

IBM TRIRIGA Application Platform
Version 4 Release 0.2

Readme



Note

Before using this information and the product it supports, read the information in “Notices” on page 15.

This edition applies to version 4, release 0, modification 2 of IBM TRIRIGA Application Platform and to all subsequent releases and modifications until otherwise indicated in new editions.

© Copyright International Business Machines Corporation 2022. All rights reserved.

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

Contents

| | |
|--|-----------|
| README FILE FOR IBM TRIRIGA APPLICATION PLATFORM 4.0.2 FIX PACK | 2 |
| What's New in This Release | 1 |
| Enhancements..... | 1 |
| Prerequisites and Supported Products..... | 2 |
| IBM TRIRIGA Supported Versions and IBM TRIRIGA Application Platform Compatibility Matrix..... | 2 |
| Installing the IBM TRIRIGA Application Platform 4.0.2 Fix Pack | 3 |
| Important Information | 5 |
| Known Limitations..... | 6 |
| Changes | 9 |
| RELATED DOCUMENTATION | 14 |
| SUPPORT | 14 |
| NOTICES..... | 15 |
| Privacy Policy Considerations..... | 16 |
| Trademarks | 16 |

Readme File for IBM TRIRIGA Application Platform 4.0.2 Fix Pack

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

These release notes include the following:

- An overview of changes
- Many of the descriptions include an internal reference number (Tri-nnnnnn, IJnnnnn, IVnnnnn, and/or RFE-nnnnnn)



Note - The IBM TRIRIGA wiki information, formerly located on DeveloperWorks, is migrated to [IBM Docs for IBM TRIRIGA Application Platform 3.8](#). For more information, see the [IBM TRIRIGA Release Information](#) page on IBM Support.

What's New in This Release

IBM TRIRIGA Application Platform 4.0.2 continues to add valuable functionality, fix defects, and reduce the effort necessary for new and existing customers to implement our products.

Enhancements

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

| Area of Impact | Description |
|-----------------------|---|
| Administrator Console | TRIRIGA application developers can now access Query Data documentation, which can be used for integrations. You can access the documentation at <TRIRIGA_URL>/api/doc. (Tri-62331) |
| Graphics | The TRIRIGA Platform now has REST APIs for querying, uploading, and deleting CAD drawings stored in TRIRIGA. Access to the new APIs is provided through the tririga-react-components npm package. (Tri-78734) |
| Navigation | Navigation items of target type Application with the open in new window checkbox deselected will now appear as selectable items in the Home Page list and the Project Home Page list on the user's My Profile page. Note that if a portal and an Application navigation item have the same name, only the portal will appear in the above mentioned lists. A warning will be displayed in server.log if this scenario is encountered. (Tri-72848) |
| Reservations | The Location Reservation room search now filters the search result set so that rooms that are not available due to reservation policies are not shown in this result set. (Tri-68246) |
| Reservations | The following new custom tasks are now created for the Exchange integration: List all the calendar events in a date/time range for a mailbox. Query details of a calendar event including organizer and attendees. |
| Reservations | When The Microsoft Graph API is enabled for Exchange integration, support is now available for notification of changes to Exchange calendars by subscribing to web-based event notifications from Exchange to TRIRIGA. (Tri-78872) |
| Security | The system user is now required to change the default password on first login. After new installation or upgrade, if system users log in to TRIRIGA with the legacy default password, they will be redirected to a screen that will require a password change. This change also impacts integrations, such as CAD, tri-deploy, CBA, etc. System users will no longer be able to do integrations by using the legacy default password. (Tri-79131) |
| Security | Resolved a reported security scan issue caused by improper scoping of a static variable. (Tri-76074, 76077) |

Prerequisites and Supported Products

To install this fix pack, you must have IBM TRIRIGA Application Platform 4.0 or 4.0.x fix pack installed.

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 IBM Support at <https://www.ibm.com/support/pages/node/1283650>.

IMPORTANT NOTICES: IBM no longer supports IBM Tivoli Directory Integrator. Migrate your TDI assemblies to a supported technology, such as Pentaho. As of version 3.6.1.2, the IBM TRIRIGA Application Platform no longer ships with or supports TDI assemblies.

