in Excel exports of reports in the Report Manager. This column is used by application developers as a flag to indicate that a record has an error message on it. It is set any time an error message is received and identifies issues without having to display a lengthy error message. (Tri-57376-IJ13894)
Query and Reporting	The Excel spreadsheet that is created after you export a TRIRIGA report now honors the display mask for currency. (Tri-57988-IJ17242)

Area of Change	Description
Query and Reporting	The Excel spreadsheet that is created after you export a TRIRIGA report no longer has the word "null" in cells where the field value was empty in the TRIRIGA report. Each value in the Excel spreadsheet no longer has a blank space at the end of the value. Depending on data composition and the Excel client you are using, the data in a column may not wrap as expected. (Tri-56312-IJ12416)
Query and Reporting	The Excel spreadsheets attached to emails generated by the Report Scheduler now contain appropriate data instead of error messages. (Tri-58752-IJ16240)
Query and Reporting	To promote a more efficient way of exporting reports with uom values to Excel, a new Server Cache has been added for UOM Types. The database will no longer be queried multiple times for the same values. (Tri-59139-IJ16992)
Query and Reporting	When a Related Reports drop-down list causes a query section to expand vertically, you can now select any of the related reports links. (Tri-58749-IJ15796)
Query and Reporting	When a user runs a report and closes a child record, query filters and results are not lost. (Tri-55661-IJ12193)
Query and Reporting	When date and dateTime fields are exported to Excel, the correct date string value representations now are in the exported Excel file. Specifically, (1) In a metric tabular report, when dateTime field values that are part of an associated business object in a multi-business object metric tabular report are exported to Excel, the values in the spreadsheet are from the report instead of the user's current dateTime. (2) The date values for Created DateTime (Number) and Modified DateTime (Number) System Read Only SubType fields are now formatted correctly in the exported Excel file. (3) The Created DateTime and Modified DateTime System Read Only SubType fields now show the correct date string value representation in the exported Excel file. (Tri-55644-IJ11127)
Query and Reporting	When running a query on a navigation item or inside a portal section using Chrome or Internet Explorer, the horizontal scroll bar is now visible. (Tri-56545-IJ12498)
Query and Reporting	When running BIRT reports in an environment with a dedicated BIRT server, you should no longer see an exception in the log similar to [com.tririga.platform.birt.viewer.TriResourceLocator](Default Executor-thread-226) Cannot retrieve BIRT resource. [fileName=TRIRIGALibrary.tririgalabels_en.properties]. (Tri-59454-IJ16786)
Query and Reporting	When you run a query that uses the Group By option, extra empty lines no longer display. Before, there was one extra line for each field in the group by selection. For example, if four fields were selected to group by in the report, four extra empty lines were displayed. Now, only one empty line shows. The purpose of the empty line is to separate the groups in the query. (Tri-56598-IJ12650)
Query and Reporting	When you run a summary report and click one of the records to drill down into the detail report, a pop-up message with a null message no longer displays. (Tri-59143-IJ17076)

