

Oracle® Real User Experience Insight

Release Notes

12c Release 3 (12.1.0.4) for Linux x86-64

E48175-02

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Oracle Real User Experience Insight (RUEI) provides you with powerful analysis of your network and business infrastructure. You can monitor the real-user experience, define Key Performance Indicators (KPIs) and Service Level Agreements (SLAs), and trigger alert notifications for incidents that violate them.

RUEI is a Web-based utility to report on real-user traffic requested by, and generated from, your Web infrastructure. It measures the response times of pages and user transactions at the most critical points in your network infrastructure. An insightful diagnostics facility allows Application Managers and IT technical staff to perform root-cause analysis.

This document provides information about the changes introduced to Oracle Real User Experience Insight (RUEI) in release 12.1.0.4. Known issues and limitations are also described. It is recommended that you review its contents before installing the product or upgrading to this version of the product.

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Important

If you are upgrading from a release other than the most recent previous release, it is *strongly* recommended that you review the *Release Notes* for each of the intermediate releases for information about possible compatibility issues. This information is available at the following location:

<http://www.oracle.com/technetwork/documentation/realuserei-091455.html>

1 Securing Apache Web Server

In order to protect sensitive data on RUEI, it is strongly recommended that access to the Reporter interface is restricted to HTTPS. Use the following command as the `root` user:

```
sed -i -e 's/^Listen 80/#Listen 80/' /etc/httpd/conf/httpd.conf
```

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In addition to the already disabled SSLv2, also disable support for SSLv3 in the web server using the following command as the root user:

```
sed -i -e 's/^SSLProtocol all -SSLv2/SSLProtocol all -SSLv2 -SSLv3/'  
/etc/httpd/conf.d/ssl.conf
```

2 New Features Included in the Release

- **Enhanced Real User Experience (RUEI) Data page (Enterprise Manager)**

In Enterprise Manager, the RUEI Data page has been enhanced with a new region that displays the health of all user flows that are related to the Business Application. This region shows the number of completes, the completion rate, and the error percentage. It also identifies the step that caused the most dropped sessions from the user flow in a single table overview.

- **Enhanced RUEI Session Diagnostics (Enterprise Manager)**

In Enterprise Manager under the Business Application target, the Session Diagnostics page has been extended so that the replay of reported page with the Session report can be opened to show the source details of the screen view and an actual screen replay of the page as the user has experienced it. Application pages may not be available via the Replay Viewer within the Session diagnostics facility, or may appear garbled, if they are based on Rich Internet Applications.

- **RUEI Metric Page (Enterprise Manager)**

In Enterprise Manager under the Business Application target, the new RUEI Metric page uses the same search mechanism as the Session Diagnostics page, but here the result set is displayed in a Metric Correlation Chart where RUEI metrics can be compared against all other system metrics and be displayed in time.

This means that End User Page Load times can be presented in time compared with Java Active threads and/or System CPU usage to discover possible connections. Any view can be stored in the correlation chart. This page can also be directly opened from any RUEI event from the Events and Incidents console.

All RUEI events have a link to the RUEI Metrics page, which when clicked will display the page with the appropriate metric filters and time period.

- **Enhanced session tracking**

In addition to the existing sources for session tracking, it is now possible to track user sessions based on XPath expressions or specified headers within either the page request or the server response. More information is available in section 12.2 of the *Oracle Real User Experience Insight User's Guide*.

- **Management of user accounts via the command-line interface**

In order to facilitate integration with Oracle Enterprise Manager, it is now possible to create and remove RUEI user accounts via the command-line interface. This is fully explained in section 3.6 of the *Oracle Real User Experience Insight Administrator's Guide*.

- **Enhanced reporting of Oracle Fusion applications**

Some issues related to the classification of end-user behavior on fusion apps have been improved. In addition, the reporting of fusion apps related content errors has

been improved by providing a larger set of potential application-errors out of the box.

- **Enhanced user flow reporting**

The reporting of user flows has been enhanced with the addition of a new view showing the average time spent by a user within a particular user flow.

- **Support for Red Hat/Oracle Linux**

The use of RUEI software on Red Hat and Oracle Linux version 6.x environments is now supported.

- **Enriched data export facility extended with new columns**

The Enriched data export facility has been extended with the addition of the PAGE_BROWSER_TIME, PAGE_DOWNLOAD_TIME, and VIOLATION_PAGEVIEWS columns to the WG_BIDATA_MASTER table. More information is available in Appendix R of the *Oracle Real User Experience Insight User's Guide*.