As communicated in the IBM TRIRIGA Application Platform 3.6.1.2 Compatibility Matrix, IBM does not support Oracle WebLogic with IBM TRIRIGA Application Platform version 3.6.1.2 and later. Please see the Compatibility Matrix for the full listing of compatible products and versions.

Installing the IBM TRIRIGA Application Platform 4.0.2 Fix Pack

To install the TRIRIGA Application Platform 4.0.2 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, 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 4.0-TIV-TAP-FA002 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_v4.0.2_Windows.exe`, `fixpack_tririga_v4.0.2_Linux.bin`, or `fixpack_tririga_v4.0.2_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.



Note - In the patch folder for the 4.0.2 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 TRIRIGA install root 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 WebSphere Application Server only, a manual update might be needed to the WebSphere JVM arguments to enable the `log4j2` feature logging. When you go to the TRIRIGA Administration Console and click the Error Logs tab, if the logs are not displayed correctly, you must complete the following steps to manually update the WebSphere JVM arguments:
 - a. Stop the TRIRIGA WebSphere Enterprise Application.
 - b. Manually update the Generic JVM arguments to include the following line:

```
-Dlog4j2.configurationFile=file:<INSTALLATION  
PATH>/config/log4j2.xml
```

where `<INSTALLATION PATH>` is the full path where TRIRIGA is installed.

The path to access the Generic JVM arguments is as follows:

Enterprise Applications > `<IBM-TRIRIGA application name>` > **Target specific**

application status > <server name> > Java and Process Management > Process definition > Java Virtual Machine

where <IBM-TRIRIGA application name> is the TRIRIGA WebSphere Enterprise Application name and <server name> is the server name.

- c. Apply and Start the TRIRIGA WebSphere Enterprise Application.

Note: If you don't update the WebSphere JVM arguments correctly, the TRIRIGA logging might not work properly. To verify this, go to **TRIRIGA Administration Console > Error Logging**. If you don't see any logs, the manual update has not been done properly.

16. After upgrading to log4j2, the config/log4j.xml file is no longer used to configure log4j. Use the new log4j2.xml file in the config directory. If you have custom log4j settings, you can review and update the settings accordingly. For more information, see the [log4j documentation](#).

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.

| Area of Impact | Description |
|-------------------------|--|
| Object Labels/Licensing | Because of extensive changes involved in the upgrade of log4j and other updates required to resolve critical issues, some of the objects, ILMT license files, and other objects related to those changes are labeled as version 4.1, referring to the version from which these updates were originally made and backported from. |
| Reporting | Resolved an issue with the queries run through enhanced query rendering grids where the header filter value was not honored. The header filter values were clearing out after the user entered an additional filter value in one of the Show more filters fields and pressed Enter. (Tri-80268-IJ39460) |

Known Limitations

The following known limitations concerning the IBM TRIRIGA Application Platform are newly added for this release.

| Area of Impact | Description |
|----------------|---|
| Installation | For DB2 on Websphere Liberty, jdbcCollection="NULLIDR1" needs to be added to the properties.db2.jcc in server.xml. This is necessary for performance optimization. (Tri-80596) |
| Login | There is a Chrome and Edge browser limitation where user auto-filled usernames and passwords are not automatically enabling the continue button on the login screen. (Tri-72065) |
| Login Page | For the Safari browser, the login page responsive design might distort while decreasing or increasing the window size and screen sizes 865 and above. (Tri-75537) |
| Navigation | The hamburger icon in the menu header displays when company level is disabled. The hamburger icon is not needed in this scenario. (Tri-70419) |
| Navigation | The side navigation menu option visible only on the sitemap page is not being honored at runtime. (Tri-76285) |
| Navigation | If no action is performed after logging into TRIRIGA and the session expires while on the home page, after logging back in via the login dialog displayed, when the user refreshes the home page, the TRIRIGA user session might be destroyed. (Tri-74036) |
| Navigation | Navigating to the login page in the same browser session where other windows are open while still accessing TRIRIGA, might result in the TRIRIGA user session being destroyed for those open windows. (Tri-73831) |
| Navigation | On the Safari browser for RTL users, the far left button on the multi-session logout dialog might appear truncated. (Tri-76034) |
| Navigation | The following TRIRIGAWEB.properties setting is not correctly navigating the specified logout page: SSO_SINGLE_SIGN_OUT_REDIRECT_URL The workaround is as follows: SSO_SINGLE_SIGN_OUT_REDIRECT_URL=/p/websignon?redirectUrl=YOUR_SIGN_OUT_URL (Tri-74208-IJ34600) |
| Navigation | For the Safari browser, the latest TRIRIGA favicon does not appear in the browser title of the page/tab for the new window after clicking Open in New Window link. (Tri-77135) |
| Navigation | For best results with user profile images and enhanced navigation, the images should have a square aspect ratio and be sized to 96 x 96 pixels. Other sizes are supported, but the recommended size will provide the best results. (Tri-70209) |

| Area of Impact | Description |
|----------------|--|
| Navigation | The Select Project link might still appear for users after the project license is removed. (Tri-72300) |
| Navigation | Clicking the home link after its session is terminated due to a multi-session logout from another device, might result in a 'loading please wait' message and a spinner, instead of a session expired message. (Tri-74439) |
| Navigation | When you click the page title after clicking a portal section link, the breadcrumb might go back to home instead of the correct navigation path in some scenarios. (Tri-76222) |
| Navigation | The tooltip for the hamburger icon in the menu header is not translated. (Tri-69877) |
| Navigation | <p>After logging in via the session timeout login prompt, other browser windows, and/or tabs still open, you might encounter a session timeout page if the next user action after the login is on one of those pages. Most TRIRIGA pages will not encounter this issue. Following is a list of product areas where the session timeout might occur in the above scenario on some but not all of their respective pages. There might be other areas that are not listed here.</p> <ul style="list-style-type: none"> Admin Console Alternate Form builder Budget Currency Business Object properties and State Transition pages Document Management Flat Hierarchy Hierarchy Tree Label Manager Object Label Manager Performance Manager Reserve Scorecard Security Groups Style Manager Workflow Mapping <p>(Tri-75057)</p> |
| Navigation | For the Safari browser, the latest favicon is not displaying in the browser page/tab title. (Tri-75590) |
| Reporting | For users with a Date and Time format that includes a ZZZ timezone token, Data and Time query filters might not display accurate results in certain scenarios if the timezone part is entered into the filter value. (Tri-77134) |
| Reporting | Text fields with Type field set to DateTime or Date type incorrectly show data in milliseconds on the editable query results page. (Tri-54627-IJ08888) |
| Reporting | The wrap text feature on reports displayed via the enhanced query grid will visually make grid row height slightly smaller if the row height has been set to 64px. (Tri-74584) |

| Area of Impact | Description |
|----------------|--|
| Reporting | In Safari, for the enhanced render query grid, the blue focus is displayed by default on the first element in the row size drop-down menu when the menu is selected. (Tri-74334) |
| Reporting | The ellipses of the overflow menu for manager queries might appear truncated when a record is open in the inline view from that manager query. (Tri-74402) |
| Reporting | On reports rendered through an enhanced grid, a horizontal scroll appears at the bottom of pinned columns even though visually a horizontal scroll is not necessary. (Tri-71983) |
| Reporting | For the Safari browser, entering values in the more filter feature on reports run through the enhanced query grid might have a false positive of returning no results. (Tri-77022) |
| Reporting | For queries displayed in portal sections, the Apply and Clear filter links might display in scenarios where there are no filters. (Tri-75024) |
| Reporting | When filtering a Date and Time field on a TRIRIGA query, users might get unexpected results if their user profile date-time format is: MMMMM dd, yyyy hh:mm a zzz, and they leave off the timezone part in their filter value. (Tri-74890) |
| Security | After a TRIRIGA user session timeout, SSO users who click the Renew session button might see an SSO authentication popup window automatically open and close immediately before the session renews. (Tri-73614) |

