

# Oracle® Health Sciences Life Sciences Warehouse API Guide



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# Preface

This guide contains information on using the Application Programming Interface (API) for Oracle Life Sciences Data Hub and Oracle Health Sciences Data Management Workbench.

- [Documentation accessibility](#)
- [Related resources](#)
- [Access to Oracle Support](#)

## Documentation accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>.

## Related resources

All documentation and other supporting materials are available on the [Oracle Help Center](#).

## Access to Oracle Support

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# Part I

## Essential Information

This part of the Oracle Life Sciences Data Hub (Oracle LSH) API guide contains the basic information you need on running APIs.

Part I contains the following chapters:

- [Using Application Programming Interfaces](#)
- [Reference Information](#)

# 1

## Using Application Programming Interfaces

All Oracle Life Sciences Data Hub (Oracle LSH) views are public and have names that begin with "cdr\_". You can see them in SQL Developer or a similar tool, or query for them using the string `cdr_`

### Note:

During its initial development, Oracle LSH was known as CDR. Therefore many internal names contain the string `cdr`. Please think of CDR as a synonym for LSH.

This section contains the following topics:

- [About APIs](#)
- [Tips](#)
- [Calling APIs from Outside the Oracle Life Sciences Data Hub](#)
- [Calling APIs from Defined Programs](#)
- [Code Example Using Security and Error Message APIs](#)

## About APIs

Oracle LSH includes a set of APIs that enable you to do most of the things you can do through the user interface, including creating, modifying, and installing objects.

You can call Oracle LSH APIs from source code in a defined Program in Oracle LSH. In this case, no additional security or setup is required.

If you have an Oracle LSH database account with certain privileges, you can also develop programs that call APIs in a tool outside of Oracle LSH; such as SAS, Oracle SQL Developer, or SQL\*Plus. You can then see views of all the Oracle LSH data you need, including data from both the LSH (CDR) schema and, for classification data, the TMS schema. You can make the programs you write available to other people from the external tool. See [Calling APIs from Outside the Oracle Life Sciences Data Hub](#).

This section contains the following topics:

- [Example 1: Using APIs to Perform Multiple Tasks at Once](#)
- [Example 2: Calling APIs from an External System's UI](#)
- [Understand Oracle LSH Functionality](#)

## Example 1: Using APIs to Perform Multiple Tasks at Once

You can write a package that calls multiple APIs to do with one execution what it would take many tasks in the user interface (UI) to do; for example, create a Domain, an Application Area inside the Domain, a Work Area inside the Application Area, and multiple Load Sets, Tables, and Programs, each with a definition in the Application Area and an instance in the Work Area, and install the Work Area. If you have a standard structure for Project/Therapeutic Area Domains, for example, you may want to work this way. However, remember that you can also copy a Domain and all its contents at once in the user interface.

Using APIs is even more attractive when you want to create, for example, multiple objects with variations or large complex objects such as Report Sets. You can create a spreadsheet to store all the variable information and load its data into an Oracle LSH Table instance using a Text Load Set. In your program, use a loop to read all the spreadsheet data and call the relevant Oracle LSH APIs to create the objects.

## Example 2: Calling APIs from an External System's UI

**Example 2: Calling APIs from an External System's UI:** You may want to allow people in your company to perform actions on Oracle LSH objects from an external system.

For example, instead of requiring that SAS developers check out Source Code in Oracle LSH before opening the SAS IDE from an Oracle LSH Program, you may want to add a button to the SAS user interface that calls the API for checking out the Source Code object when clicked. Then, if the program is located in a schema with Execute privileges on the security API, any user with SAS, a database account in Oracle LSH, and normal Oracle LSH object security privileges on the Source Code definition, can check out the Source Code definition directly from SAS.

## Understand Oracle LSH Functionality

To use Oracle LSH APIs, you must understand basic Oracle LSH functionality including:

- **Object Ownership.** You must create container objects before creating the objects they contain, because to create any object you must identify its namespace (parent or container) object. For example, begin by defining a Domain, then an Application Area, then a Work Area, and then create a Table definition in the Application Area and an instance of it in the Work Area. You can use a single API to create both the Table definition and an instance of it. For details, see "Object Ownership" in the *Oracle Life Sciences Data Hub Application Developer's Guide*.
- **Installation.** You must create an instance of an object definition and install it before you can execute or store data in the object.
- **Mapping.** All executable objects must contain one Table Descriptor for each Table instance they read from and write to, and the Table Descriptors and Table instances must be mapped. For details, see "Defining and Mapping Table Descriptors" in the *Oracle Life Sciences Data Hub Application Developer's Guide*.
- **Checking Objects In and Out.** You must check objects out to modify them and check them in before you install and use them. For details, see "Understanding

Object Versions and Checkin/Checkout" in the *Oracle Life Sciences Data Hub Application Developer's Guide*.

- **Security.** All objects require user group assignments to control user access. For details, see "Applying Security to Objects and Outputs" in the *Oracle Life Sciences Data Hub Application Developer's Guide*.
- **Classification.** To enable objects to appear in the Reports tab of the user interface for end users to run them and view their outputs, you must classify them. Classifications can also be used in searching for objects. For details, see "Classifying Objects and Outputs" in the *Oracle Life Sciences Data Hub Application Developer's Guide*.
- **Validation.** Objects should be validated according to your company policy whether they are created in the user interface or with APIs. For details, see "Validating Objects and Outputs" in the *Oracle Life Sciences Data Hub Application Developer's Guide*.
- **Object-Specific Information.** Further information on each object type is included in other chapters of the *Oracle Life Sciences Data Hub Application Developer's Guide*.

## Tips

The section provides advice on committing APIs and getting attribute values for namespace objects. It contains the following topics:

- [Committing APIs](#)
- [Get Attribute Values for Namespace Objects](#)

## Committing APIs

The standard parameter P\_COMMIT is found in every API; see [Standard Parameters](#). Its default value is FALSE, which prevents the API from committing. This is useful if you are creating multiple objects in a single program execution, to enable you to do a rollback. However, if you want the API to commit, pass the value FND\_API.G\_TRUE.

## Get Attribute Values for Namespace Objects

Many APIs require internal IDs for the namespace object of the object you are creating. Use [Get a Naming Version Object](#) to get these details. However, you must first determine what the namespace object is, using the object ownership diagram and explanation in the *Oracle Life Sciences Data Hub Application Developer's Guide* or *Oracle Health Sciences Data Management Workbench Setup Guide*, then query for the namespace object ID and object version using its name and its namespace's name and object type, in CDR\_DF\_NAMING\_V.

## Calling APIs from Outside the Oracle Life Sciences Data Hub

This section contains the following topics:

- [Security Setup Required](#)

- [Calling the Security API Package](#)
- [Calling APIs from SAS](#)
- [Using a Permanent Schema for Deploying Programs that Call APIs](#)

## Security Setup Required

To run any API package from a tool outside of Oracle LSH, such as SAS, SQL Developer, or SQL\*Plus, your system administrator needs to do the following:

1. Set up an Oracle LSH database account linked to your LSH user account; see "Creating Database Accounts" in the *Oracle Life Sciences Data Hub System Administrator's Guide*.
2. Grant your Oracle LSH database account Execute privileges on the API security package CDR\_PUB\_API\_INITIALIZATION.
3. To run APIs that insert, delete, or modify Oracle LSH classification hierarchy terms, you need security access to the Oracle Thesaurus Management System (TMS) instance that is installed as part of Oracle LSH. The Oracle LSH classification system is based on TMS.

### Note:

This step is not required for Oracle DMW custom programs. DMW does not use the LSH classification system.

Ask your system administrator to run the script `tmsadduser.sql` to do the following:

- Create a TMS user account with the same name as your Oracle LSH database account so that your account is entered in the TMS\_ACCOUNTS and OPA\_ACCOUNTS tables.
- Give your TMS user account superuser privileges in the TMS\_ACCOUNTS table.
- Grant your TMS user account the TMS\_MAINTAIN\_PRIV database role.

## Calling the Security API Package

For every program that you run from outside Oracle LSH to call an Oracle LSH API, you must first call a special security API: CDR\_PUB\_API\_INITIALIZATION. This API contains three functions:

- EnableApis
- DisableApis
- AreApisEnabled

When you initialize any API, the AreApisEnabled function of the security API, CDR\_PUB\_API\_INITIALIZATION, is called to check the calling program. If the program does not have the EnableAPIs flag set to True, the initialization fails.

To set the EnableApis flag to True, call the EnableApis function from your program. To call the EnableApis function, you need a schema/user account with an

Execute privilege on the CDR\_PUB\_API\_INITIALIZATION API granted by a system administrator.

Therefore, when you write a program that calls an API and is intended for use outside Oracle LSH, set the EnableApis flag to True in your program and then set it to False at the end to force the security check on the schema the next time the program is run:

1. Begin the body with the following code to call the function to enable APIs:

```
call CDR_PUB_API_INITIALIZATION.enableApis (arguments);
```

The arguments are described in CDR\_PUB\_API\_INITIALIZATION itself.

2. At the end of the body, disable APIs with the following code:

```
CDR_PUB_API_INITIALIZATION.disableApis (arguments);
```

See [Example 1-1](#).

## Calling APIs from SAS

If you need to call multiple APIs from SAS, you may want to use a PL/SQL wrapper around the API calls so that you only call PL/SQL once. The *Oracle Life Sciences Data Hub Application Developer's Guide* has two examples. In the Report Sets chapter, see "Passing Values from a Program Instance to the Report Set for Post-Processing" and in the Programs chapter see "Calling an API to Capture Output Parameter Values."

## Using a Permanent Schema for Deploying Programs that Call APIs

Starting release 3.1, if you have custom user defined outside of Oracle LSH, make sure that the schema is editioned. Use the following command to mark any existing custom users/schemas as editionable:

```
ALTER USER <user_name> ENABLE EDITIONS FORCE;
```

When you develop a program outside Oracle LSH that will call the Oracle LSH APIs, you can use your own schema in the external tool (such as SQL\*Plus, SQL Developer, or SAS) to run and test the program, if you have Execute privileges on CDR\_PUB\_API\_INITIALIZATION. When you are ready to allow other people to run it, copy it into a different location.

Oracle recommends setting up one or more permanent, publicly available schemas in the Oracle LSH database for the purpose of compiling and storing programs that call the Oracle LSH APIs. Grant each schema Execute privileges on CDR\_PUB\_API\_INITIALIZATION. This approach has the following advantages:

- If a user manually runs your program, he or she must enter the program location and name explicitly. This will be much easier if the user knows which schema contains such programs.
- If you set up the program to run automatically when a user clicks a button in the external system's user interface, for example, you must hardcode the program's name and location into the code.
- You can grant Execute on CDR\_PUB\_API\_INITIALIZATION to a controlled number of schemas.



## Calling APIs from Defined Programs

If you develop and run a Program that calls an API within Oracle LSH—that is, in the defined Source Code of a defined Program object—no security is required beyond normal Oracle LSH object security. You do not need Execute privileges on the CDR\_PUB\_API\_INITIALIZATION API, and you do not need to enable APIs in your Program code.

### Note:

Within Oracle LSH, the calls to CDR\_PUB\_API\_INITIALIZATION are unnecessary and in fact a program that includes such a call will not compile because the Work Area schema does not have Execute privileges on CDR\_PUB\_API\_INITIALIZATION.

You do need to install the Program before you can run it, as you do any defined Program in Oracle LSH.

You can write packages in an Oracle LSH Program that do anything with APIs that you could do in a package outside Oracle LSH. For example, you could create an instance of a Program definition whose Source Code created a Work Area, several Load Sets, and a Program to merge the data, instead of defining the Work Area, Load Sets and Program through the Oracle LSH user interface.

## Code Example Using Security and Error Message APIs

There are two utility Oracle LSH APIs that you call in conjunction with other Oracle LSH APIs:

- **CDR\_PUB\_API\_INITIALIZATION.** This API is required for developing and running programs that call any Oracle LSH API from outside Oracle LSH. See [Calling the Security API Package](#) for further information.
- **CDR\_PUB\_MSG\_PUB.** This API returns error messages from other Oracle LSH APIs called in the same package.

The following code provides an example of calling the API to define a Work Area and each of the utility APIs.

### Example 1-1 Program that Calls the API to Define a Work Area and Calls the Security and Error Message APIs

```
CDR_PUB_DF_WORKAREA.CREATEWORKAREA (
    P_API_VERSION=>1,
    P_INIT_MSG_LIST=>CDR_PUB_DEF_CONSTANTS.G_FALSE,
    P_COMMIT=>CDR_PUB_DEF_CONSTANTS.G_FALSE,
    P_VALIDATION_LEVEL=>CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
    X_RETURN_STATUS => X_RETURN_STATUS,
    X_MSG_COUNT     => X_MSG_COUNT,
    X_MSG_DATA      => X_MSG_DATA,
    PIO_SOURCECDRNAMING =>VARWANSOBJ,
    PIO_WORKAREAOBJTYPE =>VARWAOBJ,
    PI_DEFCLASSIFICATIONCOLL => NULL);
    IF X_RETURN_STATUS <> 'S' THEN
```

```

        DBMS_OUTPUT.PUT_LINE('ERROR FOUND IN CREATEPROGRAM');
    END IF ;
    X_MSG_COUNT := CDR_PUB_MSG_PUB.COUNT_MSG(
        P_API_VERSION=>1,
    P_INIT_MSG_LIST=>CDR_PUB_DEF_CONSTANTS.G_FALSE,
    P_COMMIT=>CDR_PUB_DEF_CONSTANTS.G_FALSE,
        P_VALIDATION_LEVEL=>CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL
    );
    IF X_MSG_COUNT >= 1 THEN
        FOR I IN 1..X_MSG_COUNT LOOP
            IF I =1 THEN
                X_MSG_DATA := CDR_PUB_MSG_PUB.GET(
                    P_API_VERSION=>1,
                    P_INIT_MSG_LIST=>CDR_PUB_DEF_CONSTANTS.G_FALSE,
                P_COMMIT=>CDR_PUB_DEF_CONSTANTS.G_FALSE,
                    P_VALIDATION_LEVEL=>CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
                P_MSG_INDEX =>CDR_PUB_MSG_PUB.G_FIRST,
                P_ENCODED =>CDR_PUB_DEF_CONSTANTS.G_FALSE);
            ELSIF I = X_MSG_COUNT THEN
                X_MSG_DATA := CDR_PUB_MSG_PUB.GET(
                    P_API_VERSION=>1,
                    P_INIT_MSG_LIST=>CDR_PUB_DEF_CONSTANTS.G_FALSE,
                P_COMMIT=>CDR_PUB_DEF_CONSTANTS.G_FALSE,
                    P_VALIDATION_LEVEL=>CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
                P_MSG_INDEX =>CDR_PUB_MSG_PUB.G_LAST,
                P_ENCODED =>CDR_PUB_DEF_CONSTANTS.G_FALSE);
            ELSE
                X_MSG_DATA := CDR_PUB_MSG_PUB.GET(
                    P_API_VERSION=>1,
                    P_INIT_MSG_LIST=>CDR_PUB_DEF_CONSTANTS.G_FALSE,
                P_COMMIT=>CDR_PUB_DEF_CONSTANTS.G_FALSE,
                    P_VALIDATION_LEVEL=>CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
                P_MSG_INDEX =>CDR_PUB_MSG_PUB.G_NEXT,
                P_ENCODED =>CDR_PUB_DEF_CONSTANTS.G_FALSE);
            END IF ;
            DBMS_OUTPUT.PUT_LINE('MESSAGE: ' || I || ' : ' || X_MSG_DATA);
        END LOOP;
    END IF;
    CDR_PUB_API_INITIALIZATION.DISABLEAPIS(
        P_API_VERSION=>1,
        P_INIT_MSG_LIST=>CDR_PUB_DEF_CONSTANTS.G_FALSE,
    P_COMMIT=>CDR_PUB_DEF_CONSTANTS.G_FALSE,
        P_VALIDATION_LEVEL=>CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
    X_RETURN_STATUS => X_RETURN_STATUS,
    X_MSG_COUNT     => X_MSG_COUNT,
    X_MSG_DATA      => X_MSG_DATA);
    EXCEPTION
    WHEN OTHERS THEN
        CDR_PUB_API_INITIALIZATION.DISABLEAPIS(
            P_API_VERSION=>1,
            P_INIT_MSG_LIST=>CDR_PUB_DEF_CONSTANTS.G_FALSE,
        P_COMMIT=>CDR_PUB_DEF_CONSTANTS.G_FALSE,
            P_VALIDATION_LEVEL=>CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
        X_RETURN_STATUS => X_RETURN_STATUS,
        X_MSG_COUNT     => X_MSG_COUNT,
        X_MSG_DATA      => X_MSG_DATA);
    END MY_PROCEDURE;

BEGIN -- PACKAGE INIT BLOCK
    CDR_PUB_API_INITIALIZATION.ENABLEAPIS(
        P_API_VERSION=>1,

```

```
        P_INIT_MSG_LIST=>CDR_PUB_DEF_CONSTANTS.G_FALSE,  
P_COMMIT=>CDR_PUB_DEF_CONSTANTS.G_FALSE,  
        P_VALIDATION_LEVEL=>CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
X_RETURN_STATUS => X_RETURN_STATUS,  
X_MSG_COUNT     => X_MSG_COUNT,  
X_MSG_DATA      => X_MSG_DATA);  
END MY_PACKAGE;
```

# 2

## Reference Information

This section contains the following topics:

- [CDR Naming Version Object Type](#)
- [CDR Base Object Type](#)
- [CDR Object-Specific Database Object Types](#)
- [Retrieving Reference Codelist Names and Values](#)
- [Retrieving the Instance Domain ID](#)
- [Retrieving the ID of a User-Defined Domain](#)
- [CDR\\_DF\\_NAMING\\_V View](#)
- [Standard Parameters](#)

### CDR Naming Version Object Type

Object information is stored in two tables in the Oracle LSH database: `cdr_namings`, which contains one row for each defined Oracle LSH object, and `cdr_naming_versions`, which contains one row for each version of each defined Oracle LSH object. Information from these two tables is stored in two composite database object types: `cdr_naming_version_obj_type` and `cdr_base_obj_type`.

For both the composite object types, the attributes `company_id`, `obj_id`, `obj_ver`, `namespace_obj_id`, and `namespace_obj_ver` form a composite primary key. You can refer to any existing object using this primary key.

Parameters of type `cdr_naming_version_obj_type` are required in APIs for creating and modifying an object. To get an object's naming version attribute values, see [Get a Naming Version Object](#).

The attributes of `cdr_naming_version_obj_type` are:

- **company\_id**. To get your company ID, use `CDR_PUB_DEF_FACTORY_UTILS.GetCompanyId`.
- **obj\_id** is the unique ID of the object. Oracle LSH generates this ID when you create a new object. Enter NULL if you are creating a new object.
- **obj\_ver** is the object's version number. Enter NULL if you are creating a new object.

#### Note:

The attributes `company_id`, `obj_id`, `obj_ver`, `namespace_obj_id`, and `namespace_obj_ver` together constitute an object's primary key.

- **namespace\_obj\_id**. The unique ID of the object's parent object; for example, a Table instance is always contained in a Work Area, so its namespace\_obj\_id is the object ID of its Work Area.
- **namespace\_obj\_ver**. The version number of the object's parent object.

 **Note:**

You can create a child object only in the latest version of its parent object. If you pass a namespace version number that is not the latest when creating a child object, the system ignores the value you pass and creates the child in the latest version of the parent.

- **namespace\_start\_obj\_ver**. This attribute contains the version number of the parent object at the time the version represented by **obj\_ver** of the object represented by **obj\_id** was created.
- **namespace\_end\_obj\_ver**. This attribute contains the version number of the parent object at the time when the version represented by **obj\_ver** of the object represented by **obj\_id** was superseded by a higher version. If the object is still the most current version, then this attribute contains the value 999999. If you are creating a new object, enter 999999.
- **object\_type\_rc**. This attribute defines what type of object you are creating or modifying. This value is mandatory for creating objects, but not for modifying objects. See [Retrieving Reference Codelist Names and Values](#) for information on retrieving valid values.
- **name**. This is the name of the object.
- **owning\_location\_rc**. This attribute is entered in the system at LSH installation time and is stored as a profile in the system. The system automatically sets this value to the profile value for all objects. Enter NULL.
- **checked\_out\_flag\_rc**. This value indicates whether the object is currently checked out or not. The possible values are \$YESNO\$YES and \$YESNO\$NO. If you are creating a new object, enter NULL.
- **checked\_out\_id** is the user ID of the person who checked out the object, if it is currently checked out. If you are creating a new object, enter NULL.
- **object\_subtype\_id**. This attribute specifies the ID of the object's subtype. Use CDR\_PUB\_DF\_NAMING\_UTIL.GetObjectSubtypeID to retrieve an object's subtype ID. If you are creating a new object, enter NULL.
- **description**. This is an optional attribute but it is highly recommended that you provide a description for future reference. You can modify the description using appropriate API for the object.
- **ref\_company\_id**. If the object is an instance object, this attribute contains the company ID of the source definition.
- **ref\_obj\_id**. If the object is an instance object, this attribute contains the object ID of the source definition.
- **ref\_obj\_ver**. If the object is an instance object, this attribute contains the object version number of the source definition.

- **copied\_from\_company\_id.** If the object is a copy of another object, this attribute contains the company ID of the original object. If you are creating a new object, enter NULL.
- **copied\_from\_obj\_id.** If the object is a copy of another object, this attribute contains the object ID of the original object. If you are creating a new object, enter NULL.
- **copied\_from\_obj\_ver.** If the object is a copy of another object, this attribute contains the object version number of the original object. If you are creating a new object, enter NULL.
- **object\_version\_number.** This attribute is for Oracle LSH internal use only. Never enter a value for this attribute. If you are creating a new object, enter NULL.
- **status\_rc.** This attribute contains the current status of the object. See [Retrieving Reference Codelist Names and Values](#) for information on retrieving valid values. If you are creating a new object, enter NULL.
- **validation\_status\_rc.** This attribute contains the current validation status of the object. See [Retrieving Reference Codelist Names and Values](#) for information on retrieving valid values. If you are creating a new object, enter NULL.
- **version\_label.** This attribute stores the version label of the object, if any. If you are creating a new object, enter NULL.

## CDR Base Object Type

For some operations on objects, only the identification contained in a CDR base object type (`cdr_base_obj_type`) is required. Some APIs allow you to operate on multiple objects at the same time by using a parameter based on a collection of CDR base object types called `cdr_base_obj_coll`.

A CDR Base Object Type contains a subset of the information contained in a CDR naming Version Object Type. (See [CDR Naming Version Object Type](#).)

## CDR Object-Specific Database Object Types

Each Oracle LSH object type has its own unique attributes beyond what is included in the CDR Naming Version Object Type and CDR Base Object Type. These unique attributes are included in a view for each object type. The view includes information on both definitions and instances of a particular object type. In the case of Tables, it includes Table Descriptors as well as Table definitions and instances.

APIs that are used to create or modify Oracle LSH defined objects contain parameters based on these supplementary database object types. You can set values for the object-specific attributes using these parameters.

For example, the supplementary database object type for Oracle LSH Programs is called `cdr_program_obj_type`. In the Create Program API, the parameter `pi_cdrprgobjtype` is of this type. Its attributes are:

- **company\_id.** To get your company ID, use `CDR_PUB_DEF_FACTORY_UTILS.GetCompanyId`.
- **obj\_id.** The unique ID of the Program.
- **obj\_ver.** The Program's version number.

- **tech\_type\_id.** Different executable object types have different technology types, which can be queried using the view `cdr_tech_types_v`. Use the column `program_type_rc` to see which tech type is valid for a particular object type. In the case of Programs, only the tech types whose value in the `program_type_rc` column is `$PROGRAMTYPES$PROGRAM` and which are present in the lookup type `cdr_tech_types` are allowed. They are: `$TECHTYPES$SAS`, `$TECHTYPES$SASCATALOGS`, `$TECHTYPES$SASFORMATS`, `$TECHTYPES$PLSQL`, `$TECHTYPES$REPORTS`.

 **Note:**

Tech types that are not included in the lookup type `cdr_tech_types` are used internally only and should not be used with public APIs.

- **manual\_validation\_flag\_rc.** This flag determines whether a Program's outputs receive their validation status from their Execution Setup or must be validated manually. The valid values are: `$YESNO$YES` and `$YESNO$NO`.

See the chapter on "Defining Programs" in the *Oracle Life Sciences Data Hub Application Developer's Guide* for information about these attributes. Each object type has its own chapter in this manual where its attributes are described.

## Retrieving Reference Codelist Names and Values

Some database object type attributes (those ending in the string `_rc`) have a fixed set of allowed values stored in a lookup (reference codelist). These attributes correspond to fields in the user interface with a drop-down or pop-up list of values. To supply or change one of these values you must enter the exact string stored in the reference codelist, with the codelist name surrounded by dollar signs and followed by a codelist value.

For example, the API to create any object includes a parameter of type `cdr_naming_version_obj_type`, one of whose attributes is `object_type_rc`. You must enter the correct string for the type of object you want to create.

Reference codelists are stored in a table you access through the view `cdr_lookups`. The following columns contain the following information:

- **lookup\_type:** reference codelist names
- **lookup\_code:** reference codelist values
- **meaning:** the text that is displayed in the user interface
- **description:** additional information (sometimes)

If you have LSH Setup Admin privileges you can look up reference codelists in the Applications user interface; see "Querying and Viewing Lookups" in the *Oracle Life Sciences Data Hub System Administrator's Guide*.

You can browse the view in a tool like SQL Developer to find these values. However, it is not always easy to guess the name of the reference codelist. In that case, you can go into the Oracle LSH user interface to where they are displayed and note one of the allowed values, then query.

For example, object types are displayed in the Add drop-down list in the Work Area Properties screen. You can see that one object type is Business Area, so you can use the following query:

```
select lookup_type, lookup_code, meaning from cdr_lookups where meaning like '%Business Area%';
```

Now you know that the lookup\_type for object types is CDR\_OBJECT\_TYPES and you can use the following query to get all the other values:

```
select distinct lookup_code, meaning from cdr_lookups where lookup_type = 'CDR_OBJECT_TYPES';
```

## Retrieving the Instance Domain ID

While working with classification-related APIs, you may need the domain ID for the Oracle LSH environment you are working in. This is the ID for your Oracle LSH instance, which is created during installation. It has nothing to do with user-defined Domains that contain Application Areas.

Its value is usually 1.

## Retrieving the ID of a User-Defined Domain

Query the CDR\_DF\_NAMING view for the domain ID and other attributes.

```
select * from cdr_df_naming_v where object_type_rc like '%$objtypes$libdomain%';
```

## CDR\_DF\_NAMING\_V View

Query the CDR\_DF\_NAMING\_v view for object types.

```
select distinct OBJECT_TYPE_RC, from cdr_df_naming_v;
```

Then query for the object type you need, for example:

```
select * from cdr_df_naming_v where object_type_rc like '%$objtypes$object_type%';
```

## Standard Parameters

Some or all of the following standard Oracle Applications parameters are included in each function and procedure:

### **P\_API\_VERSION**

(Mandatory) Enter 1.

### **P\_INIT\_MSG\_LIST**

(Optional) Accept the default value (FND\_API.G\_FALSE) to ensure that this individual API does not initialize the message list when the procedure is entered. Pass FND\_API.G\_TRUE to override the default behavior.



### **P\_COMMIT**

(Optional) Accept the default value (FND\_API.G\_FALSE) to ensure that this individual API does not commit upon completion. Pass FND\_API.G\_TRUE to override the default behavior.

### **P\_VALIDATION\_LEVEL**

(Optional) Accept the default value to perform full validation. No other values are currently supported.

### **X\_RETURN\_STATUS**

This output parameter returns the end status of the API: (S) Success, (E) Error or (U) Unexpected Error.

### **X\_MSG\_COUNT**

This output parameter returns the count of error messages if the return status is other than Success.

### **X\_MSG\_DATA**

This output parameter returns the text of the error message, if the message count is 1. If there are more than one messages, use `cdr_pub_msg_pub.get` to retrieve the messages.

# Part II

## Object APIs

This part of the Oracle Life Sciences Data Hub (Oracle LSH) API guide contains APIs that you can use to create, modify, check in or out, delete, copy, and move defined Oracle LSH objects. You can also perform object-specific tasks using these APIs.

Part II contains the following chapters:

- [Application Areas](#)
- [Business Areas](#)
- [Data Marts](#)
- [Domains](#)
- [Load Sets](#)
- [Parameter Sets](#)
- [Planned Outputs](#)
- [Programs](#)
- [Software Source Codes](#)
- [Tables](#)
- [Parameters](#)
- [Variables](#)
- [Work Areas](#)
- [Workflows](#)
- [Workflow Notifications](#)

# 3

## Application Areas

This is a public interface for Application Area-related operations— creating, modifying, and removing Application Areas; as well as copying and moving object definitions into an Application Area. It contains the following:

- [Define and Modify Application Areas](#)

### Define and Modify Application Areas

This section contains the following topics:

- [Create an Application Area](#)
- [Modify an Application Area](#)
- [Remove an Application Area](#)
- [Copy Objects into an Application Area](#)
- [Move Objects into an Application Area](#)

### Create an Application Area

Use this API to create a new Application Area.

#### Name

CDR\_PUB\_DF\_APPLICATIONAREA.CreateApplicationArea

#### Signature

```
PROCEDURE CREATEAPPLICATIONAREA(  
    P_API_VERSION IN NUMBER,  
    P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
    P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
    P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
    X_RETURN_STATUS OUT VARCHAR2,  
    X_MSG_COUNT OUT NUMBER,  
    X_MSG_DATA OUT VARCHAR2,  
    PIO_SOURCECDRNAMING IN OUT CDR_NAMING_VERSION_OBJ_TYPE,  
    PI_DEFCLASSIFICATIONCOLL IN CDR_CLASSIFICATIONS_COLL  
);
```

#### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_SOURCECDRNAMING** (Mandatory) This is a parameter of table type CDR\_NAMING\_VERSION\_OBJ\_TYPE. Enter values for the Application Area you want to create.

The following attributes are required: `company_id`, `namespace_obj_id`, `namespace_obj_ver`, `object_type_rc`. For `object_type_rc` enter `$objtypes$appliance`.

- **PI\_DEFCLASSIFICATIONCOLL**(Optional) By default the new Application Area is classified according to the subtype you assigned it in the `CDR_NAMING_VERSION_OBJ_TYPE`. If you want to override the default classifications for one or more classification levels, use this parameter. This is a collection of `CDR_CLA_OBJ_TYPES`, which have 5 attributes, including `CLA_LEVEL_ID` and `CLASSIFICATION_ID`. If you want the Application Area to inherit its classifications for a particular level from its parent Domain, enter the classification level ID and, for the `CLASSIFICATION_ID`, enter 0 (zero). If you want to explicitly assign one or more terms for a particular level, initialize a `CDR_CLA_OBJ_TYPE` for each term, entering the classification level ID and, for the `CLASSIFICATION_ID`, the term ID. The `PAR_` attributes are not relevant to Application Areas. Do not enter any values for them.

## Modify an Application Area

Use this API to modify the name or description of an existing Application Area.

### Name

`CDR_PUB_DF_APPLICATIONAREA.ModifyApplicationArea`

### Signature

```
PROCEDURE MODIFYAPPLICATIONAREA(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PIO_SOURCECDRNAMING IN OUT CDR_NAMING_VERSION_OBJ_TYPE
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) as well as the following:

**PIO\_SOURCECDRNAMING** (Mandatory) This is a parameter of table type `CDR_NAMING_VERSION_OBJ_TYPE`. Enter values to identify the Application Area you want to modify and for the attributes you want to modify. You can modify the name and description. All attributes are required.

## Remove an Application Area

Use this API to remove one or more Application Areas and all its/their contents.

### Name

`CDR_PUB_DF_APPLICATIONAREA.RemoveApplicationAreas`

### Signature

```
PROCEDURE REMOVEAPPLICATIONAREAS(
  P_API_VERSION IN NUMBER,
```

```

P_INIT_MSG_LIST IN    VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
P_COMMIT IN      VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
P_VALIDATION_LEVEL IN    NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
X_RETURN_STATUS OUT    VARCHAR2,
X_MSG_COUNT OUT      NUMBER,
X_MSG_DATA OUT      VARCHAR2,
PI_BASEOBJCOLL IN OUT  CDR_BASE_OBJ_COLL
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

**PI\_BASEOBJCOLL** (Mandatory) This is a collection of CDR\_BASE\_OBJ\_TYPES. For each Application Area that you want to remove (including all its contents), initialize a CDR\_BASE\_OBJ\_TYPE and then extend the collection.

The following attributes are required: COMPANY\_ID, OBJ\_ID, OBJ\_VER, OBJECT\_VERSION\_NUMBER, NAMESPACE\_OBJ\_ID, NAMESPACE\_OBJ\_VER.

## Copy Objects into an Application Area

Use this API to copy object definitions into an Application Area.

### Name

CDR\_PUB\_DF\_APPLICATIONAREA.CopyObjectIntoAA

### Signature

```

PROCEDURE COPYOBJECTINTOAA(
  P_API_VERSION IN    NUMBER,
  P_INIT_MSG_LIST IN    VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN      VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN    NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT    VARCHAR2,
  X_MSG_COUNT OUT      NUMBER,
  X_MSG_DATA OUT      VARCHAR2,
  PI_CDRBASEOBJCOLL IN OUT  CDR_BASE_OBJ_COLL,
  PI_CDRTARGETCONTAINEROBJECT IN OUT  CDR_BASE_OBJ_TYPE,
  PI_CHECKINFLAG IN    VARCHAR2
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_CDRBASEOBJCOLL** (Mandatory). This is a collection of CDR\_BASE\_OBJ\_TYPES. For each object that you want to copy into the Application Area, initialize a CDR\_BASE\_OBJ\_TYPE and then extend the collection.  
The following attributes are required: COMPANY\_ID, OBJ\_ID, OBJ\_VER, OBJECT\_VERSION\_NUMBER, NAMESPACE\_OBJ\_ID, NAMESPACE\_OBJ\_VER.

- **PI\_CDRTARGETCONTAINEROBJECT** (Mandatory). This is a parameter of table type CDR\_BASE\_OBJ\_TYPE. Enter values to identify the Application Area into which you want to copy objects.  
The following attributes are required: COMPANY\_ID, OBJECT\_ID, OBJECT\_VER, NAMESPACE\_OBJ\_ID, NAMESPACE\_OBJ\_VER, OBJECT\_VERSION\_NUMBER.
- **PI\_CHECKINFLAG** (Mandatory). Enter \$YESNO\$NO if you want any checked-out copied objects to remain checked out, or \$YESNO\$YES if you want the system to check them in after the copy operation.

## Move Objects into an Application Area

Use this API to move LSH objects into an Application Area.

### Name

CDR\_PUB\_DF\_APPLICATIONAREA.MoveObjectIntoAA

### Signature

```
PROCEDURE MOVEOBJECTINTOAA(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PI_CDRBASEOBJCOLL IN OUT CDR_BASE_OBJ_COLL,
  PI_CDRTARGETCONTAINEROBJECT IN OUT CDR_BASE_OBJ_TYPE
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_CDRBASEOBJCOLL** (Mandatory) This is a collection of CDR\_BASE\_OBJ\_TYPEs. For each object that you want to move into the Application Area, initialize a CDR\_BASE\_OBJ\_TYPE and then extend the collection.  
The following attributes are required: COMPANY\_ID, OBJ\_ID, OBJ\_VER, OBJECT\_VERSION\_NUMBER, NAMESPACE\_OBJ\_ID, NAMESPACE\_OBJ\_VER.
- **PI\_CDRTARGETCONTAINEROBJECT** (Mandatory) This is a parameter of table type CDR\_BASE\_OBJ\_TYPE. Enter values to identify the Application Area into which you want to move objects.  
The following attributes are required: COMPANY\_ID, OBJ\_ID, OBJ\_VER, OBJECT\_VERSION\_NUMBER, NAMESPACE\_OBJ\_ID, NAMESPACE\_OBJ\_VER.

# 4

## Business Areas

This section contains the following topics:

- [Define and Modify Business Areas](#)
- [Create and Modify Business Area Hierarchies](#)
- [Create and Modify Business Area Joins](#)
- [Public APIs and Naming Views for Generic Visualization Adapter \(GVA\)](#)

### Define and Modify Business Areas

This is a public interface for Business Area-related APIs, including creating, modifying, and removing Business Areas. It also includes APIs for checking Business Areas in and out, and undoing a Business Area checkout.

This section contains the following topics:

- [Create a Business Area](#)
- [Modify a Business Area](#)
- [Check Out a Business Area](#)
- [Undo a Business Area Checkout](#)
- [Check In a Business Area](#)
- [Remove a Business Area](#)

### Create a Business Area

Use this API to create a new Business definition, a new instance of an existing Business Area definition, or a new definition and an instance of it.

#### Name

CDR\_PUB\_DF\_BUSINESSAREA.CreateBusiArea

#### Signature

```
PROCEDURE CREATEBUSIAREA(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  X_RETURN_STATUS OUT VARCHAR2,  
  X_MSG_COUNT OUT NUMBER,  
  X_MSG_DATA OUT VARCHAR2,  
  PIO_SOURCECDRNAMING IN OUT CDR_NAMING_VERSION_OBJ_TYPE,  
  PI_CDRPRGOBJTYPE IN CDR_BUSAREA_OBJ_TYPE,  
  PI_CREATEOBJECT IN VARCHAR2,  
  PI_INSTANCE_SUBTYPE_ID IN CDR_NAMINGS.OBJECT_SUBTYPE_ID%TYPE,
```

```

PI_DEFCLASSIFICATIONCOLL IN CDR_CLASSIFICATIONS_COLL,
PI_INSTCLASSIFICATIONCOLL IN CDR_CLASSIFICATIONS_COLL
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- PIO\_SOURCECDRNAMING** (Mandatory) This is a parameter of table type CDR\_NAMING\_VERSIONS\_OBJ\_TYPE that contains CDR Naming Version attributes.

If you are creating a new definition only or a new definition and an instance of it, enter values for the new definition.

If you are creating an instance of an existing definition, enter values to identify the definition. For OBJECT\_TYPE\_RC enter \$OBJTYPES\$BUSAREA if you are creating a definition only; \$OBJTYPES\$BUSAREAREF if you are creating an instance of an existing definition; and NULL if you are creating a new definition and an instance of it.
- PI\_CDRPRGOBJTYPE** (Optional) This is a parameter of table type CDR\_BUSAREA\_OBJ\_TYPE specific to Business Areas.

If you are creating a new definition, enter values for the new Business Area.

The following attributes are required:  
ADAPTER\_COMPANY\_ID,ADAPTER\_OBJ\_ID,ADAPTER\_OBJ\_VER.

If you are creating an instance of an existing Business Area, do not enter any values here.
- PI\_CREATEOBJECT** (Mandatory) Enter DEFN to create a definition only; INST to create a instance of an existing definition; or BOTH to create a new definition and an instance of it.
- PI\_INSTANCE\_SUBTYPE\_ID** (Optional) If you are creating a new instance, enter the ID for the subtype you want to give the instance.

If you are creating a definition only, do not enter a value for this parameter.
- PI\_DEFCLASSIFICATIONCOLL** (Optional) By default, the new definition is classified according to the subtype you assigned it in the CDR\_NAMING\_VERSION\_OBJ\_TYPE.

If you want to override the default classifications for one or more classification levels, use this parameter. This is a collection of CDR\_CLA\_OBJ\_TYPES, which have 5 attributes, including CLA\_LEVEL\_ID and CLASSIFICATION\_ID.

If you want the definition to inherit its classifications for a particular level from its parent, enter the classification level ID and, for the CLASSIFICATION\_ID, enter 0 (zero).

If you want to explicitly assign one or more terms for a particular level, initialize a CDR\_CLA\_OBJ\_TYPE for each term, entering the classification level ID and, for the CLASSIFICATION\_ID, the term ID. The PAR\_ attributes are not relevant to Business Areas. Do not enter any values for them.
- PI\_INSTCLASSIFICATIONCOLL** (Optional) By default, the new instance is classified according to the subtype you assigned it in the PI\_INSTANCE\_SUBTYPE\_ID.

If you want to override the default classifications for one or more classification levels, use this parameter. This is a collection of CDR\_CLA\_OBJ\_TYPES, which have 5 attributes, including CLA\_LEVEL\_ID and CLASSIFICATION\_ID.



If you want the instance to inherit its classifications for a particular level from its parent Work Area, enter the classification level ID and, for the CLASSIFICATION\_ID, enter 0 (zero).

If you want to explicitly assign one or more terms for a particular level, initialize a CDR\_CLA\_OBJ\_TYPE for each term, entering the classification level ID and, for the CLASSIFICATION\_ID, the term ID. The PAR\_ attributes are not relevant to Business Areas. Do not enter any values for them.

## Modify a Business Area

Use this API to modify a Business Area definition or instance.

### Note:

If you are modifying a definition, you must first check it out.

### Name

CDR\_PUB\_DF\_BUSINESSAREA.ModifyBusiAreaDetails

### Signature

```
PROCEDURE MODIFYBUSIAREADETAILS(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PIO_CDRNAMING IN OUT CDR_NAMING_VERSION_OBJ_TYPE
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PIO\_CDRNAMING** (Mandatory) This is a parameter of table type CDR\_NAMING\_VERSION\_OBJ\_TYPE. Enter values to identify the Business Area and enter new values for the attributes you want to modify.

You can change the name, description, or version label for either a definition or instance. For an instance, you can also change to a different underlying source definition by entering values for the new definition in the three REF attributes. All attributes are required.

## Check Out a Business Area

Use this API to check out a Business Area definition either directly or through an instance of it.

### Name

CDR\_PUB\_DF\_BUSINESSAREA.CheckOutBusiArea

## Signature

```
PROCEDURE CHECKOUTBUSIAREA(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PIO_BASEOBJECT IN OUT CDR_BASE_OBJ_TYPE,
  PI_COMMENT IN VARCHAR2,
  PI_ISINSTONLY IN VARCHAR2
);
```

## Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_BASEOBJECT** (Mandatory) This is a parameter of table type `CDR_BASE_OBJ_TYPE`. Enter values to identify the Business Area that you want to do check out.  
If you are checking out the Business Area definition directly, enter values to identify the definition.  
  
If you are checking out a Business Area definition through an instance of it, enter values to identify the instance.  
  
The following attributes are required:  
`COMPANY_ID,OBJ_ID,OBJ_VER,OBJECT_VERSION_NUMBER,NAMESPACE_OBJ_ID,NAMESPACE_OBJ_VER`.
- **PI\_COMMENT** Enter the reason you are checking out the Business Area.
- **PI\_ISINSTONLY** (Mandatory) Enter `$YESNO$NO`.

## Undo a Business Area Checkout

Use this API to undo the checkout of a Business Area definition, discarding any changes that have been made.

### Name

`CDR_PUB_DF_BUSINESSAREA.UncheckOutBusiArea`

### Signature

```
PROCEDURE UNCHECKOUTBUSIAREA(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PIO_BASEOBJECT IN OUT CDR_BASE_OBJ_TYPE
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

**PIO\_BASEOBJECT** (Mandatory) This is a parameter of table type CDR\_BASE\_OBJ\_TYPE. Enter values to identify the Business Area whose checkout you want to undo.

The following attributes are required:

COMPANY\_ID,OBJ\_ID,OBJ\_VER,OBJECT\_VERSION\_NUMBER,NAMESPACE\_OBJ\_ID,NAMESPACE\_OBJ\_VER.

## Check In a Business Area

Use this API to check in a Business Area definition.

### Name

CDR\_PUB\_DF\_BUSINESSAREA.CheckInBusiAreaDefinition

### Signature

```

PROCEDURE CHECKINBUSIAREADEFINITION(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PIO_BASEOBJECT IN OUT CDR_BASE_OBJ_TYPE,
  PI_COMMENT IN VARCHAR2
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_BASEOBJECT** (Mandatory) This is a parameter of table type CDR\_BASE\_OBJ\_TYPE. Enter values to identify the Business Area that you want to check in.

The following attributes are required:

COMPANY\_ID,OBJ\_ID,OBJ\_VER,OBJECT\_VERSION\_NUMBER,NAMESPACE\_OBJ\_ID,NAMESPACE\_OBJ\_VER.

- **PI\_COMMENT** (Optional) Enter the reason you are checking in the Business Area.

## Remove a Business Area

Use this API to remove one or more Business Area definitions or instances.

### Name

CDR\_PUB\_DF\_BUSINESSAREA.RemoveBusiArea

### Signature

```
PROCEDURE REMOVEBUSIAREA(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  X_RETURN_STATUS OUT VARCHAR2,  
  X_MSG_COUNT OUT NUMBER,  
  X_MSG_DATA OUT VARCHAR2,  
  PIO_CDRBASEOBJCOLL IN OUT CDR_BASE_OBJ_COLL  
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PIO\_CDRBASEOBJCOLL** (Mandatory) This is a collection of CDR\_BASE\_OBJ\_TYPES.

For each Business Area that you want to remove, initialize a CDR\_BASE\_OBJ\_TYPE and then extend the collection.

The following attributes are required:

COMPANY\_ID,OBJ\_ID,OBJ\_VER,OBJECT\_VERSION\_NUMBER,NAMESPACE\_OBJ\_ID,NAMESPACE\_OBJ\_VER.

## Create and Modify Business Area Hierarchies

This is a public interface for all Business Area hierarchy-related operations, including creating, modifying, and removing Business Area hierarchies and hierarchy columns.

This section contains the following topics:

- [Create a Business Area Hierarchy](#)
- [Modify a Hierarchy and a Hierarchy Column](#)
- [Reorder a Hierarchy Column](#)
- [Remove a Hierarchy Column](#)
- [Remove a Business Area Hierarchy](#)

## Create a Business Area Hierarchy

Use this API to create a hierarchy in a Business Area. To define the hierarchy's columns, use `ModifyBusAreaHierAndHierCol`.

### Name

CDR\_PUB\_DF\_BUSINESSAREA\_HIER.CreateBusinessAreaHier

### Signature

```
PROCEDURE CREATEBUSINESSAREAHIER(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
```

```

P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
X_RETURN_STATUS OUT VARCHAR2,
X_MSG_COUNT OUT NUMBER,
X_MSG_DATA OUT VARCHAR2,
PIO_SOURCECDRNAMING IN OUT CDR_NAMING_VERSION_OBJ_TYPE
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

**PIO\_SOURCECDRNAMING** (Mandatory) This is a parameter of table type CDR\_NAMING\_VERSION\_OBJ\_TYPE.

Enter values for the new hierarchy. Use the NAMESPACE attributes to identify the Business Area in which you want to create the hierarchy.

The following attributes are required:

OBJECT\_TYPE\_RC, NAME, NAMESPACE\_OBJ\_ID, NAMESPACE\_OBJ\_VER, OBJECT\_SUBTYPE\_ID. For OBJECT\_TYPE\_RC enter \$OBJTYPES\$BUSAREAHIER.

## Modify a Hierarchy and a Hierarchy Column

Use this API to modify Business Area hierarchies and hierarchy columns. You can change name and description, add columns, and change their Group With Previous setting. Use the remove columns API to remove columns.

### Name

CDR\_PUB\_DF\_BUSINESSAREA\_HIER.ModifyBusAreaHierAndHierCol

### Signature

```

PROCEDURE MODIFYBUSAREAHIERANDHIERCOL(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PIO_NAMING IN OUT CDR_NAMING_VERSION_OBJ_TYPE,
  PI_BUS_HIERCOLUMNS_COLL IN OUT CDR_BUSAREA_HIER_COLS_COLL
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_NAMING** (Mandatory) This is a parameter of table type CDR\_NAMING\_VERSION\_OBJ\_TYPE. Enter values to identify the Business Area Hierarchy that you want to modify and enter new values for the attributes you want to modify. You can modify only the Name and Description. All attributes are required.
- **PI\_BUS\_HIERCOLUMNS\_COLL** (Mandatory) This is a collection of CDR\_BUSAREA\_HIER\_COLS\_OBJ\_TYPE.

Initialize a CDR\_BUSAREA\_HIER\_COLS\_OBJ\_TYPE for each Column in their position order with the values you want to change, and then extend the collection. All attributes are required.

## Reorder a Hierarchy Column

Use this API to reorder the Columns of a Business Area Hierarchy.



### Note:

The API enforces validation rules for Column sequence.

### Name

CDR\_PUB\_DF\_BUSINESSAREA\_HIER.ReorderHierCols

### Signature

```
PROCEDURE REORDERHIERCOLS(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PIO_BUS_HIERCOLUMNS_COLL IN OUT CDR_BUSAREA_HIER_COLS_COLL
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

**PIO\_BUS\_HIERCOLUMNS\_COLL** (Mandatory) This is a collection of CDR\_BUSAREA\_HIER\_COLS\_OBJ\_TYPES. For each Column, initialize a CDR\_BUSAREA\_HIER\_COLS\_OBJ\_TYPE, providing the new value for POSITION NUMBER relative to the other Columns, and then extend the collection. You must initialize all existing Columns.

The following attributes are required:

COMPANY\_ID,HIER\_OBJ\_ID,HIER\_OBJ\_VER,TD\_COMPANY\_ID,TD\_OBJ\_ID,TD\_COLL\_COMPANY\_ID,TD\_COL\_OBJ\_ID,POSITION,GROUP\_WITH\_PREVIOUS\_RC.

## Remove a Hierarchy Column

Use this API to remove Business Area Hierarchy Columns.



### Note:

You cannot remove a Column that is currently part of a Join. If you remove a Column, and if the next Column's Group By Previous setting is Yes, then that setting is changed to No.

**Name**

CDR\_PUB\_DF\_BUSINESSAREA\_HIER.RemoveHierColumns

**Signature**

```
PROCEDURE REMOVEHIERCOLUMNS(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PIO_BUS_HIERCOLUMNS_COLL IN OUT CDR_BUSAREA_HIER_COLS_COLL
);
```

**Parameters**

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PIO\_BUS\_HIERCOLUMNS\_COLL** (Mandatory) This is a collection of CDR\_BUSAREA\_HIER\_COLS\_OBJ\_TYPES. For each Column that you want to remove, initialize a CDR\_BUSAREA\_HIER\_COLS\_OBJ\_TYPE and then extend the collection.

The following attributes are required:

COMPANY\_ID,HIER\_OBJ\_ID,HIER\_OBJ\_VER,TD\_COMPANY\_ID,TD\_OBJ\_ID,TD\_C  
OL\_COMPANY\_ID,TD\_COL\_OBJ\_ID,POSITION,GROUP\_WITH\_PREVIOUS\_RC.

## Remove a Business Area Hierarchy

Use this API to remove one or more Business Area Hierarchies, including all their Columns.

**Name**

CDR\_PUB\_DF\_BUSINESSAREA\_HIER.RemoveHiers

**Signature**

```
PROCEDURE REMOVEHIERS(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PI_BASEOBJCOLL IN OUT CDR_BASE_OBJ_COLL
);
```

**Parameters**

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PI\_BASEOBJCOLL** (Mandatory) This is a collection of CDR\_BASE\_OBJ\_TYPEs. For each Hierarchy that you want to remove, initialize a CDR\_BASE\_OBJ\_TYPE and then extend the collection.

The following attributes are required:

COMPANY\_ID,OBJ\_ID,OBJ\_VER,OBJECT\_VERSION\_NUMBER,NAMESPACE\_OBJ\_ID,NAMESPACE\_OBJ\_VER.

## Create and Modify Business Area Joins

This is a public interface for Business Area Join-related operations, including creating, modifying, and removing Business Area Joins and Join Columns.

This section contains the following topics:

- [Create a Join](#)
- [Modify a Join and a Join Column](#)
- [Remove a Join Column](#)
- [Remove a Join](#)

### Create a Join

Use this API to create a Business Area Join.

#### Name

CDR\_PUB\_DF\_BUSINESSAREA\_JOIN.CreateBusinessAreaJoin

#### Signature

```
PROCEDURE CREATEBUSINESSAREAJOIN(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PIO_SOURCECDRNAMING IN OUT CDR_NAMING_VERSION_OBJ_TYPE,
  PI_BUSAREAJOINSOBJTYPE IN CDR_BUSAREA_JOINS_OBJ_TYPE
);
```

#### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_SOURCECDRNAMING** (Mandatory) This is a parameter of table type CDR\_NAMING\_VERSION\_OBJ\_TYPE. Enter values for the Join that you want to create. Use the NAMESPACE attributes to identify the Business Area in which you want to create the Join.  
The following attributes are required:  
OBJECT\_TYPE\_RC,NAME,NAMESPACE\_OBJ\_ID,NAMESPACE\_OBJ\_VER,OBJECT\_SUBTYPE\_ID. For OBJECT\_TYPE\_RC enter \$OBJTYPES\$JOIN.



- **PI\_BUSAREAJOINSOBJTYPE** (Mandatory) This is a parameter of table type CDR\_BUSAREA\_JOINS\_OBJ\_TYPE specific to Joins. Enter values for the Join that you want to create.  
The following attributes are required:  
TD\_COMPANY\_ID,TD\_OBJ\_ID,FK\_TD\_COMPANY\_ID,FK\_TD\_OBJ\_ID,TD\_OUTERJOIN\_RC,FK\_TD\_OUTERJOIN\_RC.  
For TD\_OUTERJOIN\_RC and FK\_TD\_OUTERJOIN\_RC, enter \$YESNO\$NO to define an inner join on the side of the corresponding Table Descriptor, or \$YESNO\$YES to define an outer join. Be sure to define an outer join on only one side, if any.

## Modify a Join and a Join Column

Use this API to modify Business Area Joins and Join Columns. You can change the name and description of the Join and change either side to an inner or outer join (but be careful not to make both sides into outer joins). You can add Join Columns and pair them with a different Column from the other Table Descriptor.

### Note:

Do not change the operator. EQUAL TO is the only operator currently supported.

### Name

CDR\_PUB\_DF\_BUSINESSAREA\_JOIN.ModifyBusAreaJoinAndJoinCol

### Signature

```
PROCEDURE MODIFYBUSAREAJOINANDJOINCOL(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PIO_NAMING IN OUT CDR_NAMING_VERSION_OBJ_TYPE,
  PI_BUSINESS_JOIN IN OUT CDR_BUSAREA_JOINS_OBJ_TYPE,
  PI_BUS_JOINCOLUMNS_COLL IN OUT CDR_BUSAREA_JOIN_COLS_COLL
);
```

### Parameters

This API has standard parameters (see "[Standard Parameters](#)") and the following parameters:

- **PIO\_NAMING** (Mandatory) This is a parameter of table type CDR\_NAMING\_VERSION\_OBJ\_TYPE. Enter values to identify the Join that you want to modify and for the attributes you want to change.  
The following attributes are required:  
COMPANY\_ID,OBJ\_ID,OBJ\_VER,OBJECT\_VERSION\_NUMBER,NAMESPACE\_OBJ\_ID,NAMESPACE\_OBJ\_VER.

- **PI\_BUSINESS\_JOIN** (Mandatory) This is a parameter of table type CDR\_BUSAREA\_JOINS\_OBJ\_TYPE specific to Joins. Enter values to identify the Join that you want to modify and the values you want to modify. All attributes are required.
- **PI\_BUS\_JOINCOLUMNS\_COLL** (Mandatory) This is a collection of CDR\_BUSAREA\_JOIN\_COLS\_TYPES. For each Join Column that you want to modify, initialize a CDR\_BUSAREA\_JOIN\_COLS\_TYPE and then extend the collection.  
The following attributes are required:  
COMPANY\_ID,JOIN\_OBJ\_ID,JOIN\_OBJ\_VER,TD\_COL\_COMPANY\_ID,TD\_COL\_OBJ\_ID,FK\_TD\_COL\_COMPANY\_ID,FK\_TD\_COL\_OBJ\_ID,POSITION. You can change the joined columns but you cannot modify the operator, which is always Equal To.

## Remove a Join Column

Use this API to remove one or more Columns from a Join.

### Name

CDR\_PUB\_DF\_BUSINESSAREA\_JOIN.RemoveJoinColumns

### Signature

```
PROCEDURE REMOVEJOINCOLUMNS(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PIO_BUS_JOINCOLUMNS_COLL IN OUT CDR_BUSAREA_JOIN_COLS_COLL
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PIO\_BUS\_JOINCOLUMNS\_COLL** (Mandatory) This is a collection of CDR\_BUSAREA\_JOIN\_COLS\_TYPES. For each Join Column that you want to remove, initialize a CDR\_BUSAREA\_JOIN\_COLS\_TYPE and then extend the collection.

The following attributes are required:

COMPANY\_ID,JOIN\_OBJ\_ID,JOIN\_OBJ\_VER,TD\_COL\_COMPANY\_ID,TD\_COL\_OBJ\_ID,FK\_TD\_COL\_COMPANY\_ID,FK\_TD\_COL\_OBJ\_ID,POSITION.

## Remove a Join

Use this API to remove one or more Joins, with all their Columns, from a Business Area.

### Name

CDR\_PUB\_DF\_BUSINESSAREA\_JOIN.RemoveJoins

**Signature**

```
PROCEDURE REMOVEJOINS(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PI_BASEOBJCOLL IN OUT CDR_BASE_OBJ_COLL
);
```

**Parameters**

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PI\_BASEOBJCOLL** (Mandatory) This is a collection of CDR\_BASE\_OBJ\_TYPES.

For each Join that you want to remove from the Business Area, initialize a CDR\_BASE\_OBJ\_TYPE and then extend the collection.

The following attributes are required:

COMPANY\_ID,OBJ\_ID,OBJ\_VER,OBJECT\_VERSION\_NUMBER,NAMESPACE\_OBJ\_ID,NAMESPACE\_OBJ\_VER.

## Public APIs and Naming Views for Generic Visualization Adapter (GVA)

This is a public interface for operations related to Generic Visualization Business Areas including initializing and resetting them.

For more information on integrating a data visualization tool, see *Oracle® Health Sciences Data Management Workbench Data Visualization Integration Guide* on My Oracle Support, ID E87987-01.

This section contains the following topics:

- [Initialize a Generic Visualization Business Area Instance](#)
- [Reset a Generic Visualization Business Area Instance](#)
- [Get Possible Blinding Types of a Business Area Instance](#)
- [Get Snapshot Labels Common to all Tables in a BA Instance for a Given Blinding AccessType](#)
- [Get Custom Listing Business Area ID](#)

### Initialize a Generic Visualization Business Area Instance

Use this API to initialize a business area instance with a given currency and blinding access type to determine which data is displayed. The visualization tool must run this API each time:

- A user logs in.

- The user changes the currency or blinding setting.
- A user selects a business area to view. Users can view multiple business areas in a single session as long as the user selects compatible blinding settings for all business areas.  
If the user selects a blinding access type for a business area that is incompatible with the blinding access types selected for other business areas in the same session, the API errors out with the message, "There is a change in reading dummy data to blinded data or vice-versa. Please reset access to all business areas using resetBAAccess api and try again." See [Reset a Generic Visualization Business Area Instance](#).

If the currency and the blinding access values are not set by the user, the API uses the default values, which are to show current and nonblinded data.



**Tip:**

There are two versions of API CDR\_PUB\_API\_GVA.setInitializeBa with the same name. One allows entering a timestamp for the currency, while the other one accepts either the value `CURRENT` or a snapshot label.

**Signature for Version 1**

```
PROCEDURE SETINITIALIZEBA(
PI_COMPANYID IN CDR_NAMINGS.COMPANY_ID%TYPE,
PI_OBJID     IN CDR_NAMINGS.OBJ_ID%TYPE,
PI_OBJVER   IN CDR_NAMING_VERSIONS.OBJ_VER%TYPE,
PI_VCURRENCY IN VARCHAR2,
PI_VBLINDINGACCESSTYPE IN VARCHAR2,
X_RETURN_STATUS      OUT NOCOPY VARCHAR2,
X_MSG_COUNT          OUT NOCOPY NUMBER,
X_MSG_DATA           OUT NOCOPY VARCHAR2)
```

**Signature for Version 2**

```
PROCEDURE SETINITIALIZEBA(
PI_COMPANYID IN CDR_NAMINGS.COMPANY_ID%TYPE,
PI_OBJID     IN CDR_NAMINGS.OBJ_ID%TYPE,
PI_OBJVER   IN CDR_NAMING_VERSIONS.OBJ_VER%TYPE,
PI__REFRESHTS IN DATE,
PI_VBLINDINGACCESSTYPE IN VARCHAR2,
X_RETURN_STATUS      OUT NOCOPY VARCHAR2,
X_MSG_COUNT          OUT NOCOPY NUMBER,
X_MSG_DATA           OUT NOCOPY VARCHAR2)
```

**Parameters**

**PI\_COMPANYID.** Enter the business area instance's company ID.

**PI\_OBJID.** Enter the business area instance's object ID.

**PI\_OBJVER.** Enter the business area instance's object version.

**PI\_VCURRENCY.** Enter `Current` or a snapshot label common to all Table instances. See [Get Snapshot Labels Common to all Tables in a BA Instance for a Given Blinding AccessType](#).

OR

**PI\_DREFRESHTS** Timestamp of the data currency required. Use any valid Oracle date or datetime format. The system displays data that was current at the date and time specified. For example, if data was loaded for the first time at 1:00 pm and then again at 2:00 pm:

- If the user specifies a timestamp of 1:30 pm, the visualization displays data loaded at 12:00.
- If the user specifies a timestamp of 12:00 pm, the visualization displays no data.
- If the user specifies a timestamp of 4:00 pm, the visualization displays data loaded at 2:00 pm.

**PI\_VBLINDINGACCESSTYPE.** Enter the blinding access type. The allowed values are: `NA/Dummy`, `Masked Data`, `Real(Unblinded)`, and `Real(BlindBreak)`. Note that there is no space between `Real` and the parentheses/brackets.

- **NA/Dummy:** The user sees dummy data for data blinded at the table level.
- **Masked Data:** The user sees masking values for data blinded at the column, row, or cell level.
- **Real (Unblinded):** The user sees real data in unblinded table instances. This option is available only if *all* the business area's table instances whose Blinding flag is set to Yes have a Blinding Status of Unblinded.
- **Real (Blind Break):** The user sees currently blinded data in blinded table instances.
- **Real (Unblinded) and Real (Blind Break)** can be specified together: The user sees unblinded data in business area instances where this option is available (all table instances that have their Blinding Flag set to Yes must have a Blinding Status of Unblinded) and currently blinded data in other business area instances in the same session.



**Tip:**

There is no space between `Real` and the parentheses/brackets.

## Reset a Generic Visualization Business Area Instance

Use this API to clear all the initializations of Business Area schemas. It is equivalent to logging out and logging back in to the system. Use this API when you want to change blinding access type from blinded to unblinded or vice-versa.

**Name**

CDR\_PUB\_API\_GVA.RESETBAACCESS

## Get Possible Blinding Types of a Business Area Instance

Use this API to get the possible Blinding Access Types of a Business Area Instance, which is in turn based on the blinding statuses of underlying Business Area Table instances and the user's privileges.

### Name

CDR\_PUB\_API\_GVA.GetBAValidBlindingAccessTypes

### Signature

```
FUNCTION GETBAVALIDBLINDINGACCESSTYPES(  
    PI_COMPANYID IN CDR_NAMINGS.COMPANY_ID%TYPE,  
    PI_OBJID     IN CDR_NAMINGS.OBJ_ID%TYPE,  
    PI_OBJVER    IN CDR_NAMING_VERSIONS.OBJ_VER%TYPE) RETURN  
BLINDINGACCESSTYPESCOLL PIPELINED;
```

### Return

A collection of the possible blinding access types. BLINDINGACCESSTYPESCOLL is TABLE TYPE OF VARCHAR2(30);

### Parameters

This API has the following parameters:

**PI\_COMPANYID.** Enter the Business Area Instance Company ID.

**PI\_OBJID.** Enter the Business Area Instance Object ID.

**PI\_OBJVER.** Enter the Business Area Instance Object Version.

**BLINDINGACCESSTYPESCOLL.** This is the list of possible blinding access types.

## Get Snapshot Labels Common to all Tables in a BA Instance for a Given Blinding AccessType

Use this API to get the snapshot labels common to all Tables within a Business Area Instance for a given blinding access type.

### Name

CDR\_PUB\_API\_GVA.GetSnapshotLabels

### Signature

```
FUNCTION GETSNAPSHOTLABELS(  
    PI_COMPANYID IN CDR_NAMINGS.COMPANY_ID%TYPE,  
    PI_OBJID     IN CDR_NAMINGS.OBJ_ID%TYPE,  
    PI_OBJVER    IN CDR_NAMING_VERSIONS.OBJ_VER%TYPE,  
    PI_VBLINDINGACCESSTYPE IN VARCHAR2) RETURN CURRENCYCOLL PIPELINED;
```

### Return

A collection of the snapshot labels for a particular blinding access type in the Business Area instance common to all Tables within a Business Area Instance. CURRENCYCOLL is TABLE TYPE OF VARCHAR2(200);

### Parameters

This API has the following parameters.

**PI\_COMPANYID.** Enter the Business Area Instance Company ID.

**PI\_OBJID.** Enter the Business Area Instance Object ID.

**PI\_OBJVER.** Enter the Business Area Instance Object Version.

**PI\_VBLINDINGACCESSTYPE.** Enter the Blinding Access Type.

## Get Custom Listing Business Area ID

When a user logs into a visualization tool, the visualization tool must call an API to initialize the primary data model schema and, if the user wants to see custom listings through the tool, the schema for custom listings. The initialization API requires the business area instance ID, which is not available to a user in DMW.

Use this API to fetch the ID of the business area instance that contains all the custom listings defined in the model.

### Signature

```
FUNCTION getCustomListingBA(  
pi_nDataModelId IN NUMBER,  
pi_vContext IN VARCHAR2)  
RETURN NUMBER;
```

### Parameters

**pi\_nDataModelId** Enter the ID of the data model.

**pi\_vContext** Enter the life cycle context value. The allowed values are: \$LIFECYCLE\$DEV, \$LIFECYCLE\$PROD, or \$LIFECYCLE\$QC.

# 5

## Data Marts

This is a public interface for creating, modifying, and removing Data Marts.

This chapter contains this section:

- [Define and Modify Data Marts](#)

### Define and Modify Data Marts

This section contains the following topics:

- [Create a Data Mart](#)
- [Check In a DataMart Definition](#)
- [Modify a Data Mart](#)
- [Check Out a Data Mart](#)
- [Remove a Data Mart](#)

### Create a Data Mart

Use this API to create a new Data Mart definition, a new instance of an existing Data Mart definition, or a new definition and an instance of it.

#### Name

CDR\_PUB\_DF\_DATAMART.CreateDataMart

#### Signature

```
PROCEDURE CREATEDATAMART(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  X_RETURN_STATUS OUT VARCHAR2,  
  X_MSG_COUNT OUT NUMBER,  
  X_MSG_DATA OUT VARCHAR2,  
  PIO_SOURCECDRNAMING IN OUT CDR_NAMING_VERSION_OBJ_TYPE,  
  PI_CDRDATAMARTOBJTYPE IN CDR_DATA_MART_OBJ_TYPE,  
  PI_CREATEOBJECT IN VARCHAR2,  
  PI_INSTANCESUBTYPE_ID IN CDR_NAMINGS.OBJECT_SUBTYPE_ID%TYPE,  
  PI_DEFCLASSIFICATIONCOLL IN CDR_CLASSIFICATIONS_COLL,  
  PI_INSTCLASSIFICATIONCOLL IN CDR_CLASSIFICATIONS_COLL  
);
```

#### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:



- PIO\_SOURCECDRNAMING** (Mandatory) This is a parameter of table type CDR\_NAMING\_VERSIONS\_OBJ\_TYPE that contains CDR Naming Version attributes.

If you are only creating a new definition or a new definition and an instance of it, enter values for the new definition. If you are creating a definition enter \$OBJTYPES\$DATAMART for OBJECT\_TYPE\_RC. Enter NULL if you are creating a new definition and an instance of it.

If you are creating an instance of an existing definition, enter values to identify the definition. If you are creating an instance of an existing definition enter \$OBJTYPES\$DATAMARTREF for OBJECT\_TYPE\_RC.
- PI\_CDRDATAMARTOBJTYPE** (Optional) This is a parameter of table type CDR\_DATA\_MART\_OBJ\_TYPE that contains object attributes specific to Data Marts.

If you are creating a new definition, enter values for the new Data Mart. The following attributes are required: COMPANY\_ID, ADAPTER\_COMPANY\_ID, ADAPTER\_OBJ\_ID, ADAPTER\_OBJ\_VER.

If you are creating an instance of an existing Data Mart, do not enter any values here.
- PI\_CREATEOBJECT** (Mandatory) Enter DEFN to create a definition only; INST to create a instance of an existing definition; or BOTH to create a new definition and an instance of it.
- PI\_INSTANCE\_SUBTYPE\_ID** (Optional) If you are creating a new instance, enter the ID for the subtype you want to give the instance. If you are creating a definition only, do not enter a value for this parameter.
- PI\_DEFCLASSIFICATIONCOLL** (Optional) By default the new definition is classified according to the subtype you assigned it in the CDR\_NAMING\_VERSION\_OBJ\_TYPE. If you want to override the default classifications for one or more classification levels, use this parameter. This is a collection of CDR\_CLA\_OBJ\_TYPES, which have 5 attributes, including CLA\_LEVEL\_ID and CLASSIFICATION\_ID.

If you want the definition to inherit its classifications for a particular level from its parent, enter the classification level ID and, for the CLASSIFICATION\_ID, enter 0 (zero).

If you want to explicitly assign one or more terms for a particular level, initialize a CDR\_CLA\_OBJ\_TYPE for each term, entering the classification level ID and, for the CLASSIFICATION\_ID, the term ID. The PAR\_ attributes are not relevant to Data Marts. Do not enter any values for them. If you are not creating a new definition, do not enter values here.
- PI\_INSTCLASSIFICATIONCOLL** The definition is classified according to the subtype you assigned it in the PI\_INSTANCE\_SUBTYPE\_ID. If you want to override the default classifications for one or more classification levels, use this parameter. This is a collection of CDR\_CLA\_OBJ\_TYPES, which have 5 attributes, including CLA\_LEVEL\_ID and CLASSIFICATION\_ID. If you want the instance to inherit its classifications for a particular level from its parent Work Area, enter the classification level ID and, for the CLASSIFICATION\_ID, enter 0 (zero). If you want to explicitly assign one or more terms for a particular level, initialize a CDR\_CLA\_OBJ\_TYPE for each term, entering the classification level ID and, for the CLASSIFICATION\_ID, the term ID. The PAR\_ attributes are not relevant to Data Marts. Do not enter any values for them. If you are not creating a new instance, do not enter values here.

## Check In a DataMart Definition

Use this API to check in a Data Mart definition.

### Name

CDR\_PUB\_DF\_DATAMART.CheckInDataMartDefinition

### Signature

```
PROCEDURE CHECKINDATAMARTDEFINITION(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  X_RETURN_STATUS OUT VARCHAR2,  
  X_MSG_COUNT OUT NUMBER,  
  X_MSG_DATA OUT VARCHAR2,  
  PIO_BASEOBJECT IN OUT CDR_BASE_OBJ_TYPE,  
  PI_COMMENT IN VARCHAR2  
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_BASEOBJECT** (Mandatory) This is a parameter of table type CDR\_BASE\_OBJ\_TYPE. Enter values to identify the Data Mart definition that you want to check in. The following attributes are required: COMPANY\_ID,OBJ\_ID,OBJ\_VER,OBJECT\_VERSION\_NUMBER,NAMESPACE\_OBJ\_ID,NAMESPACE\_OBJ\_VER.
- **PI\_COMMENT** (Optional) Enter the reason you are checking in the Data Mart.

## Modify a Data Mart

Use this API to modify a Data Mart definition or instance. You can modify the name and description. If you are modifying an instance object, you can also change the 3 REF attribute values to select a different source definition.

Note: If you are modifying a definition, you must first check it out.

### Name

CDR\_PUB\_DF\_DATAMART.ModifyDataMart

### Signature

```
PROCEDURE MODIFYDATAMART(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  X_RETURN_STATUS OUT VARCHAR2,  
  X_MSG_COUNT OUT NUMBER,  
  X_MSG_DATA OUT VARCHAR2,
```

```

    PIO_CDRNAMING IN OUT    CDR_NAMING_VERSION_OBJ_TYPE
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

**PIO\_CDRNAMING** (Mandatory) This is a parameter of table type `CDR_NAMING_VERSION_OBJ_TYPE`. Enter values to identify the Data Mart and enter new values for the attributes you want to modify. You can change the name or description for either a definition or instance. For an instance you can also change to a different underlying source definition by entering values for the new definition in the three REF attributes. All attributes are required.

NOTE: Use separate APIs for modifying the validation status and the version label: `CDR_PUB_VL_VALIDATION`. `UpdateValStatus` and `CDR_PUB_DF_NAMING`. `UpdateVersionLabel`.

## Check Out a Data Mart

Use this API to check out a Data Mart definition, either directly or through an instance of it.

### Name

`CDR_PUB_DF_DATAMART.CheckOutDataMart`

### Signature

```

PROCEDURE CHECKOUTDATAMART(
    P_API_VERSION IN    NUMBER,
    P_INIT_MSG_LIST IN  VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
    P_COMMIT IN       VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
    P_VALIDATION_LEVEL IN  NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
    X_RETURN_STATUS OUT   VARCHAR2,
    X_MSG_COUNT OUT      NUMBER,
    X_MSG_DATA OUT       VARCHAR2,
    PIO_BASEOBJECT IN OUT CDR_BASE_OBJ_TYPE,
    PI_COMMENT IN       VARCHAR2,
    PI_ISINSTONLY IN    VARCHAR2
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_BASEOBJECT** (Mandatory) This is a parameter of table type `CDR_BASE_OBJ_TYPE`. Enter values to identify the Data Mart that you want to do check out. If you are checking out the Data Mart definition directly, enter values to identify the definition. If you are checking out a Data Mart definition through an instance of it, enter values to identify the instance.

The following attributes are required:

`COMPANY_ID,OBJ_ID,OBJ_VER,OBJECT_VERSION_NUMBER,NAMESPACE_OBJ_ID,NAMESPACE_OBJ_VER`.

The following attributes are required: COMPANY\_ID, OBJ\_ID, OBJ\_VER. For OBJECT\_TYPE\_RC enter \$OBJTYPES\$WORKAREA. By default, new Work Areas receive a Usage Intent value of Development.

- **PI\_COMMENT** (Optional) Enter the reason you are checking out the Data Mart.
- **PI\_ISINSTONLY** (Mandatory) Enter \$YESNO\$NO.

## Remove a Data Mart

Use this API to remove one or more Data Mart definitions or instances.

### Name

CDR\_PUB\_DF\_DATAMART.RemoveDataMart

### Signature

```
PROCEDURE REMOVEDATAMART(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  X_RETURN_STATUS OUT VARCHAR2,  
  X_MSG_COUNT OUT NUMBER,  
  X_MSG_DATA OUT VARCHAR2,  
  PIO_CDRBASEOBJCOLL IN OUT CDR_BASE_OBJ_COLL  
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

**PIO\_CDRBASEOBJCOLL** (Mandatory) This is a collection of CDR\_BASE\_OBJ\_TYPES. For each Data Mart that you want to remove, initialize a CDR\_BASE\_OBJ\_TYPE and then extend the collection.

The following attributes are required:

COMPANY\_ID,OBJ\_ID,OBJ\_VER,OBJECT\_VERSION\_NUMBER,NAMESPACE\_OBJ\_ID,NAMESPACE\_OBJ\_VER.

# 6

## Domains

This is a public interface for Domain-related operations, including creating, modifying, and removing Domains. It also includes functions for copying and moving objects into Domains.

This chapter contains this section:

- [Define and Modify Domains](#)

### Define and Modify Domains

This section contains the following topics:

- [Create a Domain](#)
- [Modify a Domain](#)
- [Copy a Domain](#)
- [Move Objects into a Domain](#)
- [Copy Objects into a Domain](#)
- [Check in Objects and Copy them into a Different Domain](#)
- [Remove a Domain](#)

### Create a Domain

Use this API to create a new Domain.

#### Name

CDR\_PUB\_DF\_DOMAIN.CreateDomain

#### Signature

```
PROCEDURE CREATEDOMAIN(  
    P_API_VERSION IN NUMBER,  
    P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
    P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
    P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
    X_RETURN_STATUS OUT VARCHAR2,  
    X_MSG_COUNT OUT NUMBER,  
    X_MSG_DATA OUT VARCHAR2,  
    PIO_SOURCECDRNAMING IN OUT CDR_NAMING_VERSION_OBJ_TYPE,  
    PO_DEFCLASSIFICATIONCOLL IN CDR_CLASSIFICATIONS_COLL  
);
```

#### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_SOURCECDRNAMING** (Mandatory) This is a parameter of table type `CDR_NAMING_VERSIONS_OBJ_TYPE` that contains CDR Naming Version attributes. For `OBJECT_TYPE_RC` enter `$OBJTYPES$LIBDOMAIN`.
- **PO\_DEFCLASSIFICATIONCOLL** (Optional) By default the new Domain is classified according to the subtype you assigned it in the `CDR_NAMING_VERSION_OBJ_TYPE`.  
If you want to override the default classifications for one or more classification levels, use this parameter. This is a collection of `CDR_CLA_OBJ_TYPES`, which have 5 attributes, including `CLA_LEVEL_ID` and `CLASSIFICATION_ID`.  
If you want the definition to inherit its classifications for a particular level from its parent, enter the classification level ID and, for the `CLASSIFICATION_ID`, enter 0 (zero).  
If you want to explicitly assign one or more terms for a particular level, initialize a `CDR_CLA_OBJ_TYPE` for each term, entering the classification level ID and, for the `CLASSIFICATION_ID`, the term ID. The `PAR_` attributes are not relevant to Domains. Do not enter any values for them.

## Modify a Domain

Use this API to modify a Domain.

### Name

`CDR_PUB_DF_DOMAIN.ModifyDomain`

### Signature

```
PROCEDURE MODIFYDOMAIN(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PIO_SOURCECDRNAMING IN OUT CDR_NAMING_VERSION_OBJ_TYPE
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

**PIO\_SOURCECDRNAMING** (Mandatory) This is a parameter of table type `CDR_NAMING_VERSION_OBJ_TYPE`. Enter values to identify the Domain and enter new values for the attributes you want to modify. The `COMPANY_ID`, `OBJ_ID` and `OBJ_VER` of the domain to be modified should be initialized.

#### Note:

Use separate APIs for modifying the validation status and the version label: `CDR_PUB_VL_VALIDATION.UPDATEVALSTATUS` and `CDR_PUB_DF_NAMING.UPDATEVERSIONLABEL`.

## Copy a Domain

Use this API to make a copy of a Domain.

### Name

CDR\_PUB\_DF\_DOMAIN.CopyDomain

### Signature

```
PROCEDURE COPYDOMAIN(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  X_RETURN_STATUS OUT VARCHAR2,  
  X_MSG_COUNT OUT NUMBER,  
  X_MSG_DATA OUT VARCHAR2,  
  PI_CDRBASEOBJCOLL IN OUT CDR_BASE_OBJ_COLL  
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

**PI\_CDRBASEOBJCOLL** (Mandatory) This is a collection of CDR\_BASE\_OBJ\_TYPES. For each Domain that you want to copy, initialize a CDR\_BASE\_OBJ\_TYPE and then extend the collection.

The following attributes are required:

COMPANY\_ID,OBJ\_ID,OBJ\_VER,NAMESPACE\_OBJ\_ID,NAMESPACE\_OBJ\_VER,OBJECT\_VERSION\_NUMBER.

## Move Objects into a Domain

Use this API to move subdomains, Application Areas, and object definitions from one Domain or Application Area, into another Domain.

### Name

CDR\_PUB\_DF\_DOMAIN.MoveObjectsIntoDomain

### Signature

```
PROCEDURE MOVEOBJECTSINTODOMAIN(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  X_RETURN_STATUS OUT VARCHAR2,  
  X_MSG_COUNT OUT NUMBER,  
  X_MSG_DATA OUT VARCHAR2,  
  PI_CDRBASEOBJCOLL IN OUT CDR_BASE_OBJ_COLL,  
  PI_CDRTARGETCONTAINEROBJECT IN OUT CDR_BASE_OBJ_TYPE  
);
```

## Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_CDRBASEOBJCOLL** (Mandatory) This is a collection of CDR\_BASE\_OBJ\_TYPEs. For each object that you want to move, initialize a CDR\_BASE\_OBJ\_TYPE and then extend the collection. The following attributes are required: COMPANY\_ID,OBJ\_ID,OBJ\_VER,OBJECT\_VERSION\_NUMBER,NAMESPACE\_OBJ\_ID,NAMESPACE\_OBJ\_VER
- **PI\_CDRTARGETCONTAINEROBJECT** (Mandatory) This is a parameter of CDR\_BASE\_OBJ\_TYPE and contains basic naming details about the Domain into which you want move objects. The following attributes are required: COMPANY\_ID,OBJ\_ID,OBJ\_VER, NAMESPACE\_OBJ\_ID, NAMESPACE\_OBJ\_VER, and OBJECT\_VERSION\_NUMBER).

## Copy Objects into a Domain

Use this API to copy objects into a Domain. You can copy subdomains, Application Areas, and object definitions from other Domains or Application Areas.

### Name

CDR\_PUB\_DF\_DOMAIN.CopyObjectsIntoDomain

### Signature

```
PROCEDURE COPYOBJECTSINTODOMAIN(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PI_CDRBASEOBJCOLL IN OUT CDR_BASE_OBJ_COLL,
  PI_CDRTARGETCONTAINEROBJECT IN OUT CDR_BASE_OBJ_TYPE
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_CDRBASEOBJCOLL** (Mandatory) This is a collection of CDR\_BASE\_OBJ\_TYPEs. For each object that you want to copy, initialize a CDR\_BASE\_OBJ\_TYPE and then extend the collection. The following attributes are required: COMPANY\_ID,OBJ\_ID,OBJ\_VER,OBJECT\_VERSION\_NUMBER,NAMESPACE\_OBJ\_ID,NAMESPACE\_OBJ\_VER.
- **PI\_CDRTARGETCONTAINEROBJECT** (Mandatory) This is a parameter of CDR\_BASE\_OBJ\_TYPE and contains basic naming details about the Domain into which you want copy objects.



The following attributes are required: COMPANY\_ID, OBJ\_ID, OBJ\_VER, NAMESPACE\_OBJ\_ID, NAMESPACE\_OBJ\_VER, and OBJECT\_VERSION\_NUMBER).

## Check in Objects and Copy them into a Different Domain

Use this overloaded API to copy objects into a Domain and check them in if they are checked out, before copying.

### Name

CDR\_PUB\_DF\_DOMAIN.CopyObjectsIntoDomain

### Signature

```
PROCEDURE COPYOBJECTSINTODOMAIN(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PI_CDRBASEOBJCOLL IN OUT CDR_BASE_OBJ_COLL,
  PI_CDRTARGETCONTAINEROBJECT IN OUT CDR_BASE_OBJ_TYPE,
  PI_CHECKINFLAG IN VARCHAR
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_CDRBASEOBJCOLL** (Mandatory) This is a collection of CDR\_BASE\_OBJ\_TYPEs. For each object that you want to copy, initialize a CDR\_BASE\_OBJ\_TYPE and then extend the collection.  
The following attributes are required: COMPANY\_ID, OBJ\_ID, OBJ\_VER, OBJECT\_VERSION\_NUMBER, NAMESPACE\_OBJ\_ID, NAMESPACE\_OBJ\_VER.
- **PI\_CDRTARGETCONTAINEROBJECT** (Mandatory) This is a parameter of CDR\_BASE\_OBJ\_TYPE and contains basic naming details about the Domain into which you want copy objects.  
The following attributes are required: COMPANY\_ID, OBJ\_ID, OBJ\_VER, NAMESPACE\_OBJ\_ID, NAMESPACE\_OBJ\_VER, and OBJECT\_VERSION\_NUMBER).
- **PI\_CHECKINFLAG** (Mandatory) Enter \$YESNO\$YES if you want to check in the copied objects, if they are checked out, and \$YESNO\$NO if you do not want to check in the copied objects.

## Remove a Domain

Use this API to delete a Domain.

### Name

CDR\_PUB\_DF\_DOMAIN.RemoveDomain

## Signature

```
PROCEDURE REMOVEDOMAIN(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  X_RETURN_STATUS OUT VARCHAR2,  
  X_MSG_COUNT OUT NUMBER,  
  X_MSG_DATA OUT VARCHAR2,  
  PIO_DOMAIN IN OUT CDR_BASE_OBJ_TYPE  
);
```

## Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

**PIO\_DOMAIN** (Mandatory) This is a parameter of CDR\_BASE\_OBJ\_TYPE and contains basic naming details about the Domain you want to delete.

The following attributes are required: COMPANY\_ID, OBJ\_ID, OBJ\_VER, NAMESPACE\_OBJ\_ID, NAMESPACE\_OBJ\_VER, and OBJECT\_VERSION\_NUMBER).

# 7

## Load Sets

This is a public interface for Load Set-related operations, including creating, modifying, and removing Load Sets. It also includes APIs for checking Load Sets in and out, undoing a Load Set checkout, and computing the status of a Load Set.

This chapter contains this section:

- [Define and Modify Load Sets](#)

### Define and Modify Load Sets

This section contains the following topics:

- [Create a Load Set](#)
- [Check Out a Load Set](#)
- [Modify a Load Set](#)
- [Check In a Load Set Definition](#)
- [Undo Check Out for a Load Set Definition](#)
- [Remove a Load Set](#)
- [Synchronize Table Descriptors in a Load Set](#)

### Create a Load Set

Use this API to create a Load Set definition, Load Set instance or both.

#### Name

CDR\_PUB\_DF\_LOADSET.CreateLoadSet

#### Signature

```
PROCEDURE CREATELOADSET(  
    P_API_VERSION IN NUMBER,  
    P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
    P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
    P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
    X_RETURN_STATUS OUT VARCHAR2,  
    X_MSG_COUNT OUT NUMBER,  
    X_MSG_DATA OUT VARCHAR2,  
    PIO_SOURCECDRNAMING IN OUT CDR_NAMING_VERSION_OBJ_TYPE,  
    PI_CDRLOADSETOBJTYPE IN CDR_LOAD_SET_OBJ_TYPE,  
    PI_CREATEOBJECT IN VARCHAR2,  
    PI_INSTANCE_SUBTYPE_ID IN CDR_NAMINGS.OBJECT_SUBTYPE_ID%TYPE,  
    PI_DEFCLASSIFICATIONCOLL IN CDR_CLASSIFICATIONS_COLL,  
    PI_INSTCLASSIFICATIONCOLL IN CDR_CLASSIFICATIONS_COLL  
);
```

## Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_SOURCECDRNAMING** :(Mandatory) This is a parameter of table type CDR\_NAMING\_VERSIONS\_OBJ\_TYPE that contains CDR Naming Version attributes.  
If you are creating a new definition only or a new definition and an instance of it, enter values for the new definition. If you are creating an instance of an existing definition, enter values to identify the existing definition.  
  
For OBJECT\_TYPE\_RC enter \$OBJTYPES\$LOADSET if you are creating a definition only; \$OBJTYPES\$LOADSETREF if you are creating an instance of an existing definition; and NULL if you are creating a new definition and an instance of it.
- **PI\_CDRLOADSETOBJTYPE** (Mandatory) This is a parameter of table type CDR\_LOAD\_SET\_OBJ\_TYPE that contains object attributes specific to Load Sets. Enter values for the Load Set that you want to create.  
The following attributes are required: COMPANY\_ID, ADAPTER\_COMPANY\_ID, ADAPTER\_OBJ\_ID, ADAPTER\_OBJ\_VER.
- **PI\_CREATEOBJECT** (Mandatory) Enter DEFN to create a definition only; INST to create an instance of an existing definition; or BOTH to create a definition and an instance of it
- **PI\_INSTANCE\_SUBTYPE\_ID** (Optional) If you are creating a new instance, enter the subtype ID that you want to give the instance.  
If you are creating a definition only, do not enter a value for this parameter.
- **PI\_DEFCLASSIFICATIONCOLL** (Optional) By default, the new definition is classified according to the subtype you assigned it in the CDR\_NAMING\_VERSION\_OBJ\_TYPE.  
If you want to override the default classifications for one or more classification levels, use this parameter. This is a collection of CDR\_CLA\_OBJ\_TYPEs, which have 5 attributes, including CLA\_LEVEL\_ID and CLASSIFICATION\_ID.  
  
If you want the definition to inherit its classifications for a particular level from its parent, enter the classification level ID and, for the CLASSIFICATION\_ID, enter 0 (zero).  
  
If you want to explicitly assign one or more terms for a particular level, initialize a CDR\_CLA\_OBJ\_TYPE for each term, entering the classification level ID and, for the CLASSIFICATION\_ID, the term ID. The PAR\_ attributes are not relevant to Load Sets. Do not enter any values for them.  
  
If you are not creating a new definition, do not enter values here.
- **PI\_INSTCLASSIFICATIONCOLL** PI\_INSTANCE\_SUBTYPE\_ID. If you want to override the default classifications for one or more classification levels, use this parameter. This is a collection of CDR\_CLA\_OBJ\_TYPEs, which have 5 attributes, including CLA\_LEVEL\_ID and CLASSIFICATION\_ID.  
If you want the instance to inherit its classifications for a particular level from its parent Work Area, enter the classification level ID and, for the CLASSIFICATION\_ID, enter 0 (zero).  
  
If you want to explicitly assign one or more terms for a particular level, initialize a CDR\_CLA\_OBJ\_TYPE for each term, entering the classification level ID and,

for the CLASSIFICATION\_ID, the term ID. The PAR\_ attributes are not relevant to Load Sets. Do not enter any values for them.

If you are not creating a new instance, do not enter values here.

## Check Out a Load Set

Use this API to check out a Load Set definition or definition and instance.

### Name

CDR\_PUB\_DF\_LOADSET.CheckOutLoadSet

### Signature

```
PROCEDURE CHECKOUTLOADSET(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PIO_BASEOBJECT IN OUT CDR_BASE_OBJ_TYPE,
  PI_COMMENT IN VARCHAR2,
  PI_ISINSTONLY IN VARCHAR2
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_BASEOBJECT** (Mandatory) This is a parameter of table type CDR\_BASE\_OBJ\_TYPE. You can enter values to identify either the Load Set definition or an instance of it:
  - Pass the Load Set definition details if you want to check out and subsequently modify only the definition.
  - Pass the details of an instance of the Load Set definition if you want the instance to point to the new version of the Load Set definition.

The following attributes are required:

COMPANY\_ID,OBJ\_ID,OBJ\_VER,OBJECT\_VERSION\_NUMBER,NAMESPACE\_OBJ\_ID,NAMESPACE\_OBJ\_VER.

To get the OBJECT\_VERSION\_NUMBER, enter the following query:  
select Max(OBJECT\_VERSION\_NUMBER) from cdr\_vl\_val\_docs\_v where  
OBJ\_ID = <objid> and OBJ\_VER = <objver> and DOC\_STATUS\_RC  
= '\$VALINFOSTATUS\$ACTIVE';

NAMESPACE\_OBJ\_ID. If you are entering information about the Load Set definition, enter the object ID of its containing Application Area. If you are entering information about the Load Set instance, enter the object ID of its containing Work Area.

NAMESPACE\_OBJ\_VER. If you are entering information about the Load Set, definition, enter the object version number of its containing Application Area. If you are entering information about the Load Set instance, enter the object version number of its containing Work Area.

- **PI\_COMMENT** (Optional) Enter the reason you are checking out the Load Set.
- **PI\_ISINSTONLY** Enter \$YESNO\$NO if you are checking out only the definition. Enter \$YESNO\$YES if you are checking out the definition through its instance.

## Modify a Load Set

Use this API to modify a Load Set definition or instance. You can change the name, description, or version label.



### Note:

If you are modifying a definition, you must first check it out.

### Name

CDR\_PUB\_DF\_LOADSET.ModifyLoadSet

### Signature

```
PROCEDURE MODIFYLOADSET(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PIO_CDRNAMING IN OUT CDR_NAMING_VERSION_OBJ_TYPE
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

**PIO\_CDRNAMING** (Mandatory) This is a parameter of table type `CDR_NAMING_VERSION_OBJ_TYPE`. Enter values to identify the Load Set and enter new values for the attributes you want to modify. All attributes are required.

## Check In a Load Set Definition

Use this API to check in a Load Set definition.

### Name

CDR\_PUB\_DF\_LOADSET.CheckInLoadSetDefinition

### Signature

```
PROCEDURE CHECKINLOADSETDEFINITION(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
```

```

X_MSG_COUNT OUT NUMBER,
X_MSG_DATA OUT VARCHAR2,
PIO_BASEOBJECT IN OUT CDR_BASE_OBJ_TYPE,
PI_COMMENT IN VARCHAR2
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_BASEOBJECT** (Mandatory) This is a parameter of table type CDR\_BASE\_OBJ\_TYPE. Enter values to identify the Load Set definition that you want to check in.  
The following attributes are required:  
COMPANY\_ID,OBJ\_ID,OBJ\_VER,OBJECT\_VERSION\_NUMBER,NAMESPACE\_OBJ\_ID,NAMESPACE\_OBJ\_VER.
- **PI\_COMMENT** (Optional) Enter the reason for checking in the Load Set.

## Undo Check Out for a Load Set Definition

Use this API to undo a check out for a Load Set Definition.

### Name

CDR\_PUB\_DF\_LOADSET.UndoCheckOutLoadSet

### Signature

```

PROCEDURE UNDOCHECKOUTLOADSET(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT NOCOPY VARCHAR2,
  x_MSG_COUNT OUT NOCOPY NUMBER,
  X_MSG_DATA OUT NOCOPY VARCHAR2,
  PIO_BASEOBJECT IN OUT NOCOPY CDR_BASE_OBJ_TYPE,
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **P\_COMMIT** (Optional) Accept the default value (FND\_API.G\_FALSE) to ensure that this individual API does not commit upon completion. Enter FND\_API.G\_TRUE to override the default behavior.
- **P\_VALIDATION\_LEVEL** (Optional) Accept the default value to perform full validation. No other values are currently supported.
- **PIO\_BASEOBJECT** (Mandatory) This is a parameter of table type CDR\_BASE\_OBJ\_TYPE that contains object attributes. Enter values to identify the Load Set definition that you want to undo check out.  
The required attributes are: COMPANY\_ID, OBJ\_ID,OBJ\_VER,OBJECT\_VERSION\_NUMBER, NAMESPACE\_OBJ\_ID, NAMESPACE\_OBJ\_VER.

## Remove a Load Set

Use this API to remove one or more Load Set definitions or instances.

### Name

CDR\_PUB\_DF\_LOADSET.RemoveLoadSet

### Signature

```
PROCEDURE REMOVELOADSET(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  X_RETURN_STATUS OUT VARCHAR2,  
  X_MSG_COUNT OUT NUMBER,  
  X_MSG_DATA OUT VARCHAR2,  
  PIO_CDRBASEOBJCOLL IN OUT CDR_BASE_OBJ_COLL  
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PIO\_CDRBASEOBJCOLL** (Mandatory) This is a collection of CDR\_BASE\_OBJ\_TYPES.

For each Load Set definition or instance that you want to remove, initialize a CDR\_BASE\_OBJ\_TYPE and then extend the collection.

The following attributes are required:

COMPANY\_ID,OBJ\_ID,OBJ\_VER,OBJECT\_VERSION\_NUMBER,NAMESPACE\_OBJ\_ID,NAMESPACE\_OBJ\_VER.

## Synchronize Table Descriptors in a Load Set

Use this API to synchronize all the existing table descriptors in a Load Set with the Table definition at the source. When you use this API, it performs different tasks according to the situation:

- If the API finds no changes to be synchronized, it displays a message indicating that there are no changes to the table descriptors.
- If the API finds changes to be synchronized and the Load Set definition is checked out, it synchronizes the changes and displays a message indicating that changes were identified and synchronized.
- If the API finds changes to be synchronized and the Load Set definition is checked in, then it checks out the Load Set, completes synchronization and leaves the Load Set checked out.

Table descriptors (and corresponding Table definitions) are checked out only if changes are detected. After synchronization is complete, the API returns a collection of Table descriptor objIDs and obj versions that were changed.



The API does not create a new table descriptor in the Load Set but only synchronizes the existing Table Descriptors. The updated Table Descriptor generates the same outcome as when columns are uploaded for a Table Descriptor.

### Name

CDR\_PUB\_DF\_LOADSET.SynchronizeTablesWithinLS

### Signature

```
PROCEDURE SYNCHRONIZETABLESWITHINLS(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER DEFAULT CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  X_RETURN_STATUS OUT NOCOPY VARCHAR2,  
  X_MSG_COUNT OUT NOCOPY NUMBER,  
  X_MSG_DATA OUT NOCOPY VARCHAR2,  
  PI_NLSDEFCOMPID IN NUMBER,  
  PI_NLSDEFID IN NUMBER,  
  PI_VFILENAME IN VARCHAR2,  
  PI_BFILEBLOB IN BLOB,  
  PO_TDESCLIST OUT NOCOPY CDR_BASE_OBJ_COLL,  
  PO_OUTMSG OUT NOCOPY VARCHAR2 );
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

- PARAM P\_API\_VERSION (Mandatory). Enter the current version of the API you are calling. The API compares the version numbers of incoming calls to its current version number and returns an error if they are incompatible.
- PARAM P\_INIT\_MSG\_LIST (Optional). Accept the default value (FND\_API.G\_FALSE) to ensure that this individual API does not initialize the message list upon completion. Pass FND\_API.G\_TRUE to override the default behavior.
- PARAM P\_COMMIT (Optional). Accept the default value (FND\_API.G\_FALSE) to ensure that this individual API does not commit upon completion. Pass FND\_API.G\_TRUE to override the default behavior.
- PARAM P\_VALIDATION\_LEVEL (Optional). Accept the default value to perform full validation. No other values are currently supported.
- PARAM X\_RETURN\_STATUS. This output parameter returns the end status of the API: (S) Success, (E) Error or (U) Unexpected Error
- PARAM X\_MSG\_COUNT. This output parameter returns the count of error messages if the return status is other than Success.
- PARAM X\_MSG\_DATA. If the message count is 1, this output parameter returns the text of the error message. If there are more than one message, use `cdr_pub_msg_pub.get` to retrieve the messages.
- PARAM PI\_NLSDEFCOMPID. Enter the Company Id.
- PARAM PI\_NLSDEFID. Provide the Load Set Definition Id
- PARAM PI\_VFILENAME (Optional). If the Load Set is a SAS or TEXT type, provide the file name.

For SAS—cport, xport, cpri, xpri and .sas\*dat files are allowed.

For TXT—zip and mdd files are allowed. The zip should only contain mdd files. The mdd file name should be the same as the Table Descriptor it needs to update. For other types, it can be sent as null.

- PARAM PI\_BFILEBLOB (Optional). Provide the BLOB that holds the file content for SAS and TEXT Load Sets.
- PARAM PO\_TDESCLIST. This list contains the table descriptors that were updated.
- PARAM PO\_OUTMSG. Returns the error/confirmation messages.

# 8

## Parameter Sets

This is a public interface for operations involving Parameter sets. These APIs provide procedures to create Parameter sets, modify Parameter set details, remove Parameter sets, check in, check out and uncheckout Parameter sets.

This chapter contains this section:

- [Create and Modify Parameter Sets](#)

### Create and Modify Parameter Sets

This section contains the following topics:

- [Create a Parameter Set Definition](#)
- [Check Out a Parameter Set Definition](#)
- [Modify a Parameter Set Definition](#)
- [Modify a Parameter Set Detail](#)
- [Check In a Parameter Set Definition](#)
- [Remove a Parameter Set Definition](#)

### Create a Parameter Set Definition

Use this API to create a new Parameter Set definition, a new instance of an existing Parameter Set definition, or a new definition and an instance of it.

#### Name

CDR\_PUB\_DF\_PARAMETER\_SET.CreateParameterSet

#### Signature

```
PROCEDURE CREATEPARAMETERSET(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  X_RETURN_STATUS OUT VARCHAR2,  
  X_MSG_COUNT OUT NUMBER,  
  X_MSG_DATA OUT VARCHAR2,  
  PIO_SOURCECDRNAMING IN OUT CDR_NAMING_VERSION_OBJ_TYPE,  
  PI_CDRPSOBJTYPE IN CDR_PARAM_SETS_OBJ_TYPE,  
  PI_CREATEOBJECT IN VARCHAR2,  
  PI_INSTANCE_SUBTYPE_ID IN CDR_NAMINGS.OBJECT_SUBTYPE_ID%TYPE,  
  PI_DEFCLASSIFICATIONCOLL IN CDR_CLASSIFICATIONS_COLL  
);
```

## Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_SOURCECDRNAMING** (Mandatory) This is a parameter of table type CDR\_NAMING\_VERSIONS\_OBJ\_TYPE that contains CDR Naming Version attributes.  
If you are creating a new definition only or a new definition and an instance of it, enter values for the new definition.  
  
If you are creating an instance of an existing definition, enter values to identify the definition. For OBJECT\_TYPE\_RC enter \$OBJTYPES\$PARAMSET if you are creating a definition only; \$OBJTYPES\$PARAMSETREF if you are creating an instance of an existing definition; and NULL if you are creating a new definition and an instance of it.
- **PI\_CDRPSOBJTYPE** (Optional) This is a parameter of table type CDR\_PARAM\_SETS\_OBJ\_TYPE that contains object attributes specific to Parameter Sets.  
If you are creating a new definition, enter values for the new Parameter Set.  
  
The following attributes are required: COMPANY\_ID, USAGE, PR\_REF\_ID, PR\_REF\_VER.  
  
If you are creating an instance of an existing Parameter Set, do not enter any values here.
- **PI\_CREATEOBJECT** (Mandatory) Enter DEFN to create a definition only; INST to create an instance of an existing definition; or BOTH to create a new definition and an instance of it.
- **PI\_INSTANCE\_SUBTYPE\_ID** (Optional) If you are creating a new instance, enter the ID for the subtype you want to give the instance.  
If you are creating a definition only, do not enter a value for this parameter.
- **PI\_DEFCLASSIFICATIONCOLL** (Optional) By default, the new definition is classified according to the subtype you assigned it in the CDR\_NAMING\_VERSION\_OBJ\_TYPE.  
If you want to override the default classifications for one or more classification levels, use this parameter. This is a collection of CDR\_CLA\_OBJ\_TYPEs, which have 5 attributes, including CLA\_LEVEL\_ID and CLASSIFICATION\_ID.  
  
If you want the definition to inherit its classifications for a particular level from its parent, enter the classification level ID and, for the CLASSIFICATION\_ID, enter 0 (zero).  
  
If you want to explicitly assign one or more terms for a particular level, initialize a CDR\_CLA\_OBJ\_TYPE for each term, entering the classification level ID and, for the CLASSIFICATION\_ID, the term ID. The PAR\_ attributes are not relevant to Parameter Sets. Do not enter any values for them.  
  
If you are not creating a new definition, do not enter values here.

## Check Out a Parameter Set Definition

Use this API to check out a Parameter Set definition either directly or through an instance of it.

**Name**

CDR\_PUB\_DF\_PARAMETER\_SET.CheckOutParameterSet

**Signature**

```
PROCEDURE CHECKOUTPARAMETERSET(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PIO_BASEOBJECT IN OUT CDR_BASE_OBJ_TYPE,
  PI_COMMENT IN VARCHAR2,
  PI_ISINSTONLY IN VARCHAR2
);
```

**Parameters**

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_BASEOBJECT** (Mandatory) This is a parameter of table type CDR\_BASE\_OBJ\_TYPE. Enter values to identify the Parameter Set that you want to check out.  
If you are checking out the Parameter Set definition directly, enter values to identify the definition.  
  
If you are checking out a Parameter Set definition through an instance of it, enter values to identify the instance.  
  
The following attributes are required:  
COMPANY\_ID,OBJ\_ID,OBJ\_VER,OBJECT\_VERSION\_NUMBER,NAMESPACE\_OBJ\_ID,NAMESPACE\_OBJ\_VER.
- **PI\_COMMENT** (Optional) Enter the reason you are checking out the Parameter Set.
- **PI\_ISINSTONLY** (Mandatory) Enter \$YESNO\$NO.

## Modify a Parameter Set Definition

Use this API to modify the name or description of a Parameter Set definition.

**Name**

CDR\_PUB\_DF\_PARAMETER\_SET.ModifyParameterSetDefinition

**Signature**

```
PROCEDURE MODIFYPARAMETERSETDEFINITION(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
```

```

    PIO_CDRNAMING IN OUT    CDR_NAMING_VERSION_OBJ_TYPE
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PIO\_CDRNAMING** (Mandatory) This is a parameter of table type CDR\_NAMING\_VERSION\_OBJ\_TYPE. Enter values to identify the Parameter Set and enter new values for the attributes you want to modify. You can change the name or description.



#### Note:

Use separate APIs for modifying the validation status and the version label: CDR\_PUB\_VL\_VALIDATION.UPDATEVALSTATUS and CDR\_PUB\_DF\_NAMING.UPDATEVERSIONLABEL. All attributes are required.

## Modify a Parameter Set Detail

Use this API to modify Parameter Set details.

### Name

CDR\_PUB\_DF\_PARAMETER\_SET.ModifyParameterSetDetails

### Signature

```

PROCEDURE MODIFYPARAMETERSETDETAILS(
    P_API_VERSION IN    NUMBER,
    P_INIT_MSG_LIST IN  VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
    P_COMMIT IN    VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
    P_VALIDATION_LEVEL IN  NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
    X_RETURN_STATUS OUT  VARCHAR2,
    X_MSG_COUNT OUT    NUMBER,
    X_MSG_DATA OUT    VARCHAR2,
    PIO_CDRNAMING IN OUT    CDR_NAMING_VERSION_OBJ_TYPE
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PIO\_CDRNAMING** Naming details of the parameter set object to be modified.

## Check In a Parameter Set Definition

Use this API to check in a Parameter Set definition.

### Name

CDR\_PUB\_DF\_PARAMETER\_SET.CheckInParameterSetDefinition

## Signature

```
PROCEDURE CHECKINPARAMETERSETDEFINITION(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PIO_BASEOBJECT IN OUT CDR_BASE_OBJ_TYPE,
  PI_COMMENT IN VARCHAR2
);
```

## Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_BASEOBJECT** (Mandatory) This is a parameter of table type `CDR_BASE_OBJ_TYPE`. Enter values to identify the Parameter Set definition that you want to check in.  
The following attributes are required:  
`COMPANY_ID,OBJ_ID,OBJ_VER,OBJECT_VERSION_NUMBER,NAMESPACE_OBJ_ID,NAMESPACE_OBJ_VER`.
- **PI\_COMMENT** (Optional) Enter the reason you are checking in the Parameter Set.

## Remove a Parameter Set Definition

Use this API to remove one or more Parameter Set definitions or instances.

### Name

`CDR_PUB_DF_PARAMETER_SET.RemoveParameterSet`

### Signature

```
PROCEDURE REMOVEPARAMETERSET(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PIO_CDRBASEOBJCOLL IN OUT CDR_BASE_OBJ_COLL
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

- **PIO\_CDRBASEOBJCOLL** (Mandatory) This is a collection of `CDR_BASE_OBJ_TYPE`s.

For each Parameter Set that you want to remove, initialize a `CDR_BASE_OBJ_TYPE` and then extend the collection.

The following attributes are required:  
COMPANY\_ID,OBJ\_ID,OBJ\_VER,OBJECT\_VERSION\_NUMBER,NAMESPACE\_OBJ\_ID,NAMESPACE\_OBJ\_VER.



# 9

## Planned Outputs

This is a public interface for all Planned Output related functions including creating, modifying, removing, and copying Planned Outputs.

This chapter contains the following section:

- [Create and Modify Planned Outputs](#)

### Create and Modify Planned Outputs

This section contains the following topics:

- [Create a Planned Output](#)
- [Get a New Position Number](#)
- [Get a Planned Output Object](#)
- [Modify a Planned Output](#)
- [Identify whether a SAS Object](#)
- [Remove a Planned Output Object](#)

### Create a Planned Output

Use this API to create a Planned Output.

#### Name

CDR\_PUB\_DF\_PLANNED\_OUTPUT.CreatePlannedOutput

#### Signature

```
PROCEDURE CREATEPLANNEDOUTPUT(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  X_RETURN_STATUS OUT VARCHAR2,  
  X_MSG_COUNT OUT NUMBER,  
  X_MSG_DATA OUT VARCHAR2,  
  PIO_SOURCECDRNAMING IN OUT CDR_NAMING_VERSION_OBJ_TYPE,  
  PI_PLANNEDOUTPUTOBJTYPE IN OUT CDR_PLANNEDOUTPUT_OBJ_TYPE,  
  PI_DEFCLASSIFICATIONCOLL IN CDR_CLASSIFICATIONS_COLL  
);
```

#### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- PIO\_SOURCECDRNAMING** (Mandatory) This is a parameter of type CDR\_NAMING\_VERSIONS\_OBJ\_TYPE.  
The following attributes are required: COMPANY\_ID, OBJECT\_TYPE\_RC, NAME, NAMESPACE\_OBJ\_ID, NAMESPACE\_OBJ\_VER, OWNING\_LOCATION\_RC, OBJECT\_SUBTYPE\_ID, DESCRIPTION, REF\_COMPANY\_ID, REF\_OBJ\_ID, REF\_OBJ\_VER.  
For OBJECT\_TYPE\_RC enter \$OBJTYPES\$PLANNEDOUT.
- PI\_PLANNEDOUTPUTOBJTYPE** (Mandatory) This is a parameter of table type CDR\_PLANNEDOUTPUT\_OBJ\_TYPE.  
You need to pass the following attributes: COMPANY\_ID, OBJ\_ID, OBJ\_VER, TITLE, POSITION, FILEREF, FILE\_NAME, PRIMARY\_FLAG\_RC, ERROR\_FILE\_FLAG\_RC, REQ\_FILE\_FLAG\_RC.  
For the POSITION attribute, use the GETNEWPOSITIONNUMBER API.
- PI\_DEFCLASSIFICATIONCOLL** (Optional) By default the new PLANNED OUTPUT is classified according to the subtype you assigned it in the CDR\_NAMING\_VERSION\_OBJ\_TYPE.  
If you want to override the default classifications for one or more classification levels, use this parameter. This is a collection of CDR\_CLA\_OBJ\_TYPES, which have 5 attributes, including CLA\_LEVEL\_ID and CLASSIFICATION\_ID.  
If you want the definition to inherit its classifications for a particular level from its parent, enter the classification level ID and, for the CLASSIFICATION\_ID, enter 0 (zero).  
If you want to explicitly assign one or more terms for a particular level, initialize a CDR\_CLA\_OBJ\_TYPE for each term, entering the classification level ID and, for the CLASSIFICATION\_ID, the term ID.  
If you want to use a Parameter to classify the actual output, use the PAR attributes to identify the Parameter. The Parameter's list of values must be based on a classification hierarchy level.

## Get a New Position Number

Use this API to get a unique position number for a Planned Output within a parent object. This API is used from within the CREATEPLANNEDOUTPUT API, which is used to create a new Planned Output. You can also reorder Planned Outputs using this API.

### Name

CDR\_PUB\_DF\_PLANNED\_OUTPUT.GetNewPositionNumber

### Signature

```
FUNCTION GETNEWPOSITIONNUMBER(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  PI_NCOMPANYID IN CDR_NAMINGS.COMPANY_ID%TYPE,
  PI_NOBJID IN CDR_NAMINGS.OBJ_ID%TYPE,
  PI_NOBJVER IN CDR_NAMING_VERSIONS.OBJ_VER%TYPE
) RETURN NUMBER;
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_NCOMPANYID** (Mandatory) Enter the COMPANY\_ID of the parent object.
- **PI\_NOBJID** (Mandatory) Enter the OBJ\_ID of the parent object.
- **PI\_NOBJVER** (Mandatory) Enter the OBJ\_VER of the parent object.

## Get a Planned Output Object

Use this API to retrieve a Planned Output object for an LSH object.

### Name

CDR\_PUB\_DF\_PLANNED\_OUTPUT.GetPlannedOutputObject

### Signature

```
FUNCTION GETPLANNEDOUTPUTOBJECT(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  PI_NCOMPANYID IN CDR_NAMINGS.COMPANY_ID%TYPE,  
  PI_NOBJID IN CDR_NAMINGS.OBJ_ID%TYPE,  
  PI_NOBJVER IN CDR_NAMING_VERSIONS.OBJ_VER%TYPE,  
  PO_PLANNEDOUTPUT OUT CDR_PLANNEDOUTPUT_OBJ_TYPE  
) RETURN BOOLEAN;
```

### Return

Type BOOLEAN

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_NCOMPANYID** (Mandatory) Enter your company ID. To get your company ID, use CDR\_DF\_PUB\_DEF\_CONSTANTS.CURRENT\_COMPANY\_ID.
- **PI\_NOBJID** (Mandatory) Enter the OBJ\_ID value of the object for which you want to retrieve the Planned Output object.
- **PI\_NOBJVER** (Mandatory) Enter the OBJ\_VER value of the object for which you want to retrieve the Planned Output's object.
- **PO\_PLANNEDOUTPUT** This is the output parameter of the API returning the Planned Output Object.

## Modify a Planned Output

Use this API to modify an existing Planned Output.

**Name**

CDR\_PUB\_DF\_PLANNED\_OUTPUT.ModifyPlannedOutput

**Signature**

```
PROCEDURE MODIFYPLANNEDOUTPUT(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PI_SOURCECDRNAMING IN OUT CDR_NAMING_VERSION_OBJ_TYPE,
  PI_POUTOBJTYPE IN OUT CDR_PLANNEDOUTPUT_OBJ_TYPE
);
```

**Parameters**

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_SOURCECDRNAMING** (Mandatory) This is a parameter of table type CDR\_NAMING\_VERSION\_OBJ\_TYPE. Enter values to identify the Planned Output.
- **PI\_POUTOBJTYPE** (Mandatory) This is a parameter of table CDR\_PLANNEDOUTPUT\_OBJ\_TYPE that contains attributes specific to Planned Outputs. Enter values for the Planned Output and enter new values for the attributes you want to modify. You can change the name or description of a Planned Output.

 **Note:**

Use separate APIs for modifying the validation status and the version label: CDR\_PUB\_VL\_VALIDATION.UPDATE\_VAL\_STATUS and CDR\_PUB\_DF\_NAMING.UPDATEVERSIONLABEL.

## Identify whether a SAS Object

Use this API to check if the parent object of the Planned Output is a SAS object. SAS objects are: SAS programs, SAS load Sets, SAS Tables.

**Name**

CDR\_PUB\_DF\_PLANNED\_OUTPUT.IsSASObject

**Signature**

```
FUNCTION ISSASOBJECT(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  PI_NCOMPANYID IN CDR_NAMINGS.COMPANY_ID%TYPE,
```

```

PI_NOBJID IN CDR_NAMINGS.OBJ_ID%TYPE,
PI_NOBJVER IN CDR_NAMING_VERSIONS.OBJ_VER%TYPE,
PI_NSOBJTYPE IN CDR_NAMINGS.OBJECT_TYPE_RC%TYPE
) RETURN VARCHAR2;

```

### Return

Type VARCHAR2 Description

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_NCOMPANYID** (Mandatory) Enter your company ID.  
To get your company ID, use CDR\_PUB\_DEF\_FACTORY\_UTILS.GetCompanyId.
- **PI\_NOBJID** (Mandatory) Enter the object ID of the Planned Output's parent object.
- **PI\_NOBJVER** (Mandatory) Enter the version number of the Planned Output's parent object.
- **PI\_NSOBJTYPE** (Mandatory) Enter the OBJ\_TYPE value for the Planned Output's parent object.

## Remove a Planned Output Object

Use this API to delete one or more Planned Outputs.

### Name

CDR\_PUB\_DF\_PLANNED\_OUTPUT.RemovePlannedOutput

### Signature

```

PROCEDURE REMOVEPLANNEDOUTPUT(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PIO_CDRBASEOBJCOLL IN OUT CDR_BASE_OBJ_COLL,
  PI_GETLOCK IN VARCHAR := 'T'
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_CDRBASEOBJCOLL** (Mandatory) This is a collection of CDR\_BASE\_OBJ\_TYPES.  
For each Planned Output that you want to remove, initialize a CDR\_BASE\_OBJ\_TYPE and then extend the collection.

The following attributes are required:

COMPANY\_ID,OBJ\_ID,OBJ\_VER,OBJECT\_VERSION\_NUMBER,NAMESPACE\_OBJ\_ID,NAMESPACE\_OBJ\_VER.

- **PI\_GETLOCK** (Optional) Do not enter a value for this attribute. The default and only acceptable value is 'T'.

# 10

## Programs

This is a public interface for Program-related functions, including creating, modifying, and removing Programs. It also includes functions for checking Programs in and out, and undoing a Program checkout.

This chapter contains the following section:

- [Create and Modify Programs](#)

### Create and Modify Programs

This section contains the following topics:

 **Note:**

See also [Install a Program](#).

- [Create a Program](#)
- [Copy Objects Into a Program](#)
- [Modify a Program](#)
- [Check In a Program Definition](#)
- [Check Out a Program Definition](#)
- [Remove a Program](#)
- [Create a Planned Output for a Log File](#)
- [Assign a Planned Output](#)
- [Modify a Manual Validation Flag Value](#)

### Create a Program

Use this API to create a new Program definition, a new instance of an existing Program definition, or a new definition and an instance of it.

#### Name

CDR\_PUB\_DF\_PROGRAM.CreateProgram

#### Signature

```
PROCEDURE CREATEPROGRAM(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
```

```

X_RETURN_STATUS OUT    VARCHAR2,
X_MSG_COUNT OUT      NUMBER,
X_MSG_DATA OUT      VARCHAR2,
PIO_SOURCECDRNAMING IN OUT    CDR_NAMING_VERSION_OBJ_TYPE,
PI_CDRPRGOBJTYPE IN    CDR_PROGRAM_OBJ_TYPE,
PI_CREATEOBJECT IN    VARCHAR2,
PI_INSTANCE_SUBTYPE_ID IN    CDR_NAMINGS.OBJECT_SUBTYPE_ID%TYPE,
PI_DEFCLASSIFICATIONCOLL IN    CDR_CLASSIFICATIONS_COLL,
PI_INSTCLASSIFICATIONCOLL IN    CDR_CLASSIFICATIONS_COLL
);

```

## Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- PIO\_SOURCECDRNAMING** (Mandatory) This is a parameter of table type `CDR_NAMING_VERSIONS_OBJ_TYPE` that contains CDR Naming Version attributes.

If you are creating a new definition only or a new definition and an instance of it, enter values for the new definition.

If you are creating an instance of an existing definition, enter values to identify the definition.

The required attributes are:  
`OBJECT_TYPE_RC`, `NAME`, `NAMESPACE_OBJ_ID`, `NAMESPACE_OBJ_VER`, `NAMESPACE_START_OBJ_VER`, `NAMESPACE_END_OBJ_VER`, `OWNING_LOCATION_RC`, `OBJECT_SUBTYPE_ID`.

For `OBJECT_TYPE_RC` enter `$OBJTYPES$PROGRAM` if you are creating a definition only; `$OBJTYPES$PROGRAMINST` if you are creating an instance of an existing definition; and `NULL` if you are creating a new definition and an instance of it.
- PI\_CDRPRGOBJTYPE** (Optional) This is a parameter of table type `CDR_DATA_MART_OBJ_TYPE` that contains object attributes specific to Programs.

If you are creating a new definition, enter values for the new Program. The following attributes are required: `CDR_PROGRAM_OBJ_TYPE`, `TECH_TYPE_ID`.

If you are creating an instance of an existing Program, do not enter any values here.
- PI\_CREATEOBJECT** (Mandatory) Enter `DEFN` to create a definition only; `INST` to create a instance of an existing definition; or `BOTH` to create a new definition and an instance of it.
- PI\_INSTANCE\_SUBTYPE\_ID** (Optional) If you are creating a new instance, enter the ID for the subtype you want to give the instance.

If you are creating a definition only, do not enter a value for this parameter. Definition and Instance are to be created in the same call.
- PI\_DEFCLASSIFICATIONCOLL** (Optional) By default the new definition is classified according to the subtype you assigned it in the `CDR_NAMING_VERSION_OBJ_TYPE`.

If you want to override the default classifications for one or more classification levels, use this parameter. This is a collection of `CDR_CLA_OBJ_TYPES`, which have five attributes, including `CLA_LEVEL_ID` and `CLASSIFICATION_ID`.



If you want the definition to inherit its classifications for a particular level from its parent, enter the classification level ID and, for the CLASSIFICATION\_ID, enter 0 (zero).

If you want to explicitly assign one or more terms for a particular level, initialize a CDR\_CLA\_OBJ\_TYPE for each term, entering the classification level ID and, for the CLASSIFICATION\_ID, the term ID. Do not enter any values for them.

If you are not creating a new definition, do not enter values here.

- **PI\_INSTCLASSIFICATIONCOLL** (Optional) By default the new instance is classified according to the subtype you assigned it in the CDR\_NAMING\_VERSION\_OBJ\_TYPE.

If you want to override the default classifications for one or more classification levels, use this parameter. This is a collection of CDR\_CLA\_OBJ\_TYPES, which have 5 attributes, including CLA\_LEVEL\_ID and CLASSIFICATION\_ID.

If you want the instance to inherit its classifications for a particular level from its parent Work Area, enter the classification level ID and, for the CLASSIFICATION\_ID, enter 0 (zero).

If you want to explicitly assign one or more terms for a particular level, initialize a CDR\_CLA\_OBJ\_TYPE for each term, entering the classification level ID and, for the CLASSIFICATION\_ID, the term ID. The PAR\_ attributes are not relevant to Programs. Do not enter any values for them.

If you are not creating a new instance, do not enter values here.

## Copy Objects Into a Program

Use this API to copy objects into a Program.

### Name

CDR\_PUB\_DF\_PROGRAM.CopyObjectIntoProgram

### Signature

```
PROCEDURE COPYOBJECTINTOPROGRAM(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PI_CDRBASEOBJCOLL IN CDR_BASE_OBJ_COLL,
  PI_CDRTARGETCONTAINEROBJECT IN OUT CDR_BASE_OBJ_TYPE,
  PI_CHECKINFLAG IN VARCHAR2
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_CDRBASEOBJCOLL** Collection of objects to be copied.
- **PI\_CDRTARGETCONTAINEROBJECT** The target container object.
- **PI\_CHECKINFLAG** Flag to indicate if the copied objects are to be checked in.

## Modify a Program

Use this API to modify a Program definition or instance. You can modify the name and description.

If you are modifying an instance object, you can also change the 3 REF attribute values to select a different source definition.



### Note:

If you are modifying a definition, you must first check it out.

### Name

CDR\_PUB\_DF\_PROGRAM.ModifyProgramDetails

### Signature

```
PROCEDURE MODIFYPROGRAMDETAILS(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PIO_CDRNAMING IN OUT CDR_NAMING_VERSION_OBJ_TYPE
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PIO\_CDRNAMING** (Mandatory) This is an IN OUT parameter of table type CDR\_NAMING\_VERSIONS\_OBJ\_TYPE that contains CDR Naming Version attributes.

## Check In a Program Definition

Use this API to check in a Program definition.

### Name

CDR\_PUB\_DF\_PROGRAM.CheckInProgramDefinition

### Signature

```
PROCEDURE CHECKINPROGRAMDEFINITION(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
```

```

X_MSG_DATA OUT VARCHAR2,
PIO_BASEOBJECT IN OUT CDR_BASE_OBJ_TYPE,
PI_COMMENT IN VARCHAR2
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_BASEOBJECT** (Mandatory) This is a parameter of table type `CDR_BASE_OBJ_TYPE`. Enter values to identify the Program definition that you want to check in.  
The following attributes are required:  
`COMPANY_ID,OBJ_ID,OBJ_VER,OBJECT_VERSION_NUMBER,NAMESPACE_OBJ_ID,NAMESPACE_OBJ_VER`.
- **PI\_COMMENT** (Optional) Enter the reason you are checking in the Program.

## Check Out a Program Definition

Use this API to check out a Program definition either directly or through an instance of it.

### Name

`CDR_PUB_DF_PROGRAM.CheckOutProgram`

### Signature

```

PROCEDURE CHECKOUTPROGRAM(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PIO_BASEOBJECT IN OUT CDR_BASE_OBJ_TYPE,
  PI_COMMENT IN VARCHAR2,
  PI_ISINSTONLY IN VARCHAR2
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_BASEOBJECT** (Mandatory) This is a parameter of table type `CDR_BASE_OBJ_TYPE`. Enter values to identify the Program that you want to check out.  
If you are checking out the Program definition directly, enter values to identify the definition.  
  
If you are checking out a Program definition through an instance of it, enter values to identify the instance.

The following attributes are required:

COMPANY\_ID,OBJ\_ID,OBJ\_VER,OBJECT\_VERSION\_NUMBER,NAMESPACE\_OBJ\_ID,NAMESPACE\_OBJ\_VER.

- **PI\_COMMENT** (Optional) Enter the reason you are checking out the Program.
- **PI\_ISINSTONLY** Enter \$YESNO\$NO.

## Remove a Program

Use this API to remove one or more Program definitions or instances.

### Name

CDR\_PUB\_DF\_PROGRAM.RemoveProgram

### Signature

```
PROCEDURE REMOVEPROGRAM(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PIO_CDRBASEOBJCOLL IN OUT CDR_BASE_OBJ_COLL
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PIO\_CDRBASEOBJCOLL** (Mandatory) This is a collection of CDR\_BASE\_OBJ\_TYPES. For each Program that you want to remove, initialize a CDR\_BASE\_OBJ\_TYPE and then extend the collection.

The following attributes are required:

COMPANY\_ID,OBJ\_ID,OBJ\_VER,OBJECT\_VERSION\_NUMBER,NAMESPACE\_OBJ\_ID,NAMESPACE\_OBJ\_VER.

## Create a Planned Output for a Log File

Use this API to create a log file Planned Output for a Program.



### Note:

You must define a log file Planned Output, which is part of the Program definition, through an instance of the Program.

### Name

CDR\_PUB\_DF\_PROGRAM.CreateLogFilePlannedOutput

### Signature

```
PROCEDURE CREATELOGFILEPLANNEDOUTPUT(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PIO_SOURCECODENAMING IN OUT CDR_NAMING_VERSION_OBJ_TYPE
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PIO\_SOURCECODENAMING** (Mandatory) This is a parameter of type `cdr_naming_version_obj_type`.

The required attributes are:

COMPANY\_ID,NAME,NAMESPACE\_OBJ\_ID,NAMESPACE\_OBJ\_VER.

## Assign a Planned Output

Use this API to assign a Planned Output to a Report Set Entry (RSE). If the Planned Output is already assigned to a different RSE, you must identify that RSE. This API then unassigns the Planned Output from the original RSE and reassigns it to the RSE you specify.

### Name

CDR\_PUB\_DF\_PROGRAM.AssignPlandPOtoRSEntry

### Signature

```
PROCEDURE ASSIGNPIANDPOTORSENTRY(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PI_RSECOMPANYID IN CDR_NAMINGS.COMPANY_ID%TYPE,
  PI_RSEOBJID IN CDR_NAMINGS.OBJ_ID%TYPE,
  PI_RSEOBJVER IN CDR_NAMING_VERSIONS.OBJ_VER%TYPE,
  PI_PIOBJID IN CDR_NAMINGS.OBJ_ID%TYPE,
  PI_POCOMPANYID IN CDR_NAMINGS.COMPANY_ID%TYPE,
  PI_POOBJID IN CDR_NAMINGS.OBJ_ID%TYPE,
  PI_ASGRSEOBJID IN CDR_NAMINGS.OBJ_ID%TYPE,
  PI_ASGRSEOBJVER IN CDR_NAMING_VERSIONS.OBJ_VER%TYPE
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_RSECOMPANYID** (Mandatory) Enter the Company ID of the Report Set Entry to which you want to assign the Planned Output. To get your company ID, use `CDR_DF_PUB_DEF_CONSTANTS.Current_Company_ID`.
- **PI\_RSEOBJID** (Mandatory) Enter the object ID of the Report Set Entry to which you want to assign the Planned Output.
- **PI\_RSEOBJVER** (Mandatory) Enter the object version of the Report Set Entry to which you want to assign the Planned Output.
- **PI\_PIOBJID** (Mandatory) Enter the object ID of the Program instance to which the Planned Output belongs.
- **PI\_POCOMPANYID** (Mandatory) Enter the Company ID of the Planned Output.
- **PI\_POOBJID** (Mandatory) Enter the object ID of the Planned Output.
- **PI\_ASGRSEOBJID** (Optional) If the Planned Output is already assigned to another RSE, enter the object ID of the other Report Set Entry.
- **PI\_ASGRSEOBJVER** (Optional) If the Planned Output is already assigned to another RSE, enter the object version of the other Report Set Entry.

## Modify a Manual Validation Flag Value

Use this API to change the value of the Program's manual validation (Force Validation Status to Development) flag.

### Name

`CDR_PUB_DF_PROGRAM.ModifyProgramDetails`

### Signature

```
PROCEDURE MODIFYPROGRAMDETAILS(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PIO_CDRNAMING IN OUT CDR_NAMING_VERSION_OBJ_TYPE,
  PI_PROGRAMOBJTYPE IN OUT CDR_PROGRAM_OBJ_TYPE
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_CDRNAMING** (Mandatory) This is a parameter of table type `CDR_NAMING_VERSION_OBJ_TYPE`. Enter values to identify the Program definition whose flag value you want to change. The following attributes are required: `OBJ_ID`, `OBJ_VER`, `COMPANY_ID`, `NS_OBJ_ID`, `NS_OBJ_VER`.
- **PI\_PROGRAMOBJTYPE** (Mandatory) This is a parameter of table type `CDR_PROGRAM_OBJ_TYPE` that contains Program definition attributes. The required attributes are `OBJ_ID`, `OBJ_VER`, `COMPANY_ID`. Enter values to identify the Program definition whose flag value you want to change and

enter the new flag value in the attribute MANUAL\_VALIDATION\_FLAG\_RC.  
Enter \$yesno\$yes for yes, and \$yesno\$no for no.

# 11

## Software Source Codes

This is a public interface for Source Code-related operations including creating, modifying, and removing Source Code objects.

- [Create and Modify Source Code](#)

### Create and Modify Source Code

This section contains the following topics:

- [Create a Source Code Object](#)
- [Get a Source Code CLOB](#)
- [Modify Source Code](#)
- [Set the Primary Flag to Yes](#)
- [Update a Shareable Flag](#)
- [Remove a Source Code Object](#)

### Create a Source Code Object

Use this API to create a new instance of an existing Source Code definition or a new Source Code definition and an instance of it.

 **Note:**

Source Code definitions and instances are always contained in Program definitions. You cannot create a Source Code definition without also creating an instance of it in the same Program definition.

#### Name

CDR\_PUB\_DF\_SOURCECODE.CreateSourceCode

#### Signature

```
PROCEDURE CREATESOURCECODE(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  X_RETURN_STATUS OUT VARCHAR2,  
  X_MSG_COUNT OUT NUMBER,  
  X_MSG_DATA OUT VARCHAR2,  
  PIO_SCREF_SOURCECDRNAMING IN OUT CDR_NAMING_VERSION_OBJ_TYPE,  
  PI_CDRSCOBJTYPE IN OUT CDR_SRCCODE_OBJ_TYPE,  
  PIO_CDRSREFOBJTYPE IN OUT CDR_SRCCODE_REF_OBJ_TYPE,
```



```

PI_CREATEOBJECT IN VARCHAR2,
PI_DEFINITON_SUBTYPE_ID IN CDR_NAMINGS.OBJECT_SUBTYPE_ID%TYPE,
PI_VLOBMODE IN VARCHAR2 := NULL,
PIO_CDRSCBLOB IN OUT CDR_SRCCODE_BLOB_OBJ_TYPE,
PIO_CDRSCCLOB IN OUT CDR_SRCCODE_CLOB_OBJ_TYPE
);

```

## Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- PIO\_SCREF\_SOURCECDRNAMING** (Mandatory) This is a parameter of table type CDR\_NAMING\_VERSIONS\_OBJ\_TYPE that contains CDR Naming Version attributes.  
Enter values for the Source Code instance you are creating. For OBJECT\_TYPE\_RC enter \$OBJTYPES\$SRCCDEREF.
- PI\_CDRSCOBJTYPE** (Optional) This is a parameter of table type CDR\_SRCCODE\_OBJ\_TYPE that contains object attributes specific to Source Code definitions.  
If you are creating a new definition, enter values for the new Source Code definition. The following attributes are required:  
TECH\_TYPE\_ID,SRCCODE\_TYPE\_RC,SHAREABLE\_FLAG\_RC,ORACLE\_PACKAGE\_NAME.  
  
If you are creating an instance of an existing Source Code definition, do not enter any values here.
- PIO\_CDRSCREFOBJTYPE** (Optional) This is a parameter of table type CDR\_SRCCODE\_REF\_OBJ\_TYPE that contains object attributes specific to Source Code instances.  
If you are creating a new instance, enter values for it.  
  
If you are creating a new Source Code definition only, do not enter any values here.
- PI\_CREATEOBJECT** (Mandatory) Enter INST to create an instance of an existing definition or BOTH to create a new definition and an instance of it.
- PI\_DEFINITON\_SUBTYPE\_ID** (Optional) Enter a subtype for the Source Code definition.  
If you do not enter a value, the API creates the definition with the default subtype.
- PI\_VLOBMODE** Enter 'DIRECT' if your source code is already contained in a BLOB or CLOB file. You enter information about it in one of the next two parameters and the API uploads it immediately.  
If you enter anything other than 'DIRECT' the API creates a new, empty BLOB and CLOB in the next parameters. It prompts you to paste your source code in and then uploads the BLOB or CLOB.
- PIO\_CDRSCBLOB** This is a compound object of type CDR\_SRCCODE\_BLOB\_OBJ\_TYPE.  
If the source code is binary, enter its name for the FILE\_NAME attribute value and the BLOB itself for the FILE\_BLOB attribute value.
- PIO\_CDRSCCLOB** This is a compound object of type CDR\_SRCCODE\_CLOB\_OBJ\_TYPE.  
If the source code is text-based, enter its name for the FILE\_NAME attribute value and the CLOB itself for the FILE\_CLOB attribute value.

## Get a Source Code CLOB

Use this API to get the source code CLOB.

### Name

CDR\_PUB\_DF\_SOURCECODE.GetSourceCode

### Signature

```
FUNCTION GETSOURCECODE(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  COMPANYID IN CDR_NAMINGS.COMPANY_ID%TYPE,  
  OBJID IN CDR_NAMINGS.OBJ_ID%TYPE,  
  OBJVER IN CDR_NAMING_VERSIONS.OBJ_VER%TYPE,  
  NSOBJID IN CDR_NAMINGS.OBJ_ID%TYPE,  
  NSOBJVER IN CDR_NAMING_VERSIONS.OBJ_VER%TYPE  
) RETURN CLOB;
```

### Return

Type CLOB

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **COMPANYID** (Mandatory) Enter your company ID.
- **OBJID** (Mandatory) Enter the object ID of the Source Code definition.
- **OBJVER** (Mandatory) Enter the object version (OBJ\_VER) of the Source Code definition.
- **NSOBJID** (Mandatory) Enter the object ID of the Program definition that contains the Source Code definition.
- **NSOBJVER** (Mandatory) Enter the object version (OBJ\_VER) of the Program definition that contains the Source Code definition.

## Modify Source Code

Use this API to modify a Source Code definition or instance. You can modify the name and description. If you are modifying a Source Code instance, you can also change the 3 REF attribute values to select a different source definition.

### Name

CDR\_PUB\_DF\_SOURCECODE.ModifySourceCodeDetails

### Signature

```
PROCEDURE MODIFYSOURCECODEDETAILS(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
```

```

P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
X_RETURN_STATUS OUT VARCHAR2,
X_MSG_COUNT OUT NUMBER,
X_MSG_DATA OUT VARCHAR2,
PIO_SCREF_SOURCECDRNAMING IN OUT CDR_NAMING_VERSION_OBJ_TYPE,
PI_CDRSCOBJTYPE IN OUT CDR_SRCCODE_OBJ_TYPE,
PIO_CDRSCREFOBJTYPE IN OUT CDR_SRCCODE_REF_OBJ_TYPE,
PI_VLOBMODE IN VARCHAR2 := NULL,
PIO_CDRSCBLOB IN OUT CDR_SRCCODE_BLOB_OBJ_TYPE,
PIO_CDRSCCLOB IN OUT CDR_SRCCODE_CLOB_OBJ_TYPE
);

```

## Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_SCREF\_SOURCECDRNAMING** (Mandatory) This is a parameter of table type `CDR_NAMING_VERSION_OBJ_TYPE`. Enter values to identify the Source Code definition or instance and enter new values for the attributes you want to modify.  
You can change the name or description for either the definition or instance. For an instance you can also change to a different underlying source definition by entering values for the new definition in the three REF attributes.

### Note:

Neither Source Code definitions nor instances can have a validation status or a version label. All attributes are required.

- **PI\_CDRSCOBJTYPE** (Mandatory) This is a parameter of table type `CDR_SRCCODE_OBJ_TYPE` that contains object attributes specific to Source Code definitions.  
If you are modifying a Source Code definition, enter values to identify the definition and enter new values for the attributes you want to modify.  
You can modify `SHAREABLE_FLAG_RC`, `ORACLE_PACKAGE_NAME`, and `ORACLE_PROCEDURE_NAME`. All attributes are required.
- **PIO\_CDRSCREFOBJTYPE** (Mandatory) This is a parameter of table type `CDR_SRCCODE_REF_OBJ_TYPE` that contains object attributes specific to Source Code instances.  
If you are modifying a Source Code instance, enter values to identify the instance and enter new values for the attributes you want to modify. You can modify `PRIMARY_FLAG_RC` and `FILEREF`. All attributes are required.
- **PI\_VLOBMODE** Enter 'DIRECT' if your source code is already contained in a BLOB or CLOB file. You enter information about it in one of the next two parameters and the API uploads it immediately.  
If you enter anything other than 'DIRECT' the API creates a new, empty BLOB and CLOB in the next parameters. It prompts you to paste in your source code and then uploads the BLOB or CLOB.
- **PIO\_CDRSCBLOB** This is a compound object of type `CDR_SRCCODE_BLOB_OBJ_TYPE`.  
If the source code is binary, enter its name for the `FILE_NAME` attribute value and the BLOB itself for the `FILE_BLOB` attribute value.

- **PIO\_CDRSCCLOB** This is a compound object of type `CDR_SRCCODE_CLOB_OBJ_TYPE`. If the source code is text-based, enter its name for the `FILE_NAME` attribute value and the CLOB itself for the `FILE_CLOB` attribute value. Enter CLOB if the source code file is a character large object.

## Set the Primary Flag to Yes

Use this API to set the Primary Flag attribute of a specified Source Code instance to Yes. If any other Source Code instance in the parent Program is currently set to Yes, the API resets its flag to No.

### Name

`CDR_PUB_DF_SOURCECODE.SetPrimaryFlagRC`

### Signature

```
PROCEDURE SETPRIMARYFLAGRC(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PI_CDRSCREFBASEOBJTYPE IN CDR_BASE_OBJ_TYPE
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

**PI\_CDRSCREFBASEOBJTYPE** (Mandatory) This is a parameter of table type `CDR_BASE_OBJ_TYPE`. Enter values to identify the Source Code instance whose `PRIMARY_FLAG_RC` you want to set to `$YESNO$YES`.

The following attributes are required:

`COMPANY_ID,OBJ_ID,OBJ_VER,OBJECT_VERSION_NUMBER,NAMESPACE_OBJ_ID,NAMESPACE_OBJ_VER`.

## Update a Shareable Flag

Use this API to set the Shareable attribute for a Source Code definition.

### Name

`CDR_PUB_DF_SOURCECODE.UpdateShareableFlagRC`

### Signature

```
PROCEDURE UPDATESHAREABLEFLAGRC(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
```

```

X_MSG_COUNT OUT NUMBER,
X_MSG_DATA OUT VARCHAR2,
PI_CDRSCBASEOBJTYPE IN OUT CDR_BASE_OBJ_TYPE,
PI_CHANGESTATUSTO IN VARCHAR2
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_CDRSCBASEOBJTYPE** (Mandatory) This is a parameter of table type CDR\_BASE\_OBJ\_TYPE. Enter values to identify the Source Code definition that you want to make sharable or not sharable. The following attributes are required: COMPANY\_ID,OBJ\_ID,OBJ\_VER,OBJECT\_VERSION\_NUMBER,NAMESPACE\_OBJ\_ID,NAMESPACE\_OBJ\_VER.
- **PI\_CHANGESTATUSTO** (Mandatory) Enter SET to set the SHAREABLE\_FLAG\_RC to \$YESNO\$YES or RESET to set the SHAREABLE\_FLAG\_RC to '\$YESNO\$NO'.

## Remove a Source Code Object

Use this API to remove one or more Source Code definitions or instances.

### Name

CDR\_PUB\_DF\_SOURCECODE.RemoveSourceCode

### Signature

```

PROCEDURE REMOVESOURCECODE(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PIO_CDRBASEOBJCOLL IN OUT CDR_BASE_OBJ_COLL
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

**PIO\_CDRBASEOBJCOLL** (Mandatory) This is a collection of CDR\_BASE\_OBJ\_TYPES.

For each Source Code that you want to remove, initialize a CDR\_BASE\_OBJ\_TYPE and then extend the collection. The following attributes are required: COMPANY\_ID,OBJ\_ID,OBJ\_VER,OBJECT\_VERSION\_NUMBER,NAMESPACE\_OBJ\_ID,NAMESPACE\_OBJ\_VER.

# 12

## Tables

This is a public interface for all operations related to Tables, Columns, and Constraints; including creation, deletion, modification, and checking in and out of these objects.

This chapter contains this section:

- [Create and Modify Tables](#)

### Create and Modify Tables

This section contains the following topics:

- [Create a Table Definition](#)
- [Create a Table Instance](#)
- [Create a Temporary Blob](#)
- [Create a Table Column](#)
- [Modify a Table Column](#)
- [Create a Table Constraint](#)
- [Modify a Table Constraint](#)
- [Modify a Table Definition](#)
- [Create a Table Descriptor](#)
- [Modify a Table Descriptor](#)
- [Modify a Table Instance](#)
- [Reorder a Column](#)
- [Upload a Table Descriptor or Column](#)
- [Check Out a Table](#)
- [Check In a Table](#)
- [Undo Check Out for a Table Definition](#)
- [Remove a Single Object](#)

### Create a Table Definition

Use this API to create a Table definition.

**Name**

CDR\_PUB\_DF\_TABLE.CreateTableDefinition

## Signature

```

PROCEDURE CREATETABLEDEFINITION(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PIO_NAMING IN OUT CDR_NAMING_VERSION_OBJ_TYPE,
  PIO_TABLE IN OUT CDR_TABLE_OBJ_TYPE,
  PI_INSTANCESUBTYPEID IN NUMBER,
  PI_DEFCLASSIFICATIONCOLL IN CDR_CLASSIFICATIONS_COLL,
  PI_INSTCLASSIFICATIONCOLL IN CDR_CLASSIFICATIONS_COLL
);

```

## Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_NAMING** (Mandatory) This is a parameter of table type `CDR_NAMING_VERSIONS_OBJ_TYPE` that contains CDR Naming Version attributes. For `OBJECT_TYPE_RC` enter `$OBJTYPES$TABLE`.
- **PIO\_TABLE** (Optional) This is a parameter of table type `CDR_TABLE_OBJ_TYPE` that contains object attributes specific to Tables. If you are creating a new definition, enter values for the new Table. The following attributes are required: `COMPANY_ID,OBJ_ID,OBJ_VER,ORACLE_NAME,SAS_NAME, SASV6FLAGRC = '$YESNO$NO', SNAPSHOTFLAGRC= '$YESNO$YES', BLINDINGFLAGRC= '$YESNO$YES', PROCESSTYPERC = '$PROCESSTYPES$STAGINGWAUDIT'`. If you are creating an instance of an existing Table, do not enter any values here.
- **PI\_INSTANCESUBTYPEID** (Mandatory) Enter NULL here.
- **PI\_DEFCLASSIFICATIONCOLL** (Optional) By default the new definition is classified according to the subtype you assigned it in the `CDR_NAMING_VERSION_OBJ_TYPE`. If you want to override the default classifications for one or more classification levels, use this parameter. This is a collection of `CDR_CLA_OBJ_TYPES`, which have 5 attributes, including `CLA_LEVEL_ID` and `CLASSIFICATION_ID`.  
If you want the definition to inherit its classifications for a particular level from its parent, enter the classification level ID and, for the `CLASSIFICATION_ID`, enter 0 (zero).  
If you want to explicitly assign one or more terms for a particular level, initialize a `CDR_CLA_OBJ_TYPE` for each term, entering the classification level ID and, for the `CLASSIFICATION_ID`, the term ID.  
The `PAR_` attributes are not relevant to Tables. Do not enter any values for them.
- **PI\_INSTCLASSIFICATIONCOLL** (Mandatory) Enter NULL because you are creating a Table definition.

## Create a Table Instance

Use this API to create a Table Instance.

### Name

CDR\_PUB\_DF\_TABLE.CreateTableInstance

### Signature

```
PROCEDURE CREATETABLEINSTANCE(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PIO_NAMING IN OUT CDR_NAMING_VERSION_OBJ_TYPE,
  PIO_TABLE_INSTANCE IN OUT CDR_TABLE_REF_OBJ_TYPE,
  PI_CREATETYPE IN VARCHAR2,
  PI_INSTANCESUBTYPEID IN NUMBER,
  PI_DEFCLASSIFICATIONCOLL IN CDR_CLASSIFICATIONS_COLL,
  PI_INSTCLASSIFICATIONCOLL IN CDR_CLASSIFICATIONS_COLL
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_NAMING** (Mandatory) This is a parameter of table type CDR\_NAMING\_VERSIONS\_OBJ\_TYPE that contains CDR Naming Version attributes. For OBJECT\_TYPE\_RC enter \$OBJTYPES\$TABLEREF.
- **PIO\_TABLE\_INSTANCE** (Optional) This is a parameter of table type CDR\_TABLE\_OBJ\_TYPE that contains object attributes specific to Table instances.  
The following attributes are required:  
COMPANY\_ID,OBJ\_ID,OBJ\_VER,ORACLE\_NAME,SAS\_NAME SASV6FLAGRC = '\$YESNO\$NO', SNAPSHOTFLAGRC= '\$YESNO\$YES',  
BLINDINGFLAGRC= '\$YESNO\$YES',PROCESSTYPERC = '\$PROCESSTYPES\$\$STAGINGWAUDIT',BLINDINGSTATUSRC= '\$BLIND\_STATS\$BLINDED',COMPRESSFLAGRC= '\$YESNO\$NO',GENERATIONSTATUSRC= '\$YESNO\$NO'.
- **PI\_CREATETYPE** (Mandatory) Enter INST to create a Table instance of an existing Table definition. Enter BOTH to create a Table definition and a Table instance of it.
- **PI\_INSTANCESUBTYPEID** (Mandatory) Enter the SUBTYPE\_ID of the Table instance.
- **PI\_DEFCLASSIFICATIONCOLL** (Optional) By default the new definition is classified according to the subtype you assigned it in the CDR\_NAMING\_VERSION\_OBJ\_TYPE.



If you want to override the default classifications for one or more classification levels, use this parameter. This is a collection of CDR\_CLA\_OBJ\_TYPEs, which have 5 attributes, including CLA\_LEVEL\_ID and CLASSIFICATION\_ID.

If you want the definition to inherit its classifications for a particular level from its parent, enter the classification level ID and, for the CLASSIFICATION\_ID, enter 0 (zero).

If you want to explicitly assign one or more terms for a particular level, initialize a CDR\_CLA\_OBJ\_TYPE for each term, entering the classification level ID and, for the CLASSIFICATION\_ID, the term ID. The PAR\_ attributes are not relevant to Tables. Do not enter any values for them. If you are not creating a new definition, do not enter values here.

- **PI\_INSTCLASSIFICATIONCOLL** (Optional) By default the new instance is classified according to the subtype you assigned it in the PI\_INSTANCE\_SUBTYPE\_ID.

If you want to override the default classifications for one or more classification levels, use this parameter. This is a collection of CDR\_CLA\_OBJ\_TYPEs, which have 5 attributes, including CLA\_LEVEL\_ID and CLASSIFICATION\_ID.

If you want the instance to inherit its classifications for a particular level from its parent Work Area, enter the classification level ID and, for the CLASSIFICATION\_ID, enter 0 (zero).

If you want to explicitly assign one or more terms for a particular level, initialize a CDR\_CLA\_OBJ\_TYPE for each term, entering the classification level ID and, for the CLASSIFICATION\_ID, the term ID.

The PAR\_ attributes are not relevant to Tables. Do not enter any values for them. If you are not creating a new instance, do not enter values here.

## Create a Temporary Blob

Use this API to create a temporary BLOB in a BLOB Table. Call this API before you upload Columns or Table Descriptors using the UPLOADOPERATORCOLUMNS API for a SAS or CPORT file, or before creating a Table for a SAS dataset.

### Name

CDR\_PUB\_DF\_TABLE.CreateTempBlob

### Signature

```
PROCEDURE CREATETEMPBLOB(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PIO_TMPBLOBOBJ IN OUT CDR_TEMP_BLOBS_OBJ_TYPE
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PIO\_TMPBLOBOBJ** (Mandatory) This is parameter of table type **CDR\_TEMP\_BLOBS\_OBJ\_TYPE** that contains information about the BLOB.

The required attributes are: **FILE\_NAME**, **FILE\_BLOB**

## Create a Table Column

Use this API to create a Table Column. As with any other object, you can create an instance of an existing Variable or create a new Variable and Column. (Variable is the definition object for Columns.)

### Name

**CDR\_PUB\_DF\_TABLE.CreateColumn**

### Signature

```
PROCEDURE CREATECOLUMN(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PIO_NAMING IN OUT CDR_NAMING_VERSION_OBJ_TYPE,
  PIO_VARIABLE IN OUT CDR_VAR_OBJ_TYPE,
  PIO_COLUMN IN OUT CDR_COLUMNS_OBJ_TYPE,
  PI_CREATETYPE IN VARCHAR2,
  PI_DEFCLASSIFICATIONCOLL IN CDR_CLASSIFICATIONS_COLL
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_NAMING** (Mandatory) This is a parameter of table type **CDR\_NAMING\_VERSIONS\_OBJ\_TYPE** that contains CDR Naming Version attributes. For **OBJECT\_TYPE\_RC** enter **\$OBJTYPES\$COLUMN**.
- **PIO\_VARIABLE** (Mandatory) This is a parameter of table type **CDR\_VAR\_OBJ\_TYPE** that contains object attributes specific to Variables. The following attributes are required: **ORACLE\_NAME**, **ORACLE\_DATATYPE\_RC**, **LENGTH**, **PRECISION**, **SAS\_V8\_NAME**, **SAS\_LABEL**, **SAS\_FORMAT**, **NULLABLE\_FLAG\_RC**, **DEFAULT\_VALUE**.
- **PIO\_COLUMN** (Mandatory) This is a parameter of table type **CDR\_COLUMNS\_OBJ\_TYPE** that contains object attributes specific to Columns. The following attributes are required: **COMPANY\_ID**, **OBJ\_ID**, **OBJ\_VER**, **POSITION**, **SAS\_LABEL**, **NULLABLE\_FLAG\_RC**.
- **PI\_CREATETYPE** (Mandatory) Enter **INST** to create only a Column of an existing definition (Variable); or **BOTH** to create a new Column and Variable.
- **PI\_DEFCLASSIFICATIONCOLL** (Optional) By default the new definition is classified according to the subtype assigned it in the **CDR\_NAMING\_VERSION\_OBJ\_TYPE**.

If you want to override the default classifications for one or more classification levels, use this parameter. This is a collection of CDR\_CLA\_OBJ\_TYPES, which have 5 attributes, including CLA\_LEVEL\_ID and CLASSIFICATION\_ID.

If you want the definition to inherit its classifications for a particular level from its parent, enter the classification level ID and, for the CLASSIFICATION\_ID, enter 0 (zero).

If you want to explicitly assign one or more terms for a particular level, initialize a CDR\_CLA\_OBJ\_TYPE for each term, entering the classification level ID and, for the CLASSIFICATION\_ID, the term ID. The PAR\_ attributes are not relevant to Columns. Do not enter any values for them.

If you are not creating a new definition, do not enter values here.

## Modify a Table Column

Use this API to modify a column in a Table definition.

### Name

CDR\_PUB\_DF\_TABLE.ModifyColumn

### Signature

```
PROCEDURE modifyColumn(
  p_api_version IN NUMBER
  ,p_init_msg_list IN VARCHAR2 default CDR_PUB_DEF_CONSTANTS.G_FALSE
  ,p_commit IN VARCHAR2 default CDR_PUB_DEF_CONSTANTS.G_FALSE
  ,p_validation_level IN NUMBER default CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL
  ,x_return_status OUT NOCOPY VARCHAR2
  ,x_msg_count OUT NOCOPY NUMBER
  ,x_msg_data OUT NOCOPY VARCHAR2
  ,pio_naming IN OUT NOCOPY cdr_naming_version_obj_type
  ,pio_column IN OUT NOCOPY cdr_columns_obj_type
) ;
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_NAMING** (Mandatory) This is a parameter of table type CDR\_NAMING\_VERSIONS\_OBJ\_TYPE that contains object attributes. Enter values you want to change. For OBJECT\_TYPE\_RC enter \$OBJTYPES\$COLUMN.
- **PIO\_COLUMN** (Mandatory) This is a parameter of table type CDR\_COLUMNS\_OBJ\_TYPE that contains object attributes specific to Columns. You can change the Column's name, description and values for the NULLABLEFLAGRC, and SAS\_LABEL attributes. Valid values for NULLABLEFLAGRC are \$YESNO\$YES or \$YESNO\$NO.

## Create a Table Constraint

Use this API to create a constraint for a Table definition or a Table instance.

**Name**

CDR\_PUB\_DF\_TABLE.CreateTableConstraint

**Signature**

```
PROCEDURE CREATETABLECONSTRAINT(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PIO_NAMING IN OUT CDR_NAMING_VERSION_OBJ_TYPE,
  PIO_CONSTRAINT IN OUT CDR_TABLE_CONS_OBJ_TYPE,
  PI_CONSTRAINTCOLUMNS IN OUT CDR_TABLE_CONCOLS_LIST_COLL,
  PI_VALS IN CDR_VALS_COLL
);
```

**Parameters**

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_NAMING** (Mandatory) This is a parameter of table type CDR\_NAMING\_VERSIONS\_OBJ\_TYPE that contains CDR Naming Version attributes. Enter \$OBJECTYPES\$TABLECNSTR for OBJECT\_TYPE\_RC.
- **PIO\_CONSTRAINT** (Mandatory) This is a parameter of table type CDR\_TABLE\_CONS\_OBJ\_TYPE. You must enter values for CONSTRAINT\_TYPE\_RC.  
The possible values are: \$CONSTRAINTYPES\$CHECK, \$CONSTRAINTYPES\$NUINDEX, \$CONSTRAINTYPES\$PRIMARYKEY, and \$CONSTRAINTYPES\$UNIQUE.
- **PI\_CONSTRAINTCOLUMNS** (Mandatory) This is a collection of table type CDR\_TABLE\_CONCOLS\_OBJ\_TYPE. Identify the Table and the Table's columns where you want to apply the Constraints. Depending on the Constraint, you must also provide values for attributes that define Foreign Key, or that identify the List of Values object to store the values for a CHECK Constraint.  
The following attributes are required:  
TABC\_COMPANY\_ID,TABC\_OBJ\_ID,TABC\_OBJ\_VER,FK\_COL\_COMPANY\_ID,FK\_COL\_OBJ\_ID,FK\_COL\_OBJ\_VER,POSITION,COL\_COMPANY\_ID,COL\_OBJ\_ID,COL\_OBJ\_VER,LOV\_COMPANY\_ID,LOV\_ID,LOV\_VER
- **PI\_VALS** (Optional) This is a collection of CDR\_VAL\_OBJ\_TYPE that contains the values for a CHECK Constraint.

## Modify a Table Constraint

Use this API to modify a Table constraint. You need to check out the Table definition to modify the constraint.

```
PROCEDURE modifyTableConstraint(
  p_api_version IN NUMBER
  ,p_init_msg_list IN VARCHAR2 default CDR_PUB_DEF_CONSTANTS.G_FALSE
  ,p_commit IN VARCHAR2 default CDR_PUB_DEF_CONSTANTS.G_FALSE
  ,p_validation_level IN NUMBER default CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL
```

```
,x_return_status OUT NOCOPY VARCHAR2
,x_msg_count OUT NOCOPY NUMBER
,x_msg_data OUT NOCOPY VARCHAR2
, pio_naming IN OUT NOCOPY cdr_naming_version_obj_type
, pio_constraint IN OUT NOCOPY cdr_table_cons_obj_type
, pi_constraintColumns IN cdr_table_concols_list_coll
, pi_vals IN cdr_vals_coll
) ;
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_NAMING** (Mandatory) This is a parameter of table type CDR\_NAMING\_VERSIONS\_OBJ\_TYPE that contains CDR Naming Version attributes. Enter values to identify the Table Constraint and enter new values for the attributes you want to modify. Enter \$OBJTYPES\$TABLECNSTR for OBJECT\_TYPE\_RC.
- **PIO\_CONSTRAINT** (Mandatory) This is a parameter of table type CDR\_TABLE\_CONS\_OBJ\_TYPE. Enter values you want to change. You can change the name, description, and values specific to the constraint type; for example, values for the CHECK constraint. You cannot modify the constraint type.
- **PI\_CONSTRAINTCOLUMNS** (Mandatory) This is a collection of table type CDR\_TABLE\_CONCOLS\_OBJ\_TYPE. Identify the table and the table's columns where you want to apply the constraints.
- **PI\_VALS** (Optional) This is a collection of CDR\_VAL\_OBJ\_TYPE that contains the values for a CHECK constraint. It is not relevant to other constraints.

## Modify a Table Definition

Use this API to modify a Table definition. You need to check out the Table definition that you want to modify.

### Name

CDR\_PUB\_DF\_TABLE.ModifyTableDefinition

### Signature

```
PROCEDURE MODIFYTABLEDEFINITION(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PIO_NAMING IN OUT CDR_NAMING_VERSION_OBJ_TYPE,
  PIO_TABLE IN OUT CDR_TABLE_OBJ_TYPE
) ;
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_NAMING** (Mandatory) This is a parameter of table type CDR\_NAMING\_VERSION\_OBJ\_TYPE. Enter values to identify the Table definition and enter new values for the attributes you want to modify. All attributes are required.

**Note:**

Use separate APIs for modifying the validation status and the version label: CDR\_PUB\_VL\_VALIDATION.UPDATE\_VAL\_STATUS and CDR\_PUB\_DF\_NAMING.UPDATEVERSIONLABEL.

- **PIO\_TABLE** (Mandatory) This is a parameter of table type CDR\_TABLE\_OBJ\_TYPE that contains attributes specific to Table definitions. Enter the values that you want to change.

## Create a Table Descriptor

Use this API to create a Table Descriptor. Table Descriptors are owned by executable object definitions and Business Area definitions and are required to map to source and target Table instances. You must check out the parent object to create a Table Descriptor.

**Name**

CDR\_PUB\_DF\_TABLE.CreateTableDescriptor

**Signature**

```
p_api_version IN NUMBER
,p_init_msg_list IN VARCHAR2 default CDR_PUB_DEF_CONSTANTS.G_FALSE
,p_commit IN VARCHAR2 default CDR_PUB_DEF_CONSTANTS.G_FALSE
,p_validation_level IN NUMBER default CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL
,x_return_status OUT NOCOPY VARCHAR2
,x_msg_count OUT NOCOPY NUMBER
,x_msg_data OUT NOCOPY VARCHAR2
, pio_naming IN OUT NOCOPY cdr_naming_version_obj_type
, pio_table_descriptor IN OUT NOCOPY cdr_table_desc_obj_type
, pi_createType IN VARCHAR2
, pi_instanceSubTypeId IN NUMBER
, pi_defClassificationColl IN CDR_CLASSIFICATIONS_COLL
, pi_instClassificationColl IN CDR_CLASSIFICATIONS_COLL
) ;
```

**Parameters**

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_NAMING** (Mandatory) This is a parameter of table type CDR\_NAMING\_VERSION\_OBJ\_TYPE. Enter values to identify the Table Descriptor and enter new values for the attributes you want to create. All attributes are required. See [CDR Naming Version Object Type](#). For OBJECT\_TYPE\_RC enter \$OBJTYPES\$TABLEDESCRIPTOR.  
If you are creating a Table Descriptor from an existing Table definition, enter values for the table definition in the CDR naming attributes. REF\_COMPANY\_ID, REF\_OBJ\_ID, REF\_OBJ\_VER.

If you are creating a new Table definition, leave these attributes blank.

- **PIO\_TABLE\_DESCRIPTOR** (Mandatory) This is a parameter of table type CDR\_TABLE\_OBJ\_TYPE that contains attributes specific to Table Descriptors, including:
  - LIBREF: Enter Target or Source.
  - TARGET\_OPER\_FLAG\_RC: Enter \$YESNO\$YES
  - TARGET\_AS\_DATASET\_FLAG\_RC: Enter \$YESNO\$NO
  - PROCESS\_TYPE\_RC: Enter \$PROCESSTYPES\$STAGINGWAUDIT
  - REVEAL\_AUDIT\_FLAG\_RC: Enter \$PROCESSTYPES\$STAGINGWAUDIT
  - SEQ: Enter 1.
- **PI\_CREATETYPE** (Mandatory)
  - Enter INST to create a Table instance of an existing Table definition.
  - Enter BOTH to create a Table definition and a Table instance of it.
- **PI\_INSTANCESUBTYPEID** (Mandatory) Enter NULL.
- **PI\_DEFCLASSIFICATIONCOLL** (Optional) To inherit its classifications for a particular level from its parent, enter the classification level ID and, for the CLASSIFICATION\_ID, enter 0 (zero). The PAR\_ attributes are not relevant. Do not enter any values for them. Or enter NULL.
- **PI\_INSTCLASSIFICATIONCOLL** (Mandatory) Enter NULL because you are creating a Table definition.

## Modify a Table Descriptor

Use this API to modify a Table Descriptor. You need to check out the parent object of the Table Descriptor in order to modify it.

### Name

CDR\_PUB\_DF\_TABLE.ModifyTableDescriptor

### Signature

```
PROCEDURE MODIFYTABLEDESCRIPTOR(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PIO_NAMING IN OUT CDR_NAMING_VERSION_OBJ_TYPE,
  PIO_TABLE_DESCRIPTOR IN OUT CDR_TABLE_DESC_OBJ_TYPE
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_NAMING** (Mandatory) This is a parameter of table type `CDR_NAMING_VERSION_OBJ_TYPE`. Enter values to identify the Table Descriptor and enter new values for the attributes you want to modify. All attributes are required.

 **Note:**

Use separate APIs for modifying the validation status and the version label: `CDR_PUB_VL_VALIDATION.UPDATE_VAL_STATUS` and `CDR_PUB_DF_NAMING.UPDATEVERSIONLABEL`.

- **PIO\_TABLE\_DESCRIPTOR** (Mandatory) This is a parameter of table type `CDR_TABLE_OBJ_TYPE` that contains attributes specific to Table Descriptors. Enter the values that you want to change.

## Modify a Table Instance

Use this API to modify a Table Instance.

### Name

`CDR_PUB_DF_TABLE.ModifyTableInstance`

### Signature

```
PROCEDURE MODIFYTABLEINSTANCE(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PIO_NAMING IN OUT CDR_NAMING_VERSION_OBJ_TYPE,
  PIO_TABLE_INSTANCE IN OUT CDR_TABLE_REF_OBJ_TYPE
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_NAMING** (Mandatory) This is a parameter of table type `CDR_NAMING_VERSION_OBJ_TYPE`. Enter values to identify the Table instance and enter new values for the attributes you want to modify. All attributes are required.

 **Note:**

Use separate APIs for modifying the validation status and the version label: `CDR_PUB_VL_VALIDATION.UPDATE_VAL_STATUS` and `CDR_PUB_DF_NAMING.UPDATEVERSIONLABEL`.



- **PIO\_TABLE\_INSTANCE** (Mandatory) This is a parameter of table type `CDR_TABLE_OBJ_TYPE` that contains attributes specific to Table instances. Enter the values that you want to change.

## Reorder a Column

Use this API to reorder a Table's columns. You need to check out the Table definition whose columns you want to reorder.

### Name

`CDR_PUB_DF_TABLE.ReorderColumns`

### Signature

```
PROCEDURE REORDERCOLUMNS(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  X_RETURN_STATUS OUT VARCHAR2,  
  X_MSG_COUNT OUT NUMBER,  
  X_MSG_DATA OUT VARCHAR2,  
  PI_REORDEROBJCOLL IN CDR_REORDER_OBJ_COLL  
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

**PI\_REORDEROBJCOLL** (Mandatory) This is a collection of `CDR_REORDER_OBJ_TYPE` that contains the Column objects that you want to reorder. The value for `ENTRY_NUMBER` must be `NULL`. Add the Columns to the collection in the new order in which you want them.

## Upload a Table Descriptor or Column

Use this API to upload Columns and/or a Table Descriptor.

### Name

`CDR_PUB_DF_TABLE.UploadOperatorColumns`

### Signature

```
PROCEDURE UPLOADOPERATORCOLUMNS(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  X_RETURN_STATUS OUT VARCHAR2,  
  X_MSG_COUNT OUT NUMBER,  
  X_MSG_DATA OUT VARCHAR2,  
  PI_COMPID IN NUMBER,  
  PI_NSOBJID IN NUMBER,  
  PI_NSOBJVER IN NUMBER,  
  PI_OBJID IN NUMBER,  
  PI_OBJVER IN NUMBER,
```

```

    PI_NVCOLL IN CDR_NAME_VALUE_PAIR_COLL
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_COMPID** (Mandatory) Enter the COMPANY\_ID of the Column or Table Descriptor.
- **PI\_NSOBJID** (Mandatory) Enter the Namespace OBJ\_ID of the Column or Table Descriptor.
- **PI\_NSOBJVER** (Mandatory) Enter the Namespace OBJ\_VER of the Column or Table Descriptor.
- **PI\_OBJID** (Mandatory) Enter the OBJ\_ID of the Column or Table Descriptor.
- **PI\_OBJVER** (Mandatory) Enter the OBJ\_VER of the Column or Table Descriptor.
- **PI\_NVCOLL** (Mandatory) This is a collection of CDR\_NAME\_VALUE\_PAIR\_OBJ\_TYPE that contains name value pairs for the variable in LSH database to store the uploaded Columns and/or Table Descriptor. You must call CREATETEMPBLOB API before you use this API.

For SAS/C-PORT files, the variable name is the TMP\_BLOB\_ID which is defined after you call CREATETEMPBLOB API. For other uploads, the variable name is NULL.

## Check Out a Table

Use this API to check out a Table definition or definition and instance.

### Name

CDR\_PUB\_DF\_TABLE.Checkout

### Signature

```

Procedure checkout(
  p_api_version IN NUMBER
  ,p_init_msg_list IN VARCHAR2 default CDR_PUB_DEF_CONSTANTS.G_FALSE
  ,p_commit IN VARCHAR2 default CDR_PUB_DEF_CONSTANTS.G_FALSE
  ,p_validation_level IN NUMBER default CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL
  ,x_return_status OUT NOCOPY VARCHAR2
  ,x_msg_count OUT NOCOPY NUMBER
  ,x_msg_data OUT NOCOPY VARCHAR2
  , pio_baseObject IN OUT NOCOPY cdr_base_obj_type
  , pi_comment IN VARCHAR2
  , pi_isInstOnly IN VARCHAR2
) ;

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_BASEOBJECT** (Mandatory) This is a parameter of table type CDR\_BASE\_OBJ\_TYPE. You can enter values to identify either the Table definition or an instance of it:

- Pass the Table definition details if you want to check out and subsequently modify only the definition.
- Pass the details of an instance of the Table definition if you want the instance to point to the new version of the Table definition.

The following attributes are required: COMPANY\_ID, OBJ\_ID, OBJ\_VER, OBJECT\_VERSION\_NUMBER, NAMESPACE\_OBJ\_ID, NAMESPACE\_OBJ\_VER.

NAMESPACE\_OBJ\_ID. If you are entering information about a Table definition, enter the object ID of its containing Application Area. If you are entering information about a Table instance, enter the object ID of its containing Work Area.

NAMESPACE\_OBJ\_VER. If you are entering information about a Table definition, enter the object version number of its containing Application Area. If you are entering information about a Table instance, enter the object version number of its containing Work Area.

- **PI\_COMMENT** (Optional) Enter the reason you are checking out the Table.
- **PI\_ISINSTONLY** Enter \$YESNO\$NO if you are checking out only the definition. Enter \$YESNO\$YES if you are checking out the definition through its instance.

## Check In a Table

Use this API to check in a Table Object.

### Name

CDR\_PUB\_DF\_TABLE.CheckIn

### Signature

```
PROCEDURE CHECKIN(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PIO_BASEOBJECT IN OUT CDR_BASE_OBJ_TYPE,
  PI_COMMENT IN VARCHAR2
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_BASEOBJECT** (Mandatory) This is a parameter of table type CDR\_BASE\_OBJ\_TYPE. Enter values to identify the Table definition that you want to check in.  
The following attributes are required:  
COMPANY\_ID,OBJ\_ID,OBJ\_VER,OBJECT\_VERSION\_NUMBER,NAMESPACE\_OBJ\_ID,NAMESPACE\_OBJ\_VER.
- **PI\_COMMENT** (Optional) Enter the reason you are checking in the Table.

## Undo Check Out for a Table Definition

Use this API to undo a check out for a Table Definition.

### Name

CDR\_PUB\_DF\_TABLE.UndoCheckOut

### Signature

```
PROCEDURE UNDOCHECKOUT(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  X_RETURN_STATUS OUT NOCOPY VARCHAR2,  
  X_MSG_COUNT OUT NOCOPY NUMBER,  
  X_MSG_DATA OUT NOCOPY VARCHAR2,  
  PIO_BASEOBJECT IN OUT NOCOPY CDR_BASE_OBJ_TYPE,  
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

- **PIO\_BASEOBJECT** (Mandatory) This is a parameter of table type CDR\_BASE\_OBJ\_TYPE that contains object attributes. Enter values to identify the Table definition that you want to undo check out. The required attributes are: COMPANY\_ID, OBJ\_ID, OBJ\_VER, OBJECT\_VERSION\_NUMBER, NAMESPACE\_OBJ\_ID, NAMESPACE\_OBJ\_VER.

## Remove a Single Object

Use this API to remove a single object of any of the following types: Table definition, Table instance, Table Descriptor, Column, or a Constraint.

### Name

CDR\_PUB\_DF\_TABLE.Remove

### Signature

```
PROCEDURE REMOVE(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  X_RETURN_STATUS OUT VARCHAR2,  
  X_MSG_COUNT OUT NUMBER,  
  X_MSG_DATA OUT VARCHAR2,  
  PI_NAMING IN OUT CDR_NAMING_VERSION_OBJ_TYPE  
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PI\_NAMING** (Mandatory) This is a collection of CDR\_BASE\_OBJ\_TYPES. For each object that you want to remove, initialize a CDR\_BASE\_OBJ\_TYPE and then extend the collection.

The following attributes are required:

COMPANY\_ID,OBJ\_ID,OBJ\_VER,OBJECT\_VERSION\_NUMBER,NAMESPACE\_OBJ\_ID,NAMESPACE\_OBJ\_VER.

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## Parameters

This section contains the following topics:

- [Define and Modify Parameters](#)
- [Define Parameter Relations](#)

### Define and Modify Parameters

This is a public interface for operations involving defined Parameter objects. For further information, see the chapter on Parameters in the *Oracle Life Sciences Data Hub Application Developer's Guide*.

This section contains the following topics:

- [Create a Parameter](#)
- [Check Out a Parameter](#)
- [Check In a Parameter](#)
- [Get Displayed Parameter Values](#)

### Create a Parameter

Use this API to create a parameter instance or definition or both the parameter instance and its definition.

#### Name

CDR\_PUB\_DF\_PARAMETER.CreateParameter

#### Signature

```
PROCEDURE CREATEPARAMETER( P_API_VERSION IN NUMBER, P_INIT_MSG_LIST
IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE, P_COMMIT IN
VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE, P_VALIDATION_LEVEL IN
NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL, X_RETURN_STATUS OUT
VARCHAR2, X_MSG_COUNT OUT NUMBER, X_MSG_DATA OUT
VARCHAR2, PIO_PARAMNAMING IN OUT CDR_NAMING_VERSION_OBJ_TYPE,
PIO_CDRPARAMOBJTYPE IN OUT CDR_PARAMETER_OBJ_TYPE, PI_CREATE_OBJECT IN
VARCHAR2, PI_INSTANCE_SUBTYPE_ID IN CDR_NAMINGS.OBJECT_SUBTYPE_ID%TYPE,
PI_PARENTNAMING IN OUT CDR_BASE_OBJ_TYPE, PO_DEFCLASSIFICATIONCOLL IN
CDR_CLASSIFICATIONS_COLL );
```

#### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_PARAMNAMING** (Mandatory) If you are creating a new instance of an existing Parameter Set definition (and instances of all the Parameters in the

Parameter Set definition), enter values to identify the Parameter Set definition. For OBJECT\_TYPE\_RC enter \$OBJTYPES\$PARAMSETREF.

If you are creating a single Parameter, enter values for the Parameter definition you want to create or, if you are creating an instance of an existing Parameter definition, enter values to identify the definition you want to create an instance of. For OBJECT\_TYPE\_RC enter \$OBJTYPES\$PARAMETER if you are creating a definition only; \$OBJTYPES\$PARAMREF if you are creating an instance of an existing definition; and NULL if you are creating a new definition and an instance of it.

The following attributes are required: COMPANY\_ID, OBJECT\_TYPE\_RC, NAMESPACE\_OBJ\_ID, NAMESPACE\_OBJ\_VER, NAMESPACE\_START\_OBJ\_VER, NAMESPACE\_END\_OBJ\_VER, OWNING\_LOCATION\_RC, CHECKED\_OUT\_FLAG\_RC, CHECKED\_OUT\_ID, OBJECT\_SUBTYPE\_ID, DESCRIPTION, REF\_COMPANY\_ID, REF\_OBJ\_ID, REF\_OBJ\_VER, OBJECT\_VERSION\_NUMBER, VALIDATION\_STATUS\_RC, VERSION\_LABEL.

- **PIO\_CDRPARAMOBJTYPE** (Optional) This is a parameter of table type CDR\_PARAMETER\_OBJ\_TYPE that contains Parameter-specific attributes. If you are creating an instance of an existing Parameter Set, do not enter any values here. If you are creating a single Parameter, enter values for the Parameter definition you want to create or, if you are creating an instance of an existing definition, enter values to identify the definition you want to create an instance of. The following attributes are required:

For simple parameter, no LOV: COMPANY\_ID, PROMPT, INPUT\_OUTPUT\_RC, READ\_ONLY\_FLAG\_RC, VISIBLE\_FLAG\_RC, MANDATORY\_FLAG\_RC, DEFAULT\_VALUE, POSITION, PARAM\_TYPE\_RC, AUTO\_SHARE\_FIELD\_FLAG\_RC.

For static LOV type parameter: COMPANY\_ID, PROMPT, INPUT\_OUTPUT\_RC, READ\_ONLY\_FLAG\_RC, VISIBLE\_FLAG\_RC, MANDATORY\_FLAG\_RC, DEFAULT\_VALUE, POSITION, PARAM\_TYPE\_RC, AUTO\_SHARE\_FIELD\_FLAG\_RC, LOV\_COMPANY\_ID, LOV\_ID, LOV\_VER, LOV\_MULTI\_FLAG\_RC, ALLOWED\_VALUES\_RC, VALIDATION\_RULE\_RC, VAL\_PRG\_INST\_COMPANY\_ID, VAL\_PRG\_INST\_ID, VAL\_PRG\_INST\_VER, VAL\_SC\_REF\_COMPANY\_ID, VAL\_SC\_REF\_ID, VAL\_SC\_REF\_VER.

For programatic LOV type parameter: COMPANY\_ID, PROMPT, INPUT\_OUTPUT\_RC, READ\_ONLY\_FLAG\_RC, VISIBLE\_FLAG\_RC, MANDATORY\_FLAG\_RC, DEFAULT\_VALUE, POSITION, PARAM\_TYPE\_RC, AUTO\_SHARE\_FIELD\_FLAG\_RC, LOV\_PRG\_INST\_COMPANY\_ID, LOV\_PRG\_INST\_ID, LOV\_PRG\_INST\_VER, LOV\_SC\_REF\_COMPANY\_ID, LOV\_SC\_REF\_ID, LOV\_SC\_REF\_VER, LOV\_MULTI\_FLAG\_RC, ALLOWED\_VALUES\_RC, VALIDATION\_RULE\_RC, VAL\_PRG\_INST\_COMPANY\_ID, VAL\_PRG\_INST\_ID, VAL\_PRG\_INST\_VER, VAL\_SC\_REF\_COMPANY\_ID, VAL\_SC\_REF\_ID, VAL\_SC\_REF\_VER.

For classification LOV type parameter: COMPANY\_ID, PROMPT, INPUT\_OUTPUT\_RC, READ\_ONLY\_FLAG\_RC, VISIBLE\_FLAG\_RC, MANDATORY\_FLAG\_RC, DEFAULT\_VALUE, POSITION, PARAM\_TYPE\_RC, AUTO\_SHARE\_FIELD\_FLAG\_RC, LOV\_CLA\_LEVEL\_ID, LOV\_DEFAULT\_CLA\_ID, LOV\_MULTI\_FLAG\_RC, ALLOWED\_VALUES\_RC, VALIDATION\_RULE\_RC, VAL\_PRG\_INST\_COMPANY\_ID, VAL\_PRG\_INST\_ID, VAL\_PRG\_INST\_VER, VAL\_SC\_REF\_COMPANY\_ID, VAL\_SC\_REF\_ID, VAL\_SC\_REF\_VER.

- **PI\_CREATE\_OBJECT** (Mandatory) Enter DEFN to create a Parameter definition only; INST to create a Parameter instance only; BOTH to create a Parameter definition and an instance of it; or PARAMSET if you are creating a new instance of a Parameter Set.
- **PI\_INSTANCE\_SUBTYPE\_ID** (Optional) If you are creating an instance of a single Parameter, enter the ID for the subtype you want to give the instance. If you are creating a Parameter Set instance, do not enter a value here.
- **PI\_PARENTNAMING** (Optional) This is a parameter of table type CDR\_BASE\_OBJ\_TYPE. Enter values to identify the object (for example, the Program or Report Set) that contains the Parameter definition. The following attributes are required: COMPANY\_ID, OBJ\_ID, OBJ\_VER. If you are creating an instance of a Parameter Set, do not enter a value here.
- **PO\_DEFCLASSIFICATIONCOLL** (Optional) By default the new definition is classified according to the subtype you assigned it in the CDR\_NAMING\_VERSION\_OBJ\_TYPE. If you want to override the default classifications for one or more classification levels, use this parameter. This is a collection of CDR\_CLA\_OBJ\_TYPES, which have 5 attributes, including CLA\_LEVEL\_ID and CLASSIFICATION\_ID.  
If you want the definition to inherit its classifications for a particular level from its parent, enter the classification level ID and, for the CLASSIFICATION\_ID, enter 0 (zero). If you want to explicitly assign one or more terms for a particular level, initialize a CDR\_CLA\_OBJ\_TYPE for each term, entering the classification level ID and, for the CLASSIFICATION\_ID, the term ID. The PAR\_ attributes are not relevant to Parameters. Do not enter any values for them. If you are not creating a new definition, do not enter values here.

## Check Out a Parameter

Use this API to check out a Parameter definition.

### Name

CDR\_PUB\_DF\_PARAMETER.CheckOutParameter

### Signature

```
PROCEDURE CHECKOUTPARAMETER( P_API_VERSION IN NUMBER, P_INIT_MSG_LIST
IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE, P_COMMIT IN
VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE, P_VALIDATION_LEVEL IN NUMBER :=
CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL, X_RETURN_STATUS OUT VARCHAR2,
X_MSG_COUNT OUT NUMBER, X_MSG_DATA OUT VARCHAR2, PIO_CDRNAMING IN
OUT CDR_BASE_OBJ_TYPE, PI_COMMENT IN VARCHAR2, PI_ISINSTONLY IN
VARCHAR2 );
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_CDRNAMING** (Mandatory) This is a parameter of table type CDR\_BASE\_OBJ\_TYPE that contains CDR Naming attributes. Enter values to identify the Parameter you want to check out. The following attributes are required: COMPANY\_ID, OBJ\_ID, OBJ\_VER, OBJECT\_VERSION\_NUMBER, NAMESPACE\_OBJ\_ID, NAMESPACE\_OBJ\_VER.



- **PI\_COMMENT** (Optional) Enter an explanation of why you are checking out the Parameter.
- **PI\_ISINSTONLY** (Mandatory) Enter \$YESNO\$NO.

## Check In a Parameter

Use this API to explicitly check in a Parameter definition.

### Name

CDR\_PUB\_DF\_PARAMETER.CheckInParameter

### Signature

```
PROCEDURE CHECKINPARAMETER( P_API_VERSION IN NUMBER, P_INIT_MSG_LIST
IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE, P_COMMIT IN
VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE, P_VALIDATION_LEVEL IN NUMBER :=
CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL, X_RETURN_STATUS OUT VARCHAR2,
X_MSG_COUNT OUT NUMBER, X_MSG_DATA OUT VARCHAR2, PIO_CDRNAMING IN
OUT CDR_BASE_OBJ_TYPE, PI_COMMENT IN VARCHAR2 );
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_CDRNAMING** (Mandatory) This is a parameter of table type CDR\_BASE\_OBJ\_TYPE that contains CDR Naming attributes. Enter values to identify the Parameter you want to check out. The following attributes are required: COMPANY\_ID,OBJ\_ID,OBJ\_VER,OBJECT\_VERSION\_NUMBER,NAMESPACE\_OBJ\_ID,NAMESPACE\_OBJ\_VER.
- **PI\_COMMENT** (Optional) Enter a checkin comment.

## Get Displayed Parameter Values

Use this API to get the Parameter value(s) that must be displayed in the submission Execution Setup in cases where the displayed value differs from the value used internally: for a Parameter with a classification list of values, this API returns a comma-separated list of the terms in the appropriate classification level (instead of the term\_id used internally); for a Report Set Entry Title Parameter, the API returns the title (instead of the RSE obj\_id); and for a Parameter with a look-up value, the API returns a display value; for example, 'Yes' instead of \$YESNO\$YES. You can also use this API to populate a default value for a Parameter in an Execution Setup.

### Name

CDR\_PUB\_DF\_PARAMETER.GetDefaultCLAVvalue

### Signature

```
FUNCTION GETDEFAULTCLAVVALUE( P_API_VERSION IN NUMBER, P_INIT_MSG_LIST
IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE, P_COMMIT IN
VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE, P_VALIDATION_LEVEL IN
NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL, PALLOWEDVALUE IN
CDR_PARAMETERS.ALLOWED_VALUES_RC%TYPE, PDEFAULTVALUE IN VARCHAR2 ) RETURN
VARCHAR2;
```

## Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **P\_COMMIT** (Optional) Accept the default value (FND\_API.G\_FALSE) to ensure that this individual API does not commit upon completion. Pass FND\_API.G\_TRUE to override the default behavior.
- **P\_VALIDATION\_LEVEL** (Optional) Accept the default value to perform full validation. No other values are currently supported.
- **PALLOWEDVALUE** (Optional) To get the allowed values for a Parameter with a classification LOV, enter \$PARAMALLOWVALS\$CLALOV. To get the title for a Report Set Entry, enter \$PARAMALLOWVALS\$ENTRYLOV. To get a look-up value or enter a default value, do not enter a value here.
- **PDEFAULTVALUE** (Optional) To get the allowed values for a Parameter with a classification LOV, enter the level ID of the Parameter's LOV. To get a look-up value, enter \$PARAMALLOWVALS\$LOV. To get the title for a Report Set Entry, enter the RSE object ID. To set a default value for a Parameter in the Execution Setup, enter the string you want to serve as the default value. The API returns the string.

## Define Parameter Relations

This is a public interface for operations related to passing values from one Parameter to another within a Report Set or Workflow. For further information, see the chapter on Parameters in the *Oracle Life Sciences Data Hub Application Developer's Guide*.

This chapter contains the following procedures and functions:

- [Create a Parameter Relation Collection](#)
- [Get Parameter Instances for Value Passing](#)
- [Remove Parameter Relations](#)

## Create a Parameter Relation Collection

Program instance contained in the Workflow and an input Parameter of another Program instance that is executed later in the Workflow.

### Name

CDR\_PUB\_DF\_PARAM\_RELATION.CreateParrelColl

### Signature

```

PROCEDURE CREATEPARRELCOLL(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PIO_PARCOLL IN OUT CDR_PARAM_RELATION_COLL,

```

```

    PI_VALIDATERELATIONS IN    VARCHAR := 'T'
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_PARCOLL** (Mandatory) This is a collection of CDR\_PARAM\_RELATION\_OBJ\_TYPES. For each Parameter relation that you want to create, initialize a CDR\_PARAM\_RELATION\_OBJ\_TYPE and then extend the collection. For the SRC attributes enter information about the Parameter whose value will be passed to another Parameter. For the TGT attributes, enter information about the target Parameter that will receive its value from the source Parameter. For RELATION\_TYPE enter either LINK or SHARE.
- **PI\_VALIDATERELATIONS** (Mandatory) Accept the default value of 'T' to validate the parameter relations in the collection. Enter 'F' to skip validation.

## Get Parameter Instances for Value Passing

Use this API to get a list of Parameters that would be valid for either receiving a value from, or passing a value to, the Parameter you specify in the Report Set or Workflow you specify.

### Name

CDR\_PUB\_DF\_PARAM\_RELATION.GetParameterRefs

### Signature

```

PROCEDURE GETPARAMETERREFS( P_API_VERSION IN    NUMBER,
P_INIT_MSG_LIST IN    VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
P_COMMIT IN    VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
P_VALIDATION_LEVEL IN    NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
X_RETURN_STATUS OUT    VARCHAR2, X_MSG_COUNT OUT
NUMBER, X_MSG_DATA OUT    VARCHAR2, PI_PSNSCOMPANYID IN
CDR_NAMINGS.COMPANY_ID%TYPE, PI_PSNSOBJID IN    CDR_NAMINGS.OBJ_ID%TYPE,
PI_PSNSOBJVER IN    CDR_NAMING_VERSIONS.OBJ_VER%TYPE,
PI_PAROBJID IN    CDR_NAMINGS.OBJ_ID%TYPE, PI_PAROBJVER
IN    CDR_NAMING_VERSIONS.OBJ_VER%TYPE, PO_PARCOLL OUT
CDR_PARAM_RELATION_COLL, PI_SHARE IN    VARCHAR2 );

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_PSNSCOMPANYID** (Mandatory) Enter the company ID of the Report Set or Workflow.
- **PI\_PSNSOBJID** (Mandatory) Enter the object ID of the Report Set or Workflow.
- **PI\_PSNSOBJVER** (Mandatory) Enter the version number of the Report Set or Workflow.
- **PI\_PAROBJID** (Mandatory) Enter the object ID of the Parameter.
- **PI\_PAROBJVER** (Mandatory) Enter the version number of the Parameter.

- **PO\_PARCOLL** This output parameter is a collection of CDR\_PARAM\_RELATION\_OBJ\_TYPES containing Parameter instances in the Report Set or Workflow.
- **PI\_SHARE** Enter SHAREDFROM to get a list of potential source Parameters that could pass their value to the Parameter you specified. Enter SHAREDTO to get a list of potential target Parameters that could receive their value from the Parameter you specified.

## Remove Parameter Relations

Use this API to delete one or more Parameter relations from a Report Set or Workflow.

### Name

CDR\_PUB\_DF\_PARAM\_RELATION.RemoveParrelColl

### Signature

```
PROCEDURE REMOVEPARRELCOLL( P_API_VERSION IN NUMBER, P_INIT_MSG_LIST
IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE, P_COMMIT IN
VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE, P_VALIDATION_LEVEL IN NUMBER :=
CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL, X_RETURN_STATUS OUT VARCHAR2,
X_MSG_COUNT OUT NUMBER, X_MSG_DATA OUT VARCHAR2, PIO_PARCOLL IN
OUT CDR_PARAM_RELATION_COLL );
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

**PIO\_PARCOLL** (Mandatory) This is a collection of CDR\_PARAM\_RELATION\_OBJ\_TYPES. For each Parameter relation that you want to delete, initialize a CDR\_PARAM\_RELATION\_OBJ\_TYPE and then extend the collection.

The following attributes are required: COMPANY\_ID, SRC\_PARENT\_OBJ\_ID, SRC\_PARENT\_OBJ\_VER, SRC\_PAR\_REF\_OBJ\_ID, SRC\_PAR\_REF\_OBJ\_VER, TGT\_PARENT\_OBJ\_ID, TGT\_PARENT\_OBJ\_VER, TGT\_PAR\_REF\_OBJ\_ID, TGT\_PAR\_REF\_OBJ\_VER.

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## Variables

This is a public interface for Variable-related operations including creating, modifying, and removing Variables. It also includes functions for checking in and checking out Variables.

This chapter contains the following section:

- [Create and Modify Variables](#)

### Create and Modify Variables

This section contains the following topics:

- [Create a Variable](#)
- [Check Out a Variable](#)
- [Modify a Variable](#)
- [Check In a Variable](#)
- [Remove a Variable](#)

### Create a Variable

Use this API to create a new Variable instance.

#### Name

CDR\_PUB\_DF\_VARIABLE.CreateVariable

#### Signature

```
PROCEDURE CREATEVARIABLE(  
    P_API_VERSION IN NUMBER,  
    P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
    P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
    P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
    X_RETURN_STATUS OUT VARCHAR2,  
    X_MSG_COUNT OUT NUMBER,  
    X_MSG_DATA OUT VARCHAR2,  
    PIO_NAMING IN OUT CDR_NAMING_VERSION_OBJ_TYPE,  
    PIO_VARIABLE IN OUT CDR_VAR_OBJ_TYPE,  
    PI_DEFCLASSIFICATIONCOLL IN CDR_CLASSIFICATIONS_COLL  
);
```

#### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_NAMING** (Mandatory) This is a parameter of table type CDR\_NAMING\_VERSIONS\_OBJ\_TYPE that contains CDR Naming Version attributes.  
For OBJECT\_TYPE\_RC enter \$OBJTYPES\$CDRVAR.
- **PIO\_VARIABLE** (Mandatory) This is a parameter of table type CDR\_VAR\_OBJ\_TYPE that contains attributes specific to Variables. The required attributes are: ORACLE\_NAME, ORACLE\_DATATYPE\_RC, LENGTH, PRECISION, SAS\_V8\_NAME, SAS\_LABEL, SAS\_FORMAT, NULLABLE\_FLAG\_RC, DEFAULT\_VALUE.  
  
Possible values for ORACLE\_DATATYPE\_RC are: \$ORADATATYPES\$DATE, \$ORADATATYPES\$NUMBER, and \$ORADATATYPES\$VARCHAR2.  
  
Possible values for NULLABLE\_FLAG\_RC are: \$YESNO\$NO, \$YESNO\$YES.
- **PI\_DEFCLASSIFICATIONCOLL** By default, the variable is classified according to the subtype you assigned it in the CDR\_NAMING\_VERSION\_OBJ\_TYPE. If you want to override the default classifications for one or more classification levels, use this parameter. This is a collection of CDR\_CLA\_OBJ\_TYPES, which have 5 attributes, including CLA\_LEVEL\_ID and CLASSIFICATION\_ID.  
  
If you want the definition to inherit its classifications for a particular level from its parent, enter the classification level ID and, for the CLASSIFICATION\_ID, enter 0 (zero).  
  
If you want to explicitly assign one or more terms for a particular level, initialize a CDR\_CLA\_OBJ\_TYPE for each term, entering the classification level ID and, for the CLASSIFICATION\_ID, the term ID. The PAR\_ attributes are not relevant to Variables. Do not enter any values for them.  
  
If you are not creating a new definition, do not enter values here.

## Check Out a Variable

Use this API to check out a Variable definition or instance.

### Name

CDR\_PUB\_DF\_VARIABLE.CheckOut

### Signature

```
PROCEDURE CHECKOUT(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PIO_BASEOBJECT IN OUT CDR_BASE_OBJ_TYPE,
  PI_COMMENT IN VARCHAR2,
  PI_ISINSTONLY IN VARCHAR2
);
```

## Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_BASEOBJECT** (Mandatory) This is a parameter of table type CDR\_BASE\_OBJ\_TYPE. Enter values to identify the Variable definition that you want to check out.  
The following attributes are required:  
COMPANY\_ID,OBJ\_ID,OBJ\_VER,OBJECT\_VERSION\_NUMBER,NAMESPACE\_OBJ\_ID,NAMESPACE\_OBJ\_VER.
- **PI\_COMMENT** (Optional) Enter the reason you are checking out the Variable.
- **PI\_ISINSTONLY** (Mandatory) Enter \$YESNO\$NO.

## Modify a Variable

Use this API to modify a Variable definition or instance.

### Note:

To modify a Variable definition, you must first check it out.

### Name

CDR\_PUB\_DF\_VARIABLE.ModifyVariable

### Signature

```

PROCEDURE MODIFYVARIABLE(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PI_NAMING IN OUT CDR_NAMING_VERSION_OBJ_TYPE,
  PI_VARIABLE IN OUT CDR_VAR_OBJ_TYPE
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_NAMING** (Mandatory) This is a parameter of table type CDR\_NAMING\_VERSIONS\_OBJ\_TYPE that contains CDR Naming Version attributes. Initialize the attributes COMPANY\_ID, OBJECT\_ID, and OBJECT\_VER.
- **PI\_VARIABLE** (Mandatory) This is a parameter of table type CDR\_VARS\_OBJ\_TYPE. Provide values for the attributes you want to modify.

## Check In a Variable

Use this API to check in a Variable definition or instance.

### Name

CDR\_PUB\_DF\_VARIABLE.CheckIn

### Signature

```
PROCEDURE CHECKIN(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  X_RETURN_STATUS OUT VARCHAR2,  
  X_MSG_COUNT OUT NUMBER,  
  X_MSG_DATA OUT VARCHAR2,  
  PIO_BASEOBJECT IN OUT CDR_BASE_OBJ_TYPE,  
  PI_COMMENT IN VARCHAR2  
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_BASEOBJECT** (Mandatory) This is a parameter of table type CDR\_BASE\_OBJ\_TYPE. Enter values to identify the Variable definition that you want to check in.  
The following attributes are required:  
COMPANY\_ID,OBJ\_ID,OBJ\_VER,OBJECT\_VERSION\_NUMBER,NAMESPACE\_OBJ\_ID,NAMESPACE\_OBJ\_VER.
- **PI\_COMMENT** (Optional) Enter the reason you are checking in the Variable.

## Remove a Variable

Use this API to remove an existing variable object.

### Name

CDR\_PUB\_DF\_VARIABLE.RemoveVariable

### Signature

```
PROCEDURE REMOVEVARIABLE(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  X_RETURN_STATUS OUT VARCHAR2,  
  X_MSG_COUNT OUT NUMBER,  
  X_MSG_DATA OUT VARCHAR2,  
  PI_NAMING IN OUT CDR_NAMING_VERSION_OBJ_TYPE  
);
```



### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PI\_NAMING** (Mandatory) This is a parameter of table type CDR\_NAMING\_VERSIONS\_OBJ\_TYPE that contains CDR Naming Version attributes. Initialize the attributes COMPANY\_ID, OBJECT\_ID, and OBJECT\_VER.

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## Work Areas

This is a public interface for Work Area-related operations, including creating, modifying, removing, cloning, checking in and installing Work Areas. It also includes an API to copy instance objects into a Work Area and an API to install a single Program.

- [Define and Modify Work Areas](#)

## Define and Modify Work Areas

This section contains the following topics:

- [Create a Work Area](#)
- [Install a Work Area](#)
- [Check In a Work Area](#)
- [Modify a Work Area](#)
- [Clone a Work Area](#)
- [Copy Objects into a Work Area](#)
- [Clone an Object](#)
- [Remove a Work Area](#)
- [Get the Usage Intent RC of a Work Area](#)
- [Update a Work Area's Usage Intent](#)
- [Install a Program](#)
- [Apply or Move a Snapshot Label](#)
- [Remove a Snapshot Label from a Work Area](#)

## Create a Work Area

Use this API to create a new Work Area.

### Name

CDR\_PUB\_DF\_WORKAREA.CreateWorkArea

### Signature

```
PROCEDURE CREATEWORKAREA(  
    P_API_VERSION IN NUMBER,  
    P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
    P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
    P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
    X_RETURN_STATUS OUT VARCHAR2,  
    X_MSG_COUNT OUT NUMBER,  
    X_MSG_DATA OUT VARCHAR2,  
    PIO_SOURCECDRNAMING IN OUT CDR_NAMING_VERSION_OBJ_TYPE,
```

```

PIO_WORKKAREAOBJTYPE IN OUT CDR_WORKKAREA_OBJ_TYPE,
PI_DEFCLASSIFICATIONCOLL IN CDR_CLASSIFICATIONS_COLL
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- PIO\_WORKKAREAOBJTYPE** (Mandatory) This is a parameter of table type CDR\_WORKKAREA\_OBJ\_TYPE that contains object attributes specific to Work Areas. Enter values for the Work Area that you want to create. The following attributes are required: COMPANY\_ID, OBJ\_ID, OBJ\_VER. For OBJECT\_TYPE\_RC enter \$OBJTYPES\$WORKAREA. By default, new Work Areas receive a Usage Intent value of Development.
- PIO\_SOURCECDRNAMING** (Mandatory) This is a parameter of table type CDR\_NAMING\_VERSION\_OBJ\_TYPE. Enter values to identify the Work Area that you want to create. The following attributes are required: COMPANY\_ID, NAMESPACE\_OBJ\_ID, NAMESPACE\_OBJ\_VER, OBJECT\_TYPE\_RC. FOR OBJECT\_TYPE\_RC ENTER \$OBJTYPES\$WORKAREA.
- PI\_DEFCLASSIFICATIONCOLL** (Optional) By default the new Work Area is classified according to the subtype you assigned it in the CDR\_NAMING\_VERSION\_OBJ\_TYPE. If you want to override the default classifications for one or more classification levels, use this parameter. This is a collection of CDR\_CLA\_OBJ\_TYPES, which have 5 attributes, including CLA\_LEVEL\_ID and CLASSIFICATION\_ID. If you want the Work Area to inherit its classifications for a particular level from its parent Application Area, enter the classification level ID and, for the CLASSIFICATION\_ID, enter 0 (zero). If you want to explicitly assign one or more terms for a particular level, initialize a CDR\_CLA\_OBJ\_TYPE for each term, entering the classification level ID and, for the CLASSIFICATION\_ID, the term ID. The PAR\_ attributes are not relevant to Work Areas. Do not enter any values for them.

## Install a Work Area

Use this API to install a Work Area and the instance objects in it that you specify. The API first tries to check in the Work Area and all the object instances included in the installation. If any object included in the installation is checked out by another user, the installation fails.

### Name

CDR\_PUB\_DF\_WORKAREA.InstallWAController

### Signature

```

PROCEDURE INSTALLWACONTROLLER(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,

```

```

PIO_OWABASENAMING IN OUT CDR_BASE_OBJ_TYPE,
PI_VINSTALLMODE IN CDR_INSTALLATIONS.INSTALLATION_MODE_RC%TYPE,
PI_VFORCEREGEN IN CDR_INSTALLATIONS.FORCE_REGEN_FLAG_RC%TYPE,
PI_VBATCH IN CDR_INSTALLATIONS.BATCH_FLAG_RC%TYPE,
PI_VACTION IN CDR_INST_ELEMENTS.INSTALL_ACTION_RC%TYPE,
PI_COINSTDETAILS IN CDR_INSTALLATION_DETAILS_COLL
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_OWABASENAMING** (Mandatory) This is a parameter of table type CDR\_BASE\_OBJ\_TYPE. Enter values to identify the Work Area that you want to install. The following attributes are required: COMPANY\_ID,OBJECT\_ID,OBJECT\_VER,NAMESPACE\_OBJ\_ID,NAMESPACE\_OBJ\_VER, OBJECT\_VERSION\_NUMBER.
- **PI\_VINSTALLMODE** (Mandatory) Specify the installation mode you want to use: Enter FULL, UPGRADE, or PARTIAL.
- **PI\_VFORCEREGEN** (Optional) If you selected Upgrade mode, enter \$YESNO\$YES to force the system to generate new install scripts (and reinstall) all objects, whether or not they have been modified since the last installation of this Work Area. Enter \$YESNO\$NO to generate install scripts only for objects and object versions that have never been successfully installed.
- **PI\_VBATCH** (Mandatory) Enter \$YESNO\$YES to perform installation in batch mode. Enter \$YESNO\$NO to perform installation in interactive mode.
- **PI\_VACTION** (Mandatory) Enter COMPLETE if this is the first time the Work Area is being installed, or if the last installation was successful, or if the last installation failed and you want to continue from the last successfully completed phase. Enter CANCEL if the last installation failed and you want to begin the installation process from the beginning.
- **PI\_COINSTDETAILS** (Mandatory) This is a collection of CDR\_INST\_DET\_OBJ\_TYPES. For each object in the Work Area that you want to install, initialize a CDR\_INST\_DET\_OBJ\_TYPE and then extend the collection. The following attributes are required: COMPANY\_ID,OBJ\_ID,OBJ\_VER,OBJECT\_VERSION\_NUMBER,NAMESPACE\_OBJ\_ID,NAMESPACE\_OBJ\_VER.

For OMIT\_FROM\_INSTALL\_FLAG\_RC, enter \$YESNO\$NO to include the object in the installation, subject to the rules for the installation type (Full, Partial, or Upgrade). If you are performing installation in PARTIAL mode, you must provide a value for each object for INSTALL\_ACTION\_RC of to indicate if you want to drop and replace or upgrade each object.

## Check In a Work Area

Use this API to check in a Work Area and all the object instances it contains.

### Name

CDR\_PUB\_DF\_WORKAREA.CheckInWorkArea

## Signature

```
PROCEDURE CHECKINWORKAREA(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PIO_BASENAMING IN OUT CDR_BASE_OBJ_TYPE,
  PI_COMMENT IN VARCHAR2
);
```

## Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_BASENAMING** (Mandatory) This is a parameter of table type `CDR_BASE_OBJ_TYPE`. Enter values to identify the Work Area that you want to check in.  
The following attributes are required:  
`COMPANY_ID,OBJECT_ID,OBJECT_VER,NAMESPACE_OBJ_ID,NAMESPACE_OBJ_VER,OBJECT_VERSION_NUMBER`.
- **PI\_COMMENT** (Optional) Enter the reason you are checking in the Work Area.

## Modify a Work Area

Use this API to modify the name and/or description of an existing Work Area. (Use `CDR_PUB_DF_WORKAREA.UPDATEUSAGEINTENT` to modify a Work Area's Usage Intent attribute.)

### Name

`CDR_PUB_DF_WORKAREA.ModifyWorkArea`

## Signature

```
PROCEDURE MODIFYWORKAREA(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PIO_SOURCECDRNAMING IN OUT CDR_NAMING_VERSION_OBJ_TYPE,
  PIO_WORKAREAOBJTYPE IN OUT CDR_WORKAREA_OBJ_TYPE
);
```

## Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_SOURCECDRNAMING** (Mandatory) This is a parameter of table type `CDR_NAMING_VERSION_OBJ_TYPE`. Enter values to identify the Work Area

that you want to modify and the values you want to change. All attributes are required.

- **PIO\_WORKAREAOBJTYPE** (Mandatory) This is a parameter of table type `CDR_WORKAREA_OBJ_TYPE` that contains object attributes specific to Work Areas. Enter values to identify the Work Area that you want to modify and enter new values for the attributes you want to modify.

## Clone a Work Area

Use this API to clone a Work Area. If you specify another Work Area as the target, this API overwrites that Work Area with the source Work Area. If you specify an Application Area as the target, this API creates a new Work Area identical to the source Work Area in the Application Area you specify.

### Name

`CDR_PUB_DF_WORKAREA.CloneWorkArea`

### Signature

```
PROCEDURE CLONWORKAREA(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PIO_SOURCEOBJECT IN OUT CDR_BASE_OBJ_TYPE,
  PIO_TARGETOBJECT IN OUT CDR_BASE_OBJ_TYPE,
  PI_VLABEL IN CDR_WORKAREAS.LABEL%TYPE,
  PI_VUSAGEINTENTRC IN CDR_WORKAREAS.USAGE_INTENT_RC%TYPE
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_SOURCEOBJECT** (Mandatory) This is a parameter of table type `CDR_BASE_OBJ_TYPE`. Enter values to identify the Work Area that you want to clone.  
The following attributes are required: `COMPANY_ID`, `OBJECT_ID`, `OBJECT_VER`, `NAMESPACE_OBJ_ID`, `NAMESPACE_OBJ_VER`, `OBJECT_VERSION_NUMBER`.
- **PIO\_TARGETOBJECT** (Mandatory) This is a parameter of table type `CDR_BASE_OBJ_TYPE`. Enter values to identify the Work Area or Application Area to serve as the target of the clone. If you specify a Work Area, this API overwrites it with the source Work Area. If you specify an Application Area, this API creates a new Work Area identical to the source Work Area in the Application Area.  
The following attributes are required: `COMPANY_ID`, `OBJ_ID`, `OBJ_VER`, `OBJECT_VERSION_NUMBER`, `NAMESPACE_OBJ_ID`, `NAMESPACE_OBJ_VER`.
- **PI\_VLABEL** (Mandatory) Enter text for the label you want to assign to the source and target Work Areas.

- **PI\_VUSAGEINTENTRC** (Optional) Enter a value for the Usage Intent attribute of the target Work Area. If you do not enter a value, the API assigns the Usage Intent value of the source Work Area to the target Work Area.

## Copy Objects into a Work Area

Use this API to copy one or more objects into a Work Area.

### Name

CDR\_PUB\_DF\_WORKAREA.CopyObjectsIntoWA

### Signature

```
PROCEDURE COPYOBJECTSINTOWA(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PI_CDRPRREFOBJCOLL IN CDR_PRREF_OBJ_COLL,
  PI_CDRTARGETCONTAINEROBJECT IN OUT CDR_PRREF_OBJ_TYPE,
  PI_CHECKINFLAG IN VARCHAR,
  PI_COPYPRGASSGNMT IN VARCHAR
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_CDRPRREFOBJCOLL** (Mandatory) This is a collection of Prref objects that contains information about the instance objects you want to copy into the Work Area.  
Provide values for the attributes COMPANY\_ID, OBJ\_ID, OBJ\_VER, PRREF\_ID, PRREF\_VER, NAMESPACE\_OBJ\_ID, NAMESPACE\_OBJ\_VER, OBJECT\_VERSION\_NUMBER for each instance object. The PRREF\_ID and PRREF\_VER attributes store the hierarchy information for objects.
- **PI\_CDRTARGETCONTAINEROBJECT** (Mandatory) This is a parameter of Prref object type that describes the target Work Area.  
Enter values for the attributes COMPANY\_ID, OBJ\_ID, OBJ\_VER, PRREF\_ID, PRREF\_VER, NAMESPACE\_OBJ\_ID, NAMESPACE\_OBJ\_VER, OBJECT\_VERSION\_NUMBER.
- **PI\_CHECKINFLAG** (Mandatory) Enter 'Y' for this flag.
- **PI\_COPYPRGASSGNMT** (Optional) This parameter is not applicable.

## Clone an Object

Use this API to clone one or more instance objects in a Work Area.

### Name

CDR\_PUB\_DF\_WORKAREA.CloneObjects

## Signature

```
PROCEDURE CLONEOBJECTS(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PI_SRCINSTBASEOBJCOLL IN OUT CDR_BASE_OBJ_COLL,
  PI_TGTWABASEOBJTYPE IN OUT CDR_BASE_OBJ_TYPE
);
```

## Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_SRCINSTBASEOBJCOLL** (Mandatory) This is a collection of base objects that you want to clone in the Work Area.  
Enter the attributes COMPANY\_ID, OBJ\_ID, OBJ\_VER, PRREF\_ID, PRREF\_VER, NAMESPACE\_OBJ\_ID, NAMESPACE\_OBJ\_VER, OBJECT\_VERSION\_NUMBER for each instance object.
- **PI\_TGTWABASEOBJTYPE** (Mandatory) This is a parameter of base object type that describes the Work Area.  
Enter the Work Area's COMPANY\_ID, OBJ\_ID, OBJ\_VER, NAMESPACE\_OBJ\_ID, NAMESPACE\_OBJ\_VER, OBJECT\_VERSION\_NUMBER.

## Remove a Work Area

Use this API to remove a Work Area and all the instance objects it contains.

### Name

CDR\_PUB\_DF\_WORKAREA.RemoveWorkArea

### Signature

```
PROCEDURE REMOVEWORKAREA(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PIO_SOURCECDRNAMING IN OUT CDR_NAMING_VERSION_OBJ_TYPE
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_SOURCECDRNAMING** (Mandatory) This is a parameter of table type CDR\_NAMING\_VERSION\_OBJ\_TYPE. Enter values to identify the Work Area that



you want to remove. The following attributes are required:  
COMPANY\_ID,OBJ\_ID,OBJ\_VER,OBJECT\_VERSION\_NUMBER,NAMESPACE\_OBJ\_ID,NAMESPACE\_OBJ\_VER.

## Get the Usage Intent RC of a Work Area

Use this API to retrieve the current value of the Usage Intent attribute for a particular Work Area.

### Name

CDR\_PUB\_DF\_WORKAREA.GetUsageIntentRC

### Signature

```
PROCEDURE GETUSAGEINTENTRC(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PI_COMPANY_ID IN CDR_NAMINGS.COMPANY_ID%TYPE,
  PI_OBJ_ID IN CDR_NAMINGS.OBJ_ID%TYPE,
  PI_OBJ_VER IN CDR_NAMING_VERSIONS.OBJ_VER%TYPE,
  PO_USAGEINTENT OUT CDR_WORKAREAS.USAGE_INTENT_RC%TYPE
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_COMPANY\_ID** (Mandatory) Enter company ID
- **PI\_OBJ\_ID** (Mandatory) Enter the object ID of the Work Area.
- **PI\_OBJ\_VER** (Mandatory) Enter the object version (OBJ\_VER) of the Work Area.
- **PO\_USAGEINTENT** This output parameter returns the current value of the Work Area's Usage Intent attribute.

## Update a Work Area's Usage Intent

Use this API to modify the value of the Usage Intent attribute of a Work Area.

### Name

CDR\_PUB\_DF\_WORKAREA.UpdateUsageIntent

### Signature

```
PROCEDURE UPDATEUSAGEINTENT(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
```

```

X_MSG_DATA OUT VARCHAR2,
PIO_SOURCECDRNAMING IN OUT CDR_NAMING_VERSION_OBJ_TYPE,
PIO_WORKAREAOBJTYPE IN OUT CDR_WORKAREA_OBJ_TYPE
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_SOURCECDRNAMING** (Mandatory) This is a parameter of table type CDR\_NAMING\_VERSION\_OBJ\_TYPE. Enter values to identify the Work Area whose Usage Intent attribute you want to modify.  
The following attributes are required: COMPANY\_ID,OBJ\_ID,OBJ\_VER.
- **PIO\_WORKAREAOBJTYPE** (Mandatory) This is a parameter of table type CDR\_WORKAREA\_OBJ\_TYPE that contains object attributes specific to Work Areas. For USAGE\_INTENT\_RC, enter the new value for the Usage Intent attribute.  
The allowed values are: \$SYSVALDNSTEPS\$DEVELOPMENT, \$SYSVALDNSTEPS\$PRODUCTION, \$SYSVALDNSTEPS\$QUALITYCONTROL.

## Install a Program

Use this API to install a single Program and the Table instances to which it is mapped. You must install a Program and its source Table instances before you can work on it in an Integrated Development Environment (IDE).

### Name

CDR\_PUB\_DF\_WORKAREA.InstallIDEcomponents

### Signature

```

PROCEDURE INSTALLIDECOMPONENTS(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PI_NCOMPANYID IN NUMBER,
  PI_NWAOBJID IN NUMBER,
  PI_NWAOBJVER IN NUMBER,
  PI_NPRREFID IN NUMBER,
  PI_NPRREFVER IN NUMBER,
  PO_VINSTLOGTYPE OUT VARCHAR2,
  PO_VINSTLOG OUT VARCHAR2
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_NCOMPANYID** (Mandatory) Enter your company ID. To get your company ID, use CDR\_PUB\_DEF\_FACTORY\_UTILS.GetCompanyId.

- **PI\_NWAOBJID** (Mandatory) Enter the object ID of the Work Area where the Program instance is located.
- **PI\_NWAOBJVER** (Mandatory) Enter the object version (OBJ\_VER) of the Work Area.
- **PI\_NPRREFID** (Mandatory) Enter the object ID of the Program instance that you want to install.
- **PI\_NPRREFVER** PrrefVer of the Program Instance to be installed
- **PO\_VINSTLOGTYPE** This output parameter returns one of the following values to indicate whether the installation ended with a status of Warning (G\_RET\_IDE\_INST\_WARNING) or Success (G\_RET\_IDE\_INST\_INFO).
- **PO\_VINSTLOG** This output parameter returns the installation log file (maximum length 32000 characters).

## Apply or Move a Snapshot Label

Use this API to apply a snapshot label to some or all tables and/or views in a Work Area.

### Name

CDR\_PUB\_EXE\_SNAPSHOT.SetOrMoveLabel

### Signature

```
PROCEDURE SETORMOVELABEL(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  PI_WA_COMPANY_ID IN CDR_NAMINGS.COMPANY_ID%TYPE,
  PI_WA_OBJ_ID IN CDR_NAMINGS.OBJ_ID%TYPE,
  PI_WA_OBJ_VER IN CDR_NAMING_VERSIONS.OBJ_VER%TYPE,
  PI_LABEL IN CDR_TAB_REF_LABELS.LABEL%TYPE,
  PI_FORCE_FLAG IN CDR_SUBMISSIONS.FORCE_EXECUTION_FLAG_RC%TYPE,
  PI_BLIND_FLAG IN CDR_TABLE_REF_JOBS.BLIND_BREAK_FLAG_RC%TYPE,
  PI_DATE IN DATE DEFAULT NULL,
  PI_SRC_TAB_COLL CDR_SRC_TABLE_COLL DEFAULT NULL,
  PI_WA_TABLES_COLL IN OUT NOCOPY CDR_WA_TABLES_COLL,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters. See [Functional Rules](#) below for more information.

- **PI\_WA\_COMPANY\_ID** (Mandatory) Enter the Company ID.
- **PI\_WA\_OBJ\_ID** (Mandatory) Enter the Work Area object ID.
- **PI\_WA\_OBJ\_VER** (Mandatory) Enter the latest object version.
- **PI\_LABEL** (Mandatory) Label text.
- **PI\_FORCEFLAG** (Mandatory)
  - If set to **\$YESNO\$YES**, the API overwrites the previous snapshot label.

- If set to **\$YESNO\$NO** the label is not applied.
- **PI\_BLIND\_FLAG** (Mandatory) The Blind Break flag (\$YESNO\$YES, \$YESNO\$NO).
- **PI\_DATE** (Optional) If this value is used, the API labels only those tables with latest data loads less than or equal to entered value.
- **PI\_SCR\_TAB\_COL** (Optional) Naming details of source table(s) of view in given Work Area and corresponding view naming details (to match value with CDR\_WA\_TABLES\_COLL).  
This parameter is of type CDR\_SRC\_TABLE\_OBJ\_TYPE and contains the following naming attributes:
  - **SRC\_TI\_COMPANY\_ID NUMBER(6)** Enter the Table or view Company ID.
  - **SRC\_TI\_OBJ\_ID NUMBER(22)** Enter the Table or view object ID.
  - **SRC\_TI\_OBJ\_VER NUMBER(7)** Enter the Table or view object version.
  - **SRC\_TI\_LABEL VARCHAR2(4000)** Source table's already applied label to any given load.
  - **VW\_TI\_COMPANY\_ID NUMBER(6)** Enter the view Company ID.
  - **VW\_TI\_OBJ\_ID NUMBER(22)** Enter the view object ID.
  - **VW\_TI\_OBJ\_VER NUMBER(7)** Enter the view object version.
- **PI\_WA\_TABLES\_COLL** (Optional) This is a parameter of type CDR\_WA\_TABLES\_TYPE that contains table naming attributes. Use this parameter if the API call is intended to set the label for only a subset of table(s) of an Work Area. It contains following naming attributes:
  - **TI\_COMPANY\_ID NUMBER(6)** Table COMPANY\_ID to which label need to be set.
  - **TI\_OBJ\_ID NUMBER(22)** Enter the object ID for the Table for which the label needs to be set.
  - **TI\_OBJ\_VER NUMBER(7)** Enter the object version for the Table for which the label needs to be set.
  - **TI\_RET\_STATUS VARCHAR2(4000)** This is return status, should be passed as null.

### Functional Rules

The following rules outline the API's behavior depending on parameter usage in the API call:

- If PI\_WA\_TABLES\_COLL is used, it will apply the label only to the entered table(s) and/or view(s).
- If PI\_WA\_TABLES\_COLL is null, the label is applied to all table(s)/view(s) in the Work Area.
- Multiple labels cannot be applied to the same table/view in one API call.
- If PI\_DATE is used, the label is applied to the latest Table data load, less than equals to the used date.
- If PI\_DATE is not used, the label is applied to latest Table data load.
- If PI\_FORCEFLAG is set to **\$YESNO\$YES**, the API overwrites the Snapshot Label if already applied, otherwise the label is not applied.

- If PI\_FORCEFLAG is set to **\$YESNO\$YES**, non-blinded Tables are always included to be labeled.
- If PI\_SRC\_TAB\_COLL is null, and PI\_WA\_TABLES\_COLL has view information or is null (if view exists), the view is loaded and labeled with latest loaded data from the source table.
- If PI\_SRC\_TAB\_COLL has a partial set of source table or views, and PI\_WA\_TABLES\_COLL has view information, the view is loaded and labeled with the latest loaded data from the source table that has non-passed source information.
- If PI\_SRC\_TAB\_COLL is used, the view details should be part of PI\_WA\_TABLES\_COLL.
- If PI\_SRC\_TAB\_COLL is null label will be applied to all table(s) in given Work Area.
- If collection PI\_SRC\_TAB\_COLL is passed with source table's label then view will be loaded and labeled with that data of source table.
- If PI\_SRC\_TAB\_COLL is used with the source table's label as null, then the view is loaded and labeled with latest loaded data of source table.

## Remove a Snapshot Label from a Work Area

Use this API to remove a snapshot label from the passing Work Area.

### Name

CDR\_PUB\_EXE\_SNAPSHOT.RemoveLabel

### Signature

```
PROCEDURE REMOVELABEL(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  PI_WA_COMPANY_ID IN CDR_NAMINGS.COMPANY_ID%TYPE,
  PI_WA_OBJ_ID IN CDR_NAMINGS.OBJ_ID%TYPE,
  PI_WA_OBJ_VER IN CDR_NAMING_VERSIONS.OBJ_VER%TYPE,
  PI_WA_TABLES_COLL in OUT NOCOPY CDR_WA_TABLES_COLL,
  PI_LABEL IN CDR_TAB_REF_LABELS.LABEL%TYPE,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

- **PI\_WA\_COMPANY\_ID** (Mandatory) Enter the Company ID.
- **PI\_WA\_OBJ\_ID** (Mandatory) Enter the Work Area object ID.
- **PI\_WA\_OBJ\_VER** (Mandatory) Enter the latest object version.
- **PI\_WA\_TABLES\_COLL** (Optional) User can pass the collection of table instance of the same Work Area on which user want remove the Snapshot Label.

- **PI\_LABEL** (Mandatory) Label value.

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## Workflows

This is a public interface for Workflow-related operations, including creating, modifying, and removing Workflows.

This chapter contains the following section:

- [Create and Modify Workflows](#)

### Create and Modify Workflows

This section contains the following topics:

- [Create a Workflow](#)
- [Check Out a Workflow Definition](#)
- [Create a Workflow Transition](#)
- [Create a Workflow Structure Instance](#)
- [Modify a Workflow](#)
- [Modify a Workflow](#)
- [Check In a Workflow Definition](#)
- [Remove a Transition](#)
- [Remove a Workflow Activity](#)
- [Remove a Workflow Instance](#)
- [Remove a Workflow Definition](#)

### Create a Workflow

Use this API to create a Workflow definition or instance.

#### Name

CDR\_PUB\_DF\_WORKFLOW.CreateWorkFlow

#### Signature

```
PROCEDURE CREATEWORKFLOW(  
    P_API_VERSION IN NUMBER,  
    P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
    P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
    P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
    X_RETURN_STATUS OUT VARCHAR2,  
    X_MSG_COUNT OUT NUMBER,  
    X_MSG_DATA OUT VARCHAR2,  
    PIO_SOURCECDRNAMING IN OUT CDR_NAMING_VERSION_OBJ_TYPE,  
    PI_CREATEOBJECT IN VARCHAR2,  
    PI_INSTANCE_SUBTYPE_ID IN CDR_NAMINGS.OBJECT_SUBTYPE_ID%TYPE,
```

```

PI_DEFCLASSIFICATIONCOLL IN CDR_CLASSIFICATIONS_COLL,
PI_INSTCLASSIFICATIONCOLL IN CDR_CLASSIFICATIONS_COLL
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- PIO\_SOURCECDRNAMING** (Mandatory) This is a parameter of table type CDR\_NAMING\_VERSIONS\_OBJ\_TYPE that contains CDR Naming Version attributes.  
For OBJECT\_TYPE\_RC enter \$OBJTYPES\$WORKFLOW if you are creating a definition only; \$OBJTYPES\$WORKFLOWREF if you are creating an instance of an existing definition; and also if you are creating a new definition and an instance of it.
- PI\_CREATEOBJECT** (Mandatory) Enter DEFN to create a definition only; INST to create an instance of an existing definition; or BOTH to create a new definition and an instance of it.  
Valid parameters are: Definition—DEFN, instance—INST, both —BOTH.
- PI\_INSTANCE\_SUBTYPE\_ID** (Optional) If you are creating a new instance, enter the ID for the subtype you want to give the instance.  
If you are creating a definition only, do not enter a value for this parameter.
- PI\_DEFCLASSIFICATIONCOLL** (Optional) By default the new definition is classified according to the subtype you assigned it in the CDR\_NAMING\_VERSION\_OBJ\_TYPE.  
If you want to override the default classifications for one or more classification levels, use this parameter. This is a collection of CDR\_CLA\_OBJ\_TYPEs, which have 5 attributes, including CLA\_LEVEL\_ID and CLASSIFICATION\_ID.  
  
If you want the definition to inherit its classifications for a particular level from its parent, enter the classification level ID and, for the CLASSIFICATION\_ID, enter 0 (zero). If you want to explicitly assign one or more terms for a particular level, initialize a CDR\_CLA\_OBJ\_TYPE for each term, entering the classification level ID and, for the CLASSIFICATION\_ID, the term ID. The PAR\_ attributes are not relevant to Workflow definitions. Do not enter any values for them.
- PI\_INSTCLASSIFICATIONCOLL** (Optional) By default the new instance is classified according to the subtype you assigned it in the PI\_INSTANCE\_SUBTYPE\_ID.  
If you want to override the default classifications for one or more classification levels, use this parameter. This is a collection of CDR\_CLA\_OBJ\_TYPEs, which have 5 attributes, including CLA\_LEVEL\_ID and CLASSIFICATION\_ID.  
  
If you want the instance to inherit its classifications for a particular level from its parent Work Area, enter the classification level ID and, for the CLASSIFICATION\_ID, enter 0 (zero).  
  
If you want to explicitly assign one or more terms for a particular level, initialize a CDR\_CLA\_OBJ\_TYPE for each term, entering the classification level ID and, for the CLASSIFICATION\_ID, the term ID. The PAR\_ attributes are not relevant to Workflows. Do not enter any values for them. If you are not creating a new instance, do not enter values here.



## Check Out a Workflow Definition

Use this API to check out a Workflow definition.

### Name

CDR\_PUB\_DF\_WORKFLOW.CheckOutWorkFlow

### Signature

```
PROCEDURE CHECKOUTWORKFLOW(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  X_RETURN_STATUS OUT VARCHAR2,  
  X_MSG_COUNT OUT NUMBER,  
  X_MSG_DATA OUT VARCHAR2,  
  PIO_CDRWORKFLOW IN OUT CDR_BASE_OBJ_TYPE,  
  PI_COMMENT IN VARCHAR2,  
  PI_ISINSTONLY IN VARCHAR2,  
  PI_OPTYPE IN VARCHAR2  
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_CDRWORKFLOW** [Mandatory] This is a parameter of table type CDR\_BASE\_OBJ\_TYPE. Enter values to identify the Workflow definition that you want to check in.  
The following attributes are mandatory: COMPANY\_ID, OBJECT\_ID, OBJECT\_VER, NAMESPACE\_OBJ\_ID, NAMESPACE\_OBJ\_VER, OBJECT\_VERSION\_NUMBER. Initialize these attributes in CDR\_BASE\_OBJ\_TYPE.
- **PI\_COMMENT** [Optional] Enter the reason for checking out the Workflow definition.
- **PI\_ISINSTONLY** (Mandatory) Enter \$YESNO\$NO. (The \$YESNO\$YES setting is used internally only.)
- **PI\_OPTYPE** (Mandatory) Enter NULL for this parameter.

## Create a Workflow Transition

Use this API to create a Workflow transition. A Workflow transition connects two Workflow activities.

### Name

CDR\_PUB\_DF\_WORKFLOW.CreateWfTransition

### Signature

```
PROCEDURE CREATEWFTRANSITION(  
  P_API_VERSION IN NUMBER,
```

```

P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
X_RETURN_STATUS OUT VARCHAR2,
X_MSG_COUNT OUT NUMBER,
X_MSG_DATA OUT VARCHAR2,
PIO_SOURCECDRNAMING IN OUT CDR_NAMING_VERSION_OBJ_TYPE,
PI_CDRWFTRANSITION IN OUT CDR_WMG_TRANS_OBJ_TYPE
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- PIO\_SOURCECDRNAMING** (Mandatory) This is a parameter of table type CDR\_NAMING\_VERSIONS\_OBJ\_TYPE that contains CDR Naming Version attributes.  
 For OBJECT\_TYPE\_RC enter \$OBJTYPES\$WORKFLOW if you are creating a definition only; \$OBJTYPES\$WORKFLOWREF if you are creating an instance of an existing definition; and also if you are creating a new definition and an instance of it.
- PI\_CDRWFTRANSITION** The Object ID and Version of the two Workflow activities being connected through this transition should be populated in the CDR\_WMG\_TRANS\_OBJ\_TYPE.  
 In the CONDITION\_RC attribute, specify the activity condition based on which the workflow transitions to the other specified activity.  
  
 The possible values are \$WFTRANSITIONS\$NONE, \$WFTRANSITIONS\$SUCCESS, \$WFTRANSITIONS\$ERROR, \$WFTRANSITIONS\$WARNING

## Create a Workflow Structure Instance

Use this API to create a Workflow Structure. These are the Workflow structures: And, Or, Start, End\_Success, End\_Warning, End\_Error, and Fork.

### Name

CDR\_PUB\_DF\_WORKFLOW.CreateWfStructref

### Signature

```

PROCEDURE CREATEWFSTRUCTREF(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PIO_SOURCECDRNAMING IN OUT CDR_NAMING_VERSION_OBJ_TYPE
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PIO\_SOURCECDRNAMING** (Mandatory) This is a parameter of table type `CDR_NAMING_VERSIONS_OBJ_TYPE` that contains CDR Naming Version attributes.

For `OBJECT_TYPