

Oracle® FMW

Release Notes for Enterprise Data Quality



12c (12.2.1.4.1)

F36176-01

October 2020

The Oracle logo, consisting of the word "ORACLE" in white, uppercase letters, centered within a solid red square.

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Oracle FMW Release Notes for Enterprise Data Quality, 12c (12.2.1.4.1)

F36176-01

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Preface

Related Documents

For more information about EDQ, see the Oracle Enterprise Data Quality documentation set.

EDQ Documentation Library

Find the latest version of the EDQ guides and all of the Oracle product documentation at <https://docs.oracle.com>.

Online Help

Online help is provided for all user applications of Oracle Enterprise Data Quality. It is accessed in each application by pressing the **F1** key or by clicking the Help icons. The main nodes in the Director project browser have integrated links to help pages. To access them, either select a node and then press **F1**, or right-click on an object in the Project Browser and then select **Help**. The EDQ processors in the Director Tool Palette have integrated help topics, as well. To access them, right-click on a processor on the canvas and then select **Processor Help**, or left-click on a processor on the canvas or tool palette and then press **F1**.

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Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.

Convention	Meaning
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

1

Oracle Enterprise Data Quality Release Notes

Oracle recommends you review this document before installing or working with the product.

It has the following sections:

- [Release 12.2.1.4.1](#)
- [Release 12.2.1.4.0](#)

1.1 Release 12.2.1.4.1

This document contains release information for Oracle Enterprise Data Quality (EDQ) (12.2.1.4.1) and includes the following sections:

- [New Features and Improvements](#)
- [Applying a Bundle Patch for Oracle Enterprise Data Quality](#)
- [Removal Notice](#)
- [Issues Resolved](#)
- [Known Issues and Workarounds](#)

1.1.1 New Features and Improvements

This release introduces the following enhancements:

1.1.1.1 Stored Credentials

The Stored Credentials feature is a new permission-controlled administrator functionality that allows you to store sets of credentials that EDQ can use to access external systems with high security, such as cloud data storage systems, so that you can use them in file download and upload tasks configured in EDQ, and when calling web services that require the same authentication.

For more information, see the Stored Credentials section of Oracle Enterprise Data Quality Online Help.

1.1.1.2 Extended Limit of Oracle VARCHAR Columns in EDQ Results Schema

Oracle databases 12c and later can be configured to support 32767 bytes instead of 4000 bytes as the maximum size of VARCHAR columns. When EDQ starts up, the maximum size of columns supported by the EDQ repository database is detected automatically and all VARCHAR columns in results tables are created with this size.

For more information, see the Limits in EDQ chapter of Administering Oracle Enterprise Data Quality guide.

1.1.1.3 Data Store for Autonomous Databases

Oracle Autonomous Database is a fully managed, preconfigured database environment with two workload types available, Autonomous Transaction Processing and Autonomous Data Warehouse. For this release, a new data store is available to enable reading data from, and exporting data to, Autonomous databases. This new data store downloads the required wallet file needed to authenticate automatically by calling the ADB REST APIs.

For more information, see the Data Stores section of Oracle Enterprise Data Quality Online Help.

1.1.1.4 Connectivity to Apache Kafka

Apache Kafka is a highly performant distributed streaming platform. EDQ can use the Kafka Consumer API to subscribe to one or more topics and process records as they are published, and can use the Kafka Producer API to publish a stream of records to a topic.

For more information on connecting EDQ to Apache Kafka, see the Using Apache Kafka with EDQ section of *Integrating Enterprise Data Quality with External Systems*.

1.1.1.5 Connectivity to Apache Hive™ using Kerberos Authentication

Apache Hive™ is a data warehouse software which facilitates reading, writing, and managing large datasets residing in distributed storage using SQL. For connecting EDQ to Apache Hive, you have to configure the server running EDQ to support Kerberos. This requires a valid Kerberos configuration file containing the realm used with Hive.

For more information, see the Data Stores section of Oracle Enterprise Data Quality Online Help.

1.1.1.6 Connectivity to Apache Avro™ Data Stores

Apache Avro™ is a data serialization and storage format often used in conjunction with Big Data systems. For this release, a new data store is available to enable reading data from, and exporting data to an Avro file. The schema in Avro files used with the EDQ data store must define the data as a record type. The record field names map to attributes in EDQ snapshots and exports.

For more information, see the Data Stores section of Oracle Enterprise Data Quality Online Help.