Changes

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

| Area of Change | Description |
|--------------------------------|--|
| Administrator Console | Resolved an issue where the server session timeout pop-up warning dialog was not displayed within the SESSION_WARNING_THRESHOLD configured in the TRIRIGAWEB.properties file. This is applicable when the SESSION_WARNING_ENABLED property is set to Y in the TRIRIGAWEB.properties file. Note: Starting with platform 4.0, this feature will only operate if the TRIRIGA User Session Timeout functionality is disabled in the TRIRIGA Administrator Console, located at TRIRIGA Admin Console > System Info > TRIRIGA User Session > Disable User Session Timeout checkbox. (Tri-77332-IJ36134) |
| Administrator Console | Users should be able to log in to the TRIRIGA Process Server Admin Console with account ID in uppercase even though the following setting is set to 'N': USERNAME_CASE_SENSITIVE = N (Tri-73883-IJ32902) |
| Administrator Console | The In Memory Smart Object debugging mode drop-down selector is now located in the Administrator Console on the Workflow Agent Info page. (Tri-75647) |
| Administrator Console | When 'Disable User Session Timeout' is enabled in the Administrator Console/System tab, the legacy session timeout will work, and no exception will be thrown. (Tri-82759) |
| Capital Project | The Select Project link and Recent Project are now displayed on the company home page after the user logs out and logs in again within the project context. (Tri-78441-IJ837237) |
| Currency Update | TreeGrid has been updated to 16.02.01. (Tri-64167) |
| Currency Update | Log4J has been updated to Log4j-2.17.2. All log4j-1 components have been removed. (Tri-79207) |
| Currency Update | Unlike previous fix pack installers, this fix pack updates the Liberty profile and files to support the new Log4j2 upgrade. The following files were updated: 1. jvm.options: The log4j entry was updated to use log4j2. 2. server.xml: The log4j entry was updated to use log4j2. 3. Added the log4j2.xml to the config directory. 4. Removed the log4j-boot file in the lib directory. (Tri-82304) |
| Currency Administrator Console | TRIRIGA Administrators will notice the following differences in the Platform logging functionality after the migration to log4j2: 1. The name for the active log file will no longer contain the date, it will simply be of the form <log_name>.log for example the active security log file will be named security.log |

| Area of Change | Description |
|---------------------|--|
| | <p>2. Any customizations that customers have made to the log4j.xml will need to be re-applied to the log4j2.xml. Make sure to follow the xml configurations specified by apache here: https://logging.apache.org/log4j/2.x/manual/appenders.html</p> <p>3. When log files automatically roll over nightly the year, month, and day will be appended to rolled log in the following format: <code><log_name>-yyyy-MM-dd.log</code> For example when the server log rolls over at midnight, the active log file will now be server.log and yesterday's log file would be server-2022-05-21.log The frequency of automatic rollover and the naming convention of the log files is configurable in the log4j2.xml. For more info on configuring the rolling features of the RollingRandomAccessFile appenders please visit the following link: https://logging.apache.org/log4j/2.x/manual/appenders.html</p> <p>4. When a user manually rolls a log file a time suffix (an underscore followed by the hour, minute, second, and milliseconds) will be appended to the file pattern specified in the log4j2.xml. For out of the box installations this would look like: <code><log_name>-yyyy-MM-dd_HH-mm-ss-SSS.log</code> For example, after rolling the server log the active log will server.log be and the rolled log would be server-2022-05-21_9-25-56-001.log This time suffix is not currently configurable in the log4j2.xml. (Tri-79361)</p> |
| Document Management | <p>When setting permissions for Folders in Document Manager, the propagation settings under the Permissions tab will now be accurately processed. "Propagate them to all child folders, documents, and publications" will now properly propagate the permissions to folders, documents, and publications. Additionally, an issue has been resolved where permissions might have been propagated to documents when "Propagate them to child folders only" was selected. (Tri-74754-IJ33882)</p> |
| Document Management | <p>After creating a capital project and applying template to generate document hierarchy automatically, the hierarchy is now synchronizing properly across multiple servers. (Tri-78729-IJ38290)</p> |
| GIS | <p>Resolved an issue with TRIRIGA and Esri integration where layers other than TileLayers were not getting displayed. (Tri-73764-IJ35345)</p> |
| GIS | <p>A TRIRIGA Esri integration issue around large number of pins causing slow performance of Esri maps is now improved. Pins will no longer re-draw themselves on zoom in/zoom out, or when dragging the map. Pins will no longer appear in individual layers when viewing the Show Options tab. The issue related to Open Record link on the pin detail window not opening the record when clicked is also resolved. (Tri-74810)</p> |
| Gantt | <p>Task hierarchy is showing up correctly on the Gantt chart now. (Tri-70745-IJ30383)</p> |
| Installation | <p>The platform release version has been updated to 4.0.2. (Tri-82041)</p> |

| Area of Change | Description |
|---------------------|---|
| Integration | OSLC Resource Manager will now work properly, even if there is another BO with the same name as the selected BO. (Tri-74726-IJ35149) |
| Integration Object | <p>A new field, Query Batch Size is now added to the Integration Object outbound file scheme that allows control of the internal result batching Integration Object with TRIRIGA queries. By default, query data is incrementally processed by Integration Object in batches of 999 records until all results are written to the output location. This default batch size is intended to prevent potential memory issues on the TRIRIGA servers. Use the Query Batch Size field to adjust the batch size (-1 will not batch the query data). This setting should be used with caution as it can impact the performance of the TRIRIGA servers.</p> <p>Note: For the Integration Object records that run via Workflow tasks, the maximum batch size will be 1000 when passing the record filter values into the CustomTask parameter due to SQL limitations with the number of values in an IN clause.</p> <p>Additionally, for the JSON and XML export file types, the "Exceed 999 Result Limit and Return Maximum?" check box " is now re-labeled as "Do Not Limit Results to First Batch?". The functionality remains the same as per the prior releases, but the new label is more compatible with the new Query Batch Size field. (Tri-76839-IJ35520)</p> |
| Lease - Real Estate | Export data from any report is now working properly for multiple attempts. (Tri-74143) |
| Login | Resolved an issue where the session expiration login prompt displayed an invalid login username for the system user. (Tri-72512) |
| MLA Converter | The Platform fix pack installer has been updated to deliver the Module-Level Associations (MLA) converter. (Tri-75088-IJ34608) |
| Navigation | Resolved an issue where expanded menu items in the navigation tree were unexpectedly collapsing after clicking the menu items. The issue occurred only when the side navigation tree was expanded by using the left mouse button. (Tri-81716) |
| Navigation | Resolved an issue where not all menu items in the side navigation had a consistent hover background color. (Tri-78800) |
| Navigation | Resolved an issue where UX Applications with the component type of WEB_APP were not correctly displayed when used via a Navigation Item. (Tri-79175) |
| Navigation | Side navigation menus, sitemap style pages, project sub-menu, and breadcrumbs can now be opened in a new window or tab of a browser by using right-click. (Tri-75342) |
| Navigation | When you delete Security Groups, they will now be removed from any Navigation Builder Group override that they are part of and also from the Navigation Builder Group override drop down list. (Tri-67191-IJ26207) |
| Navigation | The core platform owned UX Applications will no longer appear in Navigation Builder's Navigation Item Application drop-down. (Tri-79438) |

