Oracle® Clinical
Interfacing from Oracle Clinical
Release 4.6
A83793-06

August 2009
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<th>Page</th>
</tr>
</thead>
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<tr>
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<td>6-52</td>
</tr>
<tr>
<td>SetRdci</td>
<td>6-54</td>
</tr>
<tr>
<td>SetRdcm</td>
<td>6-57</td>
</tr>
<tr>
<td>SetResponseData</td>
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</tr>
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</tr>
<tr>
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<td>6-69</td>
</tr>
</tbody>
</table>

## A Error Messages
This manual describes the tables, modules, and procedures included in the Data Capture API that administrators and developers use to interfacing external applications to the Oracle Clinical System.

Intended Audience

To interface with Oracle Clinical you need to be able to carry out the tasks listed below. If you lack the necessary skills, one alternative is to engage Oracle Consulting.

Oracle Database Administration

To install Oracle Clinical, you need a level of knowledge equivalent to what is taught in Oracle's DBA Architecture and Administration course. You must be able to read and edit SQL*Plus scripts. You will also be running SQL scripts and reviewing logs. For ongoing administration, additional DBA training is essential.

System Administration

- Windows—general tasks
  - creating and managing user accounts and groups
  - installing Oracle software
  - managing settings through the Control Panel applets
  - adding network printers
- Windows 2000—creating services
- UNIX
  - creating and managing user accounts and groups
  - installing Oracle RDBMS software and patches
  - identifying space on a file system for Oracle database tablespaces
  - setting and using environment variables

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evolve over time, and Oracle is actively engaged with other market-leading technology vendors to address technical obstacles so that our documentation can be accessible to all of our customers. For more information, visit the Oracle Accessibility Program Web site at [http://www.oracle.com/accessibility/](http://www.oracle.com/accessibility/).

**Accessibility of Code Examples in Documentation**  
Screen readers may not always correctly read the code examples in this document. The conventions for writing code require that closing braces should appear on an otherwise empty line; however, some screen readers may not always read a line of text that consists solely of a bracket or brace.

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To reach AT&T Customer Assistants, dial 711 or 1.800.855.2880. An AT&T Customer Assistant will relay information between the customer and Oracle Support Services at 1.800.223.1711. Complete instructions for using the AT&T relay services are available at [http://www.consumer.att.com/relay/tty/standard2.html](http://www.consumer.att.com/relay/tty/standard2.html). After the AT&T Customer Assistant contacts Oracle Support Services, an Oracle Support Services engineer will handle technical issues and provide customer support according to the Oracle service request process.

**Related Documents**

This section lists the manuals in the Oracle Clinical documentation set. You can order printed manuals from the Oracle iStore. From the iStore, search for the part number in parentheses. You can download PDF copies of the manuals from MetaLink using their MetaLink numbers. See "Checking My Oracle Support (MetaLink)" on page xiii for details.

**Oracle Clinical Documentation**
The Oracle Clinical documentation set includes:

- *Oracle Clinical Installation Guide* (Part A83779, MetaLink 859629.1)
- *Oracle Clinical Getting Started* (Part B12308, MetaLink 859630.1)
- *Oracle Clinical Creating a Study* (Part A85200, MetaLink 859631.1)
- *Oracle Clinical Conducting a Study* (Part A85201, MetaLink 859754.1)
- *Oracle Clinical Administrator’s Guide* (Part A83791, MetaLink 859756.1)
- *Interfacing from Oracle Clinical* (Part A83793, MetaLink 859755.1)

**Oracle Clinical Remote Data Capture (RDC) Documentation**
The Oracle RDC documentation includes:

- *Oracle Clinical Remote Data Capture Onsite User’s Guide* (Part B31158, MetaLink 859758.1)
- *Oracle Clinical Remote Data Capture Onsite Administrator’s Guide* (Part E11064, MetaLink 859750.1)
In addition, Oracle Health Sciences (OHS) publishes PDF-format Technical Reference Manuals (TRMs) containing proprietary information on internal tables and APIs. If you are a licensed customer, contact Oracle Support to obtain a free electronic copy of the Oracle Clinical Stable Interface TRM (Part A83796).

About This Book

This manual contains six chapters and an appendix:

**Chapter 1, "Customer-Defined Identifier Handling"**
This chapter describes the OCL_CLIENT_PACK database package, which contains procedures that enable you to define your own object-naming validation for your Oracle Clinical installation.

**Chapter 2, "Interface Configuration"**
This chapter provides information about the areas in which Oracle Clinical interfaces with your company’s applications. It also describes the Oracle Clinical tables and modules that support basic requirements in these areas.

**Chapter 3, "Integration with External Systems"**
This chapter describes how to integrate the Oracle Clinical data entry process with external workflow and imaging systems.

**Chapter 4, "Data Capture API Overview"**
This chapter shows how to use the Data Capture API (DCAPI), a set of functions that enable you to update data in Oracle Clinical.

**Chapter 5, "DCAPI Structure Type Definitions"**
This chapter shows each structure defined for DCAPI functions.

**Chapter 6, "Data Capture API Functions"**
This chapter describes each DCAPI function completely. For each function, the chapter includes a brief description, the function’s syntax, parameters, return values, possible error messages, and any other relevant comments.

**Chapter A, "Error Messages"**
This appendix describes each error that can result from DCAPI functions, the cause of each error, and the action you should take.

Changes to the DCAPI for This Release

Since Oracle Clinical 4.5, DCAPI functions have changed to accommodate the following enhancements.

**SetMiscDiscrepancy Function**
This function sets the resolution text for an existing discrepancy with a current status.
## Conventions

The following text conventions are used in this document:

<table>
<thead>
<tr>
<th>Convention</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>boldface</strong></td>
<td>Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.</td>
</tr>
<tr>
<td><em>italic</em></td>
<td>Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.</td>
</tr>
<tr>
<td>monospace</td>
<td>Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.</td>
</tr>
</tbody>
</table>
Checking My Oracle Support (MetaLink)

Your source for the latest information about Oracle Clinical 4.6 is Oracle Support's self-service website My Oracle Support and its predecessor, Classic MetaLink, available at the same URL at the time of publication of this document. Visit the site before you begin installing or upgrading this release. The site includes the latest information, including these important installation topics:

- Oracle Life Sciences Applications Supported Technology Stacks (Document ID 180430.1).
- Any changes to the instructions in this guide are documented in the most current version of the Oracle Clinical 4.6 release notes (Document ID 859753.1).
- The latest patches.

Creating an Account

You must have a My Oracle Support account before you can access My Oracle Support. Follow these instructions:

2. Click the New user? Register here link. The registration page opens.
3. Follow the instructions on the registration page.

Navigating to the Oracle Clinical 4.6 Knowledge Page

Follow these instructions to open the My Oracle Support's Oracle Clinical 4.6 product page:

2. Select My Oracle Support (requires Flash) and log in.
   The My Oracle Support portal opens, displaying general news from several categories.
3. Click the Knowledge tab.

   **Tip:** Check the top of the page. If PowerView is on and a product other than Oracle Clinical 4.6 is displayed, turn PowerView off.

4. In the Browse any Product, By Name drop-down list, select Oracle Clinical and click the icon.
5. In the **Refine Search** region on the right, click on a topic of interest; for example, *Install, Upgrade*.
   My Oracle Support displays a list of documents that satisfy the search criteria.

6. Click a document's link to view it.

**Finding the Latest Oracle Clinical 4.6 Patches**

Check My Oracle Support for the latest patches. If there are any new patches, follow these instructions to download them:

1. Open a browser to [http://metalink.oracle.com](http://metalink.oracle.com).
2. Select **My Oracle Support (requires Flash)** and log in.
   
   The My Oracle Support portal opens, displaying general news from several categories.
3. Click the **Patches & Updates** tab.
   
   The Patches and Updates page opens.
4. Click the **Advanced Search** link. When the Advanced Search page opens, enter appropriate search criteria and click **Go**.
5. When the query results are displayed, click a patch number to download it and view the readme file.

**Finding a Patch or Document When You Know Its Number**

See "Creating an Account" on page xiii.

**Finding Patches on My Oracle Support**

To find a patch on My Oracle Support when you know its number, do the following:

1. Open a browser to [http://metalink.oracle.com](http://metalink.oracle.com).
2. Select **My Oracle Support (requires Flash)** and log in.
   
   The My Oracle Support portal opens, displaying general news from several categories.
3. Click the **Patches and Updates** tab.
   
   The Patches and Updates page opens.
4. Click the **Simple Search** link.
5. In the **Search By** drop-down list, select **Patch Number/Name** and enter the number in the blank field.
6. In the **Platform or Language** drop-down list, select your platform and click **Go**.
   
   The system returns the search results in the table in the lower part of the screen.
   
   My Oracle Support displays the patch screen.
Finding Documents on My Oracle Support
To find a document on My Oracle Support when you know its number, do the following:

2. Select My Oracle Support (requires Flash) and log in.

   The My Oracle Support portal opens, displaying general news from several categories.
3. Click the Knowledge tab.

   **Tip:** Check the top of the page. If PowerView is on and a product other than Oracle Clinical 4.6 is displayed, turn PowerView off.

4. In the Browse any Product, By Name drop-down list, select Oracle Clinical and click the icon.
5. In the Oracle Clinical Search section, enter the document ID and click the search icon.

Finding Patches and Documents on Classic MetaLink

2. Select Classic Metalink and log in.
3. In the Quick Find drop-down list, select either Patch Number or Document ID.
4. Enter the patch number or document ID.
5. Click Go.

Oracle CPU Security Updates

Oracle Corporation publishes a CPU Security Update patch quarterly. Install these patches on every computer with an Oracle Home. Check My Oracle Support's (MetaLink's) Oracle Clinical Knowledge page for information on the latest patch tested with Oracle Health Sciences applications.

**Tip:** Check the top of the page. If PowerView is on and a product other than Oracle Clinical 4.6 is displayed, turn PowerView off.
The OCL_CLIENT_PACK database package contains procedures that let you define object-naming validation for your Oracle Clinical installation. If you are the Oracle Clinical site administrator, you generally will write the function body to create site-specific validation and derivation code before you run the package. You can implement local naming conventions for:

- object names
- Case Report Form (CRF) document number validation
- document number derivation
- invoking a scanned image
- CRF page tracking

### Overview

The OCL_CLIENT_PACK package consists of two files in the RXC_INSTALL directory, ocl_client_ps.sql and ocl_client_pb.sql. Refer to these files while reading this chapter. The files serve the following purposes:

- **ocl_client_ps.sql**
  - Package specification
  - Creating the public synonym
  - Granting execute privilege to both RXCLIN_MOD and RXCLIN_READ database roles
- **ocl_client_pb.sql**
  - Container for the function bodies for the OCL_CLIENT_PACK package

Use SQL*Plus from the RXC database account to execute ocl_client_ps.sql:

- when initially installing the Oracle Clinical application
- once after each time you modify the file

This file is a skeleton for creating custom validation and derivation because each function provides a stub; as delivered all validations succeeds and no derivation occurs. Each function includes detailed header comments that describe its purpose, parameters, and usage.

The functions in the OCL_CLIENT_PACK package are described in the following sections. The functions to customize for validation and derivation are ValidateName, ValidateDocument, and DeriveDocumentNumber. The functions to customize for page
tracking are DefaultBookPageNumber, TrimPageNumber, ChangePageStatus, and AddPhysPageNumber. In each case, the function duplicates a function that already exists in the Oracle Clinical code. If you write new code for the function, your code supersedes the existing application code; otherwise, it simply uses the default system code. The SQL files ocl_client_ps.sql and ocl_client_pb.sql in the RXC_INSTALL are well commented, use them for additional information and to implement your custom functions.

**ValidateName**

This function is called by the validation triggers on the naming of each of the Oracle Clinical objects. These objects include discrete value groups, questions, question groups, DCMs, DCIs, Procedures, Where clauses, and queries. As input, the function takes a code for the type of object and the name being validated. If the validation succeeds, the function returns NULL and the user can continue.

If the validation fails, the function returns a varchar2 character string, that contains an error message. The error message is displayed in the status line of the form. This function is called by the following forms that validate the name of the object being created. You can add your own validation to enforce your company naming standards as an example:

- Maintain DVG
- Maintain Questions
- Maintain Question Groups
- Maintain DCMs
- Maintain DCIs
- Maintain Procedures (both Derivation and Validation)
- Maintain Copy Groups
- Maintain Where Clauses
- Maintain Labs
- Mass Changes

**ValidateDocument**

This function is called by Validation Procedures on the document number in the CRF Log-In form and the Batch Data Load program. The input to the function is the document number being validated. If the validation succeeds, the function returns NULL; otherwise, the function returns the error message the user defined in the package.

**DeriveDocumentNumber**

With this function you can derive CRF document numbers from the key fields entered in the Log-In form and the Batch Data Load program. If you modify this function, you must review the argument list, reapply the modifications, then reinstall the package.

Inputs are:

- **Key fields from the CRF and their ID numbers:** Study, Clinical_Study_ID, Patient, Patient_Position_ID, Investigator, Investigator_ID, Site, Site_ID, DCI, DCI_ID, Event, Clin_Plan_Eve_ID, and Subevent
- **Indicator of test or production mode date:** RXC_ENV_TYPE
The function returns NULL if the derivation is not possible; otherwise it returns the derived document number. Document numbers generated by this procedure are not validated against the ValidateDocument function; they are assumed to be valid.

**DefaultBookPageNumber**

This function assigns the correct page number to the first page of a DCI in the DCI book. The function returns zero if the operation is successful, or a non-zero error message number. The message number (message_topic_id) is used by the Maintain DCI Books to display the appropriate error message from the message_topics table. It uses the TrimPageNumber function and has these input parameters:

- first page number of the previous DCI in the DCI book
- numbering scheme of the previous DCI
- number of expected pages

The function’s one output parameter corresponds to the default page number that represents the first page number of a DCI in the DCI book.

**TrimPageNumber**

This function trims the page number off its suffix according to the numbering scheme. It is called each time Oracle Clinical needs to add one unit to a page number and each time Oracle Clinical needs to assign a default page number.

There are two input parameters:

- page number to be trimmed
- numbering scheme according to which the page number needs to be trimmed

There are two output parameters:

- the result of the trimming operations
- Y when the other output parameter contains a numeric value; N otherwise

Examples of parameter values:

<table>
<thead>
<tr>
<th>input 1</th>
<th>input2</th>
<th>output 1</th>
<th>output 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>NUMERIC</td>
<td>2</td>
<td>Y</td>
</tr>
<tr>
<td>10A</td>
<td>ALPHANUMERIC</td>
<td>10</td>
<td>Y</td>
</tr>
<tr>
<td>2.1</td>
<td>ALPHANUMERIC</td>
<td>2.1</td>
<td>N</td>
</tr>
</tbody>
</table>

**ChangePageStatus**

This function sets the client-specific status of a new page, depending on the current page status, the RDCI status, and the blank flag, according to user-defined rules. It returns NULL, if successful; otherwise, it returns an error message.

**AddPhysPageNumber**

This function adds a number to a page number, according to the numbering scheme—when DCIs are added to a DCI book, and also when pages assigned at data entry correspond to one of the following unplanned events: the DCI is not in the DCI book; the DCI is present in the DCI book but not for the specific visit; or the subevent number is zero.
There are three input parameters:

- page number to which the number must be added
- number to be added to the page number
- numbering scheme

There is one output parameter: the page number after the operation.

<table>
<thead>
<tr>
<th>input 1</th>
<th>input2</th>
<th>input 3</th>
<th>output</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>3</td>
<td>NUMERIC</td>
<td>2.4</td>
</tr>
<tr>
<td>10A</td>
<td>3</td>
<td>ALPHANUMERIC</td>
<td>10D</td>
</tr>
</tbody>
</table>
Oracle Clinical interfaces with your company’s applications in the areas of study planning, investigator management, and drug supply. The interface provides tables and modules that support basic requirements in these areas. You can use these Oracle Clinical tables and modules at your site, or you can replace them with tables and modules from your system. Oracle Clinical provides the means for validating responses using your company’s own thesaurus system.

This chapter has the following sections:
- Overview
- Interface Procedures to Be Maintained by the Customer
- Detailed Table Layouts

Overview

The Oracle Clinical tables and modules that are part of the Interface Configuration interface with external applications. The table names begin with OCL_. You can use these Oracle Clinical tables and modules at your own sites; alternatively, you can choose the following methods for your interface:
- Synonyms to customer tables
- Views on customer tables
- Batch/parallel maintenance of the OCL_ tables from customer applications

Mapping can be limited to the tables and columns required by the core Oracle Clinical functionality and does not have to reproduce exactly the Oracle Clinical version of these tables, described in “Detailed Table Layouts” on page 2-5.

---

**Note:** If you customized the interface then do not maintain these tables with Oracle Clinical functions.

---

Pay particular attention to performance when you test your modifications. This observation has special importance when views have contributed to the mapping, because they can seriously affect performance. Also, the underlying structure and indexing of the customer application may not be tuned to meet Oracle Clinical access requirements.

The following sections describe the layout and content of each Oracle Clinical table and the required components that a customized interface supports.
Study Planning

Study planning is the process of controlling and managing all studies within a company and across all company locations. The standard procedure is to define studies only at the company location where they are to be conducted or analyzed. Study planning also contains information about studies that are to be run by outside organizations, such as CROs, as well as details of possible future studies.

Oracle Clinical requires that study planning provide:

- A two-tier hierarchy of studies to which users can be assigned as an alternative to maintaining security by individual user assignments to studies
- A list of studies that are approved for definition in Oracle Clinical

Table 2–1  Study Planning Tables

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>OCL_STUDIES</td>
<td>Master list of all studies</td>
</tr>
<tr>
<td>OCL_STUDY_REGIONS</td>
<td>List of regions where each study is to be conducted</td>
</tr>
<tr>
<td>OCL_ORGANIZATION_UNITS</td>
<td>List of company departments that can support studies</td>
</tr>
<tr>
<td>OCL_PROGRAMS</td>
<td>Upper tier where studies can be grouped and security managed</td>
</tr>
<tr>
<td>OCL_PROJECTS</td>
<td>Lower tier where studies can be grouped and security managed</td>
</tr>
<tr>
<td>OCL_PROGRAM_PRODUCT_MASTERS</td>
<td>List of the compounds for which each program is responsible</td>
</tr>
</tbody>
</table>

Drug Supply

A drug supply system interacts with Oracle Clinical in two ways:

- At the front end of the clinical process, the drug supply system provides a list of drugs formulated for a clinical study.
- At the back end of the process, the drug supply system takes the randomization generated in the design subsystem of Oracle Clinical and produces from it the packaged and labeled supplies for the study.

Table 2–2  Drug Supply Tables

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>OCL_DOSAGE_FORMS</td>
<td>Look-up list of dosage forms</td>
</tr>
<tr>
<td>OCL_PRODUCT_MASTERS</td>
<td>List of active substances (raw chemicals) and formulated products (medications) that a clinical study can use</td>
</tr>
</tbody>
</table>
Investigator Management

An investigator management system is responsible for maintaining a list of the investigators who can work on studies and the records of their assignments to studies.

<table>
<thead>
<tr>
<th>Table 2–3 Investigator Management Tables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table</td>
</tr>
<tr>
<td>OCL_INVESTIGATORS</td>
</tr>
<tr>
<td>OCL_SITES</td>
</tr>
<tr>
<td>OCL_STUDY_SITES</td>
</tr>
<tr>
<td>OCL_STUDY_SITE_ROLES</td>
</tr>
</tbody>
</table>

Thesaurus

The thesaurus, or dictionary, is used to validate responses to questions marked as requiring thesaurus validation. There are two types of dictionaries: Drug Names and Adverse Events.

Interface Procedures to Be Maintained by the Customer

The procedures described in the following sections maintain referential integrity between Oracle Clinical and another customer application. You must maintain independence between Oracle-supplied code and customer applications, while maintaining referential integrity and complying with site support agreement rules. These requirements are provided for by a set of database procedures that can be maintained and used either by Oracle or by the customer.

The following sections list each test or update separately; in the actual implementation some are merged. Local procedures may differ, but the parameters and procedure names are fixed.

Prevent Study Deletion

Prevents a study from being deleted by checking in related tables in non-Oracle Clinical applications before a clinical study is deleted. Only a return value of OK allows the study to be deleted; anything else means failure.

LocalStudyDeletion.LocalDeletionOK
Param = nStudyId in number(10)
vReturnMsg out Char(60)

Delete Interface Records

Deletes records from the OCL tables used by Oracle Clinical. A return value of DONE means that everything worked correctly; anything else means failure.

LocalStudyDeletion.DeleteOCLRecords
Param = nStudyId in number(10)
vReturnMsg out Char(60)
Delete Local Records

Deletes clinical study-related records from non-Oracle Clinical tables when a clinical study is deleted. A return value of DONE means that everything worked correctly; anything else means failure.

LocalStudyDeletion.DeletelocalRecords
Param = nStudyId in number(10)
  vReturnMsg out Char(60)

Prevent Region Deletion

Checks if a region can be deleted based on local usage. A return value of DONE means that everything worked correctly; anything else means failure.

LocalRegionUpdateDeletion.LocalRegDeletionOK
Param = nRegionId in number(10)
  vRegionCode in char(7)
  vReturnMsg out Char(60)

Update Region Code

Applies a cascade update when a region code is changed.

LocalRegionUpdateDeletion.LocalRegionCascadeUpdate
Param = vOldRegionCode in varchar2(7)
  vNewRegionCode in varchar2(7)
  vReturnMsg out varchar2(60)

Treatment Pattern Deletion Check

Checks if a treatment pattern can be deleted based on local usage. A return value of DONE means everything worked correctly; anything else means failure.

LocalTreatPattDeletion.LocalTreatPattDeletion
Param = nTreatPattId in number(10)
  vReturnMsg out char(60)

Treatment Assignment Deletion Check

Checks if a treatment assignment can be deleted based on local usage. A return value of DONE means everything worked correctly; anything else means failure.

LocalTreatAssnDeletion.LocalTreatAssnDeletionOK
Param = nTreatAssNum in number(10)
  vStartCode in char(10)
  vreturnMsg out char(60)

Get the Value of a Study Site Code

Supplies the value of a STUDY_SITE code.

LocalStudySite.GetStudySite
Param = vStudySite in varchar2 (10)
  nStudyId in number(10)
  vSiteCode in varchar2(10)
Detailed Table Layouts

The following tables show the structure of the interface tables for Oracle Clinical, grouped by subsystem. The columns indicated as NOT NULL are mandatory for Oracle Clinical functionality. The other columns may not be used at all, or may be used in a display-only report or screen.

Drug Supply System

There are two drug supply tables, OCL_DOSAGE_FORMS and OCL_PRODUCT_MASTERS.

OCL_DOSAGE_FORMS

This is a list of the forms in which drugs can be manufactured. It adds a description to the dosage form code held on OCL_PRODUCT_MASTERS.
### OCL_PRODUCT_MASTERS

This is a list of two types of material. The ACT SUB (active substances) materials are base chemicals that can be assigned to programs. The FORMULATED materials are formulated drug supplies (for example, 250 mg pill of a drug) from which treatment regimens can be defined.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Datatype, Null?</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOFO_ID</td>
<td>NUMBER(10), NOT NULL</td>
<td>Unique ID for the dosage form</td>
</tr>
<tr>
<td>DOSAGE_FORM_CODE</td>
<td>VARCHAR2(7), NOT NULL</td>
<td>User-understood code for the dosage form</td>
</tr>
<tr>
<td>PM_ID</td>
<td>NUMBER(10), NOT NULL</td>
<td>Unique ID for the product master</td>
</tr>
<tr>
<td>PRODUCT_NAME</td>
<td>VARCHAR2(70), NOT NULL</td>
<td>User-understood name for the product master</td>
</tr>
<tr>
<td>PM_STATUS_CODE</td>
<td>VARCHAR2(15), NOT NULL</td>
<td>Set to ACTIVE</td>
</tr>
<tr>
<td>PM_TYPE_CODE</td>
<td>VARCHAR2(10), NOT NULL</td>
<td>ACTIVE SUB—raw compounds to which programs can be linked</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FORMULATED—formulated drugs used in treatment regimens</td>
</tr>
<tr>
<td>CREATION_TS</td>
<td>DATE, NOT NULL</td>
<td>Date and time the record was created</td>
</tr>
<tr>
<td>CREATED_BY</td>
<td>VARCHAR2(30), NOT NULL</td>
<td>User ID of the person who created the record</td>
</tr>
<tr>
<td>ACTIVE_SUBSTANCE_PM_ID</td>
<td>NUMBER(10)</td>
<td>Product Master ID of the active substance in a formulated product (Null for active substances themselves)</td>
</tr>
<tr>
<td>DOFO_ID</td>
<td>NUMBER(10)</td>
<td>ID of the dosage form for formulated products (Null for active substances)</td>
</tr>
<tr>
<td>CODE</td>
<td>VARCHAR2(10)</td>
<td>Code for the active substance itself or for the active substance in a formulated product</td>
</tr>
<tr>
<td>SUBCODE</td>
<td>VARCHAR2(10)</td>
<td>Subcode for the active substance itself or for the active substance in a formulated product</td>
</tr>
<tr>
<td>MODIFICATION_TS</td>
<td>DATE</td>
<td>Date and time the record was last modified</td>
</tr>
<tr>
<td>MODIFIED_BY</td>
<td>VARCHAR2(30)</td>
<td>User ID of the person who last modified the record</td>
</tr>
</tbody>
</table>
Investigator Management System

There are four investigator management system tables, `OCL_INVESTIGATORS`, `OCL_SITES`, `OCL_STUDY_SITES`, and `OCL_STUDY_SITE_ROLES`.

**OCL_INVESTIGATORS**
This is a master list of investigators who can be assigned to a study.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Datatype, Null?</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>INVESTIGATOR_ID</td>
<td>NUMBER(10,0), NOT NULL</td>
<td>ID of an investigator record</td>
</tr>
<tr>
<td>INVESTIGATOR</td>
<td>VARCHAR2(10), NOT NULL</td>
<td>Code for the investigator as recognized by the user</td>
</tr>
<tr>
<td>TITLE</td>
<td>VARCHAR2(4), NULL</td>
<td>Title for the investigator</td>
</tr>
<tr>
<td>INITIALS</td>
<td>VARCHAR2(4), NULL</td>
<td>Initials of the investigator</td>
</tr>
<tr>
<td>FIRST_NAME</td>
<td>VARCHAR2(15), NOT NULL</td>
<td>First name of the investigator</td>
</tr>
<tr>
<td>LAST_NAME</td>
<td>VARCHAR2(20), NOT NULL</td>
<td>Last name of the investigator</td>
</tr>
<tr>
<td>ACTIVE_FLAG</td>
<td>VARCHAR2(1), NOT NULL</td>
<td>Y = Investigator is available to work on new studies</td>
</tr>
<tr>
<td></td>
<td></td>
<td>N = Investigator not assignable to new studies</td>
</tr>
<tr>
<td>CREATED_BY</td>
<td>VARCHAR2(30), NOT NULL</td>
<td>User ID of the person who created the record</td>
</tr>
<tr>
<td>CREATION_TS</td>
<td>DATE, NOT NULL</td>
<td>Date and time the record was created</td>
</tr>
<tr>
<td>PHONE_NUMBER</td>
<td>VARCHAR2(25), NOT NULL</td>
<td>Phone number of the investigator</td>
</tr>
<tr>
<td>COUNTRY</td>
<td>VARCHAR2(7), NULL</td>
<td>Region code of the country in which the investigator lives</td>
</tr>
<tr>
<td>STATE</td>
<td>VARCHAR2(7), NULL</td>
<td>Region code of the state/province/county, etc. where the investigator lives</td>
</tr>
<tr>
<td>CITY</td>
<td>VARCHAR2(25), NULL</td>
<td>Name of the city where the investigator lives</td>
</tr>
<tr>
<td>ADDRESS_NAME</td>
<td>VARCHAR2(40), NULL</td>
<td>Name to start the investigator's address</td>
</tr>
<tr>
<td>ADDRESS_LINE_1</td>
<td>VARCHAR2(40), NULL</td>
<td>First line of the investigator's address</td>
</tr>
<tr>
<td>ADDRESS_LINE_2</td>
<td>VARCHAR2(40), NULL</td>
<td>Second line of the investigator's address</td>
</tr>
<tr>
<td>ADDRESS_LINE_3</td>
<td>VARCHAR2(40), NULL</td>
<td>Third line of the investigator's address</td>
</tr>
<tr>
<td>POSTAL_CODE</td>
<td>VARCHAR2(15), NULL</td>
<td>Postal or ZIP code for the investigator</td>
</tr>
<tr>
<td>MODIFIED_BY</td>
<td>VARCHAR2(30), NOT NULL</td>
<td>User ID of the person who last modified the record</td>
</tr>
<tr>
<td>MODIFICATION_TS</td>
<td>DATE, NULL</td>
<td>Date and time the record was last modified</td>
</tr>
</tbody>
</table>

**OCL_SITES**
This is a list of sites where a study can be performed.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Datatype, Null?</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SITE_ID</td>
<td>NUMBER(10,0), NOT NULL</td>
<td>ID for the site</td>
</tr>
<tr>
<td>SITE</td>
<td>VARCHAR2(10), NOT NULL</td>
<td>Code for the site as recognized by the user</td>
</tr>
<tr>
<td>ACTIVE_FLAG</td>
<td>VARCHAR2(1), NOT NULL</td>
<td>Y = Site is available for work on new studies</td>
</tr>
<tr>
<td></td>
<td></td>
<td>N = Site not assignable to new studies</td>
</tr>
</tbody>
</table>
This is a record of the assignments of a site to a study. The Oracle model assigns sites to a study and then patients to a site for the use of the investigator currently responsible for managing the site. The OCL_STUDY_SITES table is the linchpin around which the assignment of patients and investigators is maintained.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Datatype, Null?</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CREATED_BY</td>
<td>VARCHAR2(30), NOT NULL</td>
<td>User ID of the person who created the record</td>
</tr>
<tr>
<td>CREATION_TS</td>
<td>DATE, NOT NULL</td>
<td>Date and time the record was created</td>
</tr>
<tr>
<td>PHONE_NUMBER</td>
<td>VARCHAR2(25), NOT NULL</td>
<td>Phone number for the site</td>
</tr>
<tr>
<td>NAME</td>
<td>VARCHAR2(60), NOT NULL, NULL</td>
<td>Name to start the site's address</td>
</tr>
<tr>
<td>COUNTRY</td>
<td>VARCHAR2(7), NOT NULL</td>
<td>Region code of the country where the site is located</td>
</tr>
<tr>
<td>STATE</td>
<td>VARCHAR2(7), NOT NULL</td>
<td>Region code of the state/province/county, etc. where the site is located</td>
</tr>
<tr>
<td>CITY</td>
<td>VARCHAR2(25), NOT NULL</td>
<td>City where the site is located</td>
</tr>
<tr>
<td>ADDRESS_LINE_1</td>
<td>VARCHAR2(40), NOT NULL</td>
<td>First line of the site's address</td>
</tr>
<tr>
<td>ADDRESS_LINE_2</td>
<td>VARCHAR2(40), NULL</td>
<td>Second line of the site's address</td>
</tr>
<tr>
<td>ADDRESS_LINE_3</td>
<td>VARCHAR2(40), NULL</td>
<td>Third line of the site's address</td>
</tr>
<tr>
<td>POSTAL_CODE</td>
<td>VARCHAR2(15), NOT NULL</td>
<td>Postal or ZIP code of the site</td>
</tr>
<tr>
<td>MODIFICATION_TS</td>
<td>DATE, NULL</td>
<td>Date and time the record was last modified</td>
</tr>
<tr>
<td>MODIFIED_BY</td>
<td>VARCHAR2(30), NULL</td>
<td>User ID of the person who last modified the record</td>
</tr>
</tbody>
</table>

### OCL_STUDY_SITES

This is a record of the assignments of a site to a study. The Oracle model assigns sites to a study and then patients to a site for the use of the investigator currently responsible for managing the site. The OCL_STUDY_SITES table is the linchpin around which the assignment of patients and investigators is maintained.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Datatype, Null?</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SITE_ID</td>
<td>NUMBER(10,0), NOT NULL</td>
<td>ID of the site assigned to the study</td>
</tr>
<tr>
<td>CLINICAL_STUDY_ID</td>
<td>NUMBER(10,0), NOT NULL</td>
<td>ID of the study to which the site has been assigned</td>
</tr>
<tr>
<td>DATA_FREEZE_FLAG</td>
<td>VARCHAR2(1), NOT NULL</td>
<td>Y = All data for the site is frozen</td>
</tr>
<tr>
<td></td>
<td></td>
<td>N = Data for site can be changed</td>
</tr>
<tr>
<td>CREATED_BY</td>
<td>VARCHAR2(30), NOT NULL</td>
<td>User ID of the person who created the record</td>
</tr>
<tr>
<td>CREATION_TS</td>
<td>DATE, NOT NULL</td>
<td>Date and time the record was created</td>
</tr>
<tr>
<td>OK_TO_SHIP_FLAG</td>
<td>VARCHAR2(1), NOT NULL</td>
<td>Y = Site is approved to receive drug supplies</td>
</tr>
<tr>
<td></td>
<td></td>
<td>N = Site is awaiting approval</td>
</tr>
<tr>
<td>START_DATE</td>
<td>DATE, NULL</td>
<td>Date the site was first assigned to the study</td>
</tr>
<tr>
<td>END_DATE</td>
<td>DATE, NULL</td>
<td>Date the site was closed</td>
</tr>
</tbody>
</table>
### OCL_STUDY_SITE_ROLES

This is a record of the assignment of an investigator to a site in a study. Only one investigator can be responsible for a site within a study at a time.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Datatype, Null?</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MODIFIED_BY</td>
<td>VARCHAR2(30), NULL</td>
<td>User ID of the person who last modified the record.</td>
</tr>
<tr>
<td>MODIFICATION_TS</td>
<td>DATE, NULL</td>
<td>Date and time the record was last modified.</td>
</tr>
<tr>
<td>CLINICAL_STUDY_ID</td>
<td>NUMBER(10,0), NOT NULL</td>
<td>ID of the study to which the site has been assigned</td>
</tr>
<tr>
<td>SITE_ID</td>
<td>NUMBER(10,0), NOT NULL</td>
<td>ID of the site assigned to the study</td>
</tr>
<tr>
<td>INVESTIGATOR_ID</td>
<td>NUMBER(10,0), NOT NULL</td>
<td>ID of the investigator assigned to the site</td>
</tr>
<tr>
<td>CREATED_BY</td>
<td>VARCHAR2(30), NOT NULL</td>
<td>User ID of the person who created the record</td>
</tr>
<tr>
<td>CREATION_TS</td>
<td>DATE, NOT NULL</td>
<td>Date and time the record was created</td>
</tr>
<tr>
<td>CURRENT_FLAG</td>
<td>VARCHAR2(1), NOT NULL</td>
<td>Y = This is the investigator currently responsible for the site</td>
</tr>
<tr>
<td></td>
<td></td>
<td>N = This is a historic assignment</td>
</tr>
<tr>
<td>START_DATE</td>
<td>DATE, NOT NULL</td>
<td>Date the assignment started</td>
</tr>
<tr>
<td>NUMBER_OF_PATIENTS_REQUIRED</td>
<td>NUMBER(10,0), NULL</td>
<td>Number of patients the investigator is targeted with recruiting at this site</td>
</tr>
<tr>
<td>CONTRACT_DATE</td>
<td>DATE, NULL</td>
<td>Date the investigator's contract was signed</td>
</tr>
<tr>
<td>EXPECTED_ENROLLMENT_RATE</td>
<td>NUMBER(5,2), NULL</td>
<td>Number of patients the investigator is expected to recruit each month</td>
</tr>
<tr>
<td>TERMINATION_DATE</td>
<td>DATE, NULL</td>
<td>Date the investigator stopped being responsible for the site.</td>
</tr>
<tr>
<td>DISCONTINUATIONLETTER_DATE</td>
<td>DATE, NULL</td>
<td>Date the investigator's termination letter was sent</td>
</tr>
<tr>
<td>MODIFICATION_TS</td>
<td>DATE, NULL</td>
<td>Date and time the record was last modified</td>
</tr>
<tr>
<td>MODIFIED_BY</td>
<td>VARCHAR2(30), NULL</td>
<td>User ID of the person who last modified the record</td>
</tr>
</tbody>
</table>
Study Planning

There are six study planning tables, OCL_ORGANIZATION_UNITS, OCL_PROGRAMS, OCL_PROJECTS, OCL_PROGRAM_PRODUCT_MASTERS, OCL_STUDIES, and OCL_STUDY_REGIONS.

**OCL_ORGANIZATION_UNITS**

This table contains a list of organizations within the company that manage or sponsor studies. A study must be assigned to one of these organizations. OCL_PROPOSERS is a view of the OCL_ORGANIZATIONS table.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Datatype, Null?</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ORGANIZATION_UNIT_ID</td>
<td>NUMBER(10), NOT NULL</td>
<td>Unique ID for the organization unit</td>
</tr>
<tr>
<td>CODE</td>
<td>VARCHAR2(3), NOT NULL</td>
<td>Code for the organization unit as recognized by the user</td>
</tr>
<tr>
<td>NAME</td>
<td>VARCHAR2(60), NULL</td>
<td>Name for the organization unit</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>VARCHAR2(70), NOT NULL</td>
<td>Description of the organization unit</td>
</tr>
<tr>
<td>START_DATE</td>
<td>DATE, NOT NULL</td>
<td>Date the organization unit became active</td>
</tr>
<tr>
<td>END_DATE</td>
<td>DATE, NULL</td>
<td>Date the organization unit was retired</td>
</tr>
<tr>
<td>CREATED_BY</td>
<td>VARCHAR2(30), NOT NULL</td>
<td>User ID of the person who created the record</td>
</tr>
<tr>
<td>CREATION_TS</td>
<td>DATE, NOT NULL</td>
<td>Date and time the record was created</td>
</tr>
<tr>
<td>MODIFIED_BY</td>
<td>VARCHAR2(30), NULL</td>
<td>User ID of the person who last modified the record.</td>
</tr>
<tr>
<td>MODIFICATION_TS</td>
<td>DATE, NULL</td>
<td>Date and time the record was last modified.</td>
</tr>
</tbody>
</table>

**OCL_PROGRAMS**

Programs are the upper tier in the studies hierarchy. They group the studies within a particular compound, which could include multiple indications and formulations of the compound across all locations where studies are being performed.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Datatype, Null?</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROGRAM_CODE</td>
<td>VARCHAR2(15), NOT NULL</td>
<td>User code for the program</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>VARCHAR2(70), NOT NULL</td>
<td>Description of the program</td>
</tr>
<tr>
<td>ACTIVE_FLAG</td>
<td>VARCHAR2(1), NOT NULL</td>
<td>Y = Program is still active</td>
</tr>
<tr>
<td></td>
<td></td>
<td>N = Program is for historical use only</td>
</tr>
<tr>
<td>CREATED_BY</td>
<td>VARCHAR2(30), NOT NULL</td>
<td>User ID of the person who created the record</td>
</tr>
<tr>
<td>CREATION_TS</td>
<td>DATE, NOT NULL</td>
<td>Date and time the record was created</td>
</tr>
<tr>
<td>MODIFIED_BY</td>
<td>VARCHAR2(30), NULL</td>
<td>User ID of the person who last modified the record.</td>
</tr>
<tr>
<td>MODIFICATION_TS</td>
<td>DATE, NULL</td>
<td>Date and time the record was last modified.</td>
</tr>
</tbody>
</table>
OCL_PROJECTS
Projects are the lower tier in the studies hierarchy. They group studies in a program into some customer-determined groups. Typical groups could split studies by indications or formulations of the compound, and possibly by locations or regions.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Datatype, Null?</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROJECT_CODE</td>
<td>VARCHAR2(15), NOT NULL</td>
<td>Code for the project</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>VARCHAR2(70), NOT NULL</td>
<td>Description of the project</td>
</tr>
<tr>
<td>START_DATE</td>
<td>DATE, NOT NULL</td>
<td>Date the project started</td>
</tr>
<tr>
<td>END_DATE</td>
<td>DATE, NULL</td>
<td>Date the project ended</td>
</tr>
<tr>
<td>PROGRAM_CODE</td>
<td>VARCHAR2(15), NOT NULL</td>
<td>Code of the program to which the project belongs</td>
</tr>
<tr>
<td>CREATED_BY</td>
<td>VARCHAR2(30), NOT NULL</td>
<td>User ID of the person who created the record</td>
</tr>
<tr>
<td>CREATION_TS</td>
<td>DATE, NOT NULL</td>
<td>Date and time the record was created</td>
</tr>
<tr>
<td>MODIFIED_BY</td>
<td>VARCHAR2(30), NULL</td>
<td>User ID of the person who last modified the record</td>
</tr>
<tr>
<td>MODIFICATION_TS</td>
<td>DATE, NULL</td>
<td>Date and time the record was last modified</td>
</tr>
</tbody>
</table>

OCL_PROGRAM_PRODUCT_MASTERS
This lists type ACT SUB (active substance) product masters, assigned to programs.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Datatype, Null?</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROGRAM_CODE</td>
<td>VARCHAR2(15), NOT NULL</td>
<td>Code of the program concerned</td>
</tr>
<tr>
<td>PM_ID</td>
<td>NUMBER(10,0), NOT NULL</td>
<td>ID of the product master assigned</td>
</tr>
<tr>
<td>PRIMARY_RS_COMPOUND_FLAG</td>
<td>VARCHAR2(1), NOT NULL</td>
<td>Y = Main compound of the program</td>
</tr>
<tr>
<td></td>
<td></td>
<td>N = Other compounds assigned to the program</td>
</tr>
<tr>
<td>CREATED_BY</td>
<td>VARCHAR2(30), NOT NULL</td>
<td>User ID of the person who created the record</td>
</tr>
<tr>
<td>CREATION_TS</td>
<td>DATE, NOT NULL</td>
<td>Date and time the record was created</td>
</tr>
<tr>
<td>MODIFIED_BY</td>
<td>VARCHAR2(30), NULL</td>
<td>User ID of the person who last modified the record</td>
</tr>
<tr>
<td>MODIFICATION_TS</td>
<td>DATE, NULL</td>
<td>Date and time the record was last modified</td>
</tr>
</tbody>
</table>

OCL_STUDIES
This table lists all studies within a set of instances that share data — all studies ever performed, currently being performed, or might be performed in the future. A study must exist in this table before it can be designed in Oracle Clinical.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Datatype, Null?</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TASK_ID</td>
<td>NUMBER(10), NOT NULL</td>
<td>Unique ID for the planned study</td>
</tr>
<tr>
<td>Parameter</td>
<td>Datatype, Null?</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------</td>
<td>-----------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>STUDY</td>
<td>VARCHAR2(15), NOT NULL</td>
<td>User-recognized code of the study</td>
</tr>
<tr>
<td>CREATED_BY</td>
<td>VARCHAR2(30), NOT NULL</td>
<td>User ID of the person who created the record</td>
</tr>
<tr>
<td>CREATION_TS</td>
<td>DATE, NOT NULL</td>
<td>Date and time the record was created</td>
</tr>
<tr>
<td>ORGANIZATION_UNIT_ID</td>
<td>NUMBER(10), NOT NULL,</td>
<td>Code of the organization sponsoring the study</td>
</tr>
<tr>
<td>PROJECT_CODE</td>
<td>VARCHAR2(15), NOT NULL</td>
<td>Code of the project to which the study belongs</td>
</tr>
<tr>
<td>PROGRAM_CODE</td>
<td>VARCHAR2(15), NOT NULL</td>
<td>Code of the program that owns the project to which the study belongs</td>
</tr>
<tr>
<td>TITLE</td>
<td>VARCHAR2(255), NULL</td>
<td>Title for the study</td>
</tr>
<tr>
<td>INVESTIGATORS_PLANNED</td>
<td>NUMBER(10), NULL</td>
<td>Planned number of investigators in the study</td>
</tr>
<tr>
<td>EXPERIMENT_TYPE_CODE</td>
<td>VARCHAR2(5), NULL</td>
<td>Type of design being used in the study</td>
</tr>
<tr>
<td>REGION_ID</td>
<td>NUMBER(10), NULL</td>
<td>ID of the master region for the study</td>
</tr>
<tr>
<td>CLINICAL_PHASE</td>
<td>VARCHAR2(5), NULL</td>
<td>Clinical phase of the study</td>
</tr>
<tr>
<td>MODIFIED_BY</td>
<td>VARCHAR2(30),NULL</td>
<td>User ID of the person who last modified the record</td>
</tr>
<tr>
<td>MODIFICATION_TS</td>
<td>DATE, NULL</td>
<td>Date and time the record was last modified</td>
</tr>
</tbody>
</table>

### OCL_STUDY_REGIONS

This table lists the regions where a study is to be performed. One region must be flagged as the master region— the one displayed in the heads of some reports.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Datatype, Null?</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>STUDY_REGION_ID</td>
<td>NUMBER(10), NOT NULL,</td>
<td>ID for the study region record</td>
</tr>
<tr>
<td>TASK_ID</td>
<td>NUMBER(10), NOT NULL</td>
<td>ID of the study concerned</td>
</tr>
<tr>
<td>REGION_ID</td>
<td>NUMBER(10), NOT NULL,</td>
<td>ID of the region concerned</td>
</tr>
<tr>
<td>REGION_CODE</td>
<td>VARCHAR2(7), NOT NULL</td>
<td>Code of the region concerned</td>
</tr>
<tr>
<td>REGULATORY_FLAG</td>
<td>VARCHAR2(1), NOT NULL</td>
<td>Y = Region is being used for regulatory reasons</td>
</tr>
<tr>
<td>MARKETING_FLAG</td>
<td>VARCHAR2(1), NOT NULL</td>
<td>N = Region is not being used for regulatory reasons</td>
</tr>
<tr>
<td>REPORTING_REGION_FLAG</td>
<td>VARCHAR2(1), NOT NULL</td>
<td>Y = Region is the main reporting region</td>
</tr>
<tr>
<td></td>
<td></td>
<td>N = Region is not the main reporting region</td>
</tr>
<tr>
<td>Parameter</td>
<td>Datatype, Null?</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------</td>
<td>----------------------------------</td>
<td>---------------------------------------------------------------</td>
</tr>
<tr>
<td>CREATED_BY</td>
<td>VARCHAR2(30), NOT NULL</td>
<td>User ID of the person who created the record</td>
</tr>
<tr>
<td>CREATION_TS</td>
<td>DATE, NOT NULL</td>
<td>Date and time the record was created</td>
</tr>
<tr>
<td>MODIFIED_BY</td>
<td>VARCHAR2(30), NULL</td>
<td>User ID of the person who last modified the record</td>
</tr>
<tr>
<td>MODIFICATION_TS</td>
<td>DATE, NULL</td>
<td>Date and time the record was last modified</td>
</tr>
</tbody>
</table>
Integration with External Systems

The Oracle Clinical data entry process can be integrated with external workflow and imaging systems. Oracle Clinical communicates with the external system through a library of functions (RXCLBCLI.PLL), shipped with the product (in the admin directory on the CD-ROM) that you can customize.

Also, shipped with the functions is a set of menu options that you can enhance or supersede to modify the standard Oracle Clinical menus.

This chapter describes how to make Oracle Clinical work with an external system. The first section, "Usage Overview", describes using the Oracle Clinical System with an external system. Then, "Customizing Oracle Clinical" explains what you can modify to make the systems work together.

Usage Overview

Specific functionality is determined by the customizations that are made, so the following description provides a generic view of how Oracle Clinical and the external system might interact.

Entering Data for the Workflow Option

When the workflow option is enabled (see "Enabling External Systems" on page 3-4), the Data Entry menu shows the workflow task; otherwise, this task is hidden. All top menu items in the Data Entry tree are considered tasks. Before the task sequence is described, two basic terms, workitem and document, need to be defined.

A workitem is a collection of DCIs, also referred to as documents. All DCIs in the workitem are for the same task and the same study, but they may be for different patients. Some examples of tasks are Initial Log-In, and Second Pass Entry.

A document is a single DCI within a workitem, and can be composed of one or more physical Case Report Forms (CRF) pages.

To begin data entry, select Get Next Workitem from the Workflow menu; queries are not permitted. Oracle Clinical presents the DCIs according to the workitem sequence definition. When you commit a document, the next document in that workitem is immediately presented. If a problem prevents you from committing that document, you must select Get Next Document from the Workflow menu. When all documents in a workitem are completed, you can start the next workitem or close the workflow.
When you are performing data entry through the workflow system the following standard Oracle Clinical data entry options are unavailable from a data entry form:

- changing studies
- changing tasks
- turning DCI book on
- entering or executing a query

The key change task is also not available for use in a workflow system.

**Working from the Discrepancy Management System**

Once you enter the discrepancy database from the Conduct menu options and query discrepancies, you can use the workflow monitor system to invoke the image of the page where the discrepant question appears. You can then use standard Oracle Clinical functionality to handle discrepancies. For example, you can move to data entry to correct data or change review status before creating a Data Clarification Form (DCF).

**Working with DCFs**

You can use the external systems in managing and resolving discrepancies returned from investigators through the standard DCF. Assuming that the DCF has been scanned and indexes for the document based on DCF-ID, patient, site, investigator, you can use the imaging workflow option for performing the discrepancy resolution. One scenario to do this is:

1. Log in to Oracle Clinical.
2. Select the DCF screen.
3. Query for a DCF with the RECEIVED status.
4. Invoke the image corresponding to the current DCF.
5. Use standard Oracle Clinical functionality to move to the Discrepancy Database for the discrepancy entries on the DCF form.
6. Choose to display a Data Entry form via the Special in-form menu.
7. Invoke the corresponding CRF’s image in a separate window.
Customizing Oracle Clinical

The Oracle Clinical functions that support integration with an external system—demonstrated here by an imaging workflow system—are on the product CD-ROM in the admin directory as a library. RXCLBLGPLL is the basis of the API. These integrating functions can be programmed in the library, using OLE, C, PL/SQL, or DDE. The PLL shipped with Oracle Clinical contains code that can be activated to see the simple workflow system used to test the functionality.

Also provided are five menu stubs—Custom Program Units—that can be customized for use with the external system. This is done by naming and displaying the menu items, and to writing the code to fully implement them.
Enabling External Systems

To enable an external workflow system, set the INVOKE_WORKFLOW option to Y in the OCL_STATE reference codelist. To enable an imaging system, you set the INVOKE_IMAGE option to Y in the OCL_STATE reference codelist. To enable these options:

1. Select Admin, then Reference Codelists, and Local Codelists.
2. Type OCL_STATE in the Name field, and execute a query.
3. To enable an external workflow system, scroll through the values to INVOKE_WORKFLOW.
   To use an imaging system, scroll through the values to INVOKE_IMAGE.
4. Set the value to Y.
5. Save the data.

Menu Customization

Oracle Clinical provides functions that allow for two levels of customization. These are modifying the menus and implementing API functions.

When Oracle Clinical opens a form, it calls the wnfi procedure from the PL/SQL library. This enables you to set properties for the menu you are customizing. It can be used to update labels for the customizable options, or even to disable them. The procedure itself contains samples.

Other functions customize the Get Next and Get Previous Image options, which are workflow tasks. They allow you to proceed to the next or previous page of a multi-page document from within Oracle Clinical, when you are viewing an image of the document in conjunction with using data entry.

In rxclbcli.pll, there are five functions that are defined to allow you to add your own menu options and functionality to the Data Entry menu. The functions, are named CustomPgmUnit1 through CustomPgmUnit5.

The CustomPgmUnit# functions are provided for each custom menu option as a shell. You can add functionality into the data entry system. The return value from these functions is either a null or an error message. If the function returns an error message, the error_type value is checked. If the error_type's value is 2, an error message is displayed and an error is raised from the calling form.

These functions have arguments that are used to pass data into the function or return data from the function. The tables describing the arguments have an I for input argument and an O for an output argument.

In the tables the Data types column shows the defined type of data for the variable. Sometimes the data type is defined to be the same as a particular column in a database table. The format that shows this is the database table name, period, column name, followed by % type. For example, received_dcis.document_number%type means the.
data type is defined as the same type used to define the column document_number in the received_dcis table.

**CustomPgmUnit1**

CustomPgmUnit1(document_number, nreceived_dci_id, nError_type)

<table>
<thead>
<tr>
<th>Argument</th>
<th>In or Out</th>
<th>Data type</th>
</tr>
</thead>
<tbody>
<tr>
<td>document_number</td>
<td>I</td>
<td>received_dcis.document_number%type</td>
</tr>
<tr>
<td>received_dci_id</td>
<td>I</td>
<td>received_dcis.received_dci_id%type</td>
</tr>
<tr>
<td>nError_type</td>
<td>O</td>
<td>number</td>
</tr>
</tbody>
</table>

**CustomPgmUnit2**

CustomPgmUnit2(ndcf_id nError_type)

<table>
<thead>
<tr>
<th>Argument</th>
<th>In or Out</th>
<th>Data type</th>
</tr>
</thead>
<tbody>
<tr>
<td>ndcf_id</td>
<td>I</td>
<td>data_clarification_forms.dcf_id%type</td>
</tr>
<tr>
<td>nError_type</td>
<td>O</td>
<td>number</td>
</tr>
</tbody>
</table>

**CustomPgmUnit3**

CustomPgmUnit3(nError_type)

<table>
<thead>
<tr>
<th>Argument</th>
<th>In or Out</th>
<th>Data type</th>
</tr>
</thead>
<tbody>
<tr>
<td>nError_type</td>
<td>O</td>
<td>number</td>
</tr>
</tbody>
</table>

**CustomPgmUnit4**

CustomPgmUnit4(nError_type)

<table>
<thead>
<tr>
<th>Argument</th>
<th>In or Out</th>
<th>Data type</th>
</tr>
</thead>
<tbody>
<tr>
<td>nError_type</td>
<td>O</td>
<td>number</td>
</tr>
</tbody>
</table>

**CustomPgmUnit5**

CustomPgmUnit5(nError_type)

<table>
<thead>
<tr>
<th>Argument</th>
<th>In or Out</th>
<th>Data type</th>
</tr>
</thead>
<tbody>
<tr>
<td>nError_type</td>
<td>O</td>
<td>number</td>
</tr>
</tbody>
</table>

**Some Possible Ways to Work with the API**

The target file is opened depending on the application associated with it. The system prompts for an application name if one is not given.

- Create a text file with the TEXT_IO command on a file server accessible to the client, and then use web.show_document('file://...') to access the file. The file is opened with the application associated with the extension of the file on the client PC. When no associated application is named, the system prompts for one. An example of this file protocol method is in the Get Image procedure.
- Create a text file on a Web server with the TEXT_IO command and access the file with web.show_document('http://...'). The file is opened with the application associated with the extension of the MIME type that is associated with the file on the Web server. When no associated application is named, the system prompts you. The Get Image procedure has an example of this method.

For Oracle WebDB listener, you can view, and add, MIME type extensions through the MIME TYPE option under the Listener mode.

- Follow a similar method to the preceding one, but create the text file in the same directory as the file opabasejini.htm, specifying the name of the Web server. The file opabasejini.htm is stored in oracle_home/html. The value of oracle_home can be derived by using tool_env.getvar('oracle_home',...). Then, use web.show_document('http://...'). The advantage of this method is that you do not have to create another virtual directory, and you do not have to specify the virtual directory in web.show_document.

- Call a form that starts up a Java bean.

**Workflow API Functions**

Plan the functions you need from the following sections. Oracle Clinical calls the functions at specific execution points. Functions created by customers will be included in the forms library dedicated to user-defined program units (PL/SQL functions or procedures).

These functions execute at the client level so that communication mechanisms between Oracle Clinical and the workflow monitor are customizable. When the workflow system is invoked, on return, there is a workitem opened for the specified userid.

Arguments are used to pass data into the functions and/or return data from the functions. In the tables describing the arguments the In or Out column has an I for input argument, O for an output argument, and I/O for both an input and output argument.

In the tables the Data types column shows the defined type of data for the variable. Sometimes the data type is defined to be the same as a particular column in a database table. The format that shows this is the database table name, period, column name, followed by % type. For example oracle_accounts.oracle_account_name%type means the data type is defined as the same type used to define the column oracle_account_name in the oracle_accounts table.

The API function that you write generally return a string. A NULL string value indicates successful execution. If your function returns a string that is not NULL the Oracle code treats this as an error; the workflow stops processing, the string value is an error message and is displayed.

**get_next_CRF_work_item**

generic function (userid, clinical_study_id, task, work_item_id, status)

<table>
<thead>
<tr>
<th>Argument</th>
<th>In or Out</th>
<th>Data type</th>
</tr>
</thead>
<tbody>
<tr>
<td>userid</td>
<td>I</td>
<td>oracle_accounts.oracle_account_name%type</td>
</tr>
<tr>
<td>clinical_study_id</td>
<td>I/O</td>
<td>clinical_studies.clinical_study_id%type</td>
</tr>
<tr>
<td>task</td>
<td>I/O</td>
<td>varchar2</td>
</tr>
<tr>
<td>work_item_id</td>
<td>O</td>
<td>number</td>
</tr>
<tr>
<td>status</td>
<td>O</td>
<td>varchar2</td>
</tr>
</tbody>
</table>
This routine is called from the Special menu item of the Log-In form. The function returns a null value to indicate successful completion. Otherwise, it returns an error message.

The task returned by the function should be one of the following values:

- INITIAL LOG-IN
- INITIAL LOG-IN AND FIRST-PASS ENTRY
- FIRST-PASS ENTRY
- SECOND-PASS ENTRY
- RECONCILIATION
- UPDATE
- BROWSE

The status code returned by the function should be SUCCESS or EOF. When the status code is EOF it indicates that there are no work items to process. A message indicating this is displayed.

Execution of this routine enables the following:

- The workflow monitor starts if this module is not yet started. (The workflow monitor starts the image viewer, if necessary.)
- The workflow monitor retrieves the next work item from the workflow system for the specified user.
- The Data Entry task (for example, PASS 1 ENTRY), the clinical_study_id, and the work_item_id are returned to Oracle Clinical. The work_item_id is stored for use by other client API routines.
- Oracle Clinical initializes the task and sets study context, then calls the `get_next_document` function.

### `get_next_document`

```
get_next_document (source, task, work_item_id, CRFpage, document_number, patient_number, clinical_planned_event, DCI_short_name, RDCI_date, RDCI_time, subevent_number, status)
```

| Argument               | In or Out | Data type                                                      |
|------------------------|-----------|                                                               |
| source                 | I         | varchar2                                                       |
| task                   | I         | varchar2                                                       |
| work_item_id           | I         | number                                                         |
| CRFpage                | O         | dci_book_pages.start_page_number%type                          |
| document_number        | O         | received_dcis.document_number%type                             |
| patient_number         | O         | patient_positions.patient%type                                 |
| clinical_planned_event | O         | received_dcis.clin_plan_eve_name%type                          |
| DCI_short_name         | O         | dcis.short_name                                                |
| RDCI_date              | O         | received_dcis.dci_date%type                                    |
| RDCI_time              | O         | received_dcis.dci_time%type                                    |
| subevent_number        | O         | received_dcis.subevent_number%type                             |
| status                 | O         | varchar2                                                       |
The purpose of this function is to retrieve information about the next workflow work item. The function returns a null value if it succeeds and an error message if it fails.

This routine is called either automatically—after get_next_workitem or when it has completed and is going to retrieve the next document in the current workitem—or manually. It is called in the following circumstances:

- whenever INITIAL LOG-IN, INITIAL LOG-IN AND ENTRY, PASS 1 ENTRY, PASS 2 ENTRY, UPDATE, BROWSE or COMPARISON RECONCILIATION is first invoked and a new workitem is being initialized (SOURCE=AUTO)
- whenever the next document in the current workitem is required (SOURCE=AUTO)—that is, when a new received DCI is to be created or an existing received DCI is to be retrieved
- whenever the get_next_document function is called from the Workflow menu (SOURCE=MANUAL)

The arguments for this function are:

- **CRF_page_number**: Number of the first page in the document.
- **document_number**: The unique number assigned by the workflow system for the document. The Log-In tasks fills the Oracle Clinical Document Number field with the contents of this variable. (On data entry or Browse tasks, this field is used to set the Oracle Clinical document field to retrieve the received DCI record for entry.)
- **patient_number**: The Oracle Clinical patient number, entered into the workflow system as part of the indexing operation. The Log-In tasks fills the Patient field in the Oracle Clinical DCI header with the contents of this variable. It is ignored in data entry or Browse operations.
- **clinical_planned_event**: The Oracle Clinical visit name, entered into the imaging system as part of the indexing operation. The Log-In tasks fills the Clinical Planned Event field in the Oracle Clinical DCI header with the contents of this variable.
- **DCI_short_name**: The DCI Name. The Log-In tasks fills the DCI Name in the Oracle Clinical DCI header with the contents of this variable. It is ignored in data entry or Browse operations. If the DCI Book Name field is null on entry, the value returned is taken from the imaging record. If DCI Book Name is not null, the value is retrieved from the DCI book.
- **status**: SUCCESS or EOF.
  - SUCCESS causes processing of the returned document.
  - EOF indicates there are no more documents in this workitem. Oracle Clinical function displays a message indicating that there are no more documents to process. The user then can select the menu item to get a new workitem.

When this function returns and the current task is Initial Log-in (or Initial Log-in and Entry) Oracle Clinical populates the DCI header with the returned data and waits for the operator to create the received DCI (and move to data entry if in Initial Log-In and Entry).

If this function is called from the First Pass Data Entry, Second Pass Data Entry, Update, Browse, or Comparison Reconciliation task, Oracle Clinical uses the returned document_number to query the received DCI record while waiting for the operator to move to data entry.
It is possible that the document has already been logged into Oracle Clinical in error, so that it is not possible to log in the duplicate RDCI. In such a case, the function returns an error. The operator is expected to correct the error for example, by creating a new subevent or by moving the document to a workflow error queue.

It is possible that an attempt is made to enter data (Pass 1 or Pass 2) into a document not logged into Oracle Clinical. While this should be an extremely rare occurrence, if it happens, the operator should move the document to a workflow error queue. This action is accomplished, as above, by selecting Get New Document from the Workflow menu.

**get_next_image**

get_next_image (document_number)

<table>
<thead>
<tr>
<th>Argument</th>
<th>In or Out</th>
<th>Data type</th>
</tr>
</thead>
<tbody>
<tr>
<td>document_number</td>
<td>I</td>
<td>received_dcis.document_number%type</td>
</tr>
</tbody>
</table>

This user-written routine calls the workflow monitor and displays the image of the next page of the document. It is called when the submenu item Get Next Image is selected from the Workflow menu. The function returns a null value if it succeeds and an error message if it fails.

**get_previous_image**

get_previous_image (document_number)

<table>
<thead>
<tr>
<th>Argument</th>
<th>In or Out</th>
<th>Data type</th>
</tr>
</thead>
<tbody>
<tr>
<td>document_number</td>
<td>I</td>
<td>received_dcis.document_number%type</td>
</tr>
</tbody>
</table>

This user-written routine is called when the submenu item Get Previous Image is selected from the Workflow menu. It displays the image of the previous page of the document. The function returns a null value if it succeeds and an error message if it fails.

**get_next_dcf_image**

get_next_dcf_image (dcf_id)

<table>
<thead>
<tr>
<th>Argument</th>
<th>In or Out</th>
<th>Data type</th>
</tr>
</thead>
<tbody>
<tr>
<td>dcf_id</td>
<td>I</td>
<td>data_clarification_forms.dcf_id%type</td>
</tr>
</tbody>
</table>

This routine calls the workflow monitor and displays the image of the next page of the DCF. It is called when the submenu item Get Next Image is selected from the menu in the DCF form. The function returns a null value if it succeeds and an error message if it fails.

**get_previous_dcf_image**

get_previous_dcf_image (dcf_id)

<table>
<thead>
<tr>
<th>Argument</th>
<th>In or Out</th>
<th>Data type</th>
</tr>
</thead>
<tbody>
<tr>
<td>dcf_id</td>
<td>I</td>
<td>data_clarification_forms.dcf_id%type</td>
</tr>
</tbody>
</table>
This routine is called when the submenu item Get Previous Image is selected from the menu in the DCF form. It displays the image of the previous page of the DCF. The function returns a null value if it succeeds and an error message if it fails.

**mark_workflow**

`mark_workflow (document_number, received_dci_id, received_dci_status_code)`

<table>
<thead>
<tr>
<th>Argument</th>
<th>In or Out</th>
<th>Data type</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>document_number</code></td>
<td>I</td>
<td><code>received_dcis.document_number%type</code></td>
</tr>
<tr>
<td><code>received_dci_id</code></td>
<td>I</td>
<td><code>received_dcis.received_dci_id%type</code></td>
</tr>
<tr>
<td><code>received_dci_status_code</code></td>
<td>I</td>
<td><code>received_dcis.received_dci_status_code%type</code></td>
</tr>
</tbody>
</table>

This routine is called at the end of the commit process, which occurs whenever changes are committed to the database. The workflow monitor updates its tables with the information it receives and moves the document along in the workflow process. Information received includes visit date, status, and other information from the Oracle Clinical received DCI record.

The execution point in Oracle Clinical where this routine is called is whenever a new received DCI has been committed to the database (Initial Log-In) or when Pass 1 or Pass 2 data has actually been saved to the database after data entry.

The function returns a null value if it succeeds and an error message if it fails. In the latter case the returned error message is displayed by the calling form as a warning.

**close_workflow**

`close_workflow ()`

This routine is called to shut down the workflow monitor and imaging systems. This function is called when Oracle Clinical is closed, or on command from the Special submenu menu item. The function returns a null value if it succeeds and an error message if it fails.

**getimage**

`getimage (Document_number, Study_id, Study, Received_dci_id, Received_dci_id_entry_ts, Dci_id, Dci_name, Dci_clin_plan_eve_id, Dci_visit_number, Dci_clin_plan_eve_name, Dci_subevent_number, Received_dcm_id, Received_dcm_id_entry_ts, Dcm_id, Dcm_name, Dcm_clin_plan_eve_id, Dcm_visit_number, Dcm_clin_plan_eve_name, Dcm_subevent_number, Patient_position_id, Patient, Site_id, Site, Investigator_id, Investigator, User_id, User_password, Owning_location, Current_location, Env_type, CrfPageNo)`

<table>
<thead>
<tr>
<th>Argument</th>
<th>In or Out</th>
<th>Data type</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>Document_number</code></td>
<td>I</td>
<td><code>received_dcis.document_number%type</code></td>
</tr>
<tr>
<td><code>Study_id</code></td>
<td>I</td>
<td><code>received_dcis.clinical_study_id%type</code></td>
</tr>
<tr>
<td><code>Study</code></td>
<td>I</td>
<td><code>clinical_studies.study%type</code></td>
</tr>
<tr>
<td><code>Received_dci_id</code></td>
<td>I</td>
<td><code>received_dcis.received_dci_id%type</code></td>
</tr>
<tr>
<td><code>Received_dci_id_entry_ts</code></td>
<td>I</td>
<td><code>received_dcis.received_dci_entry_ts%type</code></td>
</tr>
<tr>
<td><code>Dci_id</code></td>
<td>I</td>
<td><code>dcis.dci_id%type</code></td>
</tr>
</tbody>
</table>
GetImage invokes the external imaging system. Oracle Clinical passes the context information for the current RDCI. It is invoked by Special Menu Item, F3 key or the getimage icon on Log-In and Discrepancy forms.

**getImageDCF**

GetImageDCF($dcf_id$, $user_id$, $user_password$)

<table>
<thead>
<tr>
<th>Argument</th>
<th>In or Out</th>
<th>Data type</th>
</tr>
</thead>
<tbody>
<tr>
<td>$dcf_id$</td>
<td>I</td>
<td>data_clarification_forms.dcf_id%type</td>
</tr>
<tr>
<td>$user_id$</td>
<td>I</td>
<td>oracle_accounts.oracle_account_name%type</td>
</tr>
<tr>
<td>$user_password$</td>
<td>I</td>
<td>encrypted_passwords.password%type</td>
</tr>
</tbody>
</table>

---

---

Integration with External Systems 3-11
GetImageDCF invokes the external imaging system from the DCF screen. Oracle Clinical passes in dcf_id, user_id and password. It is invoked by Special Menu Item, F3 key or the get_image icon on Log-In and Discrepancy forms.

**wnfi**

wnfi (error_type)

<table>
<thead>
<tr>
<th>Argument</th>
<th>In or Out</th>
<th>Data type</th>
</tr>
</thead>
<tbody>
<tr>
<td>error_type</td>
<td>O</td>
<td>number</td>
</tr>
</tbody>
</table>

This routine is used to customize menu item labels. It also can be used to enable or disable the display of menu items. This routine is called when either the Log-In form (RXCDEMLI), the Data Entry form (RXCDECDE), the Discrepancy Management form (RXCDMMDD), or the DCF form is opened. The wnfi function returns a string.

The function returns a null value if it succeeds and an error message if it fails. In the latter case the error_type is checked. If the error_type is 1, a warning message, corresponding to the returned value is displayed. If the error_type is 2, the error message is displayed and an error would be raised from the calling form.

**webpasskeys**

webpasskeys(URL, Document_number, Study_id, Study, Received_dci_id, Received_dci_id_entry_ts, Dci_id, Dci_name, Dci_clin_plan_eve_id, Dci_visit_number, Dci_clin_plan_eve_name, Dci_subevent_number, Received_dcm_id, Received_dcm_id_entry_ts, Dcm_id, Dcm_name, Dcm_clin_plan_eve_id, Dcm_visit_number, Dcm_clin_plan_eve_name, Dcm_subevent_number, Patient_position_id, Patient, Site_id, Site, Investigator_id, Investigator, User_id, User_password, Owning_location, Current_location, Env_type, CrfPageNo)

<table>
<thead>
<tr>
<th>Argument</th>
<th>In or Out</th>
<th>Data type</th>
</tr>
</thead>
<tbody>
<tr>
<td>URL</td>
<td>I</td>
<td>varchar2</td>
</tr>
<tr>
<td>Document_number</td>
<td>I</td>
<td>received_dcis.document_number%type</td>
</tr>
<tr>
<td>Study_id</td>
<td>I</td>
<td>received_dcis.clinical_study_id%type</td>
</tr>
<tr>
<td>Study</td>
<td>I</td>
<td>clinical_studies.study%type</td>
</tr>
<tr>
<td>Received_dci_id</td>
<td>I</td>
<td>received_dcis.received_dci_id%type</td>
</tr>
<tr>
<td>Received_dci_id_entry_ts</td>
<td>I</td>
<td>received_dcis.received_dci_entry_ts%type</td>
</tr>
<tr>
<td>Dci_id</td>
<td>I</td>
<td>dcis.dci_id%type</td>
</tr>
<tr>
<td>Dci_name</td>
<td>I</td>
<td>dcis.name%type</td>
</tr>
<tr>
<td>Dci_clin_plan_eve_id</td>
<td>I</td>
<td>received_dcis.clin_plan_eve_id%type</td>
</tr>
<tr>
<td>Dci_visit_number</td>
<td>I</td>
<td>received_dcis.visit_number%type</td>
</tr>
<tr>
<td>Dci_clin_plan_eve_name</td>
<td>I</td>
<td>received_dcis.clin_plan_eve_name%type</td>
</tr>
<tr>
<td>Dci_subevent_number</td>
<td>I</td>
<td>received_dcis.subevent_number%type</td>
</tr>
<tr>
<td>Received_dcm_id</td>
<td>I</td>
<td>received_dcms.received_dcm_id%type</td>
</tr>
<tr>
<td>Received_dcm_id_entry_ts</td>
<td>I</td>
<td>received_dcms.received_dcm_entry_ts%type</td>
</tr>
<tr>
<td>Dcm_id</td>
<td>I</td>
<td>received_dcms.dcm_id%type</td>
</tr>
</tbody>
</table>
This routine is used to specify the location of the image to be displayed. Oracle Clinical passes the keys to allow the function to determine the appropriate image. The returned value is the specification string to access the image to be displayed.

An example of the use of this function is if getimage calls it to obtain the location of the image to be displayed and then displays the image.

`is_web2`  
`is_web2 ()`  
This function is no longer necessary. It was used to determine whether this was a Web environment or a client/server environment. It should always return TRUE.

<table>
<thead>
<tr>
<th>Argument</th>
<th>In or Out</th>
<th>Data type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dcm_name</td>
<td>I</td>
<td>dcms.name%type</td>
</tr>
<tr>
<td>Dcm_clin_plan_eve_id</td>
<td>I</td>
<td>received_dcms.clin_plan_eve_id%type</td>
</tr>
<tr>
<td>Dcm_visit_number</td>
<td>I</td>
<td>received_dcms.visit_number%type</td>
</tr>
<tr>
<td>Dcm_clin_plan_eve_name</td>
<td>I</td>
<td>received_dcms.clin_plan_eve_name%type</td>
</tr>
<tr>
<td>Dcm_subevent_number</td>
<td>I</td>
<td>received_dcms.subevent_number%type</td>
</tr>
<tr>
<td>Patient_position_id</td>
<td>I</td>
<td>received_dcis.patient_position_id%type</td>
</tr>
<tr>
<td>Patient</td>
<td>I</td>
<td>received_dcis.patient%type</td>
</tr>
<tr>
<td>Site_id</td>
<td>I</td>
<td>received_dcis.site_id%type</td>
</tr>
<tr>
<td>Site</td>
<td>I</td>
<td>received_dcis.site%type</td>
</tr>
<tr>
<td>Investigator_id</td>
<td>I</td>
<td>received_dcis.investigator_id%type</td>
</tr>
<tr>
<td>Investigator</td>
<td>I</td>
<td>received_dcis.investigator%type</td>
</tr>
<tr>
<td>User_id</td>
<td>I</td>
<td>oracle_accounts.oracle_account_name%type</td>
</tr>
<tr>
<td>User_password</td>
<td>I</td>
<td>encrypted_passwords.password%type</td>
</tr>
<tr>
<td>Owning_location</td>
<td>I</td>
<td>clinical_studies.owning_location%type</td>
</tr>
<tr>
<td>Current_location</td>
<td>I</td>
<td>clinical_studies.owning_location%type</td>
</tr>
<tr>
<td>Env_type</td>
<td>I</td>
<td>varchar2</td>
</tr>
<tr>
<td>CrfPageNo</td>
<td>I</td>
<td>dci_book_pages.start_page_number%type</td>
</tr>
</tbody>
</table>
The term API, or Application Programming Interface, refers to the mechanisms that form a software interface to link an application program to the services and functions of another application, operating system, network operating system, driver, or software program.

The Data Capture API (DCAPI) provides API functions to update data in Oracle Clinical. In addition to the API, Oracle Clinical provides a stable interface for programmers. The combination of the Data Capture API and the stable interface provides the tools to integrate Oracle Clinical with other systems. For information about the stable interface contact Support or see the Oracle Clinical Stable Interface TRM.

### Using the API

The API can be used with programs that you develop with Oracle Pro*C and Microsoft Visual C++. See the requirements section of the Oracle Clinical Installation Guide for the supported version Oracle Pro*C and Microsoft Visual C++. The following files are provided to use in your development, and are available on the Oracle Clinical Web Server in the `opa_home/oc/dcapi` folder:

- `dcapi.h`: Include this header file in your C files and set the header file path in your Microsoft Visual C++ project definition to the directory that contains dcapi.h.
- `dcapi.lib`: Include this library file in the list of files used to link your program and set the library path of your Microsoft Visual C++ project definition to the directory that contains dcapi.lib.
- `dcapi.dll`: Include this file in your system path during runtime.