1.1.1.7 Connectivity to AWS Redshift

AWS Redshift is a fast, simple, cost-effective data warehousing service. EDQ can connect to AWS Redshift using the standard JDBC driver that AWS makes available.

For more information, see the Data Stores section of Oracle Enterprise Data Quality Online Help.

1.1.1.8 Connectivity to JSON Data Stores

EDQ can read and write data in JSON and JSON Lines formats. The data is represented as an array of objects, either at the top level of the text file, or at a simple attribute path within the file.

For more information, see the Data Stores section of Oracle Enterprise Data Quality Online Help.

1.1.1.9 Connectivity to Oracle Service Cloud

Oracle Service Cloud is a CRM solution that improves customer service and daily operations through the use of its service request management, knowledge base, and customer portal. A new data store is available to enable reading data from Oracle Service Cloud. The Oracle Service Cloud data store uses a driver that is suitable only for data extraction, so it is not possible to export data for this type of data store.

For more information, see the Data Stores section of Oracle Enterprise Data Quality Online Help.

1.1.1.10 Support for Case Management Filter and Report Execution by using SQL and Oracle Text

This release includes optional support for Case Management filter and report execution using pure SQL, in conjunction with Oracle Text and JSON indices. Through this option, you can enable SQL filtering and disable Lucene. The EDQ repository database must be running Oracle database 12.2 or later to use this option.

For detailed instructions, refer to [Switching to SQL and Oracle Text for Case Management Filters and Reports](#).

1.1.1.11 Support for Reconnect Retries in JMS Connection

This release includes support for allowing retries when connecting to JMS message queues or topics, for either reading (consuming messages) or writing (providing messages).

Set the following properties in `director.properties` file, to control this behaviour:

```
initialattempts: Number of times to try making initial connection.  
Default = 1  
retryattempts: Number of times to try to reconnect after error. Default  
= 0  
retrydelay: Time to wait between connection attempts. Default = 5s
```

The property `retrydelay` can be specified as:

- `Nms` - N milliseconds
- `Ns` or `N - N` seconds
- `Nm` - N minutes
- `Nd` - N days

for example, the following settings set the delay to 5 seconds (500 milliseconds):

```
retrydelay = 5000ms  
retrydelay = 5  
retrydelay = 5s
```

For more details on JMS, refer to [Using JMS with EDQ](#) documentation.

1.1.2 Applying a Bundle Patch for Oracle Enterprise Data Quality

A bundle patch is an official Oracle patch for Oracle Fusion Middleware components on baseline platforms. Each bundle patch includes the libraries and files that have been rebuilt to implement one or more fixes. All of the fixes in the bundle patch have been tested and are certified to work with one another.

Note:

Oracle recommends that you have the latest version of Opatch (version 13.9.2.0.0+ or later) from My Oracle Support. Opatch requires access to a valid Oracle Universal Installer (OUI) Inventory to apply patches.

Oracle Fusion Middleware 12.2.1 products are installed with OPatch NextGen 13.9.2.0.0 to apply interim patches. The Oracle patch mechanism (Opatch) is a Java-based utility that runs on all supported operating systems. Opatch requires installation of the Oracle Universal Installer.

For detailed instructions, refer to [Manually Patching Oracle Enterprise Data Quality](#).

1.1.3 Removal Notice

The following section describes the features that have been removed in this release:

- **Removal of Active MQ server:** From this release, all the Active MQ server jars are removed and it is therefore no longer possible to launch or use an embedded Active MQ server. The recommended architecture for Active MQ is to run a separate broker outside EDQ.
- **Removal of ability to view client session logs:** The ability to view client session logs for user sessions has been removed from the Administration pages on the Launchpad.
- **Removal of XML support in EDQ configuration REST APIs:** Currently, XML data can be returned from configuration REST API calls by providing the 'accept: text/xml' header. However, support for XML requires `javax.xml.bind.annotation` classes and this package is not available in Java 11. XML support has therefore been removed from EDQ configuration REST APIs.
- **Removal of `wsdlizer` and support for 'Global' web services:** The `wsdlizer` is used in conjunction with Java XML binding (JAXB) and it has no impact on standard EDQ web services. As part of the transition towards stable Java 11 support, the `wsdlizer` and JAXB processing have been removed from EDQ web services.

- **Removal of FTP server:** The embedded FTP server has been removed from this release due to security reasons. The SFTP interface should be used instead.

1.1.4 Issues Resolved

This section describes issues resolved in this release.