- **Support for monitoring of Oracle WebCenter applications**

RUEI now supports out-of-box monitoring of modules and components that are available as part of the Oracle WebCenter suite. It automatically discovers these applications, and translates network objects to business functions. In addition, predefined content messages are automatically provided for all standard Oracle WebCenter errors and messages. For further information, see Appendix I of the *Oracle Real User Experience Insight User's Guide*.

- **New Dimension Structure**

RUEI now supports a new structure of dropdown lists within the data browser and filtering lists in other parts of the product (basic and advanced grouping).

- **Enhancements to the Data Structure**

A revised data structure enables the storing of per hit, page, and session data next to aggregated data already available.

- **Custom dimension enabling/disabling**

It is now possible to enable and disable custom dimension functionality for some time. In this way, a configuration of a custom dimension can be preserved, while the actual processing of it is not executed.

- **Application deletion/disabling**

In addition to deletion of applications or suites, it is now possible to temporarily disable some application or suite definitions. In this way, a configuration of a application or suite can be preserved, while the actual processing of it is not executed.

- **HTTP headers as source for content messages**

In addition to the existing sources for content messages, you can now also specify the request, response header, and URL as search types. For further information, see Chapter 8 of the *Oracle Real User Experience Insight User's Guide*.

- **Report retention screen changes**

The reporter retention screen now contains a tabular view of data sources and also identifies on which instance they are available. A graphical display of db usage in a pie chart is also available for an easy overview of your database usage. For

further information, see section 12.10 of the *Oracle Real User Experience Insight User's Guide*.

3 Installation/Upgrade Procedure

The installation procedure, together with the procedure to upgrade an existing RUEI 11.1 or 12.1.x installation to version 12.1.0.4, is fully described in the *Oracle Real User Experience Insight Installation Guide*.

Note: It is recommended that you check the availability of all hot fixes for the release to which you are upgrading, and apply (if relevant) before starting the upgrade procedure.

Important: Filtering Network Traffic Based on Domain Names

Article 1320386.1 describes how network traffic can be filtered based on domain names. If you are using the implementation described in this article, you should follow the procedure described in the article 1198923.1 after upgrading to 12.1.0.4. Otherwise, you may experience traffic flooding.

Settings Within the ruei.conf File

As of version 12.1.0.4, the RUEI_HOME, RUEI_DATA, RUEI_USER and RUEI_GROUP settings *must* be specified in terms of literal values. Therefore, the following is not permitted:

```
RUEI_BASE=/my/ruei/dir
export RUEI_HOME=$RUEI_BASE/home
```

The ruei-check.sh script will show the following line if this problem is not present in the ruei-conf file:

```
Checking if file /etc/ruei.conf is valid: [ OK ]
```

Default Tablespace Mode

As of version 12.1.0.4, the USERS and UXCONF tablespaces within new installations are by default set to force logging mode. Previously, the default mode was nologging. The procedure for changing this configuration is described in the *Oracle Real User Experience Insight Advanced Administrator's Guide*.

The upgrade procedure does not change your database's current setting. However, be aware that changing the tablespace mode to force logging can considerably increase disk I/O.

Increased Database Usage

As of version 12.1.0.4, additional statistics and facts database tables are created to facilitate RUEI integration with Oracle Enterprise Manager. Be aware that these tables increase the level of database I/O activity and storage requirements.

Data Access and Storage

As of version 12.1.0.4, the way data is stored and accessed in the database has changed significantly. Because RUEI 12.1.0.4 uses a new data model for storing and querying data, you will need to upgrade your pre-12.1.0.4 data if you still want to be able to view it in the new RUEI version. Note that converting the data is not required for proper operation of your RUEI 12.1.0.4 system. This step is only required if you wish

to be able to view data processed and stored before the installation of 12.1.0.4. For more details, see Chapter 3 of the *Oracle Real User Experience Insight Installation Guide*

Data Representation Changes

The following is a summary of the main changes to the way data is represented in RUEI 12.1.0.4 tables:

- Parent level values are no longer prefixed to the current value

In previous versions of RUEI, it was the convention to prefix the parent values to a value so that, for instance, the page name would be prefixed with the application and page group values to become MyApp » Admin » Login.asp.

This is no longer the case, and in RUEI 12.1.0.4 the page name is presented simply as "Login.asp". However, the convention still stands if a filter is set on multiple levels.

Note that it is now possible in RUEI to enable a Hierarchical view of data (graphs only, not table views), which will visually prefix the parent level values to each child value during display in the UI. This is just a visual tool and it is not related to the way data is stored in the tables.

- Empty values

In the past, RUEI would rely on special values to represent values for which no information was found. For example, if a user could not be identified for a given session, the user would be set to "anonymous". Similarly, a page might be set to "other-page", or a missing cookie to "no-cookie". In this release, special values are no longer required as all empty values will now be represented by the string '(no value)'.

- The page-group dimension can now become empty

In previous versions of RUEI, a page-group for which no value could be found was assigned the same value as the page name. This is no longer the case. A page-group with no value is stored empty but displayed as '(no value)' in the UI. The upgrade procedure will convert such historic data automatically.

4 Known Issues and Limitations

The following issues are known to exist with the release:

- **Vertical bar chart visualizations not available within dashboard items**

Due to size constraints, the vertical bar chart visualization is only available for time-based dashboard items.

- **External JavaScript files need to be downloaded within Replay viewer**

If you are using the Internet Explorer browser within the Replay viewer, when clicking a link to an external JavaScript file, you are first prompted to download the external file. In addition, when replaying a page which includes a download hit file (such as an .exe or .rpm), you are prompted to save the file. This does not occur with Mozilla Firefox.

- **Long dimension level values are truncated**

All dimension level values (such as page names) are limited to 4000 bytes. Note that bytes are different to characters. Characters may consist of 1 to 4 bytes depending on the encoding used. With a limit of 4000 bytes, the values can contain

4000 ASCII characters, or up to 1000 4-byte characters. If a name is longer than this, it is automatically truncated.

- **Mismatches between previewed reports and generated PDFs**

Some characters are not rendered in the generated PDF file as they appear in the preview. This is because the preview facility uses locally installed client fonts, while the PDF generation facility uses the RUEI server installed fonts. The default font will cover most customer requirements. However, there are known issues with Asian and Eastern European bold characters. If necessary, you can install a suitable alternative font to resolve this issue. For further information, see the *Oracle Real User Experience Insight Installation Guide*.

- **URL reporting**

RUEI reports URLs in a human-readable format. This means the reported URLs, although they appear to be real URLs, cannot always be copied and pasted into the browser address bar. It is not possible to distinguish between the raw format (received by the Web server) and the more readable format (reported by RUEI). As a result, the following characters might receive a different meaning: , (comma), [,], :, @, !, \$, ' (,), *, and +.

- **Pages within the Replay Viewer**

Application pages may not be available via the Replay Viewer within the Session diagnostics facility, or may appear garbled, if they are based on Rich Internet Applications (RIAs). Examples of RIA frameworks include Ajax, Curl, GWT, Adobe Flash/Adobe Flex/AIR, Java/JavaFX, Mozilla's XUL, OpenLaszlo, and Microsoft Silverlight. However, if the page contains JavaScript code, the JavaScript replay facility can be used to modify the rendering of replayed pages. This is described in section 8.2.19 of the *Oracle Real User Experience Insight User's Guide*.

- **Overlapping or repeated tagging definitions**

Specifying identification definitions, as well as functional error definitions, that overlap (or are identical) across multiple applications, suites, or services can lead to unexpected results. This restriction applies to page-naming schemes, and any configuration based on custom tags, custom functions, and response content.

- **Service naming schemes within ruling facility**

When a group and name source exist for both service group and name schemes, two levels can be delivered for each source resulting in 4-level service names.

- **Users with application-specific permissions unable to view data within the All user flows group**

Users who have only application-specific permissions cannot view generic user flows, even if these contain parts (such as conditions or triggers) that meet the user's authorization.

- **Not all time periods available for non-generic user flow dashboard widgets**

Non-generic user flow dashboard widgets (that is, those that are application, service, or suite specific) are only available when the selected period is the last hour or last 5 minutes. Selection of any other period results in these widgets reporting "N/A".

- **User flow funnel dashboard widgets need to be re-created after upgrading**

When upgrading to 12.1.0.1, existing user flow funnel dashboard widgets will no longer work. They must be re-created (or existing ones edited) by selecting

"User flow completion" as the data source, "User flows" as the View category, and "Funnel" as the view name.

- **ORA-12805: Parallel Query Server Died Unexpectedly**

This error can occur when executing a parallel statement using a partial-partition wise join, where the set of partitions accessed is pruned at runtime to no partitions or partitions without any segments.