| Area of Change | Description |
|------------------|--|
| Navigation | If you click the Cancel button on the legacy session timeout dialog, you will now be logged out of the session and then, redirected to the login page. (Tri-78064) |
| Object Migration | Performance improvements around creating Object Migration packages by date and Object Migration search functionality for type Application and type Web Component are now available. (Tri-77849) |
| Object Migration | The default value for a date or date time field in a business object will now be imported correctly in Object Migration. (Tri-76313-IJ35808) |
| Portals | Resolved an issue where when viewing portal section queries with related reports in accessibility mode, the Add To Bookmarks button was incorrectly showing up after a related report was selected. (Tri-75407-IJ354006) |
| Portals | Per IBM design guidance, UX Applications that are configured to not open in a new window, will be contained within the TRIRIGA navigation but will not display the bookmark or open in new window action bar in their header. Additionally, when UX Applications that are configured in this way are opened in a new window or new tab by using the browser open in new window or new tab options, the UX Applications will open outside of the TRIRIGA navigation container. Note, UX Applications that are used as a user portal home page will still show the bookmark / open in new window action bar in their header. (Tri-78032) |
| Portals | The query portal sections using the enhanced rendering grid will now honor the result size setting in portal section builder. The result size will be honored when set to below 100. Note: The pagination footer will remain, so that the users can paginate through the results. (Tri-78870- IJ37279) |
| Record Runtime | The default Time value defined on the field in the data modeler will be used when a record is created. (Tri-74297-IJ34257) |
| Reporting | For queries with a footer sum row that are run through the enhanced rendering grid, the footer sum row will not display if the query results return no data. (Tri-79659) |
| Reporting | Number fields with the value zero are now sorting correctly, through manual sort or with order by defined in the query design. The issue has been resolved for the TRIRIGA query types: Query, Report, Summary and Hierarchy. (Tri-76838-IJ35712) |
| Reporting | An issue where context menus displayed on the enhanced query grids with zero to only a few rows were being clipped and hidden has been resolved. The issue was mainly occurring on form query sections. The context menu will now fully display within the grid container and will be big enough to display a scroll bar so all menu items can be accessed. (Tri-75748-IJ35012) |
| Reporting | Resolved an issue where chart reports were displaying an MID error at runtime when the field representing the main group by column defined on the report no longer exists on the business object. Any invalid group by fields will now be |

| Area of Change | Description |
|----------------|---|
| | <p>ignored at runtime and a warning will display in server.log. Only the remaining valid group by columns, if any will be used at runtime in this scenario. (Tri-77325-IJ36479)</p> |
| Reporting | <p>Resolved an issue where group totals were not showing the group row header in reports with sum columns run with the enhanced rendering grids. Note: If the results of the query have inconsistent currencies the group totals may have unpredictable formatting results. (Tri-78153-IJ37236)</p> |
| Reporting | <p>Reports run through the enhanced query grids will no longer show the pagination footer if no results are returned. (Tri-IJ37483-78389)</p> |
| Reservations | <p>Organizer email addresses from iCal notifications now correctly match user emails. (Tri-79282)</p> |
| Reservations | <p>The Availability tooltip will now properly display on Room Reservation when the tooltip contains a comma. (Tri-77527-IJ37103).</p> |
| Reservations | <p>When using the Microsoft Graph API, reservations created through foundation TRIRIGA now show the correct Start date and time and End date and time in the Room Calendar in Outlook. (Tri-80875)</p> |
| Security | <p>A user with a Self-Service license will now have Read access to the triCostCode module. (Tri-76480-IJ36204)</p> |
| Security | <p>Several potential Cross-Site Scripting attacks have been fixed. (Tri-69644; Tri-68618)</p> |
| Security | <p>Log4j-boot.jar is removed from TRIRIGA Installation package. (Tri-78842)</p> |
| Workflow | <p>Resolved an issue where UX draft mode message helper records were not getting deleted. (Tri-79849)</p> |

Related Documentation

The IBM TRIRIGA documentation is at <https://www.ibm.com/docs/en/tririga> and the IBM TRIRIGA Application Platform documentation is at <https://www.ibm.com/docs/en/tap>. The documentation is available online in topics or as downloadable PDF files.

Additional documentation, previously available in the IBM TRIRIGA wiki, is available on [IBM TRIRIGA Application Platform 3.8](#). For more information, see the [IBM TRIRIGA Release Information](#) page on IBM Support.

Support

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

Notices

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

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

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

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

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

Intellectual Property Licensing
Legal and Intellectual Property Law
IBM Japan, Ltd.

19-21, Nihonbashi-Hakozakicho, Chuo-ku
Tokyo 103-8510, Japan

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

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

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

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

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

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

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

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

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

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

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

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

Privacy Policy Considerations

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

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

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

For more information about the use of various technologies, including cookies, for these purposes, see IBM’s Privacy Policy at www.ibm.com/privacy and IBM’s Online Privacy Statement at <http://www.ibm.com/privacy/details/us/en> in the section entitled “Cookies, Web Beacons and Other Technologies.”

Trademarks

IBM, the IBM logo, [ibm.com](http://www.ibm.com), and TRIRIGA are trademarks or registered trademarks of International Business Machines Corp., registered in many jurisdictions worldwide.

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

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

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

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