**Note:** If you want to use the APIs to query an Oracle Clinical 4.5 database through Pro*C, you must use Pro*C 8.0.6.0.0.

### File Locations

The Oracle Clinical Installer automatically loads the DCAPI files onto the Oracle Clinical Web Server during the Front End installation. The DCAPI files are available in the `oracle_home/oc/dcapi/` folder, and are required by Oracle Clinical. To link to these files in a different location, copy the DCAPI files to that location instead of moving them.

### Setting Up Linkage in Microsoft Visual C++

To use the header file and library file in your Microsoft Visual C++ projects, you must specify the locations of these files in the project settings. The following example shows
how to do so in Microsoft Visual C++ 6.0; your directions may differ if you use another version.

**Header File**
Open a project and navigate to **Project**, then **Settings**. Click the C/C++ tab, select **Preprocessor** from the **Category** pull-down list, and type the directory location of the `dcapi.h` file in the "Additional Include Directories" field.

**Library File**
Open a project and navigate to **Project**, then **Settings**. Click the **Input** tab and type the directory location of the `dcapi.lib` file in the "Additional Library Path" field.

**Sample C Programs**
OPA provides a selection of sample programs that illustrate the use of DCAPI functions in the following tasks for a document:

- Initial Log-in
- Key Changes
- First-pass data entry
- Update
- Browse
- Soft Delete

This listing is available in PDF format from the OPA 4.5 Addenda page on Oracle Support Services’ MetaLink web site.

**Downloading the Sample Programs Document from MetaLink**
The MetaLink log-in address is:

http://metalink.oracle.com

Once logged onto MetaLink search for DCAPI_samples.pc or Data Capture APIs.

**Auditing Considerations**
Many DCAPI functions use two new data elements that provide auditing information: the audit change reason and a reason for the change. These data elements are part of the new `AuditInfo` structure, which is a direct parameter for the DCAPI functions `SetResponseData`, `SetDataComment`, and `DeleteRepeat` and an indirect parameter for the functions `SetRdci` and `SetRdcm`.

`AuditInfo` is also a new component of other existing data structures in the DCAPI, adding audit capabilities to these structures. All DCAPI functions that use these structures are affected by the change.

`RdciKeysRecord`: The external system will use `AuditInfo` to provide the audit change reason and an optional comment, in addition to the new set of keys or comment definition, in the `RdciKeysRecord`. The `RdciKeysRecord` structure will also include another boolean called `audit_only_flag` to indicate whether only an audit reason and no key or comment changes is provided. If an audit reason is required and it is not provided and the system is unable to derive or default one, the API call will fail. This change affects the DCAPI functions `CreateRdci` and `SetRdci`.
**RdciRecord**: The external system uses AuditInfo to retrieve the audit reason and comment (if any) provided earlier during an RDCI key or comment change or a soft delete, in addition to the full set of RDCI elements, in the RdciRecord. Adding AuditInfo to this structure affects the functions CreateRdci, GetRdci, ProcessRdci, SetRdci and FetchRdci.

**RdcmKeysRecord**: This structure will be updated to include the AuditInfo structure. AuditInfo is the structure that the external system will use to provide audit reason and an optional comment, in addition to the new set of keys or comment definition, in the RdciKeysRecord. If an audit reason is required and it is not provided, and the system is unable to derive or default one, the API call will fail. This change affects the SetRdcm function.

**RdcmRecord**: This structure will be updated to include the AuditInfo structure. This is the structure that the external system will use to retrieve the audit reason and comment (if any) provided earlier during an RDCM key or comment change, in addition to the full set of RDCM elements, in the RdcmRecord. This change affects the functions GetRdcm and SetRdcm.

**RepeatId**: This structure will be updated to include the AuditInfo structure. The boolean needs_audit will be set to TRUE to indicate if a audit reason is needed and is missing. The external system uses this structure to provide the audit reason and an optional comment when deleting a repeat.

**DataComment**: This structure will be updated to include the AuditInfo structure. The external system uses AuditInfo to provide the audit reason and an optional comment, in addition to the investigator comment definition, in the DataComment. This change affects the following DCAPI functions: CreateRdci, SetRdci, GetRdci, FetchRdci, ProcessRdci, SetRdcm, GetRdcm, DeleteRepeat and SetDataComment.

The values to these new parameters will be initialized to NULL and will be cleared upon saving of a transaction.

---

**Auditing and Backward Compatibility**

DCAPI functions require an audit change reason each time you make a change to a document. To enable backward compatibility with programs you have written to interface with earlier Oracle Clinical releases, this release includes two new reference codelists that you can supply with default values for the audit change reason.

To enable backward compatibility for pre-4.5 interfacing programs, perform these steps:

1. Re-compile and re-link your existing interfacing programs with the Release 4.5 version of the header file (dcapi.h) and library file (dcapi.lib).

2. Populate the new reference codelists with the default values you want to use for the audit change reason. You can because the audit change reason supplied depends on the change you make, you can provide separate default values for:

   - **Key or Comments Changes to RDCIs/RDCMs, and Soft-deletions of Documents**
   - **Investigator Comment Changes**
   - Deletion of Repeats

**Key or Comments Changes to RDCIs/RDCMs, and Soft-deletions of Documents**

To find the default audit reason for Header changes (RDCI or RDCM Key change, RDCI or RDCM Comment change and when Soft-Deleting a document), the system
refers to the reference code list 'RDCI CHANGE REASON TYPE CODE' as the primary and to 'RDCI CHANGE REASON2 TYPE CODE' as the secondary reference codelist. The system attempts to find a default audit reason by looking for "DCAPI" as a comma-separated string in the long value of either one of the reference codelists.

**Investigator Comment Changes**
To find a default audit reason for Investigator Comment changes (a change to responses), the system refers to the reference code list 'DATA CHANGE REASON TYPE CODE' as the primary and to 'DATA CHANGE REASON2 TYPE CODE' as the secondary reference codelist. The system attempts to find a default audit reason by looking for "DCAPIINV" in the long value of either one of the reference codelists.

**Deletion of Repeats**
To find a default audit reason for Delete Repeat (a change to responses), the system refers to the reference code list 'DATA CHANGE REASON TYPE CODE' as the primary and to 'DATA CHANGE REASON2 TYPE CODE' as the secondary reference codelist. The system attempts to find a default audit reason by looking for "DCAPIDEL" in the long value of the either one of the reference codelists.

---

**About the Data Capture API Documentation**
This documentation provides information about the syntax and functionality of the API functions for creating or updating the following information in Oracle Clinical:

- received DCI and DCM Log-In information
- actual events
- patient enrollment
- data responses
- data discrepancies
- comment information

This chapter is an introduction to Chapter 6, which describes the functions themselves.

**Special Notes About the API**
Review the following rules before you begin to develop your application. Instructions are written for someone with a working knowledge of Microsoft Visual C++ 6.0.

**Accessible Documents**
The documentation includes several references to the term *accessible documents*. Every Oracle Clinical study has properties indicating if first and second pass Data Entry are necessary. A RDCI is considered accessible when any of its RDCMs become accessible.

An RDCM is considered accessible if it meets any of the following criteria:

- The RDCM was batch loaded
- Pass 1 has been completed for the RDCM and Pass 2 is not required
- Pass 2 is required for the RDCM and has been completed
Date Formats

All date, time and date-time arguments to the API function calls are of type character array. This information is translated to Oracle dates internally by the API functions, so to remove ambiguity during translation, the dates, times, and date-times must be input in the following formats: YYYYMMDD, HH24MISS, and YYYYMMDDHH24MISS. The hours, HH, are specified in military time (values from 00 to 23 inclusively). These formats are referred to as the API date, time, and date-time formats respectively.

Error Handling

API functions will return a SUCCESS, FAILURE, or WARNING, defined as "short int" in the header file (SUCCESS = 0, FAILURE = 1, WARNING = 2). In the case of FAILURE or WARNING, the external application can use the GetError API function to get the message ID, text, and type from the error message stack. The external application can also use GetErrorStackSize to assess the depth of the stack and then call GetError repeatedly until no errors remain. If GetError returns SUCCESS your application should process the errors. For a complete list of error messages, see Appendix A, "Error Messages". If GetError returns the message ID -1, an internal Oracle Clinical error has occurred.

Warning: An internal Oracle Clinical error can corrupt data. If you encounter this kind of error, immediately roll back your data. The external application should continue retrieving the errors and ignoring them until the error stack is empty.

Indicating NULL for Number Fields

Your application should put -1 in numeric (double, short, int) fields to indicate a null value to Oracle Clinical. Similarly, Oracle Clinical returns -1 for these fields to indicate a null value in the database. The Visit Number field can have a valid negative value. If the visit number has a value of -1, your application must check for a visit name. When the visit name is null and the visit number is -1, the visit number is null in the database as well.

Overall Memory Allocation and Management

The API functions described manage allocation and deallocation of memory for the internal data structures they use. Your application must manage allocation and deallocation of memory for arguments to API calls that accept pointers to variables. For example, in a call to GetRdci, your program must allocate the memory for the argument of type RdciRecord.

Memory Allocation Rules for Data Entry

InitializeRdcmResponses handles memory allocation. If you attempt to set or get response values for a question in a particular repeat in a question group without creating a repeat first, you receive an error message.

For a document with existing responses, InitializeRdcmResponses allocates memory to hold response values for all questions in all existing repeats in all question groups in the RDCM. The user can then retrieve or set values for these responses. However, for repeating groups, if the user wants to retrieve or set the response of a new repeat that does not exist in the database, the user must begin by inserting a repeat.
For repeating groups with \( n > 1 \) repeats, InsertRepeat needs to be called. This function allocates memory to hold response values for all questions in the \( i \)-th repeat for the group (where \( 1 < i \leq n \)).

It is not necessary to enter response values immediately after inserting the repeat; the user of the API functions can first insert the necessary repeats in all question groups and then set the values for the responses. However, response values for at least one question should be entered for all inserted repeats in all question groups, otherwise WriteResponses will return FAILURE.

To delete an existing repeat, use the DeleteRepeat call. This does not free the memory allocated for holding the responses in the API Responses buffer; it simply marks the corresponding responses as deleted. They will be processed at commit time and marked accordingly in the database. The deleted repeats are archived in the database. Users can run either an Oracle Clinical audit report or their own audit report to view the deleted repeats.

**Procedure Classification**

Before you can use the ExecuteMultivariate function, Validation and Derivation Procedures must be categorized in Oracle Clinical. This step lets the function, ExecuteMultivariate identify the Procedures to execute in different circumstances.

Procedures are classified by the Execution Context attribute. A field for the attribute is displayed in the Oracle Clinical Procedures forms. Although this attribute can be entered for both pre-V3.1- and V3.1-style Procedures, only V3.1-style Procedures can be called by ExecuteMultivariate. The Execution Context does not affect batch validation processing.

This attribute’s value should be chosen based on the Procedure’s purpose and its usefulness in raising multivariate discrepancies for timely feedback during data entry. While the value defaults to OFF-LINE, V3.1-style Procedures can change it to either ON-LINE/DCM or ON-LINE.

**Using Execution Context**

These sections describe the values for the Execution Context attribute. An API-only argument, SINGLE, is also described because it affects Procedure classification.

**ON-LINE/DCM**

Procedures should be classified as ON-LINE/DCM when they are suitable for DCM-targeted types of validation to be invoked—for instance, at the completion of data entry for a given patient’s DCM. Procedures with aggregate-only question groups, which have no primary reference DCM, cannot be classified as ON-LINE/DCM.

Calling ExecuteMultivariate with an ON-LINE/DCM Execution Context causes a specific DCM to be supplied in the API call. Procedures are then targeted for execution on the basis of a match on:

- Execution Context
- The Procedure primary reference question group DCM
ON-LINE
An ON-LINE classification indicates the Procedure is suited to being invoked after a larger unit of work (two or more DCMs) is completed for the patient — regardless of the Procedure primary reference question group DCM. Procedures classified as ON-LINE or ON-LINE/DCM are automatically executed when ExecuteMultivariate is called with an ON-LINE Execution Context.

OFF-LINE
Procedures classified as OFF-LINE (the default) are not executed when the API Execution Context argument is either ON-LINE or ON-LINE/DCM. They are typically appropriate for the following circumstances:
- batch processing
- execution in batch validation
- execution via the Execute Single Procedure menu option

SINGLE
An API-only argument, SINGLE, signifies that a specific Procedure is to be executed; the Procedure ID and version are supplied as API arguments in this case. When ExecuteMultivariate is called with the Execution Context of SINGLE, the match on Procedure classification is bypassed and the requested Procedure executed.

Relationship Between Procedure Definition and Procedure Execution
Procedures can have dependencies, such as using the results of derivation for subsequent validation. The Procedure Definition form enforces the restriction that a Procedure can only be flagged for a particular Execution Context if all Procedures upon which it is dependent are also in the same context or in a "lesser" context. This means that "related" Procedures must be guaranteed to execute in tandem.

The following tables shows, for six sample Procedures, whether the Procedure will be selected for execution in each context.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ON-LINE/DCM DEMOG</td>
<td>Selected</td>
<td>Not selected</td>
<td>Selected</td>
<td>Not selected</td>
</tr>
<tr>
<td>Proc: A, Primary Ref DCM: DEMOG, Execution Context: ON-LINE/DCM</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Security Access for the API

Oracle Clinical provides a mechanism for controlling the tasks that certain users can perform. Each user with access to Oracle Clinical is given a set of roles that ensures that only certain tasks can be performed by that user. A user’s assigned roles are the same for each clinical study to which he or she has access.

The Data Capture API provides similar security mechanisms for assigning roles to users to determine the tasks they can perform. This assignment is also accomplished through the use of roles assigned to users. The roles are defined in the system and assigned to users based on their level of access to the system.

For instance, if Procedure X uses derived values from Procedure Y the possible classification combinations between the two Procedures are shown below.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Proc: B,</td>
<td>Not selected</td>
<td>Selected</td>
<td>Selected</td>
<td>Selected</td>
</tr>
<tr>
<td>Primary Ref DCM:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DCM48</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Execution Context:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ON-LINE/</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Proc: C,</td>
<td>Not selected</td>
<td>Not selected</td>
<td>Not selected</td>
<td>Not selected</td>
</tr>
<tr>
<td>Primary Ref DCM:</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>DCM48</td>
<td></td>
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<tr>
<td>Execution Context:</td>
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<tr>
<td>OFF-LINE/</td>
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<td></td>
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<td>Proc: D,</td>
<td>Selected</td>
<td>Selected</td>
<td>Not selected</td>
<td>Not selected</td>
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<tr>
<td>Primary Ref DCM:</td>
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</tr>
<tr>
<td>ON-LINE/DCM</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Proc: E,</td>
<td>Not selected</td>
<td>Not selected</td>
<td>Not selected</td>
<td>Not selected</td>
</tr>
<tr>
<td>Primary Ref DCM:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VITAL_SIGNS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Execution Context:</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>OFF-LINE</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proc: F,</td>
<td>Not selected</td>
<td>Selected</td>
<td>Not selected</td>
<td>Not selected</td>
</tr>
<tr>
<td>Primary Ref DCM:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VITAL_SIGNS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Execution Context:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ON-LINE</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

For instance, if Procedure X uses derived values from Procedure Y the possible classification combinations between the two Procedures are shown below.

<table>
<thead>
<tr>
<th>Validation Procedure X Definition</th>
<th>Procedure Execution — On-Line Processing API Execution Context</th>
<th>Procedure Execution — Off-Line Processing</th>
</tr>
</thead>
<tbody>
<tr>
<td>ON-LINE/DCM</td>
<td>Selected</td>
<td>Selected</td>
</tr>
<tr>
<td>ON-LINE</td>
<td>Not selected</td>
<td>Selected</td>
</tr>
<tr>
<td>OFF-LINE</td>
<td>Not selected</td>
<td>Selected</td>
</tr>
</tbody>
</table>

Security Access for the API

Oracle Clinical provides a mechanism for controlling the tasks that certain users can perform. Each user with access to Oracle Clinical is given a set of roles that ensures that only certain tasks can be performed by that user. A user’s assigned roles are the same for each clinical study to which he or she has access.

The Data Capture API provides similar security mechanisms for assigning roles to users to determine the tasks they can perform. This assignment is also accomplished through the use of roles assigned to users. The roles are defined in the system and assigned to users based on their level of access to the system.
through database roles. The roles necessary to perform tasks through the API are different from the roles in Oracle Clinical. Therefore, a particular user may be granted permission to perform data entry through an application built with the API but not through the Oracle Clinical client, or vice versa.

Database Roles for the API

The following list shows the names of the database roles and what each role is called in Oracle Clinical user materials.

<table>
<thead>
<tr>
<th>Database Role Name</th>
<th>OC Manual Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>OCLAPI_INITIAL_LOGIN</td>
<td>Initial Log-In</td>
</tr>
<tr>
<td>OCLAPI_KEY_CHANGES</td>
<td>Key Changes</td>
</tr>
<tr>
<td>OCLAPI_FIRST_PASS_ENTRY</td>
<td>First-Pass Entry</td>
</tr>
<tr>
<td>OCLAPI_UPDATE</td>
<td>Update</td>
</tr>
<tr>
<td>OCLAPI_BROWSE</td>
<td>Browse</td>
</tr>
<tr>
<td>OCLAPI_PATIENT_ENROLLMENT</td>
<td>Patient Enrollment</td>
</tr>
<tr>
<td>OCLAPI_EXECUTE_MULTIVARIATE</td>
<td>Execute Multivariate</td>
</tr>
</tbody>
</table>

This section shows which of the database roles for the Data Capture API a user must have to act on production data. The column headers indicate different DCAPI roles. The rows indicate different DCAPI calls under different conditions. An "X" in a column signifies that the call in the selected row requires one of the roles indicated. Privileges are cumulative and require that the user have only one intersecting role/call combination for the call to succeed.

Note: So that these actions are performed on test data, the letter T is appended to the database role name — for example, OCLAPI_BROWSE becomes OCLAPI_BROWSET.

Each role maps to a specific action that you can take within Oracle Clinical. This action is referred to as a mode. There are two types of modes:

Standalone - Patient Enrollment and Multivariate Execution are standalone roles.

Data Entry - Initial Log-In, Key Changes, First-Pass Entry, Update, and Browse are data entry modes.

CreateRdci (INITIAL_LOGIN)
Requires: Initial Log-In only

CreateRdci (KEY_CHANGES)
Requires: Key Changes

FetchRdci (Locking) (INITIAL_LOGIN)
Requires: Initial Log-In for documents that are inaccessible, or accessible documents whose only updateable field is the comment field

FetchRdci (Locking) (KEY_CHANGES)
Requires: Key Changes
**FetchRdci (Locking) (FIRST_PASS_ENTRY)**
Requires: First-Pass Entry for inaccessible documents only.

**FetchRdci (Locking) (UPDATE)**
Requires: Update

**FetchRdci (Locking) (BROWSE)**
Requires: Browse, but only if the operator comment in Browse mode is enabled

**FetchRdci (Non-Locking)**
Requires: Initial Log-In, Key Changes, First-Pass Entry, Update, and Browse.

**SetRdci**
Requires: Initial Log-In (Update of the comment fields only), Key Changes, First-Pass Entry (Update of the comment fields and Blank Flag only), and Update (Update of the comment fields only).

**SetRdcm**
Requires: Initial Log-In (Update of the comment fields only), Key Changes, First-Pass Entry (Update of the comment fields and Blank Flag only), and Update (Update of the comment fields only).

**WriteRdciRdcm**
Requires: Initial Log-In (Update of the comment fields only), Key Changes, First-Pass Entry (Update of the comment fields and Blank Flag only), and Update (Update of the comment fields only).

**DeleteRdci**
Requires: Initial Log-In (Inaccessible documents only)

**InitializeRdcmResponses (FIRST_PASS_ENTRY)**
Requires: First-Pass Entry

**InitializeRdcmResponses (UPDATE)**
Requires: Update

**InitializeRdcmResponses (BROWSE)**
Requires: Browse

**SetActualEvent**
Requires: Initial Log-In and Key Changes

**SetPageStatus**
Requires: Initial Log-In, Key Changes, First-Pass Entry, and Update

**EnrollPatient**
Requires: Patient Enrollment

**ExecuteMultivariate**
Requires: Multivariate Validation
The FetchRdci function retrieves data from the Oracle Clinical database. To call FetchRdci, the program must know the RDCI_ID in the Oracle Clinical database for the RDCI it wants to fetch. You can obtain this information through the stable interface.

The Data Capture API buffers the RDCI, RDCM, and response data so that your program can pass data to the API and validate it without committing the data to the database. When program is ready to commit the RDCI and RDCM data to the database, it calls WriteRdciRdcm. To commit response data to the database call WriteResponses.

CreateRdci, ProcessRdci, SetRdci, SetRdcm and SetResponseData perform one or more of the following:

- validation checks
- defaulting of fields
- setting of timestamps

Your program should refresh any data structures it created to store RDCI and RDCM information with the modified data structures passed back from these API functions. This keeps the data structures in your program consistent with the API buffered data.

Calling API Functions

The Data Capture API enforces rules about when you can call an API function. These rules are associated with the state of the data. The API considers the data to be in one of the following states.

Pre-Connection
This state occurs when the your application is running but not connected to the Oracle Clinical database. The API function ConnectOCL connects you to the Oracle Clinical database. All other Data Capture API functions require a connection to the Oracle Clinical database.

If you call a Data Capture API function, and you are not connected to the database, you receive an error message. Once connected to the Oracle Clinical database, you can disconnect or set study context from any of the remaining four states.

Pre-Study
This state occurs immediately after your program connects to the Oracle Clinical database and means that the study for which you are planning to enter data is unknown to the API. The SetStudyContext API function provides this context information. Any of the API functions that attempt to retrieve or set data require the study context and return an error if called in this state. Because SetExternalContext does not affect Oracle Clinical data, it can be called in this state.

In-Study with Empty RDCI/RDCM Buffer
This state occurs when the program has set the study context but has not called any API functions that update RDCI/RDCM data. RDCI/RDCM data must always be entered before response data because responses are associated with RDCMs that belong to RDCIs.

To proceed with entering RDCI/RDCM and responses data, you must either create a new RDCI by calling CreateRdci or fetch an existing RDCI to browse or update by calling FetchRdci. Either of these two functions will switch you into the RDCIRDCMWork state. There are no pending changes to RDCI/RDCM data or responses data in this state, so APIs that commit data to the database — EnrollPatient,
Calling API Functions

SetActualEvent, SetPageStatus, and ExecuteMultivariate — can be called. You can call SetExternalContext from this state as well.

RDCIRDCMWork
This state occurs when the program is retrieving or updating RDCI/RDCM data; while in this state, you cannot call functions that retrieve or update RDCI/RDCM data. The function SetExternalContext does not commit data or retrieve/update responses data, so it can be called in this state.

Pending changes must be saved to the database, using WriteRdciRdcm; otherwise they must be discarded using FlushRdciRdcm before more response data can be entered. InitializeRdcmResponses then brings you to the ResponsesWork state.

Once all pending changes have been saved or discarded, the program can call EnrollPatient, SetActualEvent, SetPageStatus, and ExecuteMultivariate to commit data. These API functions do not commit data if there are pending changes, because incomplete RDCI/RDCM information would cause data corruption.

ResponsesWork
This state occurs when your program is retrieving or updating response data. The API functions that update the RDCI/RDCM data cannot be called in this state.

Once all pending changes have been saved (using WriteResponses) or discarded (using FlushResponses), the program can commit data by calling EnrollPatient, SetActualEvent, SetPageStatus, and ExecuteMultivariate. These functions cannot be called if there are pending changes, because the functions would commit incomplete responses information to the Oracle Clinical database which would cause data corruption. The program can return to either the RDCIRDCMWork state or In-Study with Empty RDCIRDCM Buffer state by calling, saving, or discarding any pending changes.

Functional State Mapping Information
This section describes the functional states in which you can call each of the DCAPI functions. Because ConnectOCL is associated with only one state, the Pre-Connection state, this function is not listed.

CreateRdci
Can be called in:

- In-Study with Empty RDCI/RDCM Buffer.
- RDCI/RDCM Work, but only if there are no changes pending. If an audit comment is required and has not been provided before you call CreateRdci in this state, it returns an error.

DeleteRdci
Can be called in RDCI/RDCM Work, but only if there are no changes pending. If an audit comment is required and has not been provided before you call DeleteRdci in this state, it returns an error.

DeleteRepeat
Can be called in Responses Work. If an audit comment is required and has not been provided before you call DeleteRepeat in this state, it returns an error.
**DisconnectOCL**
Can be called in:
- Pre-Study
- In-Study with Empty RDCI/RDCM Buffer
- RDCI/RDCM Work, but only if there are no changes pending
- Responses Work, but only if there are no changes pending

**EnrollPatient**
Can be called in:
- In-Study with Empty RDCI/RDCM Buffer
- RDCI/RDCM Work, but only if there are no changes pending. Even if there are no changes pending, EnrollPatient cannot be called in this state if the RDCI was fetched for update until the database lock is released.
- Responses Work, but only if there are no changes pending. Even if there are no changes pending, EnrollPatient cannot be called in this state if the RDCI was fetched for update until the database lock is released.

**ExecuteMultivariate**
Can be called in:
- Pre-Study
- In-Study with Empty RDCI/RDCM Buffer
- RDCI/RDCM Work, but only if there are no changes pending
- Responses Work, but only if there are no changes pending

**FetchRdci**
Can be called in:
- In-Study with Empty RDCI/RDCM Buffer
- RDCI/RDCM Work, but only if there are no changes pending. If an audit comment is required and has not been provided before you call FetchRdci, the system returns an error.

**FlushRdciRdcm**
Can be called in RDCI/RDCM Work

**FlushResponses**
Can be called in Responses Work. If an audit comment is required and has not been provided before you call FlushResponses, the system returns an error.

**GetManualDiscrepancy**
Can be called in Responses Work. If an audit comment is required and has not been provided before you call GetManualDiscrepancy, the system returns an error.

**GetNumRows**
Can be called in Responses Work. If an audit comment is required and has not been provided before you call GetNumRows, the system returns an error.
**GetQuestGroupId**
Can be called in Responses Work. If an audit comment is required and has not been provided before you call GetQuestGroupId, the system returns an error.

**GetQuestionId**
Can be called in Responses Work. If an audit comment is required and has not been provided before you call GetQuestionId, the system returns an error.

**GetRdci**
Can be called in RDCI/RDCM Work.

**GetRdcm**
Can be called in RDCI/RDCM Work, but only if there are no pending RDCI changes. If pending RDCI changes exist, process them by calling `ProcessRdci`.

**GetRdcmArr**
Can be called in RDCI/RDCM Work, but only if there are no pending RDCI changes. If pending RDCI changes exist, process them by calling `ProcessRdci`.

**GetResponse**
Can be called in Responses Work. If an audit comment is required and has not been provided before you call GetResponse, the system returns an error.

**GetUnivDiscrepancy**
Can be called in Responses Work. If an audit comment is required and has not been provided before you call GetUnivDiscrepancy, the system returns an error.

**InitializeRdcmResponses**
Can be called in RDCI/RDCM Work

**InsertRepeat**
Can be called in Responses Work. If an audit comment is required and has not been provided before you call InsertRepeat, the system returns an error.

**ProcessRdci**
Can be called in RDCI/RDCM Work

**ProcessRdcm**
Can be called in RDCI/RDCM Work, but only if there are no pending RDCI changes. If pending RDCI changes exist, process them by calling `ProcessRdci`.

**SetActualEvent**
Can be called in:
- Pre-Study
- In-Study with Empty RDCI/RDCM Buffer
- RDCI/RDCM Work, but only if there are no changes pending. Even if there are no changes pending, this API function cannot be called in this state if the RDCI was fetched for update until the database lock is released.
Responses Work, but only if there are no changes pending. Even if there are no changes pending, this API function cannot be called in this state if the RDCI was fetched for update until the database lock is released.

**SetDataComment**
Can be called in Responses Work. If an audit comment is required and has not been provided before you call this API function, the function will return an error.

**SetExternalContext**
Can be called in:
- Pre-Study
- In-Study with Empty RDCI/RDCM Buffer
- RDCI/RDCM Work, but only if there are no changes pending.

**SetManualDiscrepancy**
Can be called from Responses Work. If an audit comment is required and has not been provided before you call this API function, the function will return an error.

**SetMiscDiscrepancy**
Can be called from Responses Work. If an audit comment is required and has not been provided before you call this API function, the function will return an error.

**SetPageStatus**
Can be called from:
- Pre-Study
- In-Study with Empty RDCI/RDCM Buffer
- RDCI/RDCM Work, but only if there are no changes pending. Even if there are no changes pending, this API function cannot be called in this state if the RDCI was fetched for update until the database lock is released.
- Responses Work, but only if there are no changes pending. Even if there are no changes pending, this API function cannot be called in this state if the RDCI was fetched for update until the database lock is released.

**SetRdci**
Can be called from RDCI/RDCM Work

**SetRdcm**
Can be called from RDCI/RDCM Work, but only if there are no pending RDCI changes. You can process these pending changes by calling ProcessRdci.

**SetResponseData**
Can be called from Responses Work

**SetStudyContext**
Can be called from:
- Pre-Study
- In-Study with Empty RDCI/RDCM Buffer
- RDCI/RDCM Work, but only if there are no changes pending.
- Responses Work, but only if there are no changes pending.

**SetUnivDiscrepancy**
Can be called from Responses Work. If an audit comment is required and has not been provided before you call SetUnivDiscrepancy, it returns an error.

**WriteRdciRdcm**
Can be called from RDCI/RDCM Work, but only if there are no pending RDCI changes. You can process these pending changes by calling ProcessRdci.

**WriteResponses**
Can be called from Responses Work. If an audit comment is required and has not been provided before you call this API function, the function will return an error.

**Functional State Transition Diagram**

The following diagram illustrates the required transitions to move from one state to another in the API.

* If called with preserve lock, otherwise brings you to In-Study with Empty RDCIRDCM Buffer state.
Data Management Rules

The majority of the Oracle Clinical data management rules are inherently built into the functionality of the API. Nonetheless, there are a few data management rules that you must be aware of as you design your front-end application; otherwise, you may generate one or more error messages.

Five data entry modes are valid within the API. The following table describes the appropriate document status for each Log-In and Data Entry mode that the API supports.

<table>
<thead>
<tr>
<th>Mode</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial Log-In</td>
<td>RECEIVED</td>
</tr>
<tr>
<td>Key Changes</td>
<td>RECEIVED, P1 STARTED, P1 COMPLETE</td>
</tr>
<tr>
<td>Update/Browse</td>
<td>P1 STARTED, P1 COMPLETE</td>
</tr>
<tr>
<td>P1 (First Pass)</td>
<td>RECEIVED, P1 STARTED, P1 COMPLETE only if document is not accessible and the operator is the person who created the document</td>
</tr>
</tbody>
</table>
This section describes each of the data structures that are used by many of the DCAPI functions. For each structure, the section includes the syntax of the typedef declaration in dcapi.h, the functions and other structures that use this structure, and additional comments about some parameters.
ActualEventsRecord

Syntax

typedef struct actual_events_record
{
    char comment[COMMENT_SIZE + 1] ;
} ActualEventsRecord;

Parameters

    comment (in)

Used by DCAPI Function

    SetActualEvent
AuditInfo

This structure is used to audit changes made to a document for RDCIs, RDCMs, or response changes. Three functions use AuditInfo as a direct parameter, and two others use it indirectly by using structures that contain AuditInfo as a parameter. These functions are:

**Direct:** SetResponseData, SetDataComment, DeleteRepeat

**Indirect:** SetRdci and SetRdcm

For instructions on using the AuditInfo structure in conjunction with DeleteRdci, see the section for that function on page 6-7.

**Syntax**

```c
typedef struct audit_info
{
    char audit_comment[COMMENT_SIZE+1];
    char reason[AUDIT_REASON_SIZE+1];
    DCAPIFlag needs_audit ;
} AuditInfo;
```

**Parameters**

- **audit_comment (in/out):** This parameter provides a free-text description of the transaction. It could be defaulted by the system or can be user-provided.

- **reason (in/out):** The audit reason parameter must match a value in the reference codelists RDCI CHANGE REASON TYPE CODE or RDCI CHANGE REASON2 TYPE CODE (for RDCI and/or RDCM change or for soft deletion of a document) and DATA CHANGE REASON TYPE CODE or DATA CHANGE REASON2 TYPE CODE (for response changes). This parameter could be defaulted by the system or can be user-provided.

- **needs_audit (out):** This parameter indicates after the function call whether the audit reason was expected but was not provided. If TRUE, an audit reason was required but was not manually provided and the system could not supply a default reason.

**Used by Functions**

SetResponseData, SetDataComment, DeleteRepeat, SetRdci, and SetRdcm
DataComment

Syntax

typedef struct data_comm
 {
    char data_comment[COMMENT_SIZE + 1];
    AuditInfo audit ;
}DataComment;

Parameters

data_comment (in)
audit (in): A parameter of type AuditInfo, which tracks audit information about the investigator comment.

Used in Functions

SetDataComment
DiscInfo

If used by SetResponseData, GetUnivDiscrepancy, or GetManualDiscrepancy, the parameters will be populated by the system. If used by SetUnivDiscrepancy or SetManualDiscrepancy, the parameters will be entered manually.

Syntax

typedef struct disc_info
{
    char disc_type[DISC_TYPE_SIZE+1];
    char disc_rev_status[DISC_STATUS_SIZE+1];
    char disc_resolu_type[CODE_SIZE+1];
    char comment_text[EDMS_COMMENT_SIZE+1];
    char internal_comment_text[EDMS_COMMENT_SIZE+1];
    char resolution[EDMS_COMMENT_SIZE+1];
} DiscInfo;

Parameters

The following are input parameters when DiscInfo is used by the functions SetUnivDiscrepancy and SetManualDiscrepancy; they are output parameters when used by GetUnivDiscrepancy, GetManualDiscrepancy, SetMiscDiscrepancy, and SetResponseData.

disc_type (in/out): This parameter maps to the reference codelist MANUAL SOURCE TYPE CODE for manual discrepancies. For univariate discrepancies, this parameter is system-generated and should not be changed.

disc_rev_status (in/out): This parameter maps to the installation reference codelist DISCREPANCY REV STATUS CODE.

disc_resolu_type (in/out): This parameter maps to the reference codelist DISCREPANCY RESOLU TYPE CODE.

comment_text (in/out): For univariate discrepancies, the initial value may be system-generated if a corresponding EDMS setup has been already been done. However, this value can be updated. For manual discrepancies, this parameter is a free-text description.

internal_comment_text (in/out): Free text description.

resolution (in/out): Free text description.

Used by Functions

**ErrorInfo**

The ErrorInfo structure is a standalone element that DCAPI functions use to retrieve errors from the stack.

**Syntax**

```c
typedef struct error_info
{
    short int type;
    int message_id;
    char message_string[COMMENT_SIZE+1];
    char function_name[51];
} ErrorInfo;
```

**Parameters**

- `type` (out): The severity; either ERR (error) or WRN (warning).
- `message_id` (out): the error message ID.
- `message_string` (out): the error message.
- `function_name` (out): the API function.

**Used by Functions**

All DCAPI functions
ExternalContextInfo

This structure is used by SetExternalContext to track changes made to data.

Syntax

typedef struct context_info
{
    char userid[31];
    char timestamp[DATE_TIME_SIZE + 1];
    char trans_type[61];
    char comment[COMMENT_SIZE + 1];
}ExternalContextInfo;

Parameters

userid (in): the Oracle user who is entering or modifying data.
timestamp (in): date and time of transaction.
trans_type (in): the type of transaction, which must match a value in the EXTERNAL_TRANS_TYPE reference codelist.
comment (in): free-text description of the transaction.

Used by Function

SetExternalContext
GroupId

This structure is used by `GetQuestGroupId` to return the question group ID, given the question group name.

**Syntax**

```c
typedef struct group_id
{
    char group_name[GROUP_SIZE+1] ;
} GroupId;
```

**Parameter**

- `group_name (in)`: the name of the question group.

**Used in Function**

- `GetQuestGroupId`
MvInfo

This structure is used by ExecuteMultivariate to specify the criteria for multivariate validation submission.

Syntax

typedef struct mv_info
{
    char execution_context[16];
    double procedure_id;
    int procedure_version_sn;
    double patient_position_id;
    double dcm_id;
    double clinical_study_id;
    double clinical_study_version_id;
    double received_dci_id;
    short int mode;
    DCAPIFlag debug_flag;
} MvInfo;

Parameters

execution_context (in): Values are ON-LINE/DCM, ON-LINE or SINGLE
procedure_id (in)
procedure_version_sn (in)
patient_position_id (in)
dcm_id (in)
clinical_study_id (in)
clinical_study_version_id (in)
received_dci_id (in)
mode (in): Values are OCL_TEST or OCL_PROD.
debug_flag (in): Values are TRUE or FALSE.

Used in Function

ExecuteMultivariate
**PatientRecord**

This structure is used by EnrollPatient to enroll a patient in a study.

**Syntax**

```c
typedef struct patient_record
{
    char birth_date[DATE_SIZE +1];
    char sex[2];
    char first_name[16];
    char last_name[21];
    char initials[5];
    char enrollment_date[DATE_SIZE+1];
} PatientRecord;
```

**Parameters**

- birth_date (in)
- sex (in)
- first_name (in)
- last_name (in)
- initials (in)
- enrollment_date (in)

**Used in Function**

- EnrollPatient
QuestionId

The QuestionId structure is used by GetQuestionId to return the question ID, given the question group name, question name, and occurrence subset number.

Syntax

typedef struct question_id
{
    char group_name[GROUP_SIZE+1];
    char question_name[QUESTION_SIZE+1];
    int qn_occurrence_sn;
} QuestionId;

Parameters

group_name (in): the name of its question group.
question_name (in): the name of the question.
qn_occurrence_sn (in): the occurrence subset number.

Used in Function

GetQuestionId
RdciKeysRecord

This structure contains the key values of the RDCI record being created or modified by CreateRdci or SetRdci.

Syntax

typedef struct rdci_keys_record
{
    char document_number[21];
    char patient[11];
    char dci_short_name[11];
    char dci_date[DATE_SIZE + 1];
    char dci_time[TIME_SIZE + 1];
    char visit_name[21];
    short int subevent_number;
    char site[11];
    char investigator[11];
    DCAPIFlag blank_flag;
    char comment[COMMENT_SIZE + 1];
    AuditInfo audit;
    DCAPIFlag audit_only_flag;
} RdciKeysRecord;

Parameters

document_number (in): Optional for CreateRdci, required for SetRdci.

patient (in): Any unique identifier which the external system can assign to a patient. It is not necessarily the same as the 'patient position id' or the 'patient name'.

dci_short_name (in)

dci_date (in): Can be optional if the DCI does not require a date as part of its definition.

dci_time (in): Only applicable if the current DCI needs them to be collected; otherwise this parameter must be passed as null values. Passing a non-null value for this parameter when it is not applicable will cause the API function to fail. A null value for a character array field is the null (""") string.

visit_name (in)

subevent_number (in)

site (in): Any unique identifier which the external system can assign to a site. It is not necessarily same as the 'site id' or the 'site name'.

investigator (in): Any unique identifier that the external system can assign to an investigator. It is not necessarily the same as the investigator ID or the investigator name.

blank_flag (in): Value passed in are TRUE or FALSE.

comment (in): Free-text description.

audit (in): A parameter of type AuditInfo, which tracks audit information about the RDCI key or comment changes.

audit_only_flag (in): This parameter, if set to TRUE, indicates that the audit reason provided is for soft-deleting a document (via DeleteRdci), rather than for a key or comment change.
Used in Functions

CreateRdci, SetRdci
RdciRecord

This structure contains the contents of the RDCI record that is either being retrieved from the database or being created or modified.

Syntax

typedef struct rdci_record
{
    char document_number[21] ;
    char recvd_dci_status_code[16] ;
    char dci_name[31] ;
    char dci_date[DATE_SIZE + 1] ;
    char dci_time[TIME_SIZE + 1] ;
    char visit_name[21] ;
    int visit_number ;
    short int subevent_number ;
    DCAPIFlag blank_flag ;
    char comment[COMMENT_SIZE + 1] ;
    char received_dci_entry_ts[DATE_TIME_SIZE + 1] ;
    char entered_by[31] ;
    char end_ts[DATE_TIME_SIZE + 1] ;
    DCAPIFlag data_lock_flag ;
    char data_lock_ts[DATE_TIME_SIZE + 1] ;
    char accessible_ts[DATE_TIME_SIZE + 1] ;
    char last_status_change_ts[DATE_TIME_SIZE + 1] ;
    char last_new_ver_ts[DATE_TIME_SIZE + 1] ;
    char modification_ts[DATE_TIME_SIZE + 1] ;
    char modified_by[31] ;
    char log_in_ts[DATE_TIME_SIZE + 1] ;
    AuditInfo   audit ;
} RdciRecord;

Parameters

document_number (out)
recvd_dci_status_code (out)
patient (out)
dci_short_name (out)
dci_name (out)
dci_date (out)
dci_time (out)
visit_name (out)
visit_number (out)
subevent_number (out)
site (out)
investigator (out)
RdciRecord

blank_flag (out)
comment (out)
received_dci_entry_ts (out)
entered_by (out)
end_ts (out)
data_lock_flag (out)
data_lock_ts (out)
accessible_ts (out)
last_status_change_ts (out)
last_new_ver_ts (out)
modification_ts (out)
modified_by (out)
log_in_ts (out)
audit (out)

**Used in Functions**
CreateRdci, FetchRdci, GetRdci, ProcessRdci, SetRdci
RdcmArr

This structure is used by ProcessRdci, FetchRdci, and GetRdcmArr.

Syntax

typedef struct rdcm_arr
{
    double rdcm_a[MAX_DCMS] ;
    int len ;
}RdcmArr;

Parameters

rdcm_a (out): an array of the received_dcm_ids of all the RDCM records.
len (in): the number of elements in the array.

Used in Function

ProcessRdci, GetRdcmArr, FetchRdci
RdcmKeysRecord

This structure contains the key values of the RDCM record being created or modified by SetRdcm.

Syntax

typedef struct rdcm_keys_record
{
    DCAPIFlag blank_flag ;
    char qualifying_val[71] ;
    char dsp_lab[27] ;
    char visit_name[21] ;
    short int subevent_number ;
    char dcm_date[DATE_SIZE + 1] ;
    char dcm_time[TIME_SIZE + 1] ;
    char comment[COMMENT_SIZE + 1] ;
    char data_comment[COMMENT_SIZE + 1] ;
    AuditInfo audit ;
} RdcmKeysRecord;

Parameters

The parameters qualifying_val, dsp_lab, visit_name, subevent_number, dcm_date, and dcm_time are only applicable if the current DCM needs them to be collected. Otherwise they must be passed in to any API function as null values. Passing a non-null value for any of these items when it is not applicable will cause the API function to fail. A null value for a character array field is the null (""") string. For integers use -1 to indicate a null value.

blank_flag (in): Value passed in is TRUE or FALSE.
qualifying_val (in):
dsp_lab (in):
visit_name (in):
subevent_number (in):
dcm_date (in):
dcm_time (in):
comment (in):
data_comment (in):
audit (in): A parameter of type AuditInfo, which tracks audit information about the RDCM changes.

Used in Function

SetRdcm
RdcmRecord

This structure contains the contents of the RDCM record that is either being retrieved from the database or being created or modified.

Syntax

typedef struct rdcm_record
{
    char dcm_short_name[5];
    char dcm_name[17];
    short int dcm_subset_sn;
    short int dcm_layout_sn;
    DCAPIFlag blank_flag;
    char recvd_dcm_status_code[16];
    char qualifying_value[71];
    char dsp_lab[27];
    char visit_name[21];
    int visit_number;
    short int subevent_number;
    char dcm_date[DATE_SIZE + 1];
    char dcm_time[TIME_SIZE + 1];
    char comment[COMMENT_SIZE + 1];
    char data_comment[COMMENT_SIZE + 1];
    char recvd_dcm_entry_ts[DATE_TIME_SIZE + 1];
    char entered_by[31];
    char end_ts[DATE_TIME_SIZE + 1];
    DCAPIFlag data_lock_flag;
    char data_lock_ts[DATE_TIME_SIZE + 1];
    char accessible_ts[DATE_TIME_SIZE + 1];
    char lab_modification_ts[DATE_TIME_SIZE + 1];
    char lab_assignment_type_code[16];
    char last_status_change_ts[DATE_TIME_SIZE + 1];
    char last_data_change_ts[DATE_TIME_SIZE + 1];
    char pass1_ts[DATE_TIME_SIZE + 1];
    char pass1_by[31];
    char pass2_ts[DATE_TIME_SIZE + 1];
    char pass2_by[31];
    char modification_ts[DATE_TIME_SIZE + 1];
    char modified_by[31];
    char log_in_ts[DATE_TIME_SIZE + 1];
    AuditInfo audit;
} RdcmRecord;

Parameters

All of the following are output parameters.
dcm_short_name (out)
dcm_name (out)
dcm_subset_sn (out)
dcm_layout_sn (out)
blank_flag (out)
recvd_dcm_status_code (out)
qualifying_value (out)
dsp_lab (out)
visit_name (out)
visit_number (out)
subevent_number (out)
dcm_date (out)
dcm_time (out)
comment (out)
data_comment (out)
recvd_dcm_entry_ts (out)
entered_by (out)
end_ts (out)
data_lock_flag (out)
data_lock_ts (out)
accessible_ts (out)
lab_modification_ts (out)
lab_assignment_type_code (out)
last_status_change_ts (out)
last_data_change_ts (out)
pass1_ts (out)
pass1_by (out)
pass2_ts (out)
pass2_by (out)
modification_ts (out)
modified_by (out)
log_in_ts (out)

audit (out): A parameter of type AuditInfo, which tracks audit information about the RDCM changes

**Used in Functions**

GetRdcm, SetRdcm
**ResponseData**

This structure is used by **GetResponse** to retrieve the data from the database or from the buffer for the response being modified.

**Syntax**

```c
typedef struct response_data
{
    char value_text[COMMENT_SIZE + 1];
    char data_comment[COMMENT_SIZE + 1];
}ResponseData;
```

**Parameters**

- value_text (out)
- data_comment (out)

**Used in Function**

- **GetResponse**
RepeatId

This structure is used by InsertRepeat and DeleteRepeat to identify uniquely the repeat.

Syntax

typedef struct repeat_id
{
  double group_id;
  int repeat_sn ;
  AuditInfo   audit ;
}RepeatId;

Parameters

group_id (in)
repeat_sn (in)

audit (in): Not used by InsertRepeat. For DeleteRepeat, this parameter of type AuditInfo tracks audit information about the repeat being deleted.

Used in Functions

InsertRepeat, DeleteRepeat
Responseld

This structure uniquely identifies the response.

**Syntax**

```c
typedef struct response_id
{
    double group_id;
    double question_id;
    int repeat_sn;
} ResponseId;
```

**Parameters**

Each of the following is an input parameter for the API functions below, except for WriteResponses, where all three are output parameters.

- group_id
- question_id
- repeat_sn

**Used in Functions**

- GetResponse
- GetUnivDiscrepancy
- GetManualDiscrepancy
- SetDataComment
- SetResponseData
- SetUnivDiscrepancy
- SetManualDiscrepancy
- WriteResponses
**StudyRecord**

This structure contains the information about the live version of the study.

**Syntax**

```c
typedef struct study_record
{
    double clinical_study_id;
    int    clinical_study_version_id;
    DCAPIFlag    study_freeze_flag;
    DCAPIFlag    second_pass_required_flag;
    DCAPIFlag    data_entry_enabled_flag;
    DCAPIFlag    first_pass_from_login_flag;
    char         last_batch_ts[DATE_TIME_SIZE+1];
    DCAPIFlag    disc_in_browse;
    DCAPIFlag    disc_res_in_de;
    DCAPIFlag    priv_update;
    DCAPIFlag    unenroll_alert;
    DCAPIFlag    browse_acc_only;
    DCAPIFlag    dci_date_required;
    DCAPIFlag    univar_alert;
    DCAPIFlag    thesaurus_lov;
    DCAPIFlag    use_dci_book;
    DCAPIFlag    ocl_thes_disc;
    DCAPIFlag    ocl_thes_lov;
}StudyRecord;
```

**Parameters**

All of these are output parameters.

- **clinical_study_id** (out)
- **clinical_study_version_id** (out)
- **study_freeze_flag** (out): If TRUE, the study is frozen.
- **second_pass_required_flag** (out): If TRUE, second pass required to make data accessible
- **data_entry_enabled_flag** (out): If TRUE, production data entry is enabled
- **first_pass_from_login_flag** (out): If TRUE, allows combined log-in and data entry
- **last_batch_ts** (out)
- **disc_in_browse** (out): If TRUE, allows creation/modification of manual discrepancies in Browse mode.
- **disc_res_in_de** (out): If TRUE, allows discrepancy resolution in data entry.
- **priv_update** (out): If TRUE, allows privileged update.
- **unenroll_alert** (out): If TRUE, unenrolled patient alert is on.
- **browse_acc_only** (out): Browse accessible data only
- **dci_date_required** (out): This parameter is obsolete.
- **univar_alert** (out): If TRUE, operator is alerted when univariate error occurs.
- **thesaurus_lov** (out): If TRUE, LOVs are allowed on Thesaurus DVG-validated fields.
used_dci_book (out): If TRUE, DCI book is used as default entry mode
ocl_thes_disc (out): If TRUE, system creates discrepancies for TMS fields at data entry.
ocl_thes_lov (out): If TRUE, system allows LOVs on TMS fields at data entry.

**Used in Function**

*SetStudyContext*
ValueText

This structure contains the contents of the response.

Syntax

typedef struct value_txt
{
    char value_text[COMMENT_SIZE + 1];
}ValueText;

Parameter

value_text (in)

Used in Function

SetResponseData
The beginning of the chapter lists the Functions Grouped by Task that comprise the Oracle Clinical API. Each function is listed alphabetically by function name, and includes:

- a brief description of the function
- the syntax for calling it
- its input and output parameters
- return values and their meaning
- comments, which provide more information about the function including restrictions on its usage. Details about the task or tasks a function performs appear in this section.
- a list of error messages that the call can generate
- related functions in the DCAPI

### Functions Grouped by Task

Table 6–1 groups the API functions by their task. These functions are listed alphabetically throughout the rest of this section.

*All – refers to a function that can be used throughout the API development process.*

*Data Entry – refers to a function that processes response data.*

*Log-In – refers to a function that processes RDCI/RDCM data.*

*Standalone – refers to a function that is not related to the other functions.*

<table>
<thead>
<tr>
<th>Task</th>
<th>API Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>ConnectOCL, DisconnectOCL, GetError, GetErrorStackSize, SetStudyContext</td>
</tr>
<tr>
<td>Data Entry</td>
<td>DeleteRepeat, FlushResponses, GetManualDiscrepancy</td>
</tr>
<tr>
<td>Task</td>
<td>API Function</td>
</tr>
<tr>
<td>------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>GetNumRows</td>
</tr>
<tr>
<td></td>
<td>GetQuestGroupId</td>
</tr>
<tr>
<td></td>
<td>GetQuestionId</td>
</tr>
<tr>
<td></td>
<td>GetResponse</td>
</tr>
<tr>
<td></td>
<td>GetUnivDiscrepancy</td>
</tr>
<tr>
<td></td>
<td>InitializeRdcmResponses</td>
</tr>
<tr>
<td></td>
<td>InsertRepeat</td>
</tr>
<tr>
<td></td>
<td>SetDataComment</td>
</tr>
<tr>
<td></td>
<td>SetManualDiscrepancy</td>
</tr>
<tr>
<td></td>
<td>SetMiscDiscrepany</td>
</tr>
<tr>
<td></td>
<td>SetResponseData</td>
</tr>
<tr>
<td></td>
<td>SetUnivDiscrepany</td>
</tr>
<tr>
<td></td>
<td>WriteResponses</td>
</tr>
<tr>
<td>Log-In</td>
<td>CreateRdci</td>
</tr>
<tr>
<td></td>
<td>DeleteRdci</td>
</tr>
<tr>
<td></td>
<td>FetchRdci</td>
</tr>
<tr>
<td></td>
<td>FlushRdciRdcm</td>
</tr>
<tr>
<td></td>
<td>GetRdci</td>
</tr>
<tr>
<td></td>
<td>GetRdcm</td>
</tr>
<tr>
<td></td>
<td>GetRdcmArr</td>
</tr>
<tr>
<td></td>
<td>ProcessRdci</td>
</tr>
<tr>
<td></td>
<td>ProcessRdcm</td>
</tr>
<tr>
<td></td>
<td>SetExternalContext</td>
</tr>
<tr>
<td></td>
<td>SetRdci</td>
</tr>
<tr>
<td></td>
<td>SetRdcm</td>
</tr>
<tr>
<td></td>
<td>WriteRdciRdcm</td>
</tr>
<tr>
<td>Standalone</td>
<td>EnrollPatient</td>
</tr>
<tr>
<td></td>
<td>ExecuteMultivariate</td>
</tr>
<tr>
<td></td>
<td>SetActualEvent</td>
</tr>
<tr>
<td></td>
<td>SetPageStatus</td>
</tr>
</tbody>
</table>
ConnectOCL

Connects the user to an Oracle Clinical database in either Production or Test mode.

Syntax

```c
short int ConnectOCL(char *user,
                     char *password,
                     char *database,
                     short int mode,
                     double *sessionid);
```

Parameters

- `user` (in) The OCL database user name.
- `password` (in) The OCL database user password.
- `database` (in) The OCL database name.
- `mode` (in) Either OCL_TEST or OCL_PROD.
- `sessionid` (out) The session ID for the current session.

Return Value

SUCCESS or FAILURE or WARNING.

Comments

None.

Error Messages

<table>
<thead>
<tr>
<th>Number</th>
<th>Severity</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>284900</td>
<td>ERR</td>
<td>User does not have the privilege to call function in the current mode.</td>
</tr>
<tr>
<td>285000</td>
<td>ERR</td>
<td>Function called out of sequence.</td>
</tr>
<tr>
<td>285700</td>
<td>ERR</td>
<td>An open database connection already exists. Use DisconnectOCL to close</td>
</tr>
<tr>
<td></td>
<td></td>
<td>the connection.</td>
</tr>
<tr>
<td>297000</td>
<td>ERR</td>
<td>Null or invalid input parameters provided.</td>
</tr>
<tr>
<td>302200</td>
<td>ERR</td>
<td>Mode should be OCL_PROD or OCL_TEST.</td>
</tr>
<tr>
<td>303800</td>
<td>ERR</td>
<td>Cannot find location_code in the reference codelist for the current</td>
</tr>
<tr>
<td></td>
<td></td>
<td>connection.</td>
</tr>
<tr>
<td>304900</td>
<td>WRN</td>
<td>User has been granted too many roles: exceeds the maximum allowed.</td>
</tr>
<tr>
<td>305000</td>
<td>WRN</td>
<td>Too many messages.</td>
</tr>
</tbody>
</table>

Related Functions

DisconnectOCL, SetStudyContext, SetExternalContext
CreateRdci

Creates a new Received DCI for a patient.

Syntax

```
short int CreateRdci(RdciKeysRecord *rdci_keys_rec,
                     int rdcirdcm_mode,
                     RdciRecord *rdci_rec);
```

Parameters

- `rdci_keys_rec` (in) A structure of type RdciKeysRecord containing the key values of the API RDCI record to be created.
- `rdcirdcm_mode` (in) The mode to be used for executing this function. It also stays in effect as the RDCIRDCM mode up to the next call of either CreateRdci or FetchRdci. Values are INITIAL_LOGIN or KEY_CHANGES.
- `rdci_rec` (out) A structure of type RdciRecord that the function fills in with the content of the created API RDCI record.

Return Value

SUCCESS or FAILURE or WARNING.

Comments

The function creates an RDCI record in the API RDCI buffer using the keys passed in, and returns the contents of the API RDCI record created. The component items of an API RDCI record that are not component items of rdci_keys_rec, such as all the numeric ID items, are implicitly assigned by this function. You use this function to:

1. flush the RDCIRDCM buffer.
2. validate each individual non-null item passed in rdci_keys_rec.

All of these items must pass validation in order for the creation to take place; otherwise no creation takes place and the function returns FAILURE. The RDCI-RDCM buffer will still be empty as a result of the flush.

You use SetRdci to:

- assign values to the items of API RDCI record that are not assigned by CreateRdci.
- change the values of the items assigned by CreateRdci.

Error Messages

<table>
<thead>
<tr>
<th>Number</th>
<th>Severity</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>284900</td>
<td>ERR</td>
<td>User does not have the privilege to call function in the current mode.</td>
</tr>
<tr>
<td>285000</td>
<td>ERR</td>
<td>Function called out of sequence.</td>
</tr>
<tr>
<td>285900</td>
<td>ERR</td>
<td>No current OCL database connection open. Use ConnectOCL to connect to OCL database.</td>
</tr>
<tr>
<td>286600</td>
<td>ERR</td>
<td>Audit reason required and not provided.</td>
</tr>
</tbody>
</table>
Table 6–3 (Cont.) Error Messages

<table>
<thead>
<tr>
<th>Number</th>
<th>Severity</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>289800</td>
<td>ERR</td>
<td>This document already exists in the database.</td>
</tr>
<tr>
<td>290500</td>
<td>ERR</td>
<td>This site/investigator pair is invalid for study.</td>
</tr>
<tr>
<td>290600</td>
<td>ERR</td>
<td>Invalid investigator.</td>
</tr>
<tr>
<td>290700</td>
<td>ERR</td>
<td>Invalid site.</td>
</tr>
<tr>
<td>290800</td>
<td>ERR</td>
<td>Patient position is frozen.</td>
</tr>
<tr>
<td>290900</td>
<td>WRN</td>
<td>Patient not enrolled for this study.</td>
</tr>
<tr>
<td>291000</td>
<td>ERR</td>
<td>Patient position is invalid.</td>
</tr>
<tr>
<td>291200</td>
<td>ERR</td>
<td>DCI is inactive or invalid.</td>
</tr>
<tr>
<td>291300</td>
<td>ERR</td>
<td>[error message returned by OCL_CLIENT_PACK. Validate document]</td>
</tr>
<tr>
<td>291400</td>
<td>ERR</td>
<td>Clinical planned event is invalid for the current study.</td>
</tr>
<tr>
<td>294600</td>
<td>ERR</td>
<td>Document found in different study. Change study to access.</td>
</tr>
<tr>
<td>294900</td>
<td>WRN</td>
<td>Site is currently inactive.</td>
</tr>
<tr>
<td>295000</td>
<td>WRN</td>
<td>Investigator is currently inactive.</td>
</tr>
<tr>
<td>296600</td>
<td>ERR</td>
<td>Cannot preserve a lock when performing a rollback.</td>
</tr>
<tr>
<td>297000</td>
<td>ERR</td>
<td>Null or invalid input pointers provided.</td>
</tr>
<tr>
<td>297100</td>
<td>ERR</td>
<td>Changes pending.</td>
</tr>
<tr>
<td>299700</td>
<td>WRN</td>
<td>The data entered for this received DCI will be deleted.</td>
</tr>
<tr>
<td>304600</td>
<td>ERR</td>
<td>Date cannot exceed today’s date.</td>
</tr>
<tr>
<td>304700</td>
<td>ERR</td>
<td>Function does not exist.</td>
</tr>
<tr>
<td>305600</td>
<td>ERR</td>
<td>Invalid DCI date.</td>
</tr>
<tr>
<td>305700</td>
<td>ERR</td>
<td>Invalid DCI time.</td>
</tr>
<tr>
<td>308700</td>
<td>ERR</td>
<td>Cannot set RDCI time until RDCI short name is set.</td>
</tr>
<tr>
<td>308800</td>
<td>ERR</td>
<td>DCI short name is not applicable.</td>
</tr>
<tr>
<td>309100</td>
<td>ERR</td>
<td>Document number is not applicable.</td>
</tr>
<tr>
<td>309200</td>
<td>ERR</td>
<td>Patient is not applicable.</td>
</tr>
<tr>
<td>309400</td>
<td>ERR</td>
<td>Date is not applicable.</td>
</tr>
<tr>
<td>309600</td>
<td>ERR</td>
<td>Time is not applicable.</td>
</tr>
<tr>
<td>309800</td>
<td>ERR</td>
<td>Visit name is not applicable.</td>
</tr>
<tr>
<td>310000</td>
<td>ERR</td>
<td>Subevent number is not applicable.</td>
</tr>
<tr>
<td>310200</td>
<td>ERR</td>
<td>Site is not applicable.</td>
</tr>
<tr>
<td>310400</td>
<td>ERR</td>
<td>Investigator is not applicable.</td>
</tr>
<tr>
<td>310600</td>
<td>ERR</td>
<td>Blank flag is not applicable.</td>
</tr>
<tr>
<td>310800</td>
<td>ERR</td>
<td>Comment is not applicable.</td>
</tr>
<tr>
<td>311600</td>
<td>ERR</td>
<td>DCI document number can not be updated to null.</td>
</tr>
</tbody>
</table>
Table 6–3  (Cont.) Error Messages

<table>
<thead>
<tr>
<th>Number</th>
<th>Severity</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>311700</td>
<td>ERR</td>
<td>Document number must not have any lower case.</td>
</tr>
</tbody>
</table>

Related Functions

SetRdci, GetRdci, ProcessRdci, FetchRdci, WriteRdciRdcm
DeleteRdci

Deletes the currently buffered RDCI record from the database along with all of its accompanying RDCMs, Responses, Discrepancies, and Actual Events (if not referenced by another RDCI or RDCM). DeleteRdci also performs a database commit and clears the API RDCIRDCM buffer.

Syntax

short int DeleteRdci();

Parameters

None.

Return Value

SUCCESS or FAILURE.

Comments

None.

Error Messages

<table>
<thead>
<tr>
<th>Number</th>
<th>Severity</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>284900</td>
<td>ERR</td>
<td>User does not have the privilege to call function in the current mode.</td>
</tr>
<tr>
<td>285000</td>
<td>ERR</td>
<td>Function called out of sequence.</td>
</tr>
<tr>
<td>285900</td>
<td>ERR</td>
<td>No current OCL database connection open. Use ConnectOCL to connect to OCL database.</td>
</tr>
<tr>
<td>297100</td>
<td>ERR</td>
<td>Changes pending.</td>
</tr>
<tr>
<td>306200</td>
<td>ERR</td>
<td>RDCI record being deleted does not exist in the database.</td>
</tr>
<tr>
<td>306800</td>
<td>ERR</td>
<td>Invalid audit reason.</td>
</tr>
<tr>
<td>312200</td>
<td>ERR</td>
<td>Cannot delete Received DCI as it is Data Locked.</td>
</tr>
<tr>
<td>317800</td>
<td>ERR</td>
<td>Cannot delete accessible Received DCI in Initial Login Mode.</td>
</tr>
<tr>
<td>659700</td>
<td>ERR</td>
<td>No default audit reason.</td>
</tr>
<tr>
<td>659800</td>
<td>ERR</td>
<td>More than one default audit reason found.</td>
</tr>
<tr>
<td>660000</td>
<td>ERR</td>
<td>Cannot use system-generated audit reason.</td>
</tr>
</tbody>
</table>

Related Functions

CreateRdci, FetchRdci, GetRdci, ProcessRdci, SetRdci, WriteRdciRdcm
DeleteRepeat

Deletes a question group repeat from the API responses buffer.

Syntax

```c
short int DeleteRepeat(RepeatId*repeat_identifier);
```

Parameters

*repeat_identifier* (in) A parameter of type RepeatId, which contains the unique identifier for the question group repeat and the AuditInfo structure for this repeat.

Return Value

SUCCESS or FAILURE.

Comments

This function re-sequences all repeats following the one that was deleted, if any, by subtracting 1 from the repeat sequence number for all questions in the group in those repeats.

Error Messages

<table>
<thead>
<tr>
<th>Number</th>
<th>Severity</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>284900</td>
<td>ERR</td>
<td>User does not have the privilege to call function in the current mode.</td>
</tr>
<tr>
<td>285000</td>
<td>ERR</td>
<td>Function called out of sequence.</td>
</tr>
<tr>
<td>285900</td>
<td>ERR</td>
<td>No current OCL database connection open. Use ConnectOCL to connect to OCL database.</td>
</tr>
<tr>
<td>286600</td>
<td>ERR</td>
<td>Audit reason required and not provided.</td>
</tr>
<tr>
<td>297100</td>
<td>ERR</td>
<td>DCM question group does not exist in the DCM.</td>
</tr>
<tr>
<td>287800</td>
<td>ERR</td>
<td>Cannot delete repeats in browse mode.</td>
</tr>
<tr>
<td>287900</td>
<td>ERR</td>
<td>Cannot delete repeat for a non-repeating question group.</td>
</tr>
<tr>
<td>288000</td>
<td>ERR</td>
<td>Repeat sn does not exist for DCM question group.</td>
</tr>
<tr>
<td>288100</td>
<td>ERR</td>
<td>Cannot delete for repeating defaults when repeat is less than the maximum repeats for DCM question group.</td>
</tr>
<tr>
<td>297000</td>
<td>ERR</td>
<td>Null or invalid input pointers provided.</td>
</tr>
<tr>
<td>302600</td>
<td>ERR</td>
<td>No existing manual discrepancy for this question.</td>
</tr>
<tr>
<td>306800</td>
<td>ERR</td>
<td>Invalid audit reason.</td>
</tr>
<tr>
<td>313600</td>
<td>WRN</td>
<td>You have privileged update and have deleted repeating default when repeat sn is less than the maximum repeats for DCM question group.</td>
</tr>
<tr>
<td>659700</td>
<td>ERR</td>
<td>No default audit reason.</td>
</tr>
<tr>
<td>659800</td>
<td>ERR</td>
<td>More than one default audit reason found.</td>
</tr>
<tr>
<td>660000</td>
<td>ERR</td>
<td>Cannot use system-generated audit reason.</td>
</tr>
<tr>
<td>685900</td>
<td>ERR</td>
<td>Audit comment for Deletion of Repeat cannot have more than 158 bytes.</td>
</tr>
</tbody>
</table>
Related Functions

InitializeRdcmResponses, InsertRepeat
DisconnectOCL

Ends the current Oracle Clinical database connection.

Syntax

```
short int DisconnectOCL();
```

Parameters

None.

Return Value

SUCCESS or FAILURE.

Comments

None.

Error Messages

<table>
<thead>
<tr>
<th>Number</th>
<th>Severity</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>284900</td>
<td>ERR</td>
<td>User does not have the privilege to call function in the current mode.</td>
</tr>
<tr>
<td>285000</td>
<td>ERR</td>
<td>Function called out of sequence.</td>
</tr>
<tr>
<td>285900</td>
<td>ERR</td>
<td>No current OCL database connection open. Use ConnectOCL to connect to OCL database.</td>
</tr>
<tr>
<td>286000</td>
<td>ERR</td>
<td>Cannot disconnect while changes are pending for RDCI/RDCM work.</td>
</tr>
<tr>
<td>302300</td>
<td>ERR</td>
<td>Cannot disconnect while changes are pending for responses work.</td>
</tr>
</tbody>
</table>

Related Function

ConnectOCL
EnrollPatient

Enrolls a patient in the current study.

Syntax

```c
short int EnrollPatient(double pat_pos_id,
            PatientRecord *pat_rec);
```

Parameters

- `pat_pos_id` (in) The PATIENT_POSITION_ID for the patient you want to enroll. This parameter is the unique identifier in the database.
- `pat_rec` (in) A structure of type `PatientRecord`.

Return Value

SUCCESS or FAILURE or WARNING.

Comments

This function performs a database commit.

Error Messages

<table>
<thead>
<tr>
<th>Number</th>
<th>Severity</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>285000</td>
<td>ERR</td>
<td>Function called out of sequence.</td>
</tr>
<tr>
<td>285900</td>
<td>ERR</td>
<td>No current OCL database connection open. Use ConnectOCL to connect to OCL database.</td>
</tr>
<tr>
<td>288900</td>
<td>ERR</td>
<td>Cannot enroll a patient when RDCI is locked.</td>
</tr>
<tr>
<td>297000</td>
<td>ERR</td>
<td>Null or invalid input pointers provided.</td>
</tr>
<tr>
<td>302400</td>
<td>WRN</td>
<td>Zero rows being updated</td>
</tr>
<tr>
<td>303600</td>
<td>ERR</td>
<td>Invalid patient.</td>
</tr>
<tr>
<td>304800</td>
<td>ERR</td>
<td>User is not authorized to call this function.</td>
</tr>
</tbody>
</table>

Related Functions

None.
**ExecuteMultivariate**

Launches multivariate Procedure execution.

**Syntax**

```c
short int ExecuteMultivariate(MvInfo *mv,
   DCIAPIFlag preserve_lock,
   double *return_job_id);
```

**Parameters**

- `mv` (in) Criteria for multivariate validation submission. This parameter is a structure of type `MvInfo`.
- `preserve_lock` (in) A flag indicating whether the lock on the API RDCI record should be preserved or released. If the value is TRUE, the lock remains; if the value is FALSE, the lock is released.
- `return_job_id` (out) A unique identifier of the submitted job.

**Return Value**

SUCCESS or FAILURE or WARNING.

**Comments**

This function allows the calling application to submit multivariate Procedures for execution. Execution is performed on demand for a given patient, either on a DCM basis or not, depending upon the criteria chosen for submission. Once this function is called, control is immediately returned to the application; all processing takes place in the background. As soon as the function completes its processing, the results of the execution become available in Oracle Clinical tables. For information about how to define the execution context for a Procedure, see "Procedure Classification" on page 4-6.

**Results polling**

From the API submission, the returned argument (return_job_id) acts as a handle for subsequent status/results polling.

Execution is tracked in a table called MV_EXECUTION_LOG, which contains the information that is listed in the following table.

<table>
<thead>
<tr>
<th>Column Name</th>
<th>Type/Size</th>
<th>Nullability</th>
<th>Possible Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>JOB_ID</td>
<td>NUMBER</td>
<td>NOT NULL</td>
<td></td>
</tr>
<tr>
<td>SESSION_ID</td>
<td>NUMBER</td>
<td>NOT NULL</td>
<td></td>
</tr>
<tr>
<td>EXECUTION_STATUS</td>
<td>VARCHAR2(15)</td>
<td>NOT NULL</td>
<td>SUBMITTED, EXECUTING, COMPLETED, SUCCESS, WARNING, FAILURE</td>
</tr>
<tr>
<td>OUTCOME_STATUS</td>
<td>VARCHAR2(15)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EXECUTION_SUBMITTED_TS</td>
<td>DATE</td>
<td>NOT NULL</td>
<td></td>
</tr>
</tbody>
</table>
The client application can:
- check EXECUTION_STATUS at any time by using the JOB_ID unique identifier.
- browse all submissions for a given user session by querying the SESSION_ID field.

When the job is submitted a corresponding row is added to the table with an:
- EXECUTION_STATUS of SUBMITTED.
- EXECUTION_SUBMITTED TS of SYSDATE.

When DBMS_JOB starts executing the job:
- EXECUTION_STATUS is updated to EXECUTING.
- EXECUTION_START_TS is updated to SYSDATE.

Finally, upon execution completion:
- EXECUTION_STATUS changes to COMPLETED.
- OUTCOME_STATUS updates accordingly.
- The total number of new discrepancies is now available in TOT_NEW_DISC.
- The total number of unchanged discrepancies is now available in TOTSAME_DISC.
- The total number of obsolete discrepancies is now available in TOT_OBS_DISC.
- EXECUTION_END_TS is populated with SYSDATE.

Discrepancy information can be queried from the DISCREPANCY_MANAGEMENT view which is described in the Oracle Clinical Stable Interface TRM.

### Error Messages

<table>
<thead>
<tr>
<th>Number</th>
<th>Severity</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>284900</td>
<td>ERR</td>
<td>User does not have the privilege to call function in the current mode.</td>
</tr>
<tr>
<td>285000</td>
<td>ERR</td>
<td>Function called out of sequence.</td>
</tr>
<tr>
<td>Number</td>
<td>Severity</td>
<td>Message</td>
</tr>
<tr>
<td>----------</td>
<td>----------</td>
<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td>285900</td>
<td>ERR</td>
<td>No current OCL database connection open. Use ConnectOCL to connect to OCL database.</td>
</tr>
<tr>
<td>291000</td>
<td>ERR</td>
<td>Patient position is invalid.</td>
</tr>
<tr>
<td>297100</td>
<td>ERR</td>
<td>Changes pending.</td>
</tr>
<tr>
<td>297200</td>
<td>ERR</td>
<td>Invalid execution context.</td>
</tr>
<tr>
<td>297300</td>
<td>ERR</td>
<td>Procedure ID is required for SINGLE execution context.</td>
</tr>
<tr>
<td>297400</td>
<td>ERR</td>
<td>Procedure version is required for SINGLE execution context.</td>
</tr>
<tr>
<td>297500</td>
<td>ERR</td>
<td>Invalid Procedure (nonexistent, retired or pre-3.1 style).</td>
</tr>
<tr>
<td>297600</td>
<td>WRN</td>
<td>Procedure is not active or needs to be regenerated.</td>
</tr>
<tr>
<td>297700</td>
<td>WRN</td>
<td>Procedure is not compiled.</td>
</tr>
<tr>
<td>297800</td>
<td>ERR</td>
<td>DCM ID is required for ON-LINE/DCM execution context.</td>
</tr>
<tr>
<td>297900</td>
<td>ERR</td>
<td>DCM ID does not apply for ON-LINE execution context.</td>
</tr>
<tr>
<td>298000</td>
<td>ERR</td>
<td>DCM ID does not apply for SINGLE execution context.</td>
</tr>
<tr>
<td>298100</td>
<td>ERR</td>
<td>Procedure ID and version must be -1 for ON-LINE and ON-LINE/DCM execution contexts.</td>
</tr>
<tr>
<td>298200</td>
<td>ERR</td>
<td>Mandatory patient position ID is missing.</td>
</tr>
<tr>
<td>298300</td>
<td>ERR</td>
<td>Invalid preserve lock value.</td>
</tr>
<tr>
<td>298400</td>
<td>ERR</td>
<td>Mandatory clinical study ID is missing.</td>
</tr>
<tr>
<td>298500</td>
<td>ERR</td>
<td>Mandatory clinical study version number is missing.</td>
</tr>
<tr>
<td>298600</td>
<td>ERR</td>
<td>Invalid mode value.</td>
</tr>
<tr>
<td>298700</td>
<td>ERR</td>
<td>Invalid debug flag value.</td>
</tr>
<tr>
<td>298800</td>
<td>ERR</td>
<td>Mandatory execution context is missing.</td>
</tr>
<tr>
<td>300200</td>
<td>ERR</td>
<td>This patient is frozen.</td>
</tr>
<tr>
<td>303600</td>
<td>ERR</td>
<td>Invalid patient.</td>
</tr>
<tr>
<td>304400</td>
<td>WRN</td>
<td>No procedures qualify for execution.</td>
</tr>
<tr>
<td>304500</td>
<td>ERR</td>
<td>Cannot preserve lock as the Received DCI is not locked.</td>
</tr>
<tr>
<td>304600</td>
<td>ERR</td>
<td>Function does not exist.</td>
</tr>
<tr>
<td>304700</td>
<td>ERR</td>
<td>Privilege does not exist.</td>
</tr>
<tr>
<td>304800</td>
<td>ERR</td>
<td>User is not authorized to call this function.</td>
</tr>
<tr>
<td>313800</td>
<td>ERR</td>
<td>User is not authorized to call ExecuteMultivariate (not granted RXCLIN_MOD privilege)</td>
</tr>
</tbody>
</table>

### Related Functions

None.
FetchRdci

Use this function to fetch an existing header RDCI record from the database. FetchRdci pulls an RDCI record, along with all its underlying RDCM records, from the database into the API RDCIRDCM buffer. It returns the API RDCI record and an array of RECEIVED_DCM_IDs of all the API RDCM records.