Table 1-1 Issues Resolved

Issue	Notes
Error when saving case attachments containing multibyte characters	An issue was reported in which the file name attached to a case is truncated to 80 characters, when the first 80 characters contained multibyte characters. This issue has been fixed and it is now possible to attach file names containing multibyte characters without truncation. Also, it is to be noted that only PDF attachments are supported due to security reasons.
Error using decision input on match processor	An issue was reported in which an error occurred when using the decision input on the match processor to update alerts. It was noted that the process failed when the decision phase components were enabled. This issue has been fixed in this release.
Reference data is not updated correctly when written to and then read in the same job	An issue was reported in which the reference data in a reader is not refreshed, when the reference data is changed in the same running job. This issue has been resolved in this release.
Dashboard Administration may not work through a load balancer to a cluster	When using a load balancer in a cluster containing two or more managed servers, it was reported that Dashboard Administration fails to start with an 'Invalid Credentials' error message. This issue has been fixed and Dashboard Administration now starts successfully from behind a load balancer.
Results for a job and run label are not displayed in the Server Console	An issue was reported in which the results for a job and run label are not displayed in the Server Console. For example, the same job in the same project which was run with run label 'Test1' and then 'Test2' shows both sets of results initially, but only the results for run label 'Test2' after the same user logs out and then back in to the Server Console. Whenever the user logs in again, only the latest run label for the job is displayed and there is no way to display the others. This issue has been resolved in this release.
Spurious "Access to PID X is strictly forbidden" errors seen in Server Console and logs	It was reported that on logging in to the Server Console as a non-administrative user and running a job with a run label in a project for which the non-administrator user does not have access (that is, it is marked as 'Administrators' only), an error message "Access to PID X is strictly forbidden" is displayed.
If a "run everywhere" job is cancelled, it still runs when other servers start	An issue was reported in which a cancelled "run everywhere" job remains in the list of running jobs, ready to run when other servers are started. This issue has been resolved in this release.

Table 1-1 (Cont.) Issues Resolved

Issue	Notes
Threads used for "run everywhere" jobs on a new server do not have correct context	When a server in a cluster starts up, it will automatically run any "run everywhere" jobs which are already running in the cluster. The threads used for these jobs do not have the correct context class loader set and processes may fail to locate resources loaded through <code>Thread.currentThread().getContextClassLoader()</code> . This can cause problems with the Groovy <code>JsonSlurper</code> since this requires a fast string service loaded using the context class loader. This issue has been resolved in this release.
JSON decoding fails with JMS messages	An issue was reported in which JSON decoding fails and displays an error when receiving JMS messages. This issue has been resolved in this release.
Case state expiry can severely degrade indexing speed	An issue was reported in which case state expiry severely degrades the indexing speed. For example, consider a workflow with a state which has an expiry time set to 1 minute. If a large number of new cases/alerts are generated or updated to this state, a large number of expiries will happen and the whole indexing process will essentially stall. This issue has been resolved in this release.
Database connection framework does not support filtering by catalog	An issue was reported in which filtering by catalog is not supported in EDQ. Snowflake maps database names to catalog names. So for a Snowflake connection, tables from all databases are listed. Attempting to read from a table which is not in the selected database results in an error. This issue has been resolved in this release.
Unnecessary synchronization in Runtime progress manager	An issue has been reported in which there is unnecessary synchronization in the runtime progress manager. This can cause a dramatic slowdown in performance in a cluster. This issue has been resolved in this release.
Case creation/update places excessive load on lock manager	Cases and alerts are created/updated in batches of 30. For each batch, a lock request containing 60 GUIDs is made. This can cause significant performance problems in a clustered environment where locks are stored in Coherence. This issue has been resolved in this release.

Table 1-1 (Cont.) Issues Resolved

Issue	Notes
Allow selective disabling of case management indices	<p>An issue was reported in which there is a need to disable certain case management indices in order to improve performance. There are mainly five case management indices as follows:</p> <ul style="list-style-type: none"> • Case: This is essential and takes the least time to build. • Supplementary Data: This is important to enable detailed searching, and takes some time to build. • Comments: This is useful for searching on previous comments, and takes some time to build. • Transitions: This is not needed for many use cases, and is usually cheap to build. • History: This is not needed for many use cases, and is very expensive to build. <p>To disable one or more indices, you can add the <code>cm.disabled</code> property to <code>director.properties</code>. The value should be a comma/space separated list of index names. The index names are <code>history</code>, <code>sd</code>, <code>comment</code>, and <code>transitions</code>. You can also add the value "reporting" to hide the reporting piece in the case management user interface. This does not affect indexing. The case index cannot be disabled.</p> <p>For example, to disable the history index, you can set the property as <code>cm.disabled = history</code>.</p>
Names of temporary tables created during case management may clash in a cluster	<p>Case management creates temporary tables to collate supplementary data and other data. These tables are named with a prefix and a per-server atomic integer. In a cluster, this may lead to clashes in table names with subsequent chaos. This issue has been resolved in this release.</p>
JMS reception does not fail even if message broker stops	<p>An issue has been reported in which if, a process is reading from a JMS queue or topic, and the message broker fails, the process does not error. This issue has been resolved in this release, so that real-time processes reading from JMS queues or topics will fail if the broker becomes unavailable, unless connection retries have been configured and are successful.</p>