This is caused by a known bug in Oracle Database 11.1 and a workaround is available. For more information, see Appendix G of the *Oracle Real User Experience Insight Installation Guide*.

However, Oracle recommends that you upgrade to database version 11.2.0.3 and download and install patch 13582702 available at the following location:

<https://support.oracle.com/epmos/faces/ui/patch/PatchDetail.jspx?afrLoop=33337295036267&patchId=13582702>

5 Compatibility Issues

If you are upgrading from a previous release, you should be aware of the reporting differences highlighted in this section.

- **Reporting of any error and frustrated pages as error pages**

Previously, some pages with response return codes indicating an error (such as 400 and 500 series codes) were not reported as error pages if the response code was not tagged. Now, they are and will be reported as '(no value)'. In addition, error codes, including those when no response is returned, will also be reported as '(no value)'. More information is available in Appendix D of the *Oracle Real User Experience Insight User's Guide*.

- **Session Diagnostics facility**

As a result of improvements, the appearance of the Session Diagnostics facility has somewhat changed. Be aware that at least one search criteria must now be specified, and it is no longer possible to specify a criteria to sort the retrieved user records. More information is available in Chapter 4 of the *Oracle® Real User Experience Insight User's Guide*.

Wildcards are now supported for all search fields and more metrics will be displayed in the search result screen.

The following limitations are associated with the new Session Diagnostics facility and apply to all session diagnostics within All sessions and suites:

- Sorting is no longer possible
- Dropdown lists are not filtered internally
- Limited number of sessions returned (not paginated)

- **Data Retention Level Adjustments**

RUEI maintains data at several aggregation levels, whose retention is configured in days. If you have upgraded from a previous RUEI version, Oracle recommends that you reduce the aggregation level to 90 days.

The monthly cubes have many details, but display data per month. If you keep thousands of days worth of data, your disk allocation requirements will be massive (the size of dataset grows daily due to the elimination of the condense

process) and the detail is only needed to display day to day tend analyses. If you want to compare data over a longer period (up to 12 months), a retention level setting of 390 days is preferred. For more information on data retention policies and how to adjust them, see Chapter 12 of the *Oracle® Real User Experience Insight User's Guide*.

6 Bugs Fixed

The following bugs have been fixed in this release:

Table 1 Bugs Fixed in this Release

Bug Number	Description
13506429	CANNOT FILTER ON USERFLOW CUSTOM DIMENSION
13655066	HAVE BROWSE DATA SEARCH OPTION TO SEARCH ALL DIMENSION LEVELS
14138349	SESDIAG SHOWS NO DATA FOR SESSION FROM COMPLETED FLOW
14410259	ZOOM LOCKING FEATURE ONLY WORKS ON PAGES, NOT ON SESSIONS
14548880	SOME PAGE-NAMES ARE NOT MAPPED TO FUNCTIONAL NAMES
14679327	ERROR IN EVENT LOG AFTER UPGRADE FROM 12.1.0.0.1 TO 12.1.0.1.1
14684020	SESSION BREAKS INTO 3 SESSION AND USER-ID HIT IS SPURIOUS
14737573	AFTER UPGRADING TO 12.1, A REPORT FILTER DISAPPEARED
14738192	MULTI LEVEL CUSTOM DIMENSION WITH SAME COOKIE SOURCE GIVES INCORRECT RESULTS.
14743453	EBS - DIMENSION COMPONENT NAME/NAME" SHOWS A LOT OF 'BUTTON'
14753905	POST UPGRADE STEPS FAILED AFTER 12.1.0.3 UPGRADE
14762099	REPORT SELECT FILTER NO LONGER SORTS ON ALPHABET
14773246	ADD PAGE DOWNLOAD AND BROWSER TIME TO BI DATA TABLES
14779340	5 MINUTE DETAILS DISAPPEAR WHEN A 3RD HOUR IS ADDED TO A REPORT
14783800	INTERNAL ERROR (CHECK_RULES RETURNED ERROR CODE 1) WHEN UPLOADING CONTENT MESSAG
14784020	GET UID FROM OAM USING ADDITIONAL SOURCE
14801496	SOME PAGE-NAMES ARE NOT MAPPED TO FUNCTIONAL NAMES - TWO
14806335	ERROR PAGES NOT REPORTED WHEN USING TAGS
14813479	SUPPORT OF HEADERS AND XPATH SCHEMES FOR SESSION TRACKING
14848905	OBJECTS ARE BEING REPORTED AS PAGES
15836217	INTERNAL ERROR (MESSAGE 1(54): ORA-00054: RESOURCE BUSY
15838452	PAGE-DELIVERY TYPE = CONTENT ERROR EVEN IF NO CONTENT MESSAGE WAS EXTRACTED
15872301	UNEXPECTED REMOVE ALL SIDE EFFECT

Table 1 (Cont.) Bugs Fixed in this Release

Bug Number	Description
15876718	UPGRADE 11.1 TO 12.1.0.3 END-TO-END-TIME-PER-PAGE DECREASED SIGNIFICANTLY
15898257	FORMS TRAFFIC HITINFO=ERROR-IN-SESSION
15911654	DATA PROCESSING JUST STOPS!
15927468	MINIMUM DISK REQUIREMENT FOR RUEI_HOME
15928539	FORMS ONLY USER IDENTIFICATION DOES NOT WORK
15965055	CANCEL HELPDESK REPORT CREATION MAKES UI USELESS
15966027	EMPTY PARTITIONS USE LOTS OF DISK SPACE ON SOME DATABASES
15970416	ORA-00054 AFTER APPLYING PATCH BUG 15849594
15976234	CHINESE LANGUAGE USERID DISPLAY UNREADABLE CODE USING XPATH
16034341	LDAP : DISTINGUISHED NAME FIELD MISSING
16049809	ORA-00001: UNIQUE CONSTRAINT ON EBS_RESPKEY2DETAILS.TXT WHEN UPLOADING ZIP
16053432	FRAMEWORK EXCEPTION DOES NOT WORK ON OTHER PAGES
16063937	RUEI SESSION IS REPORTED AS 2 SESSIONS WHEN IT SHOULD BE ONLY 1
16079149	FRAMEWORK EXCEPTION ON PROBLEM ANALYSIS CUSTOM DIM CAUSE PROJECT TO HALT
16198882	ADD HTTP HEADERS AS SOURCE FOR CONTENT MESSAGES
16236511	PERIOD OVER MULTIPLE YEARS SHOWS DATA FROM YEAR CUBE
16247368	SESSION ERRORS IN LOGS REPEATING FREQUENTLY
16268442	CUSTOM TAG NOT PICKED UP WHEN IN JSON RESPONSE CONTENT
16276753	CLIENT LOCATION NOT ACCURATE FOR CHINESE LOCATIONS
16298374	RUEI - DUPLICATE DATA FOUND IN DASHBOARD AND ADD IP ADDRESS REGION" DIALOG
16396495	INTERNAL ERROR (PROJECT WG - ERROR WHILE READING EVENT FILE 'EVENT_SATISFACTION-
16482748	EBS TRANSLATIONS FOR OBJECTS WITH MULTIPLE LANGUAGES
16485077	GETTING ORA-12899 WHEN ADDING USER FROM EXTERNAL LDAP WITH DN MORE THAN 255 SYMB
16485759	SSL TRAFFIC DROPPED EVEN WITH KEYS UPLOADED
16495557	KEY PAGE DOES NOT HAVE CLIENT BROWSER/DEVICE-NETWORK/OS DIMENSIONS
16514853	INTERNAL SERVER ERROR WHEN EXPORTING A CERTAIN (LARGE) SESSION
16634575	DATA PROCESSING COULD NOT KEEP UP WITH THE AMOUNT OF TRAFFIC
16655814	SESS DIAG RETENTION SETTING FAILS WHEN \$RUEI_DATA/PROCESSOR/DATA IS A SYMLINK
16664342	SOME PAGE-NAMES ARE NOT MAPPED TO FUNCTIONAL NAMES - THREE

Table 1 (Cont.) Bugs Fixed in this Release

Bug Number	Description
16721057	DEFAULT PERMISSIONS DIRECTORIES
16825863	LOGR PROCESSING 120 MIN BEHIND
16853709	ORA-00942 WHEN VIEWING HISTORIC DATA IN BROWSE DATA

7 Product Documentation

The latest version of the product documentation is available via the link below:

<http://www.oracle.com/technetwork/documentation/realuserei-091455.html>

8 Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at

<http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>.

Access to Oracle Support

Oracle customers that have purchased support have access to electronic support through My Oracle Support. For information, visit

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<http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs> if you are hearing impaired.

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