Syntax

```c
short int FetchRdci(double received_dci_id,
    DCIAPIFlag lock_flag,
    int rdcirdcm_mode,
    RdciRecord *rdci_rec,
    RdcmArr *rdcm_arr);
```

Parameters

- `received_dci_id` (in) The received_dci_id of the RDCI record to be fetched. Use the stable interface to retrieve the correct ID. See the Oracle Clinical Stable Interface TRM for the documented data model.
- `lock_flag` (in) A flag indicating whether the specified RDCI record should be locked or not. Values are true for a locked record or false for an unlocked record.
- `rdcirdcm_mode` (in) The mode to be used for executing this function. It also stays in effect as the RDCIRDCM mode up to the next call of either CreateRdci or FetchRdci. Values are initial_log-in, first_pass_entry, key_changes, update or browse.
- `rdci_rec` (out) A structure of type RdciRecord that the function fills in with the content of the just-populated API RDCI record.
- `rdcm_arr` (out) A structure of type RdcmArr consisting of an array of the RECEIVED_DCM_IDs of all underlying RDCM records fetched along with the specified RDCI record, and the number of elements in that array that the function fills in.

Return Value

SUCCESS or FAILURE or WARNING.

Comments

FetchRdci flushes the RDCIRDCM buffer, then searches the database for an RDCI record whose received_dci_id equals the parameter received_dci_id. If FetchRdci finds a record, the function:

1. fetches the record, in the specified locking mode, into the API RDCI buffer.
2. fetches all the underlying RDCM records into the API RDCM buffer.
3. returns the contents of the populated API RDCI record in the parameter rdci_rec.
4. returns the RECEIVED_DCM_IDs of all the populated API RDCM records in the array component of the parameter rdcm_arr.

However, if FetchRdci does not find an appropriate record, it fails. It also fails if it finds the record but cannot get the lock required by the parameter lock_flag. A FAILURE happening at any point during the steps above causes the function to stop with FAILURE without reversing the effect of the flush.
**Error Messages**

**Table 6–10 Error Messages for FetchRdci**

<table>
<thead>
<tr>
<th>Number</th>
<th>Severity</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>284900</td>
<td>ERR</td>
<td>User does not have the privilege to call function in the current mode.</td>
</tr>
<tr>
<td>285000</td>
<td>ERR</td>
<td>Function called out of sequence.</td>
</tr>
<tr>
<td>285900</td>
<td>ERR</td>
<td>No current OCL database connection open. Use ConnectOCL to connect to OCL database.</td>
</tr>
<tr>
<td>286300</td>
<td>ERR</td>
<td>Locking mode incompatible with data entry mode.</td>
</tr>
<tr>
<td>286600</td>
<td>ERR</td>
<td>Audit reason required and not provided.</td>
</tr>
<tr>
<td>293800</td>
<td>WRN</td>
<td>You are working with a data locked record and have privileged update.</td>
</tr>
<tr>
<td>294600</td>
<td>ERR</td>
<td>Document found in different study. Change study to access.</td>
</tr>
<tr>
<td>296600</td>
<td>ERR</td>
<td>Cannot preserve lock when performing a rollback.</td>
</tr>
<tr>
<td>296700</td>
<td>ERR</td>
<td>Unable to lock RDCI.</td>
</tr>
<tr>
<td>297000</td>
<td>ERR</td>
<td>Null or invalid input pointers provided.</td>
</tr>
<tr>
<td>297100</td>
<td>ERR</td>
<td>Changes pending.</td>
</tr>
<tr>
<td>299000</td>
<td>ERR</td>
<td>Only browse mode can be performed from a frozen study.</td>
</tr>
<tr>
<td>299200</td>
<td>ERR</td>
<td>RDCI status is incompatible with querying the record in first-pass data entry mode.</td>
</tr>
<tr>
<td>299300</td>
<td>ERR</td>
<td>RDCI is accessible. You can query only inaccessible documents in first-pass data entry mode.</td>
</tr>
<tr>
<td>299400</td>
<td>ERR</td>
<td>Operator comment in browse is disabled. You cannot fetch the document in locking mode.</td>
</tr>
<tr>
<td>299500</td>
<td>ERR</td>
<td>RDCI is inaccessible. You can query only accessible documents in browse mode.</td>
</tr>
<tr>
<td>299600</td>
<td>ERR</td>
<td>Owning location of the patient is different from that of the database.</td>
</tr>
<tr>
<td>300700</td>
<td>WRN</td>
<td>Patient is frozen. The RDCI record will behave as if it were fetched in non-locking mode.</td>
</tr>
<tr>
<td>300800</td>
<td>WRN</td>
<td>Data on this RDCI is locked. The RDCI record will behave as if it were fetched in non-locking mode.</td>
</tr>
<tr>
<td>304600</td>
<td>ERR</td>
<td>Function does not exist.</td>
</tr>
<tr>
<td>304700</td>
<td>ERR</td>
<td>Privilege does not exist.</td>
</tr>
<tr>
<td>306300</td>
<td>ERR</td>
<td>Received DCI is inactive or invalid.</td>
</tr>
<tr>
<td>306500</td>
<td>ERR</td>
<td>Unable to release lock.</td>
</tr>
</tbody>
</table>

**Related Functions**

GetRdci, SetRdci, ProcessRdci, CreateRdci, WriteRdciRdc
FlushRdcIRdc

Flushes information from the API RDCIRDCM buffer and releases any locks on the
database records that were buffered there.

Syntax

short int FlushRdcIRdc (DCIAPIFlag discard_changes);

Parameters

discard_changes (in) A flag indicating whether or not this function should discard
any changes pending in the RDCIRDCM buffer prior to starting its work to flush the
buffer. If the value is FALSE the function returns an error if there are changes pending.

Return Value

SUCCESS or FAILURE.

Comments

This function only affects the information in the RDCIRDCM buffer. It does not affect
buffered response data. To flush the data, see FlushResponses.

Error Messages

<table>
<thead>
<tr>
<th>Number</th>
<th>Severity</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>284900</td>
<td>ERR</td>
<td>User does not have the privilege to call function in the current mode.</td>
</tr>
<tr>
<td>285000</td>
<td>ERR</td>
<td>Function called out of sequence.</td>
</tr>
<tr>
<td>285900</td>
<td>ERR</td>
<td>No current OCL database connection open. Use ConnectOCL to connect to OCL database.</td>
</tr>
<tr>
<td>299600</td>
<td>ERR</td>
<td>Cannot preserve lock when performing a rollback.</td>
</tr>
<tr>
<td>297100</td>
<td>ERR</td>
<td>Changes pending.</td>
</tr>
<tr>
<td>304600</td>
<td>ERR</td>
<td>Function does not exist.</td>
</tr>
<tr>
<td>304700</td>
<td>ERR</td>
<td>Privilege does not exist.</td>
</tr>
<tr>
<td>306500</td>
<td>ERR</td>
<td>Unable to release lock.</td>
</tr>
</tbody>
</table>

Related Function

WriteRdcIRdc
FlushResponses

Flushes information from the API Responses buffer, then either preserves the lock on the API RDCI record or releases it, based on the value of the parameter preserve_lock.

Syntax

```c
short int FlushResponses(DCIAPIFlag discard_changes,
                         DCIAPIFlag preserve_lock);
```

Parameters

discard_changes (in) A flag indicating whether this function should discard any changes pending in the Responses buffer prior to starting its work to flush the buffer. If the value is FALSE the function returns an error if there are changes pending, leaving the buffer intact.

preserve_lock (in) A flag indicating whether the lock on the API RDCI record should be preserved or released. If the value is:

- TRUE – the lock remains.
- FALSE – the lock on the API RDCI record is released.

Return Value

SUCCESS or FAILURE.

Comments

This function does not affect the RDCIRDCM buffer. To flush the header file, see FlushRdciRdcm.

Error Messages

<table>
<thead>
<tr>
<th>Number</th>
<th>Severity</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>284900</td>
<td>ERR</td>
<td>User does not have the privilege to call function in the current mode.</td>
</tr>
<tr>
<td>285000</td>
<td>ERR</td>
<td>Function called out of sequence.</td>
</tr>
<tr>
<td>285900</td>
<td>ERR</td>
<td>No current OCL database connection open. Use ConnectOCL to connect to OCL database.</td>
</tr>
<tr>
<td>286600</td>
<td>ERR</td>
<td>Audit reason required and not provided.</td>
</tr>
<tr>
<td>288300</td>
<td>ERR</td>
<td>The API RDCI record is not locked.</td>
</tr>
<tr>
<td>294200</td>
<td>ERR</td>
<td>An error occurred while processing the Received DCI structure and updating the PATIENT_DM_TRACKING table.</td>
</tr>
<tr>
<td>294300</td>
<td>ERR</td>
<td>An error occurred while processing the Received DCM structure and updating the received DCI.</td>
</tr>
<tr>
<td>297100</td>
<td>ERR</td>
<td>Changes pending.</td>
</tr>
<tr>
<td>304600</td>
<td>ERR</td>
<td>Function does not exist.</td>
</tr>
<tr>
<td>304700</td>
<td>ERR</td>
<td>Privilege does not exist.</td>
</tr>
<tr>
<td>306500</td>
<td>ERR</td>
<td>Unable to release lock.</td>
</tr>
</tbody>
</table>
Related Functions

SetResponseData, GetResponse, WriteResponses
GetError

Returns the next error message in the internal error stack. Depending upon the error that is generated, this function reflects expected API errors or internal Oracle or API errors.

Syntax

short int GetError(ErrorInfo *err_info);

Parameters

*err_info (out) – This parameter contains the information about the error in a structure of type ErrorInfo.

Return Value

SUCCESS or FAILURE.

Comments

If any unexpected internal database errors are encountered during the execution of the APIs — running out of table space, for example — the call stack and the error message encountered by the deepest routine are saved in an internal error stack. Each time GetError is called, the next entry in the stack, if any, is returned; otherwise an error is raised.

Error Messages

Table 6–13 Error Messages for GetError

<table>
<thead>
<tr>
<th>Number</th>
<th>Severity</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>284900</td>
<td>ERR</td>
<td>User does not have the privilege to call function in the current mode.</td>
</tr>
<tr>
<td>285000</td>
<td>ERR</td>
<td>Function called out of sequence.</td>
</tr>
</tbody>
</table>

Related Function

GetErrorStackSize
GetErrorStackSize

Returns the depth of the error message stack. This depth data allows you to process all of the returned error information.

Syntax

```c
short int GetErrorStackSize(int *size);
```

Parameters

`size` (out) Set to the depth of the error message stack.

Return Value

SUCCESS or FAILURE.

Comments

If any unexpected internal database errors are encountered during the execution of the APIs — running out of table space, for example — the call stack and the error message encountered by the deepest routine are saved in an internal error stack. This function returns the depth of the stack.

Error Messages

<table>
<thead>
<tr>
<th>Number</th>
<th>Severity</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>284900</td>
<td>ERR</td>
<td>User does not have the privilege to call function in the current mode.</td>
</tr>
<tr>
<td>285000</td>
<td>ERR</td>
<td>Function called out of sequence.</td>
</tr>
</tbody>
</table>

Related Function

GetError
GetManualDiscrepancy

Returns manual discrepancy information, if any, for the response. Manual discrepancies are also referred to as operator comments. Operator comments often consist of notes about data that appears to be incorrect even though Oracle Clinical has not flagged it for any potential errors. For example, an operator might add a comment that the handwriting for a data value must be reviewed by another person.

Syntax

```c
short int GetManualDiscrepancy(ResponseId *response_identifier,
                                DiscInfo *return_discrepancy_info);
```

Parameters

- `response_identifier` (in) contains the unique identifier for this response in a data structure of type `ResponseId`.
- `return_discrepancy_info` (out) contains the manual discrepancy information for this response in a structure of type `DiscInfo`.

Return Value

SUCCESS or FAILURE.

Comments

The `response_identifier` uniquely identifies the response that is being processed by the external system. Upon calling this function Oracle Clinical locates the response in the database and places the manual discrepancy information for this response into the `disc_info` structure.

If this is an existing document, the buffers are populated with data from the database. If some manual discrepancy has been previously added for this response, that data would be returned. Otherwise NULL values would be used to populate the output structures.

If this is a new document, and `SetManualDiscrepancy` has never been called for this response, NULL values would be used to populate the input variable. Otherwise, the data from the last `SetManualDiscrepancy` call would be returned. This applies also in the case of existing documents.

Error Messages

<table>
<thead>
<tr>
<th>Number</th>
<th>Severity</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>284900</td>
<td>ERR</td>
<td>User does not have the privilege to call function in the current mode.</td>
</tr>
<tr>
<td>285000</td>
<td>ERR</td>
<td>Function called out of sequence.</td>
</tr>
<tr>
<td>285900</td>
<td>ERR</td>
<td>No current OCL database connection open. Use ConnectOCL to connect to OCL database.</td>
</tr>
<tr>
<td>286600</td>
<td>ERR</td>
<td>Audit reason required and not provided.</td>
</tr>
<tr>
<td>286700</td>
<td>ERR</td>
<td>Cannot locate the corresponding DCM question in the internal OCL buffers for the DCM question ID passed.</td>
</tr>
<tr>
<td>286800</td>
<td>ERR</td>
<td>No response in the internal buffers for the question.</td>
</tr>
</tbody>
</table>
Table 6–15  (Cont.)  Error Messages for GetManualDiscrepancy

<table>
<thead>
<tr>
<th>Number</th>
<th>Severity</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>286900</td>
<td>ERR</td>
<td>No existing univariate discrepancy for the question.</td>
</tr>
<tr>
<td>287000</td>
<td>ERR</td>
<td>DCM question and DCM question group combination does not exist in DCM.</td>
</tr>
<tr>
<td>287100</td>
<td>ERR</td>
<td>DCM question group does not exist in DCM.</td>
</tr>
<tr>
<td>288000</td>
<td>ERR</td>
<td>Repeat sn does not exist for DCM question group.</td>
</tr>
<tr>
<td>302700</td>
<td>ERR</td>
<td>No existing manual discrepancy for the question.</td>
</tr>
</tbody>
</table>

Related Functions

InitializeRdcmResponses, SetManualDiscrepancy
GetNumRows

Returns the number of rows for a question group. This information might be useful if you are allocating space to hold returned values.

Syntax

```c
short int GetNumRows(double dcm_group_id,
             int *num_rows);
```

Parameters

- `dcm_group_id` (in) The question_group_id of the DCM question group.
- `num_rows` (out) The number of rows for this DCM question group.

Return Value

`SUCCESS` or `FAILURE`.

Comments

The group_identifier uniquely identifies the question_group. Upon calling this function Oracle Clinical returns the number of rows that are present for this group in the internal buffer.

Error Messages

<table>
<thead>
<tr>
<th>Number</th>
<th>Severity</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>284900</td>
<td>ERR</td>
<td>User does not have the privilege to call function in the current mode.</td>
</tr>
<tr>
<td>285000</td>
<td>ERR</td>
<td>Function called out of sequence.</td>
</tr>
<tr>
<td>285900</td>
<td>ERR</td>
<td>No current OCL database connection open. Use ConnectOCL to connect to OCL database.</td>
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<td>286600</td>
<td>ERR</td>
<td>Audit reason required and not provided.</td>
</tr>
<tr>
<td>304600</td>
<td>ERR</td>
<td>Function does not exist.</td>
</tr>
<tr>
<td>304700</td>
<td>ERR</td>
<td>Privilege does not exist.</td>
</tr>
<tr>
<td>308600</td>
<td>ERR</td>
<td>Record changed by another user.</td>
</tr>
</tbody>
</table>

Related Functions

- `InitializeRdcmResponses`
- `InsertRepeat`
- `DeleteRepeat`
GetQuestGroupId

Returns the DCM question group ID for the DCM question group. As an alternative, you can query the stable views for this information. See the Oracle Clinical Stable Interface TRM for the documented data model.

Syntax

```c
short int GetQuestGroupId(GroupId *group_identifier,
    double *group_id);
```

Parameters

- `group_identifier` (in) contains the unique name of the DCM question group in a data structure of type `GroupId`.
- `group_id` (out) The internal question_group_id for the DCM question group identified by the group name.

Return Value

SUCCESS or FAILURE.

Comments

The `group_identifier` uniquely identifies the DCM question group. Upon calling this function Oracle Clinical locates the group in its internal structure and returns the `group_id` DCM question. The current state of the internal buffers — that is, the current DCM and subset_number — determines the behavior of Oracle Clinical.

Error Messages

<table>
<thead>
<tr>
<th>Table 6–17</th>
<th>Error Messages for GetQuestGroupId</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number</strong></td>
<td><strong>Severity</strong></td>
</tr>
<tr>
<td>284900</td>
<td>ERR</td>
</tr>
<tr>
<td>285000</td>
<td>ERR</td>
</tr>
<tr>
<td>285900</td>
<td>ERR</td>
</tr>
<tr>
<td>286600</td>
<td>ERR</td>
</tr>
<tr>
<td>304600</td>
<td>ERR</td>
</tr>
<tr>
<td>304700</td>
<td>ERR</td>
</tr>
</tbody>
</table>

Related Functions

GetResponse, GetQuestionId
GetQuestionId

Returns the DCM question_id for the DCM question. As an alternative, you can query the stable views for this information. See the *Oracle Clinical Stable Interface TRM* for the documented data model.

Syntax

```c
short int GetQuestionId(QuestionId *question_identifier,
                        double *question_id);
```

Parameters

- `question_identifier` *(in)* contains the unique identifier for the question in a data structure of type `QuestionId`.
- `question_id` *(out)* The internal dcm_question_id for the DCM question identified by the `question_identifier`.

Return Value

SUCCESS or FAILURE.

Comments

The `question_identifier` uniquely identifies the group that is being processed by the external system. Upon calling this function Oracle Clinical locates the question in its internal structure and gets the `question_id`. Oracle Clinical functions based on the current state of its internal buffers, that is, the current DCM and the subset_number.

Error Messages

<table>
<thead>
<tr>
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<th>Severity</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
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<td>ERR</td>
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<tr>
<td>285000</td>
<td>ERR</td>
<td>Function called out of sequence.</td>
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<td>285900</td>
<td>ERR</td>
<td>No current OCL database connection open. Use ConnectOCL to connect to OCL database.</td>
</tr>
<tr>
<td>286600</td>
<td>ERR</td>
<td>Audit reason required and not provided.</td>
</tr>
<tr>
<td>286700</td>
<td>ERR</td>
<td>Cannot locate the corresponding DCM question in the internal OCL buffers for the DCM question ID passed.</td>
</tr>
<tr>
<td>304600</td>
<td>ERR</td>
<td>Function does not exist.</td>
</tr>
<tr>
<td>304700</td>
<td>ERR</td>
<td>Privilege does not exist.</td>
</tr>
</tbody>
</table>

Related Functions

- GetResponse, GetQuestGroupId
GetRdci

Returns the RDCI structure from the API buffers. This function is necessary when you call WriteRdciRdcm with preserve lock. After calling WriteRdciRdcm, call GetRdci to synchronize the information on the RDCI with the information in the buffer that was updated by WriteRdciRdcm. You may then begin data entry by calling InitializeRdcmResponses.

Syntax

short int GetRdci(RdciRecord *rdci_rec);

Parameters

*rdci_rec (out) contains the contents of the API RDCI record in a data structure of type RdciRecord.

Return Value

SUCCESS or FAILURE.

Comments

This function fails if the API RDCI buffer is empty. In order to:

- populate an empty API RDCI buffer, see CreateRdci and FetchRdci.
- change the contents of the API RDCI record, see SetRdci.
- process the API RDCI record as a unit, see ProcessRdci.

Error Messages

<table>
<thead>
<tr>
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<th>Severity</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>284900</td>
<td>ERR</td>
<td>User does not have the privilege to call function in the current mode.</td>
</tr>
<tr>
<td>285000</td>
<td>ERR</td>
<td>Function called out of sequence.</td>
</tr>
<tr>
<td>285900</td>
<td>ERR</td>
<td>No current OCL database connection open. Use ConnectOCL to connect to OCL database.</td>
</tr>
<tr>
<td>286600</td>
<td>ERR</td>
<td>Audit reason required and not provided.</td>
</tr>
<tr>
<td>297000</td>
<td>ERR</td>
<td>Null or invalid input pointers provided.</td>
</tr>
<tr>
<td>304600</td>
<td>ERR</td>
<td>Function does not exist.</td>
</tr>
<tr>
<td>304700</td>
<td>ERR</td>
<td>Privilege does not exist.</td>
</tr>
</tbody>
</table>

Related Functions

SetRdci, ProcessRdci, CreateRdci, FetchRdci, WriteRdciRdcm
GetRdcm

Returns the contents of a specific API RDCM record. Typically, you call this function after calling FetchRdci for an existing document or ProcessRdci for a new document.

Syntax

```c
short int GetRdcm(double received_dcm_id,
                  RdcmRecord *rdcm_rec);
```

Parameters

- `received_dcm_id` (in) The RECEIVED_DCM_ID of the API RDCM record to be returned.
- `rdcm_rec` (out) contains the contents of the specified API RDCM record in a data structure of type RdcmRecord.

Return Value

SUCCESS or FAILURE.

Comments

This function fails if:

- the API RDCI buffer is empty.
- there are changes pending in the API RDCI buffer that have not yet been processed through a call to ProcessRdci.
- there is no API RDCM record whose RECEIVED_DCM_ID equals the parameter received_dcm_id.

In order to:

- populate an empty API RDCI buffer, see FetchRdci or CreateRdci.
- change the contents of a certain API RDCM record, see SetRdcm.
- process an API RDCM record as a unit, see ProcessRdcm.

Error Messages

<table>
<thead>
<tr>
<th>Table 6–20 Error Messages for GetRdcm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
</tr>
<tr>
<td>----------</td>
</tr>
<tr>
<td>284900</td>
</tr>
<tr>
<td>285000</td>
</tr>
<tr>
<td>285900</td>
</tr>
<tr>
<td>286100</td>
</tr>
<tr>
<td>286600</td>
</tr>
<tr>
<td>297000</td>
</tr>
<tr>
<td>304600</td>
</tr>
<tr>
<td>304700</td>
</tr>
</tbody>
</table>
Table 6–20 (Cont.) Error Messages for GetRdcm

<table>
<thead>
<tr>
<th>Number</th>
<th>Severity</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>306100</td>
<td>ERR</td>
<td>Changes pending that have not been processed.</td>
</tr>
</tbody>
</table>

Related Functions

SetRdcn, ProcessRdcn, GetRdcnArr, WriteRdcnRdcn
GetRdcmArr

Returns an array containing the RECEIVED_DCM_IDs of all the API RDCM records. This function is useful because it provides you with the internal keys you need to query RDCM and to look at the full record for one or more RDCMs.

Syntax

```c
short int GetRdcmArr(RdcmArr *rdcm_arr);
```

Parameters

- `rdcm_arr` (out): a structure of type `RdcmArr` containing an array of the RECEIVED_DCM_IDs of all API RDCM records and the number of elements in that array.

Return Value

`SUCCESS` or `FAILURE`.

Comments

This function fails if:
- the API RDCI buffer is empty.
- there are changes pending in the API RDCI buffer that have not yet been processed through a call to `ProcessRdci`.

In order to:
- to get the API RDCM records, see `GetRdcm`.
- to process an API RDCM record as a unit, see `ProcessRdcm`.

Error Messages

<table>
<thead>
<tr>
<th>Number</th>
<th>Severity</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>284900</td>
<td>ERR</td>
<td>User does not have the privilege to call function in the current mode.</td>
</tr>
<tr>
<td>285000</td>
<td>ERR</td>
<td>Function called out of sequence.</td>
</tr>
<tr>
<td>285900</td>
<td>ERR</td>
<td>No current OCL database connection open. Use <code>ConnectOCL</code> to connect to OCL database.</td>
</tr>
<tr>
<td>286600</td>
<td>ERR</td>
<td>Audit reason required and not provided.</td>
</tr>
<tr>
<td>297000</td>
<td>ERR</td>
<td>Null or invalid input pointers provided.</td>
</tr>
<tr>
<td>304600</td>
<td>ERR</td>
<td>Function does not exist.</td>
</tr>
<tr>
<td>304700</td>
<td>ERR</td>
<td>Privilege does not exist.</td>
</tr>
<tr>
<td>306100</td>
<td>ERR</td>
<td>Changes pending that have not been processed.</td>
</tr>
</tbody>
</table>

Related Functions

- `GetRdcm`, `SetRdcm`, `ProcessRdcm`, `WriteRdciRdcm`
GetResponse

Returns response value and comments as well as an indicator of whether any discrepancy information exists for the response. Also returns the response ID.

Syntax

```c
short int GetResponse(ResponseId *response_identifier,
                        ResponseData *response_data,
                        double *response_id,
                        short int *disc_type);
```

Parameters

- `response_identifier` (in) A `ResponseId` structure containing the unique identifier for this response.
- `response_data` (out) A pointer to the `ResponseData` structure containing the data for this response and the data comment for this response.
- `response_id` (out) The response_id of the response identified by a `response_identifier`.
- `disc_type` (out) Indicates whether or not the response has a discrepancy. If yes, it describes the discrepancy type which may be univariate (U), manual (M), or both (B).

Return Value

SUCCESS or FAILURE.

Comments

`InitializeRdcmResponses` should be called before calling GetResponse to initialize the API Responses buffer with the definition of the DCM.

The `response_identifier` uniquely identifies the response that is being processed by the external system. Upon calling this function, Oracle Clinical locates the response in its internal structure and gets the data, comment and discrepancy information for this response into the output variables. The output variables, which are provided to hold the data, comment and discrepancy information, should be allocated by the calling routine.

If this is a new document, and `SetResponseData` and/or `SetDataComment` and/or `SetUnivDiscrepancy` has never been called for this response, NULL values would be used to populate the output variable. Otherwise, the data from the last `SetResponseData` and/or `SetDataComment` and/or `SetUnivDiscrepancy` call would be returned. This applies also in the case of existing documents, with one exception:

- if the question has a repeating default, even if `SetResponseData` has not been called for the response, the value of the repeating default, if provided, is returned.

For ordinary defaults, the default value is returned only for the first repeat. For repeats greater than 1, `SetResponseData` must be called with the appropriate default value.

---

**Note:** The discrepancy information is only an indicator of whether or not any discrepancies exist for this response. To get the actual value of the discrepancy, use `GetUnivDiscrepancy`.  
---
Error Messages

Table 6-22 Error Messages for GetResponse

<table>
<thead>
<tr>
<th>Number</th>
<th>Severity</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>284900</td>
<td>ERR</td>
<td>User does not have the privilege to call function in the current mode.</td>
</tr>
<tr>
<td>285000</td>
<td>ERR</td>
<td>Function called out of sequence.</td>
</tr>
<tr>
<td>285900</td>
<td>ERR</td>
<td>No current OCL database connection open. Use ConnectOCL to connect to OCL database.</td>
</tr>
<tr>
<td>286600</td>
<td>ERR</td>
<td>Audit reason required and not provided.</td>
</tr>
<tr>
<td>286700</td>
<td>ERR</td>
<td>Cannot locate the corresponding DCM question in the internal OCL buffers for the DCM question ID passed.</td>
</tr>
<tr>
<td>286800</td>
<td>ERR</td>
<td>No response in the internal buffers for the question.</td>
</tr>
<tr>
<td>286900</td>
<td>ERR</td>
<td>No existing univariate discrepancy for the question.</td>
</tr>
<tr>
<td>287000</td>
<td>ERR</td>
<td>DCM question and DCM question group combination does not exist in DCM.</td>
</tr>
<tr>
<td>287100</td>
<td>ERR</td>
<td>DCM question group does not exist in DCM.</td>
</tr>
<tr>
<td>288000</td>
<td>ERR</td>
<td>Repeat sn does not exist for DCM question group.</td>
</tr>
<tr>
<td>304600</td>
<td>ERR</td>
<td>Function does not exist.</td>
</tr>
<tr>
<td>304700</td>
<td>ERR</td>
<td>Privilege does not exist.</td>
</tr>
</tbody>
</table>

Related Functions

InitializeRdcmResponses, SetDataComment, SetResponseData, SetUnivDiscrepancy, GetUnivDiscrepancy, GetManualDiscrepancy
GetUnivDiscrepancy

Returns system-generated discrepancy information, if there is any, for the response. Use this function to query specific system-generated discrepancies.

Syntax

short int GetUnivDiscrepancy(ResponseId *response_identifier,
       DiscInfo *return_discrepancy_info);

Parameters

response_identifier (in) The ResponseId definition containing the unique identifier for this response.

return_discrepancy_info (out) The DiscInfo containing the discrepancy information for this response.

Return Value

SUCCESS or FAILURE.

Comments

The response_identifier uniquely identifies the response that is being proceeded by the external system. Upon calling this function Oracle Clinical locates the response in its internal structure and gets the discrepancy information for this response into the input variables. The input variables, which are provided for holding the discrepancy information, should be allocated by the calling routine.

For existing documents, if a discrepancy has been previously added for this response, that information would be returned. The function returns FAILURE otherwise.

For new documents, if SetResponseData and/or SetUnivDiscrepancy has never been called for this response, the function returns FAILURE because no discrepancies exist. Otherwise, the discrepancy information created by the last SetResponseData and/or SetUnivDiscrepancy call would be returned. This applies also in the case of existing documents.

Error Messages

<table>
<thead>
<tr>
<th>Number</th>
<th>Severity</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>284900</td>
<td>ERR</td>
<td>User does not have the privilege to call function in the current mode.</td>
</tr>
<tr>
<td>285000</td>
<td>ERR</td>
<td>Function called out of sequence.</td>
</tr>
<tr>
<td>285900</td>
<td>ERR</td>
<td>No current OCL database connection open. Use ConnectOCL to connect to OCL database.</td>
</tr>
<tr>
<td>286600</td>
<td>ERR</td>
<td>Audit reason required and not provided.</td>
</tr>
<tr>
<td>286700</td>
<td>ERR</td>
<td>Cannot locate the corresponding DCM question in the internal OCL buffers for the DCM question ID passed.</td>
</tr>
<tr>
<td>286800</td>
<td>ERR</td>
<td>No response in the internal buffers for the question.</td>
</tr>
<tr>
<td>286900</td>
<td>ERR</td>
<td>No existing univariate discrepancy for the question.</td>
</tr>
</tbody>
</table>
Table 6–23  (Cont.)  Error Messages for GetUnivDiscrepancy

<table>
<thead>
<tr>
<th>Number</th>
<th>Severity</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>287000</td>
<td>ERR</td>
<td>DCM question and DCM question group combination does not exist in DCM.</td>
</tr>
<tr>
<td>287100</td>
<td>ERR</td>
<td>DCM question group does not exist in DCM.</td>
</tr>
<tr>
<td>288000</td>
<td>ERR</td>
<td>Repeat sn does not exist for DCM question group.</td>
</tr>
</tbody>
</table>

Related Functions

InitializeRdcmResponses, SetResponseData, SetUnivDiscrepancy
InitializeRdcmResponses

Once you have created a record for a received DCI using CreateRdci or fetched a record using FetchRdci, you may add response data. InitializeRdcmResponses initializes the DCM, responses, and discrepancies information and then sets up the document for your chosen mode of data entry. Use this function when you want to pull up a response in the database. Calling this function sets up the buffer structure either with data or without data depending upon the information that has already been saved.

InitializeRdcmResponses allows authorized users to:

- open documents in Browse mode in order to create user comments (manual discrepancies).
- open locked documents in Update mode in order to browse for comments.

Syntax

```
short int InitializeRdcmResponses(double received_dcm_id,
                                 int responses_mode);
```

Parameters

- `received_dcm_id` (in) The internal key for this document.
- `responses_mode` (in) The mode to be used for the execution of this function. Valid values for this mode include:
  - INITIAL_LOGIN
  - KEY_CHANGES
  - FIRST_PASS_ENTRY
  - UPDATE
  - BROWSE

Return Value

SUCCESS or FAILURE or WARNING.

Comments

InitializeRdcmResponses handles memory allocation. If you attempt to set or get response values for a question in a particular repeat in a question group without creating a repeat first, you will receive an error message. For more information about memory allocation, see "Memory Allocation Rules for Data Entry" on page 4-5.

Prior to calling this function, the RDCIRDCM buffers must be populated. The external application obtains the received_dcm_id from the stable views or from RDCI/RDCM APIs. The received_dcm_id uniquely identifies the document that is being used by the external system. Upon calling this function, Oracle Clinical initializes its internal structures with the definition of the DCM for which this document has been or will be entered and the data (if any) that had been earlier entered for this document. If this is a new document — a document with no existing data — the responses for the first repeat in all the question groups in this document are initialized to BLANK and the remaining repeats are not initialized.
An error is returned if:

- the document status is incompatible with the mode of data entry — for example, if
  the user attempts to update responses on a document with status RECEIVED.
- the mode of data entry is incompatible with the mode of Log-In — for example, if
  the user attempts in Log-In to update a document reserved in non-locking mode.
- the user does not have the adequate privileges for the attempted data entry
  operation.
- the study is not enabled for data entry in production mode.

### Error Messages

**Table 6–24 Error Messages for InitializeRdcmResponses**

<table>
<thead>
<tr>
<th>Number</th>
<th>Severity</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>284900</td>
<td>ERR</td>
<td>User does not have the privilege to call function in the current mode.</td>
</tr>
<tr>
<td>285000</td>
<td>ERR</td>
<td>Function called out of sequence.</td>
</tr>
<tr>
<td>285900</td>
<td>ERR</td>
<td>No current OCL database connection open. Use ConnectOCL to connect to OCL database.</td>
</tr>
<tr>
<td>286100</td>
<td>ERR</td>
<td>RDCM with this received_dcm_id does not exist.</td>
</tr>
<tr>
<td>286200</td>
<td>ERR</td>
<td>Status of Received DCM with this received_dcm_id is incompatible with data entry mode.</td>
</tr>
<tr>
<td>286300</td>
<td>ERR</td>
<td>Locking mode incompatible with data entry mode.</td>
</tr>
<tr>
<td>286500</td>
<td>ERR</td>
<td>Study is not enabled for data entry.</td>
</tr>
<tr>
<td>286600</td>
<td>ERR</td>
<td>Audit reason required and not provided.</td>
</tr>
<tr>
<td>293800</td>
<td>WRN</td>
<td>You are working with a data locked record and have privileged update.</td>
</tr>
<tr>
<td>297100</td>
<td>ERR</td>
<td>Changes pending.</td>
</tr>
<tr>
<td>298600</td>
<td>WRN</td>
<td>Invalid mode value.</td>
</tr>
<tr>
<td>299100</td>
<td>ERR</td>
<td>No data has been entered for this RDCM.</td>
</tr>
<tr>
<td>299900</td>
<td>ERR</td>
<td>Cannot proceed when blank flag is set to Y.</td>
</tr>
<tr>
<td>300100</td>
<td>ERR</td>
<td>Only the user who performed Pass 1 Entry can perform data entry task.</td>
</tr>
<tr>
<td>300200</td>
<td>ERR</td>
<td>This patient is frozen.</td>
</tr>
<tr>
<td>300300</td>
<td>ERR</td>
<td>This Received DCI is data locked.</td>
</tr>
<tr>
<td>300500</td>
<td>ERR</td>
<td>First pass entry cannot be performed on an accessible RDCM.</td>
</tr>
<tr>
<td>306600</td>
<td>ERR</td>
<td>This received DCM is locked.</td>
</tr>
</tbody>
</table>

### Related Function

WriteResponses
InsertRepeat

Inserts a new record in the internal buffers for the repeat sequence number. This function is useful when entering repetitive data into a DCM. For example, you may wish to create a repeat that records time of day and patient’s temperature at several different intervals within a 24-hour period. This function can be used to insert a repeat before existing repeats with resequencing of the following repeats.

Once an operator creates a blank row in the Oracle Clinical internal buffers, it is possible to add data to this new row using SetResponseData. WriteResponses is then used to commit this data into the database.

**Syntax**

```c
short int InsertRepeat(RepeatId *repeat_identifier);
```

**Parameters**

- `repeat_identifier` *(in)* The RepeatId containing the unique identifier for this repeat.

**Return Value**

SUCCESS or FAILURE.

**Comments**

The repeat_identifier uniquely identifies the row that is being processed by the external system (returning FAILURE if the row does not exist). Upon calling this function, Oracle Clinical inserts a new record (with all data values initialized to NULL) in its internal buffers. The API returns a FAILURE if the repeat sequence number exceeds the maximum repeats specified for the question group. SetResponseData needs to be called to update the response values as and when they are entered.

In InitializeRdcmResponses, Oracle Clinical automatically creates the first row in each group, so this function accepts repeat sequence numbers greater than or equal to 1 only.

**Note:** This API function re-sequences all repeats, if any, following the one that was inserted by adding 1 to the repeat sequence number for all questions in the group in those repeats.

**Error Messages**

<table>
<thead>
<tr>
<th>Number</th>
<th>Severity</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>284900</td>
<td>ERR</td>
<td>User does not have the privilege to call function in the current mode.</td>
</tr>
<tr>
<td>285000</td>
<td>ERR</td>
<td>Function called out of sequence.</td>
</tr>
<tr>
<td>285900</td>
<td>ERR</td>
<td>No current OCL database connection open. Use ConnectOCL to connect to OCL database.</td>
</tr>
<tr>
<td>286600</td>
<td>ERR</td>
<td>Audit reason required and not provided.</td>
</tr>
<tr>
<td>287100</td>
<td>ERR</td>
<td>DCM question group does not exist in the DCM.</td>
</tr>
</tbody>
</table>

Data Capture API Functions 6-37
Table 6–25  (Cont.)  Error Messages for InsertRepeat

<table>
<thead>
<tr>
<th>Number</th>
<th>Severity</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>287200</td>
<td>ERR</td>
<td>Cannot insert repeats in browse mode.</td>
</tr>
<tr>
<td>287300</td>
<td>ERR</td>
<td>Invalid DCM question group ID passed.</td>
</tr>
<tr>
<td>287400</td>
<td>ERR</td>
<td>Cannot insert repeat for a non-repeating question group.</td>
</tr>
<tr>
<td>287500</td>
<td>ERR</td>
<td>Inserting repeat will introduce a null repeat in the middle.</td>
</tr>
<tr>
<td>287600</td>
<td>ERR</td>
<td>Cannot insert for repeating defaults when repeat is less than the maximum repeats for DCM question group.</td>
</tr>
<tr>
<td>287700</td>
<td>ERR</td>
<td>The repeat exceeds the maximum repeats expected for DCM question group.</td>
</tr>
<tr>
<td>297000</td>
<td>ERR</td>
<td>Null or invalid input pointers provided.</td>
</tr>
</tbody>
</table>

Related Functions

InitializeRdcmResponses, SetResponseData
ProcessRdci

Purpose

Once you have completed all of the appropriate keys in the DCI, use this function to:

- validate the RDCI record as a unit.
- review interdependencies between fields.
- verify that there are no duplicate pre-existing RDCIs in the database.
- create RDCM records in the RDCM buffer for RDCMs that do not yet exist.
- perform data cascades from the API RDCI record to the existing RDCM records.

After this function verifies that the header is complete, it brings the appropriate DCMs to the buffers, and returns both the API RDCI record and an array containing the RECEIVED_DCM_IDS of all the API RDCM records.

The component items of the RDCI record that are also component items of RDCI_KEYS_REC — Investigator and Site, for example — might be implicitly assigned by this function. The component items of the RDCI record that are not component items of the RDCI_KEYS — Patient Position ID and Internal Timestamp, for example — are derived from the interface and implicitly returned by the system. For this reason the function returns the updated API RDCI record in the output parameter RDCI_REC.

Syntax

short int ProcessRdci(RdciRecord *rdci_rec,
RdcmArr *rdcm_arr);

Parameters

- **rdci_rec** (out) The updated contents of the API RDCI record in a RdciRecord structure.
- **rdcm_arr** (out) A RdcmArr structure consisting of an array of the RECEIVED_DCM_IDS of all API RDCM records and the number of elements in that array.

Return Value

SUCCESS or FAILURE or WARNING.

Comments

This function fails if:

- The API RDCI buffer is empty.
- The API RDCI record exists in the database and has not been locked.

To learn about locking the API RDCI record see FetchRdci, WriteRdciRdcm, WriteResponses, and FlushResponses.

To validate the API RDCI record as a unit, this function:

1. checks that all the mandatory items in the API RDCI record are populated.
2. performs cross-item validation.
3. performs uniqueness validation for the API RDCI record.
In interactive applications, at any point in time, the FE is working on one buffer only; either the FE RDCI buffer or the FE RDCM buffer. If it wants to switch from working on the FE RDCI buffer to working on the FE RDCM buffer, it should follow these steps first:

1. Call ProcessRdci if there are changes pending in the API RDCI record that have not been processed through a call to ProcessRdci.

2. Refresh the FE RDCM buffer because step 1 could have resulted in changes being cascaded to the API RDCM records. Cascaded changes will include deleting the existing API RDCM records and creating new ones in case the FE has changed the DCI_NAME in the API RDCI record. In this case the FE should clear the FE RDCM buffer altogether and populate it with the new API RDCM records.

To write the contents of the API RDCIRDCM buffer to the database, see WriteRdciRdcm. WriteRdciRdcm fails if there are changes pending in the API RDCI record that have not been processed through a call to ProcessRdci.

### Error Messages

**Table 6–26  Error Messages for ProcessRdci**

<table>
<thead>
<tr>
<th>Number</th>
<th>Severity</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>284900</td>
<td>ERR</td>
<td>User does not have the privilege to call function in the current mode.</td>
</tr>
<tr>
<td>285000</td>
<td>ERR</td>
<td>Function called out of sequence.</td>
</tr>
<tr>
<td>285900</td>
<td>ERR</td>
<td>No current OCL database connection open. Use ConnectOCL to connect to OCL database.</td>
</tr>
<tr>
<td>286100</td>
<td>ERR</td>
<td>RDCM with this received_dcm_id does not exist.</td>
</tr>
<tr>
<td>286600</td>
<td>ERR</td>
<td>Audit reason required and not provided.</td>
</tr>
<tr>
<td>289900</td>
<td>ERR</td>
<td>Duplicate Received DCI found with the same keys in document number: \0.</td>
</tr>
<tr>
<td>290300</td>
<td>ERR</td>
<td>Current record is not complete: Operation was not successful.</td>
</tr>
<tr>
<td>290500</td>
<td>ERR</td>
<td>This site/investigator pair is invalid for this study.</td>
</tr>
<tr>
<td>291500</td>
<td>WRN</td>
<td>Subevent not found: actual event will be created once you save.</td>
</tr>
<tr>
<td>292000</td>
<td>ERR</td>
<td>Blank flag must be entered.</td>
</tr>
<tr>
<td>292100</td>
<td>ERR</td>
<td>Clinical planned event name must be entered.</td>
</tr>
<tr>
<td>292200</td>
<td>ERR</td>
<td>Patient must be entered.</td>
</tr>
<tr>
<td>292300</td>
<td>ERR</td>
<td>DCI name must be entered.</td>
</tr>
<tr>
<td>292400</td>
<td>ERR</td>
<td>Site is required.</td>
</tr>
<tr>
<td>292800</td>
<td>ERR</td>
<td>DCI date must be entered.</td>
</tr>
<tr>
<td>293000</td>
<td>ERR</td>
<td>Subevent number must be entered.</td>
</tr>
<tr>
<td>293600</td>
<td>ERR</td>
<td>Too many actual events correspond to this subevent #.</td>
</tr>
<tr>
<td>295100</td>
<td>WRN</td>
<td>Site/investigator pair is not current in study.</td>
</tr>
<tr>
<td>295300</td>
<td>ERR</td>
<td>An error occurred querying DVGs for an RDCM.</td>
</tr>
<tr>
<td>297000</td>
<td>ERR</td>
<td>Null or invalid input pointers provided.</td>
</tr>
<tr>
<td>304600</td>
<td>ERR</td>
<td>Function does not exist.</td>
</tr>
<tr>
<td>304700</td>
<td>ERR</td>
<td>Privilege does not exist.</td>
</tr>
</tbody>
</table>
### Table 6–26 (Cont.) Error Messages for ProcessRdci

<table>
<thead>
<tr>
<th>Number</th>
<th>Severity</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>307000</td>
<td>ERR</td>
<td>Cannot call this function if you have not locked the record.</td>
</tr>
<tr>
<td>307100</td>
<td>ERR</td>
<td>Investigator is required.</td>
</tr>
<tr>
<td>307200</td>
<td>ERR</td>
<td>DCI Time is required.</td>
</tr>
<tr>
<td>307300</td>
<td>WRN</td>
<td>Lab could not be defaulted.</td>
</tr>
<tr>
<td>307600</td>
<td>ERR</td>
<td>Can not log-in data for a patient that is not associated with a book in a study with no default DCI book.</td>
</tr>
<tr>
<td>308200</td>
<td>ERR</td>
<td>The DCI book assigned to this patient is not active. Can not use a DCI book that is not active to log data in a production environment.</td>
</tr>
<tr>
<td>308500</td>
<td>ERR</td>
<td>The current DCI book is Retired and the environment is Test.</td>
</tr>
<tr>
<td>311800</td>
<td>WRN</td>
<td>Patient not assigned to this site.</td>
</tr>
</tbody>
</table>

### Related Functions

GetRdci, SetRdci, CreateRdci, FetchRdci, WriteRdciRdcm
ProcessRdcm

Purpose

This function verifies that the selected RDCM record in the API RDCM buffer is a unit that includes all necessary data. For example, if the DCM requires a qualifying value, this function checks to see if one is supplied. In addition, this function verifies:

- interdependencies between fields.
- that there are no duplicate RDCMs in the API RDCM buffer.
- that there are no duplicate pre-existing RDCMs in the database.

When this function identifies a duplicate RDCM in the buffer, it returns the ID of that record in the double *RECEIVED_DCM_IDs parameter. When this function identifies a duplicate RDCM in the database, it returns an error and includes the document number of the duplicate record within the error message text.

Syntax

```c
short int ProcessRdcm(double received_dcm_id,
                       double *received_dcm_id_dup);
```

Parameters

- `received_dcm_id` (in) The RECEIVED_DCM_ID of the API RDCM record to be validated.
- `received_dcm_ids` (out) The RECEIVED_DCM_ID of the first duplicate API RDCM record encountered. This parameter will contain null if there is no duplicate API RDCM record encountered.

Return Value

SUCCESS or FAILURE or WARNING.

Comments

This function fails if:

- the API RDCI buffer is empty.
- the API RDCI record exists in the database and has not been locked.
- there are changes pending in the API RDCI buffer that have not yet been processed through a call to ProcessRdci.
- there is no API RDCM record whose RECEIVED_DCM_ID equals the parameter received_dcm_id.

To validate an API RDCM record as a unit, this function:

1. checks that all the mandatory items in the API RDCM record are populated.
2. performs cross-item validation.
3. performs uniqueness validation for the API RDCM record. If the function finds a duplicate within the other API RDCM records, it returns its RECEIVED_DCM_ID in the output parameter RECEIVED_DCM_IDs along with an error message. However, if the function finds a duplicate under another RDCI in the database, it returns an error message.

WriteRdciRdcn also validates each of the API RDCM records as part of its processing. This function is provided in order to give the FE a facility to determine early in the process whether individual API RDCM records are valid.

To write the contents of the API RDCIRDCM buffer to the database, see WriteRdciRdcn.

### Error Messages

<table>
<thead>
<tr>
<th>Number</th>
<th>Severity</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>284900</td>
<td>ERR</td>
<td>User does not have the privilege to call function in the current mode.</td>
</tr>
<tr>
<td>285000</td>
<td>ERR</td>
<td>Function called out of sequence.</td>
</tr>
<tr>
<td>285900</td>
<td>ERR</td>
<td>No current OCL database connection open. Use ConnectOCL to connect to OCL database.</td>
</tr>
<tr>
<td>286600</td>
<td>ERR</td>
<td>Audit reason required and not provided.</td>
</tr>
<tr>
<td>290100</td>
<td>ERR</td>
<td>Duplicate Received DCM found within this Received DCI.</td>
</tr>
<tr>
<td>290200</td>
<td>ERR</td>
<td>Duplicate Received DCM found in document number: \0.</td>
</tr>
<tr>
<td>290300</td>
<td>ERR</td>
<td>Current record is not complete: Operation was not successful.</td>
</tr>
<tr>
<td>291500</td>
<td>WRN</td>
<td>Subevent not found: actual event will be created once you save.</td>
</tr>
<tr>
<td>292000</td>
<td>ERR</td>
<td>Blank flag must be entered.</td>
</tr>
<tr>
<td>292100</td>
<td>ERR</td>
<td>Clinical planned event name must be entered.</td>
</tr>
<tr>
<td>293000</td>
<td>ERR</td>
<td>Subevent number must be entered.</td>
</tr>
<tr>
<td>293300</td>
<td>ERR</td>
<td>DCM time must be entered.</td>
</tr>
<tr>
<td>293400</td>
<td>ERR</td>
<td>Qualifying value must be entered.</td>
</tr>
<tr>
<td>293600</td>
<td>ERR</td>
<td>Too many actual events correspond to this subevent #.</td>
</tr>
<tr>
<td>293700</td>
<td>ERR</td>
<td>DCM date must be entered.</td>
</tr>
<tr>
<td>297000</td>
<td>ERR</td>
<td>Null or invalid input pointers provided.</td>
</tr>
<tr>
<td>304600</td>
<td>ERR</td>
<td>Function does not exist.</td>
</tr>
<tr>
<td>304700</td>
<td>ERR</td>
<td>Privilege does not exist.</td>
</tr>
<tr>
<td>306100</td>
<td>ERR</td>
<td>Changes pending that have not been processed.</td>
</tr>
<tr>
<td>307000</td>
<td>ERR</td>
<td>Cannot call this function if you have not locked the record.</td>
</tr>
<tr>
<td>307300</td>
<td>WRN</td>
<td>Lab could not be defaulted.</td>
</tr>
<tr>
<td>307400</td>
<td>ERR</td>
<td>Please use the patient enrollment form to specify which DCI Book to use to maintain the page tracking information.</td>
</tr>
</tbody>
</table>

### Related Functions

SetRdcn, GetRdcn, GetRdcmArr, WriteRdciRdcn
SetActualEvent

Use this function to add a comment to an actual event. This function updates the specified actual event record with the new comment and commits the change.

Syntax

```c
short int SetActualEvent(double actual_event_id,
                        ActualEventsRecord *actual_event);
```

Parameters

- `actual_event_id` (in) The ACTUAL_EVENT_ID of the row you want to update.
- `ActualEventsRecord` (in) The new contents with which you want to update the specified Actual Event record. This parameter is in a structure of type `ActualEventsRecord`.

Return Value

SUCCESS or FAILURE or WARNING.

Comments

None.

Error Messages

<table>
<thead>
<tr>
<th>Number</th>
<th>Severity</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>285000</td>
<td>ERR</td>
<td>Function called out of sequence.</td>
</tr>
<tr>
<td>285900</td>
<td>ERR</td>
<td>No current OCL database connection open. Use ConnectOCL to connect to OCL database.</td>
</tr>
<tr>
<td>288800</td>
<td>ERR</td>
<td>Cannot set actual event when RDCI is locked.</td>
</tr>
<tr>
<td>297000</td>
<td>ERR</td>
<td>Null or invalid input pointers provided.</td>
</tr>
<tr>
<td>302400</td>
<td>WRN</td>
<td>Zero rows updated.</td>
</tr>
<tr>
<td>304600</td>
<td>ERR</td>
<td>Function does not exist.</td>
</tr>
<tr>
<td>304700</td>
<td>ERR</td>
<td>Privilege does not exist.</td>
</tr>
<tr>
<td>304800</td>
<td>ERR</td>
<td>User is not authorized to call this function.</td>
</tr>
</tbody>
</table>

Related Functions

None.
SetDataComment

Use this function to modify a comment. This function updates the investigator comment, if any, for the response in the Oracle Clinical internal structure.

Syntax

```c
short int SetDataComment(ResponseId *response_identifier;
    DataComment *data_comm);
```

Parameters

- `response_identifier` (in) The ResponseId definition containing the unique identifier for this response.
- `data_comm` (in) A DataComment structure containing the data (investigator) comment for this response.

Return Value

SUCCESS or FAILURE.

Comments

The response_identifier uniquely identifies the response that is being processed by the external system. Upon calling SetDataComment, Oracle Clinical locates the response in its internal structure and updates the data (investigator) comment information for this response from the input variables provided for holding this information. These input variables should be allocated and initialized before calling the routine.

Error Messages

<table>
<thead>
<tr>
<th>Number</th>
<th>Severity</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>284800</td>
<td>ERR</td>
<td>Function not available in this mode.</td>
</tr>
<tr>
<td>284900</td>
<td>ERR</td>
<td>User does not have the privilege to call function in the current mode.</td>
</tr>
<tr>
<td>285000</td>
<td>ERR</td>
<td>Function called out of sequence.</td>
</tr>
<tr>
<td>285900</td>
<td>ERR</td>
<td>No current OCL database connection open. Use ConnectOCL to connect to OCL database.</td>
</tr>
<tr>
<td>286600</td>
<td>ERR</td>
<td>Audit reason required and not provided.</td>
</tr>
<tr>
<td>286700</td>
<td>ERR</td>
<td>Cannot locate the corresponding DCM question in the internal OCL buffers for the DCM question ID passed.</td>
</tr>
<tr>
<td>286800</td>
<td>ERR</td>
<td>No response in the internal buffers for the question.</td>
</tr>
<tr>
<td>286900</td>
<td>ERR</td>
<td>No existing univariate discrepancy for the question.</td>
</tr>
<tr>
<td>287000</td>
<td>ERR</td>
<td>DCM question and DCM question group combination does not exist in DCM.</td>
</tr>
<tr>
<td>287100</td>
<td>ERR</td>
<td>DCM question group does not exist in DCM.</td>
</tr>
<tr>
<td>288000</td>
<td>ERR</td>
<td>Repeat sn does not exist for DCM question group.</td>
</tr>
<tr>
<td>304600</td>
<td>ERR</td>
<td>Function does not exist.</td>
</tr>
<tr>
<td>304700</td>
<td>ERR</td>
<td>Privilege does not exist.</td>
</tr>
</tbody>
</table>
Table 6–29  (Cont.)  Error Messages for SetDataComment

<table>
<thead>
<tr>
<th>Number</th>
<th>Severity</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>306800</td>
<td>ERR</td>
<td>Invalid audit reason.</td>
</tr>
<tr>
<td>659700</td>
<td>ERR</td>
<td>No default audit reason.</td>
</tr>
<tr>
<td>659800</td>
<td>ERR</td>
<td>More than one default audit reason found.</td>
</tr>
<tr>
<td>660000</td>
<td>ERR</td>
<td>Cannot use system-generated audit reason.</td>
</tr>
</tbody>
</table>

Related Functions

InitializeRdcmResponses, GetResponse
SetExternalContext

Sets the external context information that will be used to populate the columns of the RDCI_HISTORY records to be created. This function helps to create a comprehensive tracking record that becomes part of the RDCI history. For example, this function enables you to record when data was originally entered into an external system that later passes data to Oracle Clinical.

Syntax

```c
short int SetExternalContext(ExternalContextInfo *context_info);
```

Parameters

- `context_info` (in) A structure of type `ExternalContextInfo`.

Return Value

SUCCESS or FAILURE.

Comments

This function validates the value of the parameter `context_info`. It validates the `trans_type` item by checking that it contains a value from the reference codelist `EXTERNAL_TRANS_TYPE`. If it does not contain a value, the value `STANDARD` will be used. If the validation succeeds, the value of `context_info` will immediately take effect as the new external context info and the function returns SUCCESS; otherwise, the function will return FAILURE leaving the existing external context info intact.

The values set through a call to `SetExternalContext` will be reflected in all the subsequently created RDCI_HISTORY records until the next call of `SetExternalContext` or the call of `DisconnectOCL`, whichever comes first. No auditing records will be created if `SetExternalContext` has never been called since the last call to `ConnectOCL`.

An RDCI record in the API RDCI buffer will have only one audit record created for it upon the first writing to the database done due to a call of either `WriteRdciRdcm` or `WriteResponses`. Successive writing to the database while the same RDCI record is still in the API RDCI buffer will cause more audit records to be created for it only if a call to `SetExternalContext` has taken place after the last time an audit record was created for it.

In contrast to the API, Oracle Clinical does not maintain the RDCI_HISTORY table in the sense that it does not create or update records of that table.

The RDCI_HISTORY table will not be replicated and there are no reports running against it.

Error Messages

<table>
<thead>
<tr>
<th>Table 6–30</th>
<th>Error Messages for SetExternalContext</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number</strong></td>
<td><strong>Severity</strong></td>
</tr>
<tr>
<td>284900</td>
<td>ERR</td>
</tr>
<tr>
<td>285000</td>
<td>ERR</td>
</tr>
<tr>
<td>285900</td>
<td>ERR</td>
</tr>
</tbody>
</table>
Table 6–30  (Cont.)  Error Messages for SetExternalContext

<table>
<thead>
<tr>
<th>Number</th>
<th>Severity</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>286600</td>
<td>ERR</td>
<td>Audit reason required and not provided.</td>
</tr>
<tr>
<td>297000</td>
<td>ERR</td>
<td>Null or invalid input pointers provided.</td>
</tr>
<tr>
<td>297100</td>
<td>ERR</td>
<td>Changes pending.</td>
</tr>
<tr>
<td>304600</td>
<td>ERR</td>
<td>Function does not exist.</td>
</tr>
<tr>
<td>304700</td>
<td>ERR</td>
<td>Privilege does not exist.</td>
</tr>
</tbody>
</table>

Related Functions

ConnectOCL, DisconnectOCL
SetManualDiscrepancy

Creates or updates manual discrepancy (operator comment) information for the response in the Oracle Clinical internal structure. This information includes the original comment and information about whether or not the issue has been resolved. If the issue has been resolved, the resolution is described. If unresolved, the new comment replaces the existing comment (which is retained in the DISCREPANCY_ENTRY_REVIEW_HIST table).

Syntax

```
short int SetManualDiscrepancy(ResponseId *response_identifier,
                                DiscInfo *discrepancy_info);
```

Parameters

- `response_identifier` (in) The ResponseId definition containing the unique identifier for this response.
- `discrepancy_info` (in) The DiscInfo definition containing the discrepancy information for this response.

Return Value

SUCCESS or FAILURE.

Comments

The response_identifier parameter uniquely identifies the response that is being processed by the external system. Upon calling `SetManualDiscrepancy`, Oracle Clinical locates the response in its internal structure and updates the manual discrepancy (operator comment) information for this response from the input variables provided for holding this information. These input variables should be allocated and initialized before calling the routine.

If the user has the privilege to create operator comments in browse mode and the document was fetched in locked mode, `SetManualDiscrepancy` may be invoked even in browse mode. In this respect it differs from other functions that set response and/or discrepancy values which may not be called in browse mode.

Error Messages

```
Table 6–31   Error Messages for SetManualDiscrepancy

<table>
<thead>
<tr>
<th>Number</th>
<th>Severity</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>284800</td>
<td>ERR</td>
<td>Function not available in this mode.</td>
</tr>
<tr>
<td>284900</td>
<td>ERR</td>
<td>User does not have the privilege to call function in the current mode.</td>
</tr>
<tr>
<td>285000</td>
<td>ERR</td>
<td>Function called out of sequence.</td>
</tr>
<tr>
<td>285900</td>
<td>ERR</td>
<td>No current OCL database connection open. Use ConnectOCL to connect to OCL database.</td>
</tr>
<tr>
<td>286600</td>
<td>ERR</td>
<td>Audit reason required and not provided.</td>
</tr>
<tr>
<td>286700</td>
<td>ERR</td>
<td>Cannot locate the corresponding DCM question in the internal OCL buffers for the DCM question ID passed.</td>
</tr>
<tr>
<td>286800</td>
<td>ERR</td>
<td>No response in the internal buffers for the question.</td>
</tr>
</tbody>
</table>
```
Table 6–31  (Cont.) Error Messages for SetManualDiscrepancy

<table>
<thead>
<tr>
<th>Number</th>
<th>Severity</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>286900</td>
<td>ERR</td>
<td>No existing univariate discrepancy for the question.</td>
</tr>
<tr>
<td>287000</td>
<td>ERR</td>
<td>DCM question and DCM question group combination does not exist in DCM.</td>
</tr>
<tr>
<td>287100</td>
<td>ERR</td>
<td>DCM question group does not exist in DCM.</td>
</tr>
<tr>
<td>288000</td>
<td>ERR</td>
<td>Repeat sn does not exist for DCM question group.</td>
</tr>
<tr>
<td>297000</td>
<td>ERR</td>
<td>Null or invalid input pointers provided.</td>
</tr>
<tr>
<td>302800</td>
<td>ERR</td>
<td>Invalid discrepancy review status code.</td>
</tr>
<tr>
<td>302900</td>
<td>ERR</td>
<td>Invalid discrepancy resolution type code.</td>
</tr>
<tr>
<td>303000</td>
<td>ERR</td>
<td>Resolution type code cannot be null for RESOLVED review status.</td>
</tr>
<tr>
<td>303100</td>
<td>ERR</td>
<td>Resolution type code should be null if review status is not RESOLVED.</td>
</tr>
<tr>
<td>312500</td>
<td>ERR</td>
<td>Can not update repeating defaults when repeat sn is less than the maximum repeats expected for DCM question group.</td>
</tr>
</tbody>
</table>

Related Functions

InitializeRdcmResponses, GetManualDiscrepancy
SetMiscDiscrepancy

Sets the resolution text for an existing discrepancy with a current status. This function can only be called in UPDATE mode.

Syntax

```
short int SetMiscDiscrepancy(long disc_id, char *disc_subtype, DiscInfo *discrepancy_info);
```

Parameters

- `disc_id` (in) The discrepancy ID for the discrepancy being updated.
- `disc_subtype` (in) Type of discrepancy. Valid types are UNIVARIATE, MANUAL, INDICATOR, MULTIVARIATE or MANUAL HEADER.
- `discrepancy_info` (in) The DiscInfo definition containing the discrepancy information. Only the resolution field in the structure DiscInfo is used.

Return Value

SUCCESS or FAILURE.

Comments

The disc_id and subtype parameters uniquely identify the discrepancy that is being processed by the external system. Upon calling SetMiscDiscrepancy, Oracle Clinical locates the discrepancy in its internal structure and updates the resolution comment or text for this discrepancy from the input variables provided for holding this information. These input variables should be allocated and initialized before calling the routine. The remaining fields should be initialized, otherwise a warning is raised.

If any of the remaining fields contain a non-null value, then a warning is raised.

Only discrepancies in status ‘CURRENT’ can be updated using this routine.

Error Messages

<table>
<thead>
<tr>
<th>Number</th>
<th>Severity</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>992200</td>
<td>WRN</td>
<td>All other parameters except the resolution text in the discrepancy structure will be ignored.</td>
</tr>
<tr>
<td>992300</td>
<td>ERR</td>
<td>Unable to get existing discrepancy information from the database.</td>
</tr>
</tbody>
</table>

Related Functions

- InitializeRdcmResponses
SetPageStatus

This function sets the status of a received page and commits. SetPageStatus enables you to track a specific page within a DCI. This is particularly useful, for example, when a DCI has multiple repeats within the same group that are listed on separate pages of the Case Report Form (CRF). Recording the page number from the original paper form provides a useful tracking mechanism for the electronic version of the document.

Syntax

```c
short int SetPageStatus(double received_page_id,
                       char *page_status);
```

Parameters

- `received_page_id` (in) The RECEIVED_PAGE_ID of the received page whose status is to be updated.
- `page_status` (in) The new status of the specified received page.

Return Value

SUCCESS or FAILURE.

Comments

This function will first lock the RDCI record to which the specified page belongs. If it cannot, it will fail; otherwise it will validate the new status and update the received page with the new status.

Error Messages

<table>
<thead>
<tr>
<th>Number</th>
<th>Severity</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>285000</td>
<td>ERR</td>
<td>Function called out of sequence.</td>
</tr>
<tr>
<td>285900</td>
<td>ERR</td>
<td>No current OCL database connection open. Use ConnectOCL to connect to OCL database.</td>
</tr>
<tr>
<td>289000</td>
<td>ERR</td>
<td>Cannot set page status when RDCI is locked.</td>
</tr>
<tr>
<td>289100</td>
<td>ERR</td>
<td>Unable to find the RDCI to which page belongs: \0.</td>
</tr>
<tr>
<td>289200</td>
<td>ERR</td>
<td>Unable to lock the RDCI to which page belongs.</td>
</tr>
<tr>
<td>289300</td>
<td>ERR</td>
<td>'Unknown' page status can only be changed to 'Missing' or 'Present'.</td>
</tr>
<tr>
<td>289400</td>
<td>ERR</td>
<td>The page status cannot be manually changed to a system status.</td>
</tr>
<tr>
<td>289500</td>
<td>ERR</td>
<td>A system page status cannot be manually changed.</td>
</tr>
<tr>
<td>297000</td>
<td>ERR</td>
<td>Null or invalid input pointers provided.</td>
</tr>
<tr>
<td>302500</td>
<td>ERR</td>
<td>Invalid page status.</td>
</tr>
<tr>
<td>304600</td>
<td>ERR</td>
<td>Function does not exist.</td>
</tr>
<tr>
<td>304700</td>
<td>ERR</td>
<td>Privilege does not exist.</td>
</tr>
<tr>
<td>304800</td>
<td>ERR</td>
<td>User is not authorized to call this function.</td>
</tr>
</tbody>
</table>
Related Functions

None.
SetRdci

Assigns the values of the parameter rdci_keys_rec, which is the parameter for the keys within the RDCI record, to the API RDCI record. It also returns the contents of the updated API RDCI record in the output parameter rdci_rec, which is the parameter for the entire RDCI record.

The component items of an API RDCI record which are not component items of rdci_keys_rec, such as all the numeric ID items, are implicitly assigned by this function. For example, patient ID is not a key field, but because it is part of the RDCI record, it is populated implicitly once the external patient identifier is supplied and validated.

Syntax

```c
short int SetRdci(RdciKeysRecord *rdci_keys_rec,
                  RdciRecord *rdci_rec);
```

Parameters

- `rdci_keys_rec` (in): The `RdciKeysRecord` definition containing the value that you want to assign to the API RDCI record.
- `rdci_rec` (out): The `RdciRecord` definition containing the contents of the updated API RDCI record.

Return Value

- `SUCCESS` or `FAILURE` or `WARNING`.

Comments

This function fails if:

- the API RDCI buffer is empty.
- the API RDCI record exists in the database and has not been locked, or its locked but the user does not have the privilege required for `SetPageStatus`. To learn about locking the API RDCI record see `FetchRdci`, `WriteRdciRdcm`, `WriteResponses` and `FlushResponses`. To learn about privileges, see the "Functional State Mapping Information" on page 4-12 and the "Functional State Transition Diagram" on page 4-16.

Only the items of rdci_keys_rec that have a value different from that of the corresponding item in the API RDCI record will be considered. These items will be validated first. All of them have to pass validation in order for the update to take place; otherwise no update will take place and the function will return FAILURE. The type of validation taking place here is individual item validation whereas cross-item validation will happen as part of the validation of the API RDCI record as a unit which takes place in `ProcessRdci`.

If this function fails, rdci_rec will be empty; if it succeeds rdci_rec will contain the current contents of the updated API RDCI record.

To populate an empty API RDCI buffer, see `CreateRdci` and `FetchRdci`. 
## Error Messages

<table>
<thead>
<tr>
<th>Number</th>
<th>Severity</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>284900</td>
<td>ERR</td>
<td>User does not have the privilege to call function in the current mode.</td>
</tr>
<tr>
<td>285000</td>
<td>ERR</td>
<td>Function called out of sequence.</td>
</tr>
<tr>
<td>285900</td>
<td>ERR</td>
<td>No current OCL database connection open. Use ConnectOCL to connect to OCL database.</td>
</tr>
<tr>
<td>286600</td>
<td>ERR</td>
<td>Audit reason required and not provided.</td>
</tr>
<tr>
<td>289800</td>
<td>ERR</td>
<td>This document already exists in the database.</td>
</tr>
<tr>
<td>290500</td>
<td>ERR</td>
<td>This site/investigator pair is invalid for study.</td>
</tr>
<tr>
<td>290600</td>
<td>ERR</td>
<td>Invalid investigator.</td>
</tr>
<tr>
<td>290700</td>
<td>ERR</td>
<td>Invalid site.</td>
</tr>
<tr>
<td>290800</td>
<td>ERR</td>
<td>Patient position is frozen.</td>
</tr>
<tr>
<td>290900</td>
<td>ERR</td>
<td>Patient not enrolled for this study.</td>
</tr>
<tr>
<td>291000</td>
<td>ERR</td>
<td>Patient position is invalid.</td>
</tr>
<tr>
<td>291200</td>
<td>ERR</td>
<td>DCI is inactive or invalid.</td>
</tr>
<tr>
<td>291300</td>
<td>ERR</td>
<td>[error message returned by OCL_CLIENT_PACK. Validate document.]</td>
</tr>
<tr>
<td>291400</td>
<td>ERR</td>
<td>Clinical planned event is invalid for the current study.</td>
</tr>
<tr>
<td>294600</td>
<td>ERR</td>
<td>Document found in different study. Change study to access.</td>
</tr>
<tr>
<td>294900</td>
<td>WRN</td>
<td>Site is currently inactive.</td>
</tr>
<tr>
<td>295000</td>
<td>WRN</td>
<td>Investigator is currently inactive.</td>
</tr>
<tr>
<td>297000</td>
<td>ERR</td>
<td>Null or invalid input pointers provided.</td>
</tr>
<tr>
<td>299700</td>
<td>WRN</td>
<td>The data entered for this received DCI will be deleted.</td>
</tr>
<tr>
<td>299800</td>
<td>ERR</td>
<td>Date cannot exceed today's date.</td>
</tr>
<tr>
<td>300900</td>
<td>ERR</td>
<td>No update allowed to the RDCI buffer.</td>
</tr>
<tr>
<td>304600</td>
<td>ERR</td>
<td>Function does not exist.</td>
</tr>
<tr>
<td>304700</td>
<td>ERR</td>
<td>Privilege does not exist.</td>
</tr>
<tr>
<td>305600</td>
<td>ERR</td>
<td>Invalid DCI date.</td>
</tr>
<tr>
<td>305700</td>
<td>ERR</td>
<td>Invalid DCI time.</td>
</tr>
<tr>
<td>306800</td>
<td>ERR</td>
<td>Invalid audit reason.</td>
</tr>
<tr>
<td>307000</td>
<td>ERR</td>
<td>Cannot call this function if you have not locked the record.</td>
</tr>
<tr>
<td>308700</td>
<td>ERR</td>
<td>Cannot set RDCI time until RDCI short name is set.</td>
</tr>
<tr>
<td>308900</td>
<td>ERR</td>
<td>DCI short name is not updateable.</td>
</tr>
<tr>
<td>309000</td>
<td>ERR</td>
<td>Document number is not updateable.</td>
</tr>
<tr>
<td>309300</td>
<td>ERR</td>
<td>Patient is not updateable.</td>
</tr>
<tr>
<td>309500</td>
<td>ERR</td>
<td>Date is not updateable.</td>
</tr>
<tr>
<td>309700</td>
<td>ERR</td>
<td>Time is not updateable.</td>
</tr>
<tr>
<td>309900</td>
<td>ERR</td>
<td>Visit name is not updateable.</td>
</tr>
</tbody>
</table>
Table 6–34  (Cont.) Error Messages for SetRdci

<table>
<thead>
<tr>
<th>Number</th>
<th>Severity</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>310100</td>
<td>ERR</td>
<td>Subevent number is not updateable.</td>
</tr>
<tr>
<td>310300</td>
<td>ERR</td>
<td>Site is not updateable.</td>
</tr>
<tr>
<td>310500</td>
<td>ERR</td>
<td>Investigator is not updateable.</td>
</tr>
<tr>
<td>310700</td>
<td>ERR</td>
<td>Blank flag is not updateable.</td>
</tr>
<tr>
<td>310900</td>
<td>ERR</td>
<td>Comment is not updateable.</td>
</tr>
<tr>
<td>311600</td>
<td>ERR</td>
<td>DCI comment number can not be updated to null.</td>
</tr>
<tr>
<td>311700</td>
<td>ERR</td>
<td>Document number must not have lower case.</td>
</tr>
<tr>
<td>314800</td>
<td>ERR</td>
<td>Received DCI is accessible; please use Key Changes to change Blank Flag.</td>
</tr>
<tr>
<td>315000</td>
<td>ERR</td>
<td>Some received DCMs are accessible; please use Key Changes to change Blank Flag.</td>
</tr>
<tr>
<td>315100</td>
<td>WRN</td>
<td>Responses exist for this RDCI. Changing the Blank Flag to 'Y' will cause them to be irrevocably deleted.</td>
</tr>
<tr>
<td>659700</td>
<td>ERR</td>
<td>No default audit reason.</td>
</tr>
<tr>
<td>659800</td>
<td>ERR</td>
<td>More than one default audit reason found.</td>
</tr>
<tr>
<td>660000</td>
<td>ERR</td>
<td>Cannot use system-generated audit reason.</td>
</tr>
</tbody>
</table>

Related Functions

GetRdci, ProcessRdci, CreateRdci, FetchRdci, WriteRdciRdc
SetRdcm

Assigns the value of the parameter rdcm_keys_rec to a specific API RDCM record. It also returns the contents of the updated API RDCM record in the parameter rdcm_rec. The component items of API RDCM record which are not component items of rdcm_keys_rec, such as all the numeric ID items, are implicitly assigned by this function. Patient ID, for example, is not a key field but instead is populated implicitly once the external patient identifier is supplied and validated. This process is the reason that the function returns the updated API RDCM record in the output parameter rdcm_rec.

Syntax

```c
short int SetRdcm(double received_dcm_id,
                   RdcmKeysRecord *rdcm_keys_rec,
                   RdcmRecord *rdcm_rec);
```

Parameters

- `received_dcm_id` (in) The RECEIVED_DCM_ID of the API RDCM record to be updated.
- `rdcm_keys_rec` (in) The RdcmKeysRecord definition containing the value that you want to assign to the specified API RDCM record.
- `rdcm_rec` (out) The RdcmRecord definition containing the contents of the updated API RDCM record.

Return Value

SUCCESS or FAILURE.

Comments

This function fails if:

- the API RDCI buffer is empty.
- the API RDCI record exists in the database and has not been locked, or it is locked but the user does not have the privilege required for SetRdcm.

To learn about locking the API RDCI record, see GetRdci, FetchRdci, FlushRdciRdcm, FlushResponses, WriteRdciRdcm, and WriteResponses. To learn about privileges, see the "Functional State Mapping Information" on page 4-12 and the "Functional State Transition Diagram" on page 4-16.

- there are changes pending in the API RDCI buffer that have not yet been processed through a call to ProcessRdci.
- there is no API RDCM record whose RECEIVED_DCM_ID equals the parameter received_dcm_id.

Only the items of rdcm_keys_rec that have a value different from that of the corresponding item in the specified API RDCM record will be considered. These items will be validated first. All of them have to pass validation in order for the update to take place; otherwise no update will take place and the function will return FAILURE. The type of validation taking place in SetRdcm is individual item validation, whereas cross-item validation will happen as part of the validation of the API RDCM record as a unit. Cross-item validation takes place in both ProcessRdcm and WriteRdciRdcm.
If the API RDCM record contains items related to DCM definitions, such as dcm_date and dcm_time, and those items take their values, by definition, from the corresponding items in the API RDCI record, then the values passed in for these items in SetRdcm should be the same as the values of these items in the API RDCM record. If this is not the case, the function will fail. This restriction does not apply, however, if those items do not take their values from the API RDCI record. The current values of an API RDCI record can be obtained through a call to GetRdcm.

If this function fails, rdcm_rec is empty, and if it succeeds rdcm_rec contains the current contents of the updated API RDCM record.

To populate an empty API RDCI buffer, see CreateRdci and FetchRdci.

Error Messages

<table>
<thead>
<tr>
<th>Number</th>
<th>Severity</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>284900</td>
<td>ERR</td>
<td>User does not have the privilege to call function in the current mode.</td>
</tr>
<tr>
<td>285000</td>
<td>ERR</td>
<td>Function called out of sequence.</td>
</tr>
<tr>
<td>285900</td>
<td>ERR</td>
<td>No current OCL database connection open. Use ConnectOCL to connect to OCL database.</td>
</tr>
<tr>
<td>286100</td>
<td>ERR</td>
<td>RDCM with this received _dcm_id does not exist.</td>
</tr>
<tr>
<td>286600</td>
<td>ERR</td>
<td>Audit reason required and not provided.</td>
</tr>
<tr>
<td>291400</td>
<td>ERR</td>
<td>Clinical planned event is invalid for the current study.</td>
</tr>
<tr>
<td>294600</td>
<td>ERR</td>
<td>Invalid lab.</td>
</tr>
<tr>
<td>291700</td>
<td>ERR</td>
<td>Discrete value does not exist or is inactive.</td>
</tr>
<tr>
<td>291800</td>
<td>ERR</td>
<td>Discrete value could not be validated.</td>
</tr>
<tr>
<td>291900</td>
<td>ERR</td>
<td>Value must be Y or N.</td>
</tr>
<tr>
<td>293500</td>
<td>ERR</td>
<td>Cannot set to N (not blank) when Received DCI is blank.</td>
</tr>
<tr>
<td>297000</td>
<td>ERR</td>
<td>Null or invalid input pointers provided.</td>
</tr>
<tr>
<td>299800</td>
<td>ERR</td>
<td>Date cannot exceed today’s date.</td>
</tr>
<tr>
<td>304600</td>
<td>ERR</td>
<td>Function does not exist.</td>
</tr>
<tr>
<td>304700</td>
<td>ERR</td>
<td>Privilege does not exist.</td>
</tr>
<tr>
<td>305800</td>
<td>ERR</td>
<td>Invalid DCM date.</td>
</tr>
<tr>
<td>305900</td>
<td>ERR</td>
<td>Invalid DCM time.</td>
</tr>
<tr>
<td>306100</td>
<td>ERR</td>
<td>Changes pending that have not been processed.</td>
</tr>
<tr>
<td>306800</td>
<td>ERR</td>
<td>Invalid audit reason.</td>
</tr>
<tr>
<td>306900</td>
<td>ERR</td>
<td>No update allowed to the RDCM buffer.</td>
</tr>
<tr>
<td>307000</td>
<td>ERR</td>
<td>Cannot call this function if you have not locked the record.</td>
</tr>
<tr>
<td>309400</td>
<td>ERR</td>
<td>Date is not applicable.</td>
</tr>
<tr>
<td>309500</td>
<td>ERR</td>
<td>Date is not updateable.</td>
</tr>
<tr>
<td>309600</td>
<td>ERR</td>
<td>Time is not applicable.</td>
</tr>
<tr>
<td>309700</td>
<td>ERR</td>
<td>Time is not updateable.</td>
</tr>
<tr>
<td>309800</td>
<td>ERR</td>
<td>Visit name is not applicable.</td>
</tr>
</tbody>
</table>
**Table 6–35 (Cont.) Error Messages for SetRdcm**

<table>
<thead>
<tr>
<th>Number</th>
<th>Severity</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>309900</td>
<td>ERR</td>
<td>Visit name is not updateable.</td>
</tr>
<tr>
<td>310000</td>
<td>ERR</td>
<td>Subevent number is not applicable.</td>
</tr>
<tr>
<td>310100</td>
<td>ERR</td>
<td>Subevent number is not updateable.</td>
</tr>
<tr>
<td>310600</td>
<td>ERR</td>
<td>Blank flag is not applicable.</td>
</tr>
<tr>
<td>310700</td>
<td>ERR</td>
<td>Blank flag is not updateable.</td>
</tr>
<tr>
<td>310800</td>
<td>ERR</td>
<td>Comment is not applicable.</td>
</tr>
<tr>
<td>310900</td>
<td>ERR</td>
<td>Comment is not updateable.</td>
</tr>
<tr>
<td>311000</td>
<td>ERR</td>
<td>Qualifying value is not applicable.</td>
</tr>
<tr>
<td>311100</td>
<td>ERR</td>
<td>Qualifying value is not updateable.</td>
</tr>
<tr>
<td>311200</td>
<td>ERR</td>
<td>Lab is not applicable.</td>
</tr>
<tr>
<td>311300</td>
<td>ERR</td>
<td>Lab is not updateable.</td>
</tr>
<tr>
<td>311400</td>
<td>ERR</td>
<td>Data comment is not applicable.</td>
</tr>
<tr>
<td>311500</td>
<td>ERR</td>
<td>Data comment is not updateable.</td>
</tr>
<tr>
<td>314900</td>
<td>ERR</td>
<td>Received DCM is accessible; please use Key Changes to change Blank Flag.</td>
</tr>
<tr>
<td>315200</td>
<td>WRN</td>
<td>Responses exist for this RDCM. Changing the Blank Flag to 'Y' will cause them to be irrevocably deleted.</td>
</tr>
<tr>
<td>345400</td>
<td>ERR</td>
<td>Qualifying value can only be changed to the default value defined at the DCI module.</td>
</tr>
<tr>
<td>659700</td>
<td>ERR</td>
<td>No default audit reason.</td>
</tr>
<tr>
<td>659800</td>
<td>ERR</td>
<td>More than one default audit reason found.</td>
</tr>
<tr>
<td>660000</td>
<td>ERR</td>
<td>Cannot use system-generated audit reason.</td>
</tr>
</tbody>
</table>

**Related Functions**

GetRdcm, GetRdcmArr, WriteRdciRdcm
SetResponseData

Updates data and audit information, if any, for the response in the Oracle Clinical internal structure and returns any univariate discrepancy raised.

Syntax

```c
short int SetResponseData(ResponseId *response_identifier,
ValueText *value,
AuditInfo *audit_comment,
DiscInfo *return_discrepancy_info,
DCIAPIFlag *needs_audit);
```

Parameters

- `response_identifier` (in) The ResponseId definition containing the unique identifier for this response.
- `value` (in) A pointer to the ValueText structure containing the data for this response.
- `audit_comment` (in) An AuditInfo structure holding the audit comment for this response.
- `return_discrepancy_info` (out) A DiscInfo structure containing the discrepancy information for this response.
- `needs_audit` (out) Indicates whether the response requires audit comment.

Return Value

SUCCESS or FAILURE or WARNING.

Comments

The response_identifier uniquely identifies the response that is being processed by the external system. Upon calling SetResponseData, Oracle Clinical locates the response in its internal structure and updates the audit comment information for this response from the input variables provided for holding this information. These input variables should be allocated and initialized before calling the routine.

While updating the data, the function checks the data for a univariate discrepancy and returns any discrepancy found in the structure provided for that purpose. If updating the data clears existing discrepancies, the discrepancy buffer is also cleared.

If this document is accessible and the API is in UPDATE mode, the audit comment is mandatory. SetResponseData returns FAILURE if the audit comment is needed but not provided — however, the internal buffers are updated with the rest of the information provided and the needs_audit flag is set. The user must call SetResponseData again with the missing audit comment information before calling any other API functions which will return FAILURE if invoked. Once the response has been updated with the audit comment information, you may continue with further processing by invoking other API functions.

If the RDCM is accessible, then the audit comment is mandatory to change the data. Otherwise, the API function will return FAILURE if the audit comment is not supplied.
**Note:** It is possible to enter response values for non-displayed, non-enterable and derived questions. The `SetResponseData` API does not check for such properties of the question and leaves control with the external system.

### Error Messages

**Table 6–36  Error Messages for SetResponseData**

<table>
<thead>
<tr>
<th>Number</th>
<th>Severity</th>
<th>Message</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>284800</td>
<td>ERR</td>
<td>Function not available in this mode.</td>
<td></td>
</tr>
<tr>
<td>284900</td>
<td>ERR</td>
<td>User does not have the privilege to call function in the current mode.</td>
<td></td>
</tr>
<tr>
<td>285000</td>
<td>ERR</td>
<td>Function called out of sequence.</td>
<td></td>
</tr>
<tr>
<td>285900</td>
<td>ERR</td>
<td>No current OCL database connection open. Use ConnectOCL to connect to OCL database.</td>
<td></td>
</tr>
<tr>
<td>286600</td>
<td>ERR</td>
<td>Audit reason required and not provided.</td>
<td></td>
</tr>
<tr>
<td>286700</td>
<td>ERR</td>
<td>Cannot locate the corresponding DCM question in the internal OCL buffers for the DCM question ID passed.</td>
<td></td>
</tr>
<tr>
<td>286800</td>
<td>ERR</td>
<td>No response in the internal buffers for the question.</td>
<td></td>
</tr>
<tr>
<td>286900</td>
<td>ERR</td>
<td>No existing univariate discrepancy for the question.</td>
<td></td>
</tr>
<tr>
<td>287000</td>
<td>ERR</td>
<td>DCM question and DCM question group combination does not exist in DCM.</td>
<td></td>
</tr>
<tr>
<td>287100</td>
<td>ERR</td>
<td>DCM question group does not exist in DCM.</td>
<td></td>
</tr>
<tr>
<td>288000</td>
<td>ERR</td>
<td>Repeat sn does not exist for DCM question group.</td>
<td></td>
</tr>
<tr>
<td>304600</td>
<td>ERR</td>
<td>Function does not exist.</td>
<td></td>
</tr>
<tr>
<td>304700</td>
<td>ERR</td>
<td>Privilege does not exist.</td>
<td></td>
</tr>
<tr>
<td>306800</td>
<td>ERR</td>
<td>Invalid audit reason.</td>
<td></td>
</tr>
<tr>
<td>312500</td>
<td>ERR</td>
<td>Can not update repeating defaults when repeat sn is less than the maximum repeats expected for DCM question group.</td>
<td></td>
</tr>
</tbody>
</table>

### Related Functions

- `InitializeRdcmResponses`
- `GetResponse`
- `GetUnivDiscrepancy`
SetStudyContext

This function sets up the environment for a study by gathering all study-related information, user-related information and configuration settings. Calling this function sets the study context for future API calls.

Syntax

```c
short int SetStudyContext(char *study,
    StudyRecord *study_rec);
```

Parameters

- `study` (in) The study name.
- `study_rec` (out) A `StudyRecord` structure containing information about the live version of the study.

Return Value

SUCCESS or FAILURE.

Comments

This function takes these processing steps:

1. Set the new study context, using the parameter study, replacing the existing study context. If it fails in setting the study context it will return FAILURE, leaving the existing study context intact.
2. Flush the API RDCIRDCM buffer and consequently the Responses buffer.

Error Messages

<table>
<thead>
<tr>
<th>Number</th>
<th>Severity</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>284900</td>
<td>ERR</td>
<td>User does not have the privilege to call function in the current mode.</td>
</tr>
<tr>
<td>285000</td>
<td>ERR</td>
<td>Function called out of sequence.</td>
</tr>
<tr>
<td>285900</td>
<td>ERR</td>
<td>No current OCL database connection open. Use ConnectOCL to connect to OCL database.</td>
</tr>
<tr>
<td>286500</td>
<td>ERR</td>
<td>Study is not enabled for data entry.</td>
</tr>
<tr>
<td>301300</td>
<td>ERR</td>
<td>Invalid clinical study.</td>
</tr>
<tr>
<td>301400</td>
<td>ERR</td>
<td>The clinical study is not live.</td>
</tr>
<tr>
<td>301500</td>
<td>ERR</td>
<td>Data entry is not enabled for the clinical study.</td>
</tr>
<tr>
<td>301600</td>
<td>ERR</td>
<td>Clinical study does not exist in the current location.</td>
</tr>
<tr>
<td>301700</td>
<td>ERR</td>
<td>No study state for the clinical study.</td>
</tr>
<tr>
<td>301800</td>
<td>ERR</td>
<td>No study access account exists for the study.</td>
</tr>
<tr>
<td>301900</td>
<td>ERR</td>
<td>Record validation failed.</td>
</tr>
<tr>
<td>302000</td>
<td>ERR</td>
<td>User is not authorized to access the study.</td>
</tr>
<tr>
<td>302100</td>
<td>ERR</td>
<td>Validation of study failure.</td>
</tr>
</tbody>
</table>
Table 6–37 (Cont.) Error Messages for SetStudyContext

<table>
<thead>
<tr>
<th>Number</th>
<th>Severity</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>303300</td>
<td>ERR</td>
<td>Changes are pending for RDCI/RDCM work.</td>
</tr>
<tr>
<td>303400</td>
<td>ERR</td>
<td>Changes are pending for responses work.</td>
</tr>
</tbody>
</table>

Related Functions

ConnectOCL, DisconnectOCL
SetUnivDiscrepancy

Updates discrepancy information such as review status and comment for the response in the Oracle Clinical internal structure.

Syntax

```c
short int SetUnivDiscrepancy(ResponseId *response_identifier,
                              DiscInfo *discrepancy_info);
```

Parameters

- `response_identifier` (in) The `ResponseId` structure definition containing the unique identifier for this response.
- `discrepancy_info` (in) The `DiscInfo` structure definition containing the discrepancy information for this response.

Return Value

`SUCCESS` or `FAILURE`.

Comments

The `response_identifier` uniquely identifies the response that is being processed by the external system. Upon calling `SetUnivDiscrepancy`, Oracle Clinical locates the response in its internal structure and updates the discrepancy information for this response from the input variables provided for holding this information. These input variables should be allocated and initialized before calling the routine.

Error Messages

Table 6–38 Error Messages for SetUnivDiscrepancy

<table>
<thead>
<tr>
<th>Number</th>
<th>Severity</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>284800</td>
<td>ERR</td>
<td>Function not available in this mode.</td>
</tr>
<tr>
<td>284900</td>
<td>ERR</td>
<td>User does not have the privilege to call function in the current mode.</td>
</tr>
<tr>
<td>285000</td>
<td>ERR</td>
<td>Function called out of sequence.</td>
</tr>
<tr>
<td>285900</td>
<td>ERR</td>
<td>No current OCL database connection open. Use ConnectOCL to connect to OCL database.</td>
</tr>
<tr>
<td>286600</td>
<td>ERR</td>
<td>Audit reason required and not provided.</td>
</tr>
<tr>
<td>286700</td>
<td>ERR</td>
<td>Cannot locate the corresponding DCM question in the internal OCL buffers for the DCM question ID passed.</td>
</tr>
<tr>
<td>286800</td>
<td>ERR</td>
<td>No response in the internal buffers for the question.</td>
</tr>
<tr>
<td>286900</td>
<td>ERR</td>
<td>No existing univariate discrepancy for the question.</td>
</tr>
<tr>
<td>287000</td>
<td>ERR</td>
<td>DCM question and DCM question group combination does not exist in DCM.</td>
</tr>
<tr>
<td>287100</td>
<td>ERR</td>
<td>DCM question group does not exist in DCM.</td>
</tr>
<tr>
<td>288000</td>
<td>ERR</td>
<td>Repeat sn does not exist for DCM question group.</td>
</tr>
<tr>
<td>297000</td>
<td>ERR</td>
<td>Null or invalid input pointers provided.</td>
</tr>
<tr>
<td>302800</td>
<td>ERR</td>
<td>Invalid discrepancy review status code.</td>
</tr>
</tbody>
</table>
### Related Functions

- `InitializeRdcmResponses`
- `GetResponse`
- `GetUnivDiscrepancy`

### Table 6–38 (Cont.)  Error Messages for SetUnivDiscrepancy

<table>
<thead>
<tr>
<th>Number</th>
<th>Severity</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>302900</td>
<td>ERR</td>
<td>Invalid discrepancy resolution type code.</td>
</tr>
<tr>
<td>303000</td>
<td>ERR</td>
<td>Resolution type code cannot be null for RESOLVED review status.</td>
</tr>
<tr>
<td>303100</td>
<td>ERR</td>
<td>Resolution type code should be null if review status is not RESOLVED.</td>
</tr>
<tr>
<td>312500</td>
<td>ERR</td>
<td>Can not update repeating defaults when repeat sn is less than the maximum repeats expected for DCM question group.</td>
</tr>
</tbody>
</table>
WriteRdcIRdcm

This function reviews the header information in the API RDCM and RDCI buffers and validates that each of the API RDCM records is a unit that includes all necessary data. In addition, it verifies that there are no duplicate RDCMs in either buffer or in the database. If there are duplicate RDCMs in the buffer:

- the RDCM ID of the RDCM being tested is returned in the double *received_dcm_id parameter
- the ID of the duplicate RDCM is returned in the double *received_dcm_id_dup parameter

If there are duplicate pre-existing RDCMs in the database, an error is returned and the document number of the duplicate record is returned as part of the error message text. Once the API RDCM records are validated as a unit and all duplicates are resolved, this function writes the contents of the API RDCIRDCM buffers to the database and commits. If someone has created a duplicate RDCI between the time you called ProcessRdci and the time you called WriteRdcIRdcm, the duplicate will be trapped at the time of the commit and the function will fail. Then it either preserves the lock on the API RDCI record or releases it based on the value of the parameter preserve_lock.

Syntax

```c
short int WriteRdcIRdcm (DCIAPIFlag preserve_lock,
                        double *received_dcm_id,
                        double *received_dcm_id_dup);
```

Parameters

- **preserve_lock** (in) A flag indicating whether the lock on the API RDCI record should be preserved or released. If the value is TRUE, the lock will be kept and if it is FALSE, it will be released.
- **received_dcm_id** (out) The RECEIVED_DCM_ID of either the first API RDCM record to fail validation in steps 1 or 2 below or the first API RDCM record in a pair of duplicate API RDCM records found in step 3 below.
- **received_dcm_id_dup** (out) The RECEIVED_DCM_ID of the second API RDCM record in a pair of duplicate API RDCM records. This parameter will contain null if there are no duplicate API RDCM records encountered.

Return Value

SUCCESS or FAILURE or WARNING.

Comments

To validate each API RDCM record as a unit, this function takes these steps for each API RDCM record:

1. The function checks that all the mandatory items in the API RDCM record are populated.
2. WriteRdcIRdcm performs cross-item validation. If either the previous step or this step fails, the function stops with FAILURE returning in the output parameter received_dcm_id the RECEIVED_DCM_ID of the API RDCM record and null in the parameter received_dcm_id_dup.
3. The function performs uniqueness validation for the API RDCM record. If it finds a duplicate within the other API RDCM records it returns the following values:

- In the output parameter received_dcm_id, the function returns the RECEIVED_DCM_ID of the API RDCM record currently being validated.
- In the output parameter received_dcm_id_dup, the function returns the RECEIVED_DCM_ID of the duplicate API RDCM record found, in addition to an error message.

If, on the other hand, WriteRdciRdcm finds a duplicate under another RDCI in the database, the function just returns an error message.

As part of the validation it carries out, this function will change the value of the blank flag of the API RDCI record to bring it in sync with the set of blank flag values of all the API RDCM records, if this change is necessary.

This function also assigns values to the time stamp items of both the API RDCI record and the API RDCM records.

To see the effects of this function on the API RDCIRDCM buffer, the front end has to call GetRdci and GetRdcm.

To validate a single API RDCM record, see ProcessRdcm.

### Error Messages

### Table 6–39 Error Messages for WriteRdciRdcm

<table>
<thead>
<tr>
<th>Number</th>
<th>Severity</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>284900</td>
<td>ERR</td>
<td>User does not have the privilege to call function in the current mode.</td>
</tr>
<tr>
<td>285000</td>
<td>ERR</td>
<td>Function called out of sequence.</td>
</tr>
<tr>
<td>285900</td>
<td>ERR</td>
<td>No current OCL database connection open. Use ConnectOCL to connect to OCL database.</td>
</tr>
<tr>
<td>286600</td>
<td>ERR</td>
<td>Audit reason required and not provided.</td>
</tr>
<tr>
<td>290100</td>
<td>ERR</td>
<td>Duplicate Received DCM found within this Received DCI.</td>
</tr>
<tr>
<td>290200</td>
<td>ERR</td>
<td>Duplicate Received DCM found within document number: \0.</td>
</tr>
<tr>
<td>290300</td>
<td>ERR</td>
<td>Current record is not complete: Operation was not successful.</td>
</tr>
<tr>
<td>291500</td>
<td>WRN</td>
<td>Subevent not found: actual event will be created once you save.</td>
</tr>
<tr>
<td>292000</td>
<td>ERR</td>
<td>Blank flag must be entered.</td>
</tr>
<tr>
<td>292100</td>
<td>ERR</td>
<td>Clinical planned event name must be entered.</td>
</tr>
<tr>
<td>293000</td>
<td>ERR</td>
<td>Subevent number must be entered.</td>
</tr>
<tr>
<td>293300</td>
<td>ERR</td>
<td>DCM time must be entered.</td>
</tr>
<tr>
<td>293400</td>
<td>ERR</td>
<td>Qualifying value must be entered.</td>
</tr>
<tr>
<td>293600</td>
<td>ERR</td>
<td>Too many actual events correspond to this subevent #.</td>
</tr>
<tr>
<td>293700</td>
<td>ERR</td>
<td>DCM date must be entered.</td>
</tr>
<tr>
<td>293800</td>
<td>WRN</td>
<td>You are working with a data locked record and have privileged update.</td>
</tr>
<tr>
<td>294200</td>
<td>ERR</td>
<td>An error occurred while processing the Received DCI structure and updating the PATIENT_DM_TRACKING table.</td>
</tr>
<tr>
<td>294300</td>
<td>ERR</td>
<td>An error occurred while processing the Received DCM structure and updating the received DCI.</td>
</tr>
</tbody>
</table>
Table 6–39 (Cont.) Error Messages for WriteRdciRdcm

<table>
<thead>
<tr>
<th>Number</th>
<th>Severity</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>294700</td>
<td>ERR</td>
<td>Received DCI is protected because at least one of its received DCMs is locked.</td>
</tr>
<tr>
<td>294800</td>
<td>ERR</td>
<td>An error occurred while in the Rxc_Login_Pack. SoftDeleteAll received DCMs function.</td>
</tr>
<tr>
<td>295200</td>
<td>ERR</td>
<td>Too many rows found in NONEXPECTED_DCMS table.</td>
</tr>
<tr>
<td>295800</td>
<td>ERR</td>
<td>Problem retrieving from the actual event sequence.</td>
</tr>
<tr>
<td>296700</td>
<td>ERR</td>
<td>Unable to lock RDCI.</td>
</tr>
<tr>
<td>297000</td>
<td>ERR</td>
<td>Null or invalid input pointers provided.</td>
</tr>
<tr>
<td>300700</td>
<td>WRN</td>
<td>Patient is frozen. The RDCI record will behave as if it were fetched in non-locking mode.</td>
</tr>
<tr>
<td>301200</td>
<td>WRN</td>
<td>No changes to save.</td>
</tr>
<tr>
<td>304600</td>
<td>ERR</td>
<td>Function does not exist.</td>
</tr>
<tr>
<td>304700</td>
<td>ERR</td>
<td>Privilege does not exist.</td>
</tr>
<tr>
<td>306100</td>
<td>ERR</td>
<td>Changes pending that have not been processed.</td>
</tr>
<tr>
<td>306400</td>
<td>ERR</td>
<td>Too many current actual events.</td>
</tr>
<tr>
<td>306500</td>
<td>ERR</td>
<td>Unable to release lock.</td>
</tr>
<tr>
<td>307000</td>
<td>ERR</td>
<td>Cannot call this function if you have not locked the record.</td>
</tr>
<tr>
<td>307400</td>
<td>ERR</td>
<td>Please use the patient enrollment form to specify which DCI Book to use to maintain the page tracking information.</td>
</tr>
<tr>
<td>315500</td>
<td>WRN</td>
<td>RDCI is not protected because at least one of its RDCMs is locked and you have privileged update.</td>
</tr>
</tbody>
</table>

Related Functions

CreateRdci, FetchRdci, SetRdci, GetRdci, ProcessRdci
WriteResponses

This function reviews the response data in the buffers, verifies that they are clean, and then sends it to the Oracle Clinical database. If this function detects an incomplete flag (used, for example, if the operator has not finished the work and will complete it after lunch), the response data remains in the buffers. Otherwise the function writes the data to the database and commits. Then it either preserves the lock on the API RDCI record or releases it based on the value of the parameter preserve_lock.

Syntax

```c
short int WriteResponses(DCIAPIFlag incomplete,
                   DCIAPIFlag preserve_lock,
                   ResponseId *response_identifier);
```

Parameters

- `incomplete` (in) – Specify whether responses should be saved in incomplete mode. Value is TRUE or FALSE.
- `preserve_lock` (in) – A flag indicating whether the lock on the API RDCI record should be preserved or released. If the value is TRUE, the lock will be kept and if it is FALSE, it will be released.
- `response_identifier` (out) – A ResponseId structure containing the unique identifier of the failed response.

Return Value

SUCCESS or FAILURE or WARNING.

Comments

None.

Error Messages

<table>
<thead>
<tr>
<th>Table 6–40 Error Messages for WriteResponses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number</strong></td>
</tr>
<tr>
<td>------------</td>
</tr>
<tr>
<td>284900</td>
</tr>
<tr>
<td>285000</td>
</tr>
<tr>
<td>285900</td>
</tr>
<tr>
<td>286600</td>
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<tr>
<td>288300</td>
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<td>288400</td>
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<td>288500</td>
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<tr>
<td>288600</td>
</tr>
<tr>
<td>288700</td>
</tr>
<tr>
<td>293800</td>
</tr>
</tbody>
</table>
Table 6–40  (Cont.) Error Messages for WriteResponses

<table>
<thead>
<tr>
<th>Number</th>
<th>Severity</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>294200</td>
<td>ERR</td>
<td>An error occurred while processing the Received DCI structure and updating the PATIENT_DM_TRACKING table.</td>
</tr>
<tr>
<td>294300</td>
<td>ERR</td>
<td>An error occurred while processing the Received DCM structure and updating the Received DCI.</td>
</tr>
<tr>
<td>300700</td>
<td>WRN</td>
<td>Patient is frozen. The RDCI record will behave as if it were fetched in non-locking mode.</td>
</tr>
<tr>
<td>303500</td>
<td>ERR</td>
<td>Document contains empty repeats.</td>
</tr>
<tr>
<td>304600</td>
<td>ERR</td>
<td>Function does not exist.</td>
</tr>
<tr>
<td>304700</td>
<td>ERR</td>
<td>Privilege does not exist.</td>
</tr>
<tr>
<td>306400</td>
<td>ERR</td>
<td>Too many current actual events.</td>
</tr>
<tr>
<td>306500</td>
<td>ERR</td>
<td>Unable to release lock.</td>
</tr>
<tr>
<td>308600</td>
<td>ERR</td>
<td>Record changed by another user.</td>
</tr>
</tbody>
</table>

Related Functions

SetResponseData, GetResponse, FlushResponses
This section lists the error messages that may be generated when a function is called. To retrieve error messages, call the GetError function.

-1: [Text varies, according to the particular error]
  Severity: ERR
  Cause: Internal Oracle Clinical error.
  Action: Roll back immediately. Data may have been corrupted.

284800: Function not applicable in this mode
  Severity: ERR
  Cause: For example, attempted to SetResponseData in Browse mode.
  Action: Change to the appropriate mode in order to call the function.

284900: User does not have the privilege to call function in the current mode
  Severity: ERR
  Cause: The user is not authorized to access the function that is being called.
  Action: Look at the table that maps function role to action and change the user's privileges.

285000: Function called out of sequence.
  Severity: ERR
  Cause: You are not in the right state.
  Action: Refer to the "Functional State Transition Diagram" to identify the correct state for the function that you are calling.

285700: An open database connection already exists. Use DisconnectOCL to close the connection.
  Severity: ERR
  Cause: You are already connected to Oracle Clinical. You cannot have two sessions running concurrently.
  Action: Disconnect the current session.

285900: No current OCL database connection open. Use ConnectOCL to connect to OCL database.
  Severity: ERR
  Cause: There is no connection with the database.
  Action: Use ConnectOCL to connect to the database.
286000: Cannot disconnect while changes are pending for RDCI/RDCM work.

Severity: ERR

Cause: There is work in progress. It must either be erased or completed.

Action: Release the document using FlushRdciRdcm or WriteRdciRdcm depending upon whether or not you want to preserve the changes.

286100: RDCM with this received_dcm_id does not exist.

Severity: ERR

Cause: The RDCM cannot be located within the database.

Action: Query the stable interface or use GetRdcmArr to review all possible RDCMs.

286200: Status of Received DCM with this received_dcm_id is incompatible with data entry mode.

Severity: ERR

Cause: Incompatible modes of data entry - trying to update on a received document.

Action: Perform all required processes on the document before you begin to work in this mode.

286300: Locking mode incompatible with data entry mode.

Severity: ERR

Cause: Trying to update an unlocked document.

Action: Lock the document using FetchRdci in lock mode.

286500: Study is not enabled for data entry.

Severity: ERR

Cause: The study is not enabled to accept data.

Action: Enable the study for data entry in the design subsystem.

286600: Audit reason required and not provided.

Severity: ERR

Cause: A change was made to an accessible document but no audit reason was provided. The change may have been to a RDCI or RDCM key or comment, or to a response data, or to an investigator comment or by deleting a repeat.

Action: Return to the update and set a reason for the change using SetResponseData.

286700: Cannot locate the corresponding DCM question in the internal OCL buffers for the DCM question ID passed.

Severity: ERR

Cause: The question being asked does not belong to the selected DCM.


286800: No response in the internal buffers for the question.

Severity: ERR

Cause: Have not entered a response to the question.

Action: Use SetResponseData to enter a response.
286900: No existing univariate discrepancy for the question.
   Severity: ERR
   Cause: The data follows all business rules and does not include a discrepancy description.
   Action: Use SetResponseData to enter a response.

287000: DCM question and DCM question group combination does not exist in DCM.
   Severity: ERR
   Cause: The question does not belong to the selected DCM.
   Action: Query the stable interface. The Oracle Clinical Stable Interface Technical Reference Manual includes synonyms and views to access the data model.

287100: DCM question group does not exist in DCM.
   Severity: ERR
   Cause: The question does not belong to the selected DCM.
   Action: Query the stable interface. The Oracle Clinical Stable Interface Technical Reference Manual includes synonyms and views to access the data model.

287200: Cannot insert repeats in browse mode.
   Severity: ERR
   Cause: Oracle Clinical is in a non-repeatable mode.
   Action: Change the mode to a state that allows you to update.

287300: Invalid DCM question group ID passed.
   Severity: ERR
   Cause: DCM question group ID does not exist in the DCM.
   Action: Query the stable interface for the correct ID or use the API GetQuestionId. The Oracle Clinical Stable Interface Technical Reference Manual includes synonyms and views to access the data model.

287400: Cannot insert repeat for a non-repeating question group.
   Severity: ERR
   Cause: This group is not set up to accept repeats.
   Action: Modify the DCM definition in the Data Collection definition subsystem.

287500: Inserting repeat will introduce a null repeat in the middle.
   Severity: ERR
   Cause: A question has been skipping in a repeating question group.
   Action: Do not skip repeats.

287600: Cannot insert for repeating defaults when repeat is less than the maximum repeats for DCM question group.
   Severity: ERR
   Cause: Attempt to insert repeats in a protected area.
   Action: Ask someone who has the appropriate privileges to insert the repeat.

287700: The repeat exceeds the maximum repeats expected for DCM question group.
   Severity: ERR
   Cause: Number of repeats that have been input exceeds the number that the system was set to receive.
**Action**: If you have the appropriate privileges, modify the system to accept the additional repeats.

287800: Cannot delete repeats in browse mode.

*Severity*: ERR  
*Cause*: Oracle Clinical is in a mode where you may not delete repeats.  
**Action**: Change the mode to a state where you can modify the number of repeats.

287900: Cannot delete repeat for a non-repeating question group.

*Severity*: ERR  
*Cause*: This group is not set up to accept repeat deletions.  
**Action**: Modify the DCM definition in the Data Collection definition subsystem.

288000: Repeat sn does not exist for DCM question group.

*Severity*: ERR  
*Cause*: The target row has not been created.  
**Action**: Create the row first using InsertRepeat.

288100: Cannot delete for repeating defaults when repeat is less than the maximum repeats for DCM question group.

*Severity*: ERR  
*Cause*: Attempt to insert repeats in a protected area.  
**Action**: Ask someone who has the appropriate privileges to insert the repeat.

288300: The API RDCI record is not locked.

*Severity*: ERR  
*Cause*: The system cannot update the record because it is not locked.  
**Action**: Lock the header and then update the record.

288400: The completion flag is not compatible with the data entry mode.

*Severity*: ERR  
*Cause*: You are in a mode where you are not allowed to save a partially completed DCM.  
**Action**: Flush all changes and return to finish the work when you have all the required data.

288500: Write responses called but no changes pending.

*Severity*: WRN  
*Cause*: The user has indicated that he or she wants to commit but the system has received no data.  
**Action**: Warning message; no action necessary.

288600: Blank repeats exist.

*Severity*: ERR  
*Cause*: The repeats do not contain any information.  
**Action**: Either delete the repeat using DeleteRepeat or add data using SetResponseData.

288700: Mandatory field missing.

*Severity*: ERR  
*Cause*: There is missing data.
**Action:** Provide data using `SetResponseData` or, if the Data Entry mode permits, do an incomplete comment with `WriteResponses`.

An example of an incomplete comment: "Do not know the answer. Will complete this question later."

**288800: Cannot set actual event when RDCI is locked.**

**Severity:** ERR  
**Cause:** The document is locked and the parent record is in a state of change.  
**Action:** Release the document using `FlushRdciRdcm` or `WriteRdciRdcm` depending upon whether you want to preserve the changes.

Fetch the record from the database using `FetchRdci`.  
Finish modifying the parent record and put it in the database or release the lock and state that there is no change.

**288900: Cannot enroll a patient when RDCI is locked.**

**Severity:** ERR  
**Cause:** The document is locked and the parent record is in a state of change.  
**Action:** Release the document using `FlushRdciRdcm` or `WriteRdciRdcm` depending upon whether you want to preserve the changes.

Fetch the record from the database using `FetchRdci`.  
Finish modifying the parent record and put it in the database or release the lock and state that there is no change.

**289000: Cannot set page status when RDCI is locked.**

**Severity:** ERR  
**Cause:** The document is locked and the parent record is in a state of change.  
**Action:** Release the document using `FlushRdciRdcm` or `WriteRdciRdcm` depending upon whether you want to preserve the changes.

Fetch the record from the database using `FetchRdci`.  
Finish modifying the parent record and put it in the database or release the lock and state that there is no change.

**289100: Unable to find the RDCI to which page belongs: \0.**

**Severity:** ERR  
**Cause:** Invalid received page ID passed to `SetPageStatus`.  
**Action:** Pass correct received_page_ID.

**289200: Unable to lock the RDCI to which page belongs.**

**Severity:** ERR  
**Cause:** Someone else is using the RDCI.  
**Action:** Wait a few minutes and attempt to lock the RDCI again.

**289300: 'Unknown' page status can only be changed to 'Missing' or 'Present'.**

**Severity:** ERR  
**Cause:** Invalid page status passed to `SetPageStatus`.  
**Action:** Use other means to update the status.
289400: The page status cannot be manually changed to a system status.
Severity: ERR
Cause: Invalid page status passed to SetPageStatus.
Action: Use other means to update the status.

289500: A system page status cannot be manually changed.
Severity: ERR
Cause: Invalid page status passed to SetPageStatus.
Action: Use the correct combination which is provided by the error message.

289800: This document already exists in the database.
Severity: ERR
Cause: Attempting to create a document with the same set of keys as an existing document.
Action: Change keys to create a new document or update an existing document.

289900: Document number not derived.
Severity: ERR
Cause: User has not provided the document number. The system cannot derive a document number because the user has not set the scheme to devise a document number in OCL.
Action: Either provide the document number or provide a scheme to devise one.

289000: Duplicate Received DCI found with the same keys in document number: \0.
Severity: ERR
Cause: The document that is about to be written to the database has been created by another user in the meantime.
Action: Roll back and start again.

289100: Duplicate Received DCM found within this Received DCI.
Severity: ERR
Cause: The document that is about to be written to the database has been created by another user in the meantime.
Action: Roll back and start again.

289200: Duplicate Received DCM found in document number: \0.
Severity: ERR
Cause: The document that is about to be written to the database has been created by another user in the meantime.
Action: Roll back and start again.