1.1.5 Known Issues and Workarounds

This section details known issues in this release, and their workarounds.

1.1.5.1 Opening Server Package File in Apple OSX Causes Error

An issue has been reported in which a user right-clicked on the Server node in the Project Browser (in Director) to open a Server Package file, and received a null pointer exception. In the meantime, opening Server Package file can still be accomplished in the following ways:

- **File > Open Package File.** Then navigate to the Dxi file containing project elements and import the file. This can then be copied into the Project Browser.

Or

- Drag and drop.

1.2 Release 12.2.1.4.0

This document contains release information for Oracle Enterprise Data Quality (EDQ) (12.2.1.4.0) and includes the following sections:

- [New Features and Improvements](#)
- [Deprecation Notice](#)
- [Issues Resolved](#)
- [Known Issues and Workarounds](#)
- [Upgrade Considerations](#)

1.2.1 New Features and Improvements

This release introduces the following enhancements:

1.2.1.1 Call External Web Service Processor

For this release EDQ offers a new processor called **Call External Web Service** which takes input data, configuration information, request payload and parses web service responses as the processor output. This processor makes it easier to call external REST web services within EDQ processes.

For more information, see the Call External Web Service section of *Oracle Enterprise Data Quality Online Help* .

1.2.1.2 Cassandra Data Store

A new data store is available to enable reading data from, and exporting data to, Cassandra databases.

1.2.1.3 Multiple Value Reference Data Editing

This release enables multiple value editing of Reference Data entries, to improve productivity when editing reference data, especially for standardization and product data classification purposes.

1.2.1.4 New REST API Documentation and Testing capabilities

New documentation of EDQ's REST APIs is available from the EDQ Launchpad. The new documentation gives details and examples for all services, and a built-in testing facility. The 'fixed' services to manage EDQ configuration and jobs are documented under Web Services – REST API Specification, and the dynamic services, built by configuration, are documented under Web Services – Web Services - Web Services REST Endpoints.

1.2.2 Deprecation Notice

Rhino (the JavaScript Engine) was deprecated in release 12.2.1.0.0, and will be removed in the next major release of EDQ. Custom scripts that use the E4X functionality of Rhino (which is often used to construct XML), for example to call an external web service, should if possible be rewritten after upgrade to EDQ 12.2.1.1.0.

1.2.3 Issues Resolved

This section describes issues resolved in this release.

Table 1-2 Issues Resolved

Issue	Notes
Case management reports with aggregations are not consistent with the drilldowns	Issues of consistency and overlap in some reports were noted. These issues have been fixed in this release.
Event log 'EventId' column removal can cause EDQ 9.0 upgrade issue	Users of version 9 of EDQ may have selected all event log columns (including <i>EventId</i>) for display and saved this selection. EventId is no longer used, and users of previous releases reported that trying to load an event log that contains the <i>extra</i> saved column caused the application to shut down. That condition has been fixed in this release.
Client/Server Timezone issues when using filters in Case Management	Conflicting time stamps (server versus client) have been resolved.
Unable to open 'Extract Building Identifier' parser in CDS Standardize Address	Loading symbol data was causing Director to run slowly in some circumstances. The issue has been resolved.
Vertical Data view in Case Management not appearing	An issue preventing proper display of Alerts <i>in the vertical view</i> was fixed in this release.
Incorrect key generation export name in CDS run profile	An incorrect key generation export name was discovered and fixed in this release.
IndexOutOfBoundsException error on job email icon with duplicate user display names	Duplicate display names were causing an error to be displayed when users clicked the job email icon. The issue has been resolved in this release, and job notification emails are generated without error.
WebService publishing fails if HTTPS is enabled but HTTP is disabled	An error occurred when EDQ's managed server was configured so that the main listen port was disabled but the SSL listen port was enabled. This issue has been resolved in this release.
Re-enable On-line Help for non-English languages	In a previous release, the online Help was available only in the English language. It is available in 10 languages (including English) in this release.
Match options for data-only from contributing comparisons are not saved	It was discovered that the match options for <i>Data from only contributing comparisons</i> and <i>Data from only contributing compound comparisons</i> were not being saved. It has been corrected in this release.