Area of Change	Description
Query and Reporting	Where the enhanced query grid is used, query actions on the header and footer will default with the blue link style. The exception to this is with Navigation Item landing pages, where query actions will still appear in the same button style as previous releases. Additionally, when a system Add button is clicked on queries where the enhanced query grid is used and the query design has multiple forms tied to it, the menu of forms to choose from will not be a non-draggable drop-down list. On queries where the enhanced query grid is not used, and on navigation landing pages, the form selection list will continue to be a draggable menu. (Tri-55139)
Query and Reporting	Where the enhanced query grid is used, the download to Excel button will display as download icon and appear inline with the Refresh icon, Clear Filter, and Apply Filter buttons. Also, where the enhanced query grid is used for queries that are designed with related reports, the related reports drop-down will appear inline with the Refresh and Download icons, Clear Filter, and Apply Filter buttons. Additionally, the related report drop-down will always show the report title. If the grid width becomes too small, then the related reports drop-down will appear above the Refresh and Download icons, Clear Filter, and Apply Filter buttons. Additionally, where the enhanced query grid is used, and the query displays the report name and execution time, the report name and execution time will appear inline with the Refresh and Download icons, Clear Filter, and Apply Filter buttons. If the grid width becomes too small, then the report name and execution time will appear above the Refresh and Download icons, Clear Filter, and Apply Filter buttons. (Tri-59876)
Query Sections	Resolved an issue with the enhanced grid where linked query sections on forms, such as graphic query sections, were not loading correctly. (Tri-64083-IJ22653)
Real Estate Lease	Resolved an issue where a duplicate payment was created when a lease had a scheduled payment due on the end date of the lease. (Tri-54780)
Real Estate Transactions	When selecting value from a list field while creating a Real Estate project, the page is no longer unresponsive. (Tri-60072)
Record Runtime	A client-side timing issue that could result in the CANCEL_WIZARD_WORKFLOW not being fired when closing the browser window has been resolved. (Tri-59064-IJ16664)
Record Runtime	After an application upgrade, the page that displays when you click the About link now shows the new application version. (Tri-55347-IJ10160)
Record Runtime	An error is no longer generated when you navigate to the Request Central portal section, select Facilities > Electrical & Lighting, and then either select Electrical & Lighting in the breadcrumbs or cancel the form and select Electrical & Lighting again. (Tri-56310-IJ12417)
Record Runtime	If, instead of using the date picker, you manually type a date field and then use the cursor or tab to move to the next field, the cursor is focused on the desired field. (Tri-58354-IJ15577)

Area of Change	Description
Record Runtime	In Chrome, a message popup window now closes after the user clicks OK. (Tri-54394-IJ08654; Tri-60444-IJ18383)
Record Runtime	Locator fields displayed in an editable query can now be assigned data when autocomplete causes the query section to expand vertically. (Tri-56003-IJ13058)
Record Runtime	Resolved a problem where a Note field on a form was reset to a stale value after a Locator Query action was performed. (Tri-58684-IJ15819)
Record Runtime	Resolved a Smart Section issue with the "Find" action on non-pass through reference, single row reference sections, where incorrect associations were being made when changing an existing value in the section. Additionally, incorrect data was being displayed when opening the section record via the link in the section. With this fix, reporting improvements were also made to ensure only the single active row will return in the query results for reports designed with columns/fields from non-live link, single row smart sections. (Tri-57974-IJ15294)
Record Runtime	Resolved an issue with Form system lists where non admin users could not see the data. (Tri-58714-IJ15698)
Record Runtime	Users no longer have to clear browser cache after a platform upgrade. (Tri-49629-IJ09202)
Record Runtime	When a Button Field Action is processed on a form, it will no longer prevent text field validations on the form. (Tri-55589-IJ10659)
Reserve	The TRIRIGA code signing certificate was renewed. The installer MSI and JAR publisher organization will now display as "WIPRO LTD". (Tri-61871)
Reserve Add-In	The Reserve Outlook add-in's "TRIRIGA Reserve" tab no longer has display issues that occurred on high-DPI monitors when running Microsoft Office 365 Outlook v1808 or later on Windows 10. (Tri-60550-IJ19895)
Reserve Outlook Add-in	The Reserve Outlook add-in's "TRIRIGA Reserve" tab no longer displays a blank screen with the Outlook User Interface option set to "Optimize for best appearance" when running Microsoft Office 365 Outlook v1808 or later on Windows 10. (Tri-59339-IJ17816)
Reserve Outlook Add-in	The Reserve Outlook add-in's "TRIRIGA Reserve" tab now has support for Microsoft Outlook 2019. (Tri-57387)
Security	A permission warning is now written to the security.log when a user that does not have access to an Administrator Console object attempts to access the object. (Tri-56984)
Security	A privilege escalation vulnerability was resolved. (Tri-53429-IJ07935)
Security	An information disclosure vulnerability is resolved. (Tri-63882)

Area of Change	Description
Security	CVE-ID: CVE-2018-2008 Description: Information Disclosure Vulnerability CVSS Base Score: 4.3 CVSS Temporal Score: See https://exchange.xforce.ibmcloud.com/vulnerabilities/155146 for the current score CVSS Environmental Score*: Undefined CVSS Vector: (CVSS:3.0/AV:N/AC:L/PR:L/UI:N/S:U/C:L/I:N/A:N) (Tri-57197)
Security	CVEID: CVE-2019-4207 DESCRIPTION: IBM TRIRIGA Application Platform may disclose sensitive information only available to a local user that could be used in further attacks against the system. CVSS Base Score: 4 CVSS Temporal Score: See https://exchange.xforce.ibmcloud.com/vulnerabilities/159128 for the current score CVSS Environmental Score*: Undefined CVSS Vector: (CVSS:3.0/AV:L/AC:L/PR:N/UI:N/S:U/C:L/I:N/A:N) (Tri-55647-IJ11093)
Security	CVEID: CVE-2019-4208 DESCRIPTION: IBM TRIRIGA is vulnerable to an XML External Entity Injection (XXE) attack when processing XML data. A remote attacker could exploit this vulnerability to expose sensitive information or consume memory resources. CVSS Base Score: 7.1 CVSS Temporal Score: See https://exchange.xforce.ibmcloud.com/vulnerabilities/159129 for the current score CVSS Environmental Score*: Undefined CVSS Vector: (CVSS:3.0/AV:N/AC:L/PR:L/UI:N/S:U/C:H/I:N/A:L) (Tri-56956-IJ14053)
Security	Denial of Service Vulnerability CVE-ID: CVE-2018-15756 CVSS Base Score: 7.5 CVSS Temporal Score: https://exchange.xforce.ibmcloud.com/vulnerabilities/151641 for more information CVSS Vector: (CVSS:3.0/AV:N/AC:L/PR:N/UI:N/S:U/C:N/I:N/A:H) (Tri-57407)
Security	Entitled users can now access State Family Manager without requiring full Admin Console access. (Tri-61987)
Security	Implemented XML security improvements. (Tri-61963)

Area of Change	Description
Security	In response to a reported vulnerability, Apache CXF is updated to version 3.1.16. (Tri-54472)
Security	jQuery libraries are upgraded to version 3.4.1. (Tri-59719)
Security	Non-admin users with appropriate module and business object access defined in security groups can now access the Association tab of records. (Tri-55598-IJ12902)
Security	Resolved an information disclosure vulnerability. (Tri-54388)
Security	The DB2 JDBC driver that is delivered with TRIRIGA was updated to the latest available version, 11.1.3 FP3. (Tri-54716)
Security	The Field Services Named licenses for on premise (LICENSE_IBM_TRIRIGA_Field_Services_Named.properties) and SaaS (LICENSE_IBM_TRIRIGA_Facilities_and_Real_Estate_Management_on_Cloud_Field_ Services_Named.properties) were updated. If you have the 'Named' Field Services license, you must contact IBM to obtain the corresponding new 'Authorized' Field Services license. The LICENSE_IBM_TRIRIGA_Field_Services_Authorized.properties file is available on Passport Advantage. After you upgrade to 3.6.0.6, the 'Named' license no longer works. After you upgrade and apply the new Field Services license, users with the 'Named' license automatically have the 'Authorized' license and the license usage reports will reflect the Authorized Field Services license accurately. (Tri-54567)
Security	The following license BIRT reports are now part of the IBM TRIRIGA Application Platform. Do not edit these reports. If you do edit them, they are reloaded on the next application server startup. . Daily License Usage Report for Selected Month (triLicense - BIRT - Daily License Usage Report for Selected Month) . Daily User Load Report for Selected Month (triLicense - BIRT - Daily User Load Report for Selected Month) . Hourly License Usage Report for Selected Day (triLicense - BIRT - Hourly License Usage Report for Selected Day) . Hourly User Load Report for Selected Day (triLicense - BIRT - Hourly User Load Report for Selected Day) . Monthly License Usage Report for Selected Year (triLicense - BIRT - Monthly License Usage Report for Selected Year) . Monthly User Load Report for Selected Year (triLicense - BIRT - Monthly User Load Report for Selected Year) (Tri-57034)
Security	The security log was incorrectly including a warning for successful logins; this has been changed to an information message. (Tri-58984)
Security	Users with IBM TRIRIGA Field Services Authorized, IBM TRIRIGA Field Services Concurrent, and IBM TRIRIGA Facilities and Real Estate Management On Cloud Enterprise Concurrent licenses should not have access to the Reserve application functionality and those privileges were removed. (Tri-61425)

Area of Change	Description
Security	When SSO is enabled, users logged into TRIRIGA that have access to the Admin Console are no longer required to reauthenticate when switching to the Admin Console. (Tri-56088-IJ12222)
Security	You can now delete multiple pages of users from the Security Manager as expected. (Tri-61610)
Single Sign-on	The SSO_REQUEST_ATTRIBUTE_NAME property in the TRIRIGAWEB.properties file can now be set to a blank (null) value. Users that log in when this value is set no longer experience an error. (Tri-56067-IJ11420)
Space	The triSpaceManagement UX model is now license controlled. Access to the Space Assessments for the Enterprise/Core licenses versus the Field Services licenses that allow a user to access the Space Assessments assigned to them. Field Services license users shouldn't be able to create assessments for other users or finish processing completed assessments that others have done. (Tri-61477)
Style Manager	Style Sheets now import properly through Style Manager when you use Internet Explorer 11. (Tri-54238-IJ08904)
System Report	Fixed a problem on Chrome browser that prevented a message popup window from closing after the user clicked OK. (Tri-56481)
System Setup	Resolved an issue for date fields who have the default value set to current date. When creating new records, the date would sometimes appear a day off in situations where the server timezone and the timezone for the TRIRIGA user creating the record were far apart. The fix ensures the default date will always display the date for the TRIRIGA user creating the record. To keep the date field default value behavior the same as it was prior to this release, select the Date Field Processing Options > Default Value Processing check box on the System Info page of the TRIRIGA Administrator Console. (Tri-56041-IJ11254)
Upgrade	Resolved an issue when upgrading from platform 3.4.2 where a SQL precision error was occurring due to a modify command triggering on the INSTANCE_ID column of the CRYSTAL_REQUEST_QUEUE table, which tried to make the column size smaller. The error only occurred if the INSTANCE_ID column contained data prior to upgrade. (Tri-54251-IJ08774)
Upgrade	When upgrading older Platform databases to 3.6.0.6, possible issues with the T_TRIAPPLICATIONVERSION1 database table being missing are been resolved. (Tri-55566)
UX Framework	After a restart or after clearing security cache, UX applications no longer have intermittent login issues where users see a message that the application does not exist. (Tri-54409)
UX Framework	Data changes now propagate as expected to triblock-table-row-detail. (Tri-59629)

Area of Change	Description
UX Framework	In the Polymer 3 version of the triblock-table component, the reverse-sort property now works as expected. (Tri-59522)
UX Framework	In the triblock-toast component, the icon, toast title, and text message are now aligned at the center of the container by default. (Tri-57947)
UX Framework	The Component Link Fix action was removed from the UX development page, since it is no longer needed. The WebViewSync.jar was removed as well. You can download the WebViewSync.jar file from the UX Framework wiki at https://www.ibm.com/developerworks/community/wikis/home?lang=en#!/wiki/IBM%20TRIRIGA1/page/UX%20App%20Designer%20Tools. (Tri-49903)
UX Framework	The triplat-auth-check component has a new property named model-name that you can use to check the permission for the specified model. It has two methods: getModelPermission checks the permission for a specified model and getActionPermission checks the permission for a specified action. (Tri-54493)
UX Framework	The UX Framework documentation page (/p/web/doc) now displays the Polymer 3 components. (Tri-56079)
Work Tasks	Date calculations in Work Tasks will now take into consideration holidays as defined on the calendar. (Tri-58543-IJ15636)
Workflow	A change has been made to limit the number of workflow instances saved to 1000 per day, with a hidden but configurable override. The threshold will be reset after 24 hours of first hitting the threshold. Workflow instance recording is to be used for DEBUG purposes only. It is not designed to be used to in production, during data loads, or for auditing. It severely slows down the system and greatly increases stress on the database. (Tri-59072)
Workflow	Fixed an issue with OM and Workflow builder which could result in a workflow where Create/Modify/Schedule Tasks could have the same map as another task in the workflow. (Tri-58673)
Workflow	Resolved a Workflow publish issue, where if a publish was triggered on the same Workflow multiple times with quick actions, more than one revision of the Workflow would potentially have the Published status. One scenario where this would happen was where Publish was clicked from the Workflow itself and very quickly after Publish was clicked on the Workflow revision list for the same Workflow. (Tri-56245)
Workflow	Saving the Workflow Instance recording no longer prints a warning in TRIRIGA Admin Console. (Tri-61079-IJ21623)
Workflow	Users without workflow builder access can now view the Workflow Instance tab on a record. (Tri-54421-IJ08580)
Workflow Runtime	A workflow runtime issue involving the Modify Metadata task no longer causes duplicate key errors on the GUI_INSTANCE table when multiple server threads access the Modify Metadata task process and try to handle the same data. (Tri-57102)

Area of Change	Description
Workplace Reservation Manager	The UX Perceptive Reservation app no longer has issues with releasing all blocked rooms (due to the hold time) when the user cancels the reservation before submitting it. (Tri-59671-IJ17551)
Workplace Reservation Manager	The UX Perceptive Reservation app, when accessed from Workplace Services via iPhone, now allows access to the Done button from the calendar date/time selection pop up. (Tri-56335-IJ12653)

IBM TRIRIGA Application Platform 3.6.0.6 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
Agents	The Platform Maintenance agent now removes records pending deletion in batches. The TRIRIGAWEB.property named CLEANUP_AGENT_RECORD_BATCH_SIZE property controls the size of a batch, and the default value is 10000 records. Do not set this value too large. Doing so could cause the database's redo and undo logs to fill up, which would trigger a rollback that is too large for it to handle. With a reduced batch size, the potential rollback is reduced, and records can be processed in a timely fashion. In addition, the cleanup agent timeout now can be interrupted more easily, so you can ensure that the process does not continue into your company's periods of heavy TRIRIGA utilization. (Tri-53574)
Agents	The Platform Maintenance Agent removes records marked for deletion in batches. The new TRIRIGAWEB.property CLEANUP_AGENT_RECORD_BATCH_SIZE controls the maximum number of records in a batch to be deleted at one time. For example, if there are 35000 records to clean, and this setting is at 10000, there will be 4 batches of around 10000 each. If there are 1000 records to clean, at a batch size of 10000, there will be 1 batch. The default value is 10000.

A new TRIRIGAWEB.property was added, CLEANUP_AGENT_ADD_MISSING_ASSOCIATIONS_FOR_SMART_SECTIONS. When set to the default (true), the legacy behavior runs, and the cleanup agent performs a very time- and resource-consuming statement to add back removed associations for smart sections. This is typically caused by a workflow removing an association used in a smart section without clearing/delinking the record used in the smart section. Changing the value to false is only recommended if you are sure there are no de-association tasks that would remove associations from smart sections. (Tri-54469-IJ10978) |

Area of Change	Description
TRIRIGAWEB.properties	A new property can be added to the TRIRIGAWEB.properties file to skip the deleteObsoleteAssociations section of the Platform Maintenance Scheduler Agent. This property is not in the file by default. When the property CLEANUP_DELETE_OBSOLETE_ASSOCIATIONS=false is in the TRIRIGAWEB.properties file, the Platform Maintenance Scheduler Agent does not delete from the IBS_SPEC_ASSIGNMENTS table when the associated spec_id does not exist in the IBS_SPEC table. If you are positive that you are OK with this, add CLEANUP_DELETE_OBSOLETE_ASSOCIATIONS=false to the TRIRIGAWEB.properties file on the server running the Platform Maintenance Scheduler Agent, and that section is skipped. (Tri-57149-IJ14192)
TRIRIGAWEB.properties	In the TRIRIGAWEB.properties file, the property WF_AGENT_SLEEPTIME is now spelled correctly. (Tri-57519)
TRIRIGAWEB.properties	Some default properties in the TRIRIGAWEB.properties file were updated to conform with the best practices for TRIRIGA performance. The following are now the default settings delivered for new installs. **Note:** As with any installation, every property can be updated to suit your implementation. These are starting points and have been tuned for the general case to deliver the best performance for general test cases. WF_INSTANCE_SAVE = ERRORS_ONLY USE_WF_BINARY_LOAD = Y WF_HISTORY_RETENTION_DAYS = 5 DC_HISTORY_RETENTION_DAYS = 5 REPORT_MEMORY_USAGE_LIMIT = 50 BIRT_MEMORY_USAGE_LIMIT = 35 (70 for BIRT only server) TREE_PAGING_SIZE = 1000 SESSION_HISTORY_TRACKING = WEB_USER ALLOW_REVERSE_ASSOCIATION = FALSE REPORT_CASE_SENSITIVE = NATIVE_DB_CASE_SORT CadIntegratorMaxThreads = 5 DataImportAgentMaxThreads = 6 SchedulerAgentMaxThreads = 3 WFAgentMaxThreads = 80 WF_AGENT_MAX_ACTIVE_PER_USER = 70 ReportQueueAgentMaxThreads = 2 WF_AGENT_WAITTIME = 100 WF_MAX_BATCH_ENTRIES=200000 CLEANUP_AGENT_RECORD_BATCH_SIZE = 50000 CLEAN_HOUR=0 CLEAN_TIMEOUT=240 ENABLE_CONCURRENT_AVAILABILITY=true CONCURRENT_AVAILABILITY_POOL_SIZE=200 CONCURRENT_AVAILABILITY_REQUEST_BATCH_SIZE=10 EXPORT_EXCEL_BATCH_PROCESS_SIZE=75000 (Tri-61592)

Area of Change	Description
TRIRIGAWEB.properties	The TRIRIGAWEB.properties file now includes the new MAINPAGE_LOGO_ALT_ATTRIBUTE_VALUE property. The property defines what a screen reader says when the user views the logo on the main page. The default value is IBM TRIRIGA. (Tri-57584-IJ14560)

Information Resources

IBM Knowledge Center

https://www.ibm.com/support/knowledgecenter/SSHEB3_3.6.0/com.ibm.tap.doc/product_landing.html

Access the Knowledge Center to view the product documentation. Topics include product overviews; installation and configuration tasks; instructions for using, administering, and troubleshooting the product; and security information.

IBM TRIRIGA Application Platform support portal

https://www.ibm.com/support/home/product/B587581X76101M05/IBM_TRIRIGA_Application_Platform

The IBM support resources portal provides access to tools and resources to keep your systems, software, and applications running smoothly. From the support resources portal, you can find fixes, service requests, useful links, and an enhanced search to help you find information quickly.

IBM TRIRIGA Application Platform Information and Support Resources

https://www.ibm.com/support/docview.wss?uid=swg21611356

The IBM TRIRIGA Information and Support Resources page is a collection of links and other resources that provides information and assistance for IBM TRIRIGA products.

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