289300: Current record is not complete: Operation was not successful.
Severity: ERR
Cause: Called ProcessRdci or ProcessRdcm before providing all required keys.
Action: Provide the missing keys in order to proceed.

289500: This site/investigator pair is invalid for study.
Severity: ERR
Cause: The investigator is not assigned to this site.
Action: Either change the investigator assignment or the investigator.
289600: Invalid investigator.
  Severity: ERR
  Cause: The investigator is not assigned to this study.
  Action: Either create the investigator for the study or correct the data in the document.

289700: Invalid site.
  Severity: ERR
  Cause: The site is not assigned to this study.
  Action: Either create the site for the study or correct the data in the document.

289800: Patient position is frozen.
  Severity: ERR
  Cause: Attempt to add data for a patient that is frozen. The site is not assigned to this study.
  Action: Unfreeze the patient before adding data.

289900: Patient not enrolled for study.
  Severity: WRN
  Cause: The patient has not been enrolled in the study.
  Action: Enroll the patient in the study using EnrollPatient.

291000: Patient position is invalid.
  Severity: ERR
  Cause: The patient has not been created in the study.
  Action: Add the patient to the study using the Oracle Clinical design subsystem or correct the data in the document.

291100: Patient is not associated with a valid site (active site/site role).
  Severity: WRN
  Cause: The patient has not been enrolled in the study.
  Action: Assign the patient to a valid site using the Oracle Clinical design subsystem or correct the data in the document.

291200: DCI is inactive or invalid.
  Severity: ERR
  Cause: Attempt to add data for invalid or inactive patient.
  Action: Select a different DCI or, if appropriate, activate the DCI.

291300: [error message returned by OCL_CLIENT_PACK. Validate document]
  Severity: ERR
  Cause: This internal error can display different error messages.
  Action: Print a copy of the entire error stack and contact Oracle Clinical support. Be prepared to describe your most recent actions and to provide sample code.

291400: Clinical planned event is invalid for the current study.
  Severity: ERR
  Cause: Internal error.
  Action: Print a copy of the entire error stack and contact Oracle Clinical support. Be prepared to describe your most recent actions and to provide sample code.
291500: Subevent not found: actual event will be created once you save.  
Severity: WRN  
Cause: This is an informational message.  
Action: You may wish to set the actual event using SetActualEvent.

291600: Invalid lab.  
Severity: ERR  
Cause: This is an informational message.  
Action: You may wish to add the labs using the labs menu in Oracle Clinical.

291700: Discrete value does not exist or is inactive.  
Severity: ERR  
Cause: The discrete value used for validation is invalid.  
Action: Create or activate a discrete value.

291800: Discrete value could not be validated.  
Severity: ERR  
Cause: The discrete value used for validation is invalid.  
Action: Run a query in the Maintain Discrete Value Groups window in Oracle Clinical (Glib, Discrete Value Grps, Discrete Value Grps) to see if this is the correct discrete value group.

291900: Value must be Y or N.  
Severity: ERR  
Cause: Incorrect value.  
Action: Enter Y or N.

292000: Blank flag must be entered.  
Severity: ERR  
Cause: This is a mandatory field that may not be left blank or null.  
Action: Input the appropriate value.

292100: Clinical planned event name must be entered.  
Severity: ERR  
Cause: This is a mandatory field that may not be left blank or null.  
Action: Input the appropriate value.

292200: Patient must be entered.  
Severity: ERR  
Cause: This is a mandatory field that may not be left blank or null.  
Action: Input the appropriate value.

292300: DCI name must be entered.  
Severity: ERR  
Cause: This is a mandatory field that may not be left blank or null.  
Action: Input the appropriate value.
292400: Site is required.
   Severity: ERR
   Cause: This is a mandatory field that may not be left blank or null.
   Action: Input the appropriate value.

292500: Clinical planned event name is required.
   Severity: ERR
   Cause: This is a mandatory field that may not be left blank or null.
   Action: Input the appropriate value.

292600: Patient is required.
   Severity: ERR
   Cause: This is a mandatory field that may not be left blank or null.
   Action: Input the appropriate value.

292700: DCI is required.
   Severity: ERR
   Cause: This is a mandatory field that may not be left blank or null.
   Action: Input the appropriate value.

292800: DCI date must be entered.
   Severity: ERR
   Cause: This is a mandatory field that may not be left blank or null.
   Action: Input the appropriate value.

292900: Error soft deleting actual event.
   Severity: ERR
   Cause: Internal error.
   Action: Print a copy of the entire error stack and contact Oracle Clinical support.
   Be prepared to describe your most recent actions and to provide sample code.

293000: Subevent number must be entered.
   Severity: ERR
   Cause: This is a mandatory flag that may not be left blank or null.
   Action: Input the appropriate value.

293300: DCM time must be entered.
   Severity: ERR
   Cause: This is a mandatory flag that may not be left blank or null.
   Action: Provide requested information.

293400: Qualifying value must be entered.
   Severity: ERR
   Cause: This is a mandatory flag that may not be left blank or null.
   Action: Provide requested information.

293500: Cannot set to N (not blank) when Received DCI is blank.
   Severity: ERR
   Cause: Attempt to enter data for a Received DCM whose parent RDCI is blank.
   Action: Either correct the parent Received DCI or choose another Received DCM.
293600: Too many actual events correspond to this subevent #.
Severity: ERR
Cause: Internal error.
Action: Contact Oracle Clinical support.

293700: DCM date must be entered.
Severity: ERR
Cause: A mandatory field is blank.
Action: Provide DCM date in order to proceed.

293800: You are working with a data locked record and have privileged update.
Severity: WRN
Cause: When a record is data locked, the information cannot be changed or deleted by anyone who does not have privileged update. This is an informational message to remind you that you have the privilege to update the data locked record.
Action: N/A.

294000: An error occurred while soft-deleting the responses.
Severity: ERR
Cause: Internal error.
Action: Print a copy of the entire error stack and contact Oracle Clinical support. Be prepared to describe your most recent actions and to provide sample code.

294200: An error occurred while processing the Received DCI structure and updating the PATIENT_DM_TRACKING table.
Severity: ERR
Cause: Internal error.
Action: Print a copy of the entire error stack and contact Oracle Clinical support. Be prepared to describe your most recent actions and to provide sample code.

294300: An error occurred while processing the Received DCM structure and updating the received DCI.
Severity: ERR
Cause: Internal error.
Action: Print a copy of the entire error stack and contact Oracle Clinical support. Be prepared to describe your most recent actions and to provide sample code.

294500: Document number already exists with patient from another location.
Severity: ERR
Cause: This is a duplicate.
Action: Change the patient or correct the location.

294600: Document found in different study. Change study to access.
Severity: ERR
Cause: The target document exists in another study.
Action: Point to the appropriate study to continue.
294700: Received DCI is protected because at least one of its received DCMs is locked.
  Severity: WRN
  Cause: Cannot access DCI because a DCM is locked.
  Action: The DCI must be updated by an approved super user who has the appropriate privileges.

294800: An error occurred while in the Rxc_Login_Pack SoftDeleteAll received DCMs function.
  Severity: ERR
  Cause: Internal error.
  Action: Print a copy of the entire error stack and contact Oracle Clinical support. Be prepared to describe your most recent actions and to provide sample code.

294900: Site is currently inactive.
  Severity: WRN
  Cause: Site is currently inactive.
  Action: Activate the site.

295000: Investigator is currently inactive.
  Severity: WRN
  Cause: Investigator is currently inactive.
  Action: Activate the investigator.

295100: Site/investigator pair is not current in study.
  Severity: WRN
  Cause: Site/investigator pair is not current in study.
  Action: Create an assignment for this site/investigator pair.

295200: Too many rows found in NONEXPECTED DCMS table.
  Severity: ERR
  Cause: Internal error.
  Action: Contact Oracle Clinical support.

295300: An error occurred querying DVGs for an RDCM.
  Severity: ERR
  Cause: Internal error.
  Action: Print a copy of the entire error stack and contact Oracle Clinical support. Be prepared to describe your most recent actions and to provide sample code.

295400: An error occurred validating the clinical planned event.
  Severity: ERR
  Cause: Internal error.
  Action: Print a copy of the entire error stack and contact Oracle Clinical support. Be prepared to describe your most recent actions and to provide sample code.

295800: Problem retrieving from the actual event sequence.
  Severity: ERR
  Cause: Internal error.
  Action: Print a copy of the entire error stack and contact Oracle Clinical support. Be prepared to describe your most recent actions and to provide sample code.
296100: Too many DCI IDs for DCI short name.
Severity: ERR
Cause: Internal error.
Action: Print a copy of the entire error stack and contact Oracle Clinical support. Be prepared to describe your most recent actions and to provide sample code.

296200: Too many DVGs match DVG ID.
Severity: ERR
Cause: Internal error.
Action: Print a copy of the entire error stack and contact Oracle Clinical support. Be prepared to describe your most recent actions and to provide sample code.

296300: Too many labs with same name.
Severity: ERR
Cause: Internal error.
Action: Print a copy of the entire error stack and contact Oracle Clinical support. Be prepared to describe your most recent actions and to provide sample code.

296600: Cannot preserve lock when performing a rollback.
Severity: ERR
Cause: Cannot preserve lock when performing a rollback.
Action: Either commit or do not preserve the lock.

296700: Unable to lock RDCI.
Severity: ERR
Cause: Another user is working on the RDCI.
Action: Come back later and retry.

297000: Null or invalid input parameters provided.
Severity: ERR
Cause: Null or invalid input parameters provided.
Action: Provide valid inputs with proper memory allocation to APIs.

297100: Changes pending.
Severity: ERR
Cause: Cannot take the actions because there are changes that are in process.
Action: Commit changes to the database.

297200: Invalid execution context.
Severity: ERR
Cause: The execution context provided was not one of the following: SINGLE, ON-LINE, ON-LINE/DCM.
Action: Use one of the following valid execution context values: SINGLE, ON-LINE, ON-LINE/DCM. Enter them exactly as they are listed above.

297300: Procedure ID is required for SINGLE execution context.
Severity: ERR
Cause: No Procedure ID was provided with the SINGLE execution context.
Action: Provide a Procedure ID.
297400: Procedure version is required for SINGLE execution context.
Severity: ERR
Cause: No Procedure Version was provided with the Single execution context.
Action: Provide a Procedure version.

297500: Invalid Procedure (nonexistent, retired or pre-V3.1-style).
Severity: ERR
Cause: The provided Procedure does not exist, is retired, or is not V3.1-style.
Action: Provide a valid Procedure that exists, is not retired, and is in V3.1-style.

297600: Procedure is not active or needs to be regenerated.
Severity: WRN
Cause: The Procedure provided for OCL_PROD execution was not active or needs regeneration.
Action: Provide an active Procedure that does not need to be regenerated.

297700: Procedure is not compiled.
Severity: WRN
Cause: The Procedure provided for OCL_TEST execution is not compiled.
Action: Provide an active Procedure that does not need to be regenerated.

297800: DCM ID is required for ON-LINE/DCM execution context.
Severity: ERR
Cause: No DCM ID was provided with the ON-LINE/DCM execution context.
Action: Provide a DCM ID.

297900: DCM ID does not apply for ON-LINE execution context.
Severity: ERR
Cause: A DCM ID was provided with the ON-LINE execution context. It is only applicable for the ON-LINE/DCM execution context.
Action: Provide -1 as the DCM ID value.

298000: DCM ID does not apply for SINGLE execution context.
Severity: ERR
Cause: A DCM ID was provided with the SINGLE execution context. It is only applicable for the ON-LINE/DCM execution context.
Action: Provide -1 as the DCM ID value.

298100: Procedure ID and version must be -1 for ON-LINE and ON-LINE/DCM execution contexts.
Severity: ERR
Cause: Procedure ID and version do not apply for ON-LINE or ON-LINE/DCM execution context.
Action: Provide -1 as the Procedure ID and version values.

298200: Mandatory patient position ID is missing.
Severity: ERR
Cause: Patient position ID is a required argument.
Action: Provide a Patient position ID.
298300: Invalid preserve lock value.
  Severity: ERR
  Cause: Preserve Lock value is neither TRUE (1) nor FALSE (0).
  Action: Provide TRUE (1) or FALSE (0) as the Preserve Lock value.

298400: Mandatory clinical study ID is missing.
  Severity: ERR
  Cause: Clinical Study ID is a required argument.
  Action: Provide a clinical study ID.

298500: Mandatory clinical study version ID is missing.
  Severity: ERR
  Cause: Clinical Study Version ID is a required argument.
  Action: Provide a clinical study Version ID.

298600: Invalid mode value.
  Severity: ERR
  Cause: Mode is neither OCL_PROD (0) nor OCL_TEST (1).
  Action: Provide OCL_PROD (0) or OCL_TEST (1) as the mode value.

298700: Invalid debug flag value.
  Severity: ERR
  Cause: Debug flag value is neither TRUE (1) nor FALSE (0).
  Action: Provide TRUE (1) or FALSE (0) as Debug flag value.

298800: Mandatory execution context is missing.
  Severity: ERR
  Cause: Execution context is a required argument.
  Action: Provide an execution context.

299000: Only browse mode can be performed on a frozen study.
  Severity: ERR
  Cause: Attempt to access study in mode other than Browse.
  Action: Correct mode, choose different study or unfreeze study.

299100: No data has been entered for this RDCM.
  Severity: ERR
  Cause: You are attempting to initialize RDCM responses but no data has been entered for the RDCM.
  Action: Enter data for the RDCM.

299200: RDCI status is incompatible with querying the record in first-pass entry mode.
  Severity: ERR
  Cause: First pass entry has already been performed for this entry.
  Action: Choose a different document or switch to update mode.
299300: RDCI is accessible. You can query only inaccessible documents in first-pass entry mode.
*Severity:* ERR
*Cause:* You have selected an accessible document.
*Action:* Choose a different document or switch to update mode.

299400: Operator comment in browse is disabled. You cannot fetch the document in locking mode.
*Severity:* ERR
*Cause:* Operator comment is disabled.
*Action:* Fetch the document in non-locking mode or enable operator comment in Browse mode.

299500: RDCI is inaccessible. You can query only accessible documents in browse mode.
*Severity:* ERR
*Cause:* The RDCI you selected is inaccessible, so you cannot query for it in Browse mode.
*Action:* Choose a different document or switch to First-pass Data Entry mode.

299600: Owning location of the patient is different from that of the database.
*Severity:* ERR
*Cause:* Invalid patient.
*Action:* Use a different patient or enter data for this patient in a different database.

299700: The data entered for this received DCI will be deleted.
*Severity:* WRN
*Cause:* Informational message.
*Action:* N/A.

299800: Date cannot exceed today's date.
*Severity:* ERR
*Cause:* Attempt to enter a document at a future date.
*Action:* Correct the date.

299900: Cannot proceed when blank flag is set to Y.
*Severity:* ERR
*Cause:* Attempt to enter data into a blank document.
*Action:* Either set blank to N or skip the document.

300100: Only the user who performed Pass 1 Entry can perform data entry task.
*Severity:* ERR
*Cause:* Although Pass 1 Entry has already been performed, another user is attempting the task.
*Action:* Have the original user update the document.

300200: This patient is frozen.
*Severity:* ERR
*Cause:* Attempt to enter data for a frozen patient.
*Action:* Have a user with the appropriate privileges unfreeze the patient.
300300: This Received DCI is data locked.

Severity: ERR  
Cause: Attempt to update a locked RDCI.  
Action: Have a user with the appropriate privileges perform the update or unlock the document.

300500: First pass entry cannot be performed on an accessible RDCM.

Severity: ERR  
Cause: Attempt to perform First Pass Entry on an accessible RDCM.  
Action: Choose a different document or switch to update mode.

300600: RDCI status not compatible with the mode.

Severity: ERR  
Cause: There are many instances when this error may occur, depending upon the status of the document and the mode of data entry. As an example, First Pass Entry has already been performed for the selected document.  
Action: Choose a different document (which has a different status) or switch to a different mode. In this example, you can either choose a document with a status of Received or Pass 1 Started. You may then perform first pass on it, or you can update the document because it has already had first pass performed on it.

300700: Patient is frozen. The RDCI record will behave as if it were fetched in non-locking mode.

Severity: WRN  
Cause: Informational message.  
Action: Unfreeze the patient in order to proceed.

300800: Data on this RDCI is locked. The RDCI record will behave as if it were fetched in non-locking mode.

Severity: WRN  
Cause: Informational message.  
Action: No action necessary.

300900: No update allowed to the RDCI buffer.

Severity: ERR  
Cause: The RDCI is not locked so you cannot update the RDCI buffer.  
Action: Fetch the RDCI with a lock if you have the authority.

301200: No changes to save.

Severity: WRN  
Cause: Informational message.  
Action: No action necessary.

301300: Invalid clinical study.

Severity: ERR  
Cause: Attempt to access a study that is invalid or inactive.  
Action: Choose a different study or create a live version of the study.
301400: The clinical study is not live.
Severity: ERR
Cause: Attempt to access a study that is invalid or inactive.
Action: Choose a different study or create a live version of the study.

301500: Data entry is not enabled for the clinical study.
Severity: ERR
Cause: Attempt to enter data for a study that is not enabled.
Action: Enable data entry in order to enter data.

301600: Clinical study does not exist in the current location.
Severity: ERR
Cause: Attempt to choose a study that is from a different location.
Action: Go to the correct location to enter data.

301700: No study state for the clinical study.
Severity: ERR
Cause: The clinical study does not have a study state.
Action: Create a study state.

301800: No study access account exists for the study.
Severity: ERR
Cause: The clinical study does not have a study access account.
Action: Create a study access account.

301900: Record validation failed.
Severity: ERR
Cause: Validation of the study record failed so you can not set context to that study.
Action: Try another study or see your system administrator.

302000: User is not authorized to access the study.
Severity: ERR
Cause: The user does not have the appropriate privileges.
Action: Either grant privileges to this user or have a user with the appropriate privileges perform the work.

302100: Validation of study failure.
Severity: ERR
Cause: Invalid entry.
Action: Provide a valid study.

302200: Mode should be OCL_PROD or OCL_TEST.
Severity: ERR
Cause: Invalid mode provided.
Action: Provide correct mode.
302300: Cannot disconnect while changes are pending for responses work.
   Severity: ERR
   Cause: Changes are in progress.
   Action: Either save or flush and then disconnect.

302400: Zero rows updated.
   Severity: WRN
   Cause: Informational message.
   Action: No action necessary.

302500: Invalid page status.
   Severity: ERR
   Cause: Invalid page status passed to SetPageStatus.
   Action: Use other means to update the status.

302600: Cannot delete when repeat sn is greater than the number of repeats currently existing for the question group.
   Severity: ERR
   Cause: The repeat that was the deletion target does not exist.
   Action: N/A.

302700: No existing manual discrepancy for the question.
   Severity: ERR
   Cause: Attempt to access a manual discrepancy for a response that does not have a manual discrepancy.
   Action: Choose another response with a manual discrepancy or create one for this response.

302800: Invalid discrepancy review status code.
   Severity: ERR
   Cause: An incorrect discrepancy code was entered.
   Action: Look up the appropriate code in the reference codelist.

302900: Invalid discrepancy resolution type code.
   Severity: ERR
   Cause: An incorrect discrepancy resolution type code was entered.
   Action: Look up the appropriate code in the reference codelist.

303000: Resolution type code cannot be null for RESOLVED review status.
   Severity: ERR
   Cause: The resolution type code has not been input.
   Action: Look up the appropriate code in the reference codelist.

303100: Resolution type code should be null if review status is not RESOLVED.
   Severity: ERR
   Cause: A resolution type code has been provided. The resolution type code should be NULL.
   Action: Do not provide the resolution type code.
303200: Invalid manual discrepancy type.

Severity: ERR
Cause: An invalid manual discrepancy type was entered.
Action: Look up the appropriate code in the reference codelist.

303300: Changes are pending for RDCI/RDCM work.

Severity: ERR
Cause: Change of context will result in loss of data.
Action: Commit or rollback explicitly.

303400: Changes are pending for responses work.

Severity: ERR
Cause: Change of context will result in loss of data.
Action: Commit or rollback explicitly.

303500: Document contains empty repeats.

Severity: ERR
Cause: Data was not provided for all repeats before writing.
Action: Enter data for all repeats before writing.

303600: Invalid patient.

Severity: ERR
Cause: An invalid patient was entered.
Action: Provide a valid patient ID.

303700: Patient does not belong to the current location.

Severity: ERR
Cause: Patient does not belong to the current location.
Action: Either correct the location or do not enter dates for this part.

303800: Cannot find location_code in the reference codelist for the current connection.

Severity: ERR
Cause: The reference codelist is incorrect.
Action: Correct the reference codelist.

303900: Too many current documents with this number.

Severity: ERR
Cause: Internal error.
Action: Print a copy of the entire error stack and contact Oracle Clinical support. Be prepared to describe your most recent actions and to provide sample code.

304000: Too many patients with this name.

Severity: ERR
Cause: Internal error.
Action: Print a copy of the entire error stack and contact Oracle Clinical support. Be prepared to describe your most recent actions and to provide sample code.
304100: Too many occurrences of this CPE name exist.
Severity: ERR
Cause: Internal error.
Action: Print a copy of the entire error stack and contact Oracle Clinical support. Be prepared to describe your most recent actions and to provide sample code.

304200: Too many sites with this name.
Severity: ERR
Cause: Internal error.
Action: Print a copy of the entire error stack and contact Oracle Clinical support. Be prepared to describe your most recent actions and to provide sample code.

304300: Too many investigators.
Severity: ERR
Cause: Internal error.
Action: Print a copy of the entire error stack and contact Oracle Clinical support. Be prepared to describe your most recent actions and to provide sample code.

304400: No procedures qualify for execution.
Severity: WRN
Cause: No target Procedures were found to match the specified execution criteria, due to one or more of the following causes:

- target Procedure(s) are retired, not compiled, not V3.1-style, or are in need of regeneration.
- if requested mode was OCL_PROD, target Procedure(s) are not active.
- if requested execution context was ON-LINE, no Procedure(s) classified as ON-LINE or ON-LINE/DCM were found.
- if requested execution context was ON-LINE/DCM, no Procedure(s) classified as ON-LINE/DCM with Primary Reference Question Group DCM ID matching the input argument DCM ID were found.
- if requested execution context was SINGLE, no match on input arguments Procedure ID/Version was found.

Action: Target Procedure(s) are identified for execution according to the following requirements. Procedure(s) must:

- be compiled.
- not be retired or in need of regeneration.
- be V3.1-style.
- if requested mode is OCL_PROD, Procedure(s) must be active.
- if requested execution context is ON-LINE, Procedure(s) must be classified as ON-LINE or ON-LINE/DCM.
- if requested execution context is ON-LINE/DCM, Procedure(s) must be classified as ON-LINE/DCM with a Primary Reference Question Group DCM ID that matches the input argument DCM ID.
- if requested execution context is SINGLE, a match on Procedure ID/Version must exist.
304500: Cannot preserve lock as the Received DCI is not locked.

Severity: ERR
Cause: The received DCI is not locked.
Action: Do not try to preserve the lock. If you want to lock the document, call the appropriate function.

304600: Function does not exist.

Severity: ERR
Cause: In attempting to establish whether you have the privilege for a specific function, it has been determined that the supplied function name is invalid. This may be because important OCL initializations have not taken place.
Action: See your system administrator.

304700: Privilege does not exist.

Severity: ERR
Cause: Internal error.
Action: Print a copy of the entire error stack and contact Oracle Clinical support. Be prepared to describe your most recent actions and to provide sample code.

304800: User is not authorized to call this function.

Severity: ERR
Cause: The user does not have the privilege to call this function.
Action: Grant the user the appropriate privilege to be able to call this function.

304900: User has been granted too many roles: exceeds the maximum allowed.

Severity: WRN
Cause: Informational message.
Action: Reduce the number of roles for the user or choose another user for the role.

305000: Too many messages.

Severity: WRN
Cause: The system has not retrieved all messages because the error stack is full.
Action: None. This is just an informational message.

305600: Invalid DCI date.

Severity: ERR
Cause: Date is invalid.
Action: Input the correct date in the proper format.

305700: Invalid DCI time.

Severity: ERR
Cause: Time is invalid.
Action: Input the correct time in the proper format.

305800: Invalid DCM date.

Severity: ERR
Cause: Date entered is invalid.
Action: Input the correct date in the proper format.
305900: Invalid DCM time.
Severity: ERR
Cause: Time entered is invalid.
Action: Input the correct time in the proper format.

306100: Changes pending that have not been processed.
Severity: ERR
Cause: You have not yet processed outstanding changes.
Action: Call ProcessRdci to process outstanding changes.

306200: RDCI record being deleted does not exist in the database.
Severity: ERR
Cause:
Action: Choose another record to delete.

306300: Received DCI is inactive or invalid.
Severity: ERR
Cause: You attempted to activate a received DCI that is inactive or invalid.
Action: Choose another record to activate.

306400: Too many current actual events.
Severity: ERR
Cause: Internal error.
Action: Contact Oracle Clinical support.

306500: Unable to release lock.
Severity: ERR
Cause: Internal error.
Action: Contact Oracle Clinical support.

306600: This received DCM is locked.
Severity: ERR
Cause: The data for the RDCM is locked and you are:
■ trying to initialize RDCM responses but you are in Update without appropriate privileges
■ not in Update or Browse mode
Action: Either switch to Browse mode or have your administrator give you Update privilege.

306700: Cannot set RDCI time when name is not set.
Severity: ERR
Cause: Attempt to set RDCI time without providing the name of the visit.
Action: Provide the name of the visit before attempting to set RDCI time.

306800: Invalid audit reason.
Severity: ERR
Cause: The user-entered audit reason is not present in the reference codelist.
Action: Refer to the reference codelist for a list of valid audit reasons.
306900: No update allowed to the RDCM buffer.
   Severity: ERR
   Cause: The parent RDCI of the RDCM is not locked so you can not update the RDCM buffer.
   Action: If you have the authority, fetch the RDCI with a lock.

307000: Cannot call this function if you have not locked the record.
   Severity: ERR
   Cause: Attempt to call function without locking the record.
   Action: Lock the RDCI before calling this function.

307100: Investigator is required.
   Severity: ERR
   Cause: The name of the investigator is a mandatory value that must be entered in order to proceed.
   Action: Provide the name of the investigator.

307200: DCI Time is required.
   Severity: ERR
   Cause: The DCI Time must be entered in order to proceed.
   Action: Provide the DCI Time.

307400: Please use the patient enrollment form to specify which DCI Book to use to maintain the page tracking information.
   Severity: WRN
   Cause: No DCI Book has been assigned to the patient.
   Action: Assign a DCI Book for the patient.

307600: Can not log-in data for a patient that is not associated with a book in a study with no default DCI book.
   Severity: ERR
   Cause: Although page tracking is enabled for the DCI and the study, both the patient and the study do not have an assigned DCI book.
   Action: Assign a DCI book at the study level or assign a DCI book to the patient.

308200: The DCI book assigned to this patient is not active. Can not use a DCI book that is not active to log data in a production environment.
   Severity: ERR
   Cause: Although a DCI book has been assigned, it has not been activated.
   Action: Activate the DCI book or assign an activated DCI book to the patient.

308500: The current DCI book is Retired and the environment is Test.
   Severity: ERR
   Cause: This combination is not allowed.
   Action: Either use active or run manual DCI books.

308600: Record changed by another user.
   Severity: ERR
   Cause: Another user has changed the record since you fetched it.
   Action: Fetch the record again.
308700: Cannot set RDCI time until RDCI short name is set.
Severity: ERR
Cause: You attempted to set the RDCI time before setting the RDCI short name.
Action: First provide DCI name, then set the time.

308800: DCI short name is not applicable.
Severity: ERR
Cause: You cannot provide a value for this field in a new record.
Action: Do not attempt to provide this field.

308900: DCI short name is not updateable.
Severity: ERR
Cause: You cannot update an existing value for an existing record for this field.
Action: Do not attempt to provide this field.

309000: Document number is not updateable.
Severity: ERR
Cause: You cannot update an existing value for an existing record for this field.
Action: Do not attempt to provide this field.

309100: Document number is not updateable.
Severity: ERR
Cause: You cannot provide a value for this field in a new record.
Action: Do not attempt to provide this field.

309200: Patient is not applicable.
Severity: ERR
Cause: You cannot provide a value for this field in a new record.
Action: Do not attempt to provide this field.

309300: Patient is not updateable.
Severity: ERR
Cause: You cannot update an existing value for an existing record for this field.
Action: Do not attempt to provide this field.

309400: Date is not applicable.
Severity: ERR
Cause: You cannot provide a value for this field in a new record.
Action: Do not attempt to provide this field.

309500: Date is not updateable.
Severity: ERR
Cause: You cannot update an existing value for an existing record for this field.
Action: Do not attempt to provide this field.

309600: Time is not applicable.
Severity: ERR
Cause: You cannot provide a value for this field in a new record.
Action: Do not attempt to provide this field.
309700: Time is not updateable.
Severity: ERR
Cause: You can not update an existing value for an existing record for this field.
Action: Do not attempt to provide this field.

309800: Visit name is not applicable.
Severity: ERR
Cause: You can not provide a value for this field in a new record.
Action: Do not attempt to provide this field.

309900: Visit name is not updateable.
Severity: ERR
Cause: You can not update an existing value for an existing record for this field.
Action: Do not attempt to provide this field.

310000: Subevent number is not applicable.
Severity: ERR
Cause: You can not provide a value for this field in a new record.
Action: Do not attempt to provide this field.

310100: Subevent number is not updateable.
Severity: ERR
Cause: You can not update an existing value for an existing record for this field.
Action: Do not attempt to provide this field.

310200: Site is not applicable.
Severity: ERR
Cause: You can not provide a value for this field in a new record.
Action: Do not attempt to provide this field.

310300: Site is not updateable.
Severity: ERR
Cause: You can not update an existing value for an existing record for this field.
Action: Do not attempt to provide this field.

310400: Investigator is not applicable.
Severity: ERR
Cause: You can not provide a value for this field in a new record.
Action: Do not attempt to provide this field.

310500: Investigator is not updateable.
Severity: ERR
Cause: You can not update an existing value for an existing record for this field.
Action: Do not attempt to provide this field.

310600: Blank flag is not applicable.
Severity: ERR
Cause: You can not provide a value for this field in a new record.
Action: Do not attempt to provide this field.
310700: Blank flag is not updateable.
   Severity: ERR
   Cause: You can not update an existing value for an existing record for this field.
   Action: Do not attempt to provide this field.

310800: Comment is not applicable.
   Severity: ERR
   Cause: You can not provide a value for this field in a new record.
   Action: Do not attempt to provide this field.

310900: Comment is not updateable.
   Severity: ERR
   Cause: You can not update an existing value for an existing record for this field.
   Action: Do not attempt to provide this field.

311000: Qualifying value is not applicable.
   Severity: ERR
   Cause: You can not provide a value for this field in a new record.
   Action: Do not attempt to provide this field.

311100: Qualifying value is not updateable.
   Severity: ERR
   Cause: You can not update an existing value for an existing record for this field.
   Action: Do not attempt to provide this field.

311200: Lab is not applicable.
   Severity: ERR
   Cause: You can not provide a value for this field in a new record.
   Action: Do not attempt to provide this field.

311300: Lab is not updateable.
   Severity: ERR
   Cause: You can not update an existing value for an existing record for this field.
   Action: Do not attempt to provide this field.

311400: Data comment is not applicable.
   Severity: ERR
   Cause: You can not provide a value for this field in a new record.
   Action: Do not attempt to provide this field.

311500: Data comment is not updateable.
   Severity: ERR
   Cause: You can not update an existing value for an existing record for this field.
   Action: Do not attempt to provide this field.

311600: DCI document number can not be updated to null.
   Severity: ERR
   Cause: You can not provide a value for this field in a new record.
   Action: Do not attempt to provide this field.
311700: Document number must not have any lower case letters.
Severity: ERR
Cause: The document number includes lower-case letters, which Oracle Clinical prohibits in document numbers.
Action: Change the document number so that all its letters are upper-case.

311800: Patient not assigned to this site.
Severity: WRN
Cause: The patient is not assigned to this site.
Action: No action necessary. Verify that you have selected the correct site.

312200: Can not delete Received DCI because it is data locked.
Severity: ERR
Cause: Attempt to delete a locked RDCI record.
Action: Because the data on this record is locked, it cannot be changed or deleted. A system administrator must unlock this record before it can be deleted.

312500: Can not update repeating defaults when repeat sn is less than the maximum repeats expected for DCM question group.
Severity: ERR
Cause: Attempt to update the protected repeating default. You can not update because you do not have privileged update.
Action: The data must be updated by someone who has privileged update.

313600: You have privileged update and have deleted repeating default when repeat sn is less than the maximum repeats for DCM question group.
Severity: WRN
Cause: Superuser has attempted to modify a protected repeating field.
Action: Restore deleted field, if desired.

313800: User is not authorized to call ExecuteMultivariate (not granted RXCLIN.MOD privilege)
Severity: ERR
Cause: The user requires the RXCLIN.MOD privilege to call the ExecuteMultivariate function.
Action: Grant this privilege to this user.

314800: Received DCI is accessible; please use Key Changes to change Blank Flag
Severity: ERR
Cause: You are attempting to change the Blank Flag for an accessible document.
Action: Change mode to KEY CHANGES to change the Blank Flag.

314900: Received DCM is accessible; please use Key Changes to change Blank Flag
Severity: ERR
Cause: You are attempting to change the Blank Flag for an accessible Received DCM.
Action: Change mode to KEY CHANGES to change the Blank Flag.
315000: Some received DCMs are accessible; please use Key Changes to change Blank Flag

Severity: ERR

Cause: You are attempting to change the Blank Flag for a document that has some accessible Received DCMs.

Action: Change mode to KEY CHANGES to change the Blank Flag.

315100: Responses exist for this RDCI. Changing the Blank Flag to 'Y' will cause them to be irrevocably deleted

Severity: WRN

Cause: The document has responses entered. If the RDCI Blank Flag is changed to 'Y' then all responses entered for this document will be deleted. This is an informational message to warn you of the consequence of your action.

Action: Do not change the RDCI Blank Flag to 'Y' if you want to retain the responses entered.

315200: Responses exist for this RDCM. Changing the Blank Flag to 'Y' will cause them to be irrevocably deleted

Severity: WRN

Cause: The Received DCM has responses entered. If the RDCM Blank Flag is changed to 'Y' then all responses entered for Received DCM will be deleted. This is an informational message to warn you of the consequence of your action.

Action: Do not change the RDCM Blank Flag to 'Y' if you want to retain the responses entered.

315500: RDCI is not protected because at least one of its RDCMs is locked and you have privileged update.

Severity: WRN

Cause: When a record is data locked, the information cannot be changed or deleted by anyone who does not have privileged update. This is an informational message to remind you that you have the privilege to update the data locked record.

Action: N/A

317400: Another session is connected. Cannot switch database modes.

Severity: ERR

Cause: Oracle Clinical prevents you from switching database roles when you have multiple sessions open.

Action: Close all other running sessions, then switch roles.

317800: Cannot delete accessible Received DCI in Initial Login Mode.

Severity: ERR

Cause: You are attempting to delete an accessible document by fetching the document in Initial Login mode.

Action: Fetch the document in Key Changes mode.

345400: Qualifying value can only be changed to the default value defined at the DCI module.

Severity: ERR

Cause: You are attempting to change the qualifying value to a value other than the default value.

Action: Set the qualifying value to the value specified as the default.
659700: No default audit reason.

**Severity:** ERR

**Cause:** No default audit reason was found in either of the reference codelists.

**Action:** Supply a default audit reason in one of the two reference codelists. See "Auditing and Backward Compatibility" on page 4-3 for an explanation of how the system uses reference codelists to supply default audit change reasons.

659800: More than one default audit reason found.

**Severity:** ERR

**Cause:** Both reference codelists had a default value.

**Action:** Only one of the two reference codelists should have a default audit reason. Remove the default audit reason from one of the codelists. See "Auditing and Backward Compatibility" on page 4-3 for an explanation of how the system uses reference codelists to supply default audit change reasons.

660000: Cannot use system generated audit reason.

**Severity:** ERR

**Cause:** User has provided a system-generated audit reason as the user-entered audit reason.

**Action:** Provide an audit reason that is valid in the reference codelists.

685900: Audit comment for Deletion of Repeat cannot have more than 158 bytes.

**Severity:** ERR

**Cause:** The audit comment provided for DeleteRepeat is longer than 158 characters.

**Action:** Provide an audit comment that is 158 characters or shorter.

743300: Cannot delete Received DCI without a valid audit reason.

**Severity:** ERR

**Cause:** DeleteRdci failed because the user-entered audit reason is not present in the reference codelist.

**Action:** Refer to the reference codelist for a list of valid audit reasons.

970100: The following sequence(s) is approaching its maximum value. Reset each listed sequence to an unused lower value.

**Severity:** ERR

**Cause:** When Oracle Clinical processes modules where new received DCIs, received DCMs, discrepancies and responses are created—Data Entry, Discrepancy Management, Mass Change, Batch Validation, Procedures—it checks that these sequences are not close to their maximum limits. When the system identifies a sequence that will exceed its limits, risking data corruption, this error message is issued.

**Action:** Reseed the sequence or sequences listed in the error message. Refer to the *Oracle Clinical Administrator's Guide* for information on how to do this.

992100: All other parameters except the resolution text in the discrepancy structure will be ignored.

**Severity:** WRN

**Cause:** A parameter other than resolution text contained a value.

**Action:** Ensure that all parameters other than resolution text are initialized but contain only the empty string.
992300: Unable to get existing discrepancy information from the database.

Severity: ERR

Cause: The function only acts on current discrepancies.

Action: Make sure the discrepancy has a status of CURRENT.