Table 1-2 (Cont.) Issues Resolved

Issue	Notes
Download task does not support HTTPS through a proxy server	Using an HTTPS URL in the download task was causing an error when the task passed through a proxy. This issue has been resolved in this release.
Flag Key changes not reflected during Case Source import	An issue was reported in which Flag Key changes were not visible after import. The issue was resolved in this release.
Match cluster limit warnings rendered incorrectly in HTML job log report	An issue in which Match cluster limit warnings were being incorrectly rendered in the Event Log Job Messages HTML output has been corrected in this release.
Correct error status not returned when running runjob	Error status was not correctly reported (no error returned) when running runjob. This issue has been fixed and errors are now reported correctly.
E-mail notification does not support SMTP authentication	An issue was reported in which the email notification function did not work when an SMTP server requiring authentication was used. The defect has been addressed, and notifications are working properly in this release.
File uploads do not work with built-in SFTP server	When connecting to the internal SFTP server, file uploads were returning an error (<i>Couldn't get handle</i>). The issue has been fixed in this release.
Length of keys generated in batch can exceed staging table column size	An issue was reported (in Customer Data Services Pack) in which errors occurred when the length of keys generated by EDQ exceeded the width of the table column. The keys are now truncated to address this issue.
Case Management Reports use all values that exist, rather than those in filter	Case Management Reports were erroneously including placeholders (rows/columns) for values not called for in the filter, in addition to the data called for in the filter. This issue has been fixed in this release.
Case Management temp files not deleted until server restart	Temp files were previously being retained until the server was restarted, at which time the temp files were deleted. The application has been updated so that the temp files are cleared when the application is closed.
Issue email notifications do not work if an LDAP userdisplayname is configured	The presence of <i>userdisplayname</i> was interfering with issue email notification. The issue has been resolved, and the presence of <i>userdisplayname</i> does not cause any problems.
Job email notifications do not work if an LDAP userdisplayname is configured	The presence of <i>userdisplayname</i> was interfering with job email notification. The issue has been resolved, and the presence of <i>userdisplayname</i> does not cause any problems.
Excel exports from Case Management reports with aggregations contain <nobr> tags	<nobr> and </nobr> tags were appearing in some Case Management reports exported to Microsoft Excel. This issue has been resolved.
One-way web service returns 'unresolvable error' with webservice tester	When testing a one-way web service using the webservice tester, an error message appeared (<i>unresolvable error</i>). This release includes the fix to this issue.

Table 1-2 (Cont.) Issues Resolved

Issue	Notes
Configuration Analysis generates a null pointer exception when comparing jobs	An issue was reported in which users received null pointer exceptions when using Configuration Analysis when comparing jobs. This release addresses the issue and it is no longer observed.
Case Management 'State Changed By' filter on user Display Name does not work	When creating a filter using <i>State Changed By</i> , users can now filter users based on their Display Name.
Lucene index update is not committed for user updates of individual cases	Users reported not being able to search on attributes updated in Cases or Alerts until a re-index was performed. Functionality was updated to enable searching on updated attributes without having to re-index.
Option to log Case Management report requests for debug purposes	To provide additional debug logging of all user Case Management report requests: <ol style="list-style-type: none"> 1. Access the following new EDQ mbean in JConsole on a running EDQ server: edq Logging Case Management Filter Execution 2. Invoke the <code>setLevel</code> operation with a value of <i>FINE</i>. Whilst not recommended, this setting can be made permanent by adding the following line to <code>logging.properties</code> and restarting EDQ: <code>com.datanomic.director.casemanagement.search.level = fine</code>
Prevent running of very large Case Management reports to avoid memory problems	By default, attempts to run Case Management reports in which either axis contains more than 1000 entries will be rejected, and an error message displayed. The size of this limit is configurable, and can be set using the following new parameter in <code>override.properties</code> , for example to change it to <i>5000</i> : <code>casemanager.maxReportWidth = 5000</code>
Some CM reports with a date field with a week granularity will never finish	An issue has been reported in which running CM reports with a granularity of <i>week</i> caused looping that would not allow the report to be completed. This issue has been resolved in this release.

1.2.4 Known Issues and Workarounds

This section details known issues in this release, and their workarounds.

1.2.4.1 Opening Server Package File in Apple OSX Causes Error

An issue has been reported in which a user right-clicked on the Server node in the Project Browser (in Director) to open a Server Package file, and received a null pointer exception. In the meantime, opening Server Package file can still be accomplished in the following ways:

- **File > Open Package File.** Then navigate to the Dxi file containing project elements and import the file. This can then be copied into the Project Browser.

Or

- Drag and drop.

1.2.5 Upgrade Considerations

This section details major considerations for upgrading to 12c (12.2.1.4.0).

1.2.5.1 Upgrades in an Oracle WebLogic Server Environment

- Read for guidelines for preparing to upgrade to Oracle Fusion Middleware 12c (12.2.1.4.0). This documentation also includes descriptions of terminology changes that you must understand to move forward to a 12c environment.
- If your current EDQ version is 11.1.1.7 or later *and* was installed with Oracle Universal Installer (OUI), you can use the Upgrade Assistant to upgrade your installation directly to 12c (12.2.1.4.0).
- All EDQ components must be shut down and remain stopped until you are prompted to start them at the end of these upgrade instructions. The WebLogic Server console must remain running until you are prompted to shut it down during the upgrade procedure.

For all upgrade scenarios, see Upgrading Enterprise Data Quality in *Installing and Configuring Oracle Enterprise Data Quality* guide.

1.2.5.2 Upgrades in an Apache Tomcat Environment

You can perform a direct upgrade to version 12c of EDQ only from Tomcat version 8. If you are running an earlier version of Tomcat, you must upgrade Tomcat to version 8 before proceeding with the EDQ upgrade. See the Apache Tomcat documentation at

<http://tomcat.apache.org>

To upgrade to 12c (12.2.1.4.0), see Upgrading Enterprise Data Quality in *Installing and Configuring Oracle Enterprise Data Quality* guide.

A

Switching to SQL and Oracle Text for Case Management Filters and Reports

This appendix describes how to use SQL and Oracle Text for Case Management filter and report execution.

 **Note:**

This feature is applicable only for EDQ 12.2.1.4.1 release.

From this release, you can use pure SQL in conjunction with Oracle Text and JSON indices for Case Management filter and report execution.

Follow the below procedure to enable SQL filtering and disable Lucene.

 **Note:**

To use this option, the EDQ repository database must be running Oracle database 12.2 or later.

It includes the following sections:

A.1 Working of Case Management Filters

Case management filters are mapped to SQL searches on the `dn_case` and supporting tables. Filters on the case key, case description and comment text are mapped to Oracle Text searches. Filters on source data are mapped to Oracle JSON Text searches on a new column in the supplementary data table which contains JSON encoded source data. All other fields do not support free text searches and are mapped to simple SQL predicates.

A.2 Understanding Oracle Text Expressions

There are very few differences between Lucene filter expressions and Oracle Text Context Grammar. For more guidance on the Oracle Text search syntax, refer to [The CONTEXT Grammar](#) documentation.

The existing filters use Lucene search syntax and you have to modify them to work correctly with Oracle Text. Asterisk ("`*`" - wild card) characters in filters are replaced with `%` automatically.

A.3 Using Oracle Text Options

Indexes created for searches using Oracle Text have a large number of configuration options. The best options to use for any installation greatly depends on the data and typical search patterns.

For example, an index can be enhanced to improve the performance of prefix searches such as `A%`. The length of the prefix can also be configured. Improving prefix search performance entails an additional cost in index maintenance and storage size. These options can be set on the EDQ repository database housing the `EDQCONFIG` schema.

EDQ provides a script that sets these options for typical use cases, for example - to include a prefix optimization for prefixes up to 3 characters long when searching on source attributes, but this may be tuned for individual requirements. For more information on this, refer to [Oracle Text Indexing Elements](#).

A.4 Updating Schema

To enable Oracle Text functionality, you must grant the CTXAPP role for the EDQ configuration schema user.

For database versions 18 and later, you must also grant the CREATE JOB system privilege to the user. Use the following SQL commands:

```
GRANT "CTXAPP" TO "USERNAME";  
GRANT CREATE JOB TO "USERNAME";
```

where `USERNAME` is the EDQ configuration schema user name.

A.5 Creating Helper Index and Column

Case and alert permissions are checked directly in the SQL filters. You have to create a new index on the case table to improve performance for these checks:

```
CREATE INDEX idx_dn_case_permission ON dn_case(permission);
```

Source attribute searches are performed using a new JSON data column in the supplementary data table.

Use the following command to add the new column:

```
ALTER TABLE dn_supplementarydata ADD json BLOB CONSTRAINT jcheck CHECK  
(json IS JSON);
```

A.6 Creating Text Indices

The following SQL script creates the required Oracle Text and JSON indexes:

```
BEGIN
  CTX_DDL.create_preference('dn_textpref', 'BASIC_LEXER');
  CTX_DDL.create_stoplist('dn_textstop', 'BASIC_STOPLIST');
  CTX_DDL.create_preference('dn_wordlist', 'BASIC_WORDLIST');
  CTX_DDL.set_attribute('dn_wordlist', 'PREFIX_INDEX', 'TRUE');
  CTX_DDL.set_attribute('dn_wordlist', 'PREFIX_MAX_LENGTH', '3');
END;
/

CREATE INDEX dn_case_key_text ON dn_case (key_label)
  INDEXTYPE IS CTXSYS.CONTEXT
  PARAMETERS('sync (every "freq=secondly;interval=20") lexer
dn_textpref stoplist dn_textstop wordlist dn_wordlist')
/

CREATE INDEX dn_case_desc_text ON dn_case (description)
  INDEXTYPE IS CTXSYS.CONTEXT
  PARAMETERS('sync (every "freq=secondly;interval=20") lexer
dn_textpref stoplist dn_textstop wordlist dn_wordlist')
/

CREATE INDEX dn_casecomment_text ON dn_casecomment (case_comment)
  INDEXTYPE IS CTXSYS.CONTEXT
  PARAMETERS('sync (every "freq=secondly;interval=20") lexer
dn_textpref stoplist dn_textstop wordlist dn_wordlist')
/

CREATE SEARCH INDEX dn_supp_json ON dn_supplementarydata (json) FOR
JSON PARAMETERS('sync (every "freq=secondly;interval=20") wordlist
dn_wordlist')
/
```

The indexes are updated asynchronously every 20 seconds. By default, prefix searches are optimized for prefix lengths up to 3 characters. No special language analysis is enabled.

You can find the script in the `cmsql` directory of the EDQ Home directory after updating to this release.

A.7 Populating JSON

Use the tool `sdjson.jar` to populate the supplementary data JSON column. Execute the following command to run the tool:

```
$ java -jar sdjson.jar oracle:#service@HOST:PORT/USER/PW
```

Tests have shown that the overall time for the conversion and indexing is much less if the JSON index is created before the population step.

A.8 Enabling SQL and Oracle Text Usage for Filtering and Reports

A new setting `cm.filter.sql` in `director.properties` file controls the usage of SQL or Lucene for filters and reports.

```
cm.filter.sql = off
```

Lucene is used for all filters and reports. This is the default for compatibility with earlier versions.

```
cm.filter.sql = on
```

SQL and Oracle Text is used for all filters and reports. Lucene indexing is disabled.

```
cm.filter.sql = optional
```

A `Use SQL` option is available in the Case Management UI. Lucene indexing is enabled. You can use this setting to compare results and timing between SQL and Lucene searches.



Note:

Use this option only for testing.

A.9 Additional Considerations

The extended attribute (custom flags) columns in the case table do not have database indexes by default. If searches on extended attributes are common without other search filters, it is necessary to create additional indices. This depends on the individual requirements.

B

Manually Patching Oracle Enterprise Data Quality

This appendix describes how to prepare and install the Bundle Patch files for Oracle Enterprise Data Quality.

 **Note:**

This feature is applicable only for EDQ 12.2.1.4.1 release.

You can manually install a patch for Oracle Enterprise Data Quality through OPatch NextGen 13.9.2.0.0 utility.

 **Note:**

Oracle recommends that you always install the latest Bundle Patch.

Patching process uses both unzip and Opatch executables. After sourcing the `ORACLE_HOME` environment, Oracle recommends that you confirm that both of these exist before patching. Opatch is accessible at: `$ORACLE_HOME/OPatch/opatch`

You can check your version using the following command:

```
ORACLE_HOME/OPatch/opatch version
```

Set the `ORACLE_HOME` environment variable to the directory where you have installed Oracle Enterprise Data Quality.

Follow the below procedure to manually install the bundle patch for Oracle Enterprise Data Quality.

It includes the following sections:

B.1 Installing a Patch on Weblogic

Follow the below procedure to install a patch for Oracle Enterprise Data Quality on Weblogic:

1. Unzip the patch zip file to a desired location (for example, `PATCH_TOP`).

```
$ unzip -d PATCH_TOP p28526695_122120_Generic.zip
```

 **Note:**

On WINDOWS, the preferred location is the drive root directory. For example, C:\PATCH_TOP and avoid choosing locations like, C:\Documents and Settings\username\PATCH_TOP. This is necessary due to the 256 characters limitation on windows platform.

On WINDOWS, the unzip command has a limitation of 256 characters in the path name. If you encounter this, use an alternate ZIP utility like 7-Zip to unzip the patch. For example: To unzip using 7-zip, run the command:

```
"c:\Program Files\7-Zip\7z.exe" x p28526695_122120_Generic.zip
```

2. Set your current directory to the directory where the patch is located.

```
$ cd PATCH_TOP/28526695
```

3. Run OPatch to apply the patch.

```
$ opatch apply
```

 **Note:**

When OPatch starts, it validates the patch and makes sure that there are no conflicts with the software already installed in ORACLE_HOME.

In case of opatch conflict, you will see a warning message similar to the one mentioned below:

```
Interim Patch XXXX has Conflict with patch(es) [ YYYY ] in OH ...
Conflict patches: YYYY
Patch(es) YYYY conflict with the patch currently being installed
(XXXX).
If you continue, patch(es) YYYY will be rolled back and the new
patch (XXXX) will be installed.
If a merge of the new patch (XXXX) and the conflicting patch(es)
( YYYY) is required,contact Oracle Support Services and request a
Merged patch.
Do you want to proceed? [y|n]
n
```

You must stop the patch installation and contact oracle support to know how to proceed further.

4. Restart all servers (AdminServer and all Managed server(s)) and ensure that edq.war is successfully deployed. This is necessary to redeploy the original applications and bring the environment back to it's original state.

B.2 Installing a Patch on Tomcat

Follow the below procedure to install a patch for Oracle Enterprise Data Quality on Tomcat:

1. Unzip the patch zip file to a desired location (for example, PATCH_TOP).

```
$ unzip -d PATCH_TOP p28526695_122120_Generic.zip
```

Note:

On WINDOWS, the preferred location is the drive root directory. For example, C:\PATCH_TOP and avoid choosing locations like, C:\Documents and Settings\username\PATCH_TOP. This is necessary due to the 256 characters limitation on windows platform.

On WINDOWS, the unzip command has a limitation of 256 characters in the path name. If you encounter this, use an alternate ZIP utility like 7-Zip to unzip the patch. For example: To unzip using 7-zip, run the command:

```
"c:\Program Files\7-Zip\7z.exe" x p28526695_122120_Generic.zip
```

2. Set your current directory to the directory where the patch is located.

```
$ cd PATCH_TOP/28526695
```

3. Run OPatch to apply the patch.

```
$ opatch apply
```

Note:

When OPatch starts, it validates the patch and makes sure that there are no conflicts with the software already installed in ORACLE_HOME.

In case of opatch conflict, you will see a warning message similar to the one mentioned below:

```
Interim Patch XXXX has Conflict with patch(es) [ YYYY ] in OH ...
Conflict patches: YYYY
Patch(es) YYYY conflict with the patch currently being installed
(XXXX).
If you continue, patch(es) YYYY will be rolled back and the new
patch (XXXX) will be installed.
If a merge of the new patch (XXXX) and the conflicting patch(es)
( YYYY) is required,contact Oracle Support Services and request a
Merged patch.
```

```
Do you want to proceed? [y|n]
n
```

You must stop the patch installation and contact oracle support to know how to proceed further.

4. Edit `catalina.properties` file, to remove the reference to Oracle Application Development Framework (ADF). Optionally, you can remove `lib.adf` directory from their respective shared library path.

 **Note:**

This step is a one time activity and is specific to 12.2.1.4.1 bundle patch installation.

Remove the entry `${catalina.home}/lib.adf/*.jar` in the file.

For example,

```
common.loader=${catalina.base}/lib,${catalina.base}/lib/*.jar,${
catalina.home}/lib,${catalina.home}/lib/*.jar,
```

5. Stop the Application Server.
6. Deploy the `edq.war` file on your application server.
For more details, refer to the [Tomcat Web Application Deployment](#) documentation.
7. Restart your application server and ensure that `edq.war` is successfully deployed. This is necessary to redeploy the original applications and bring the environment back to it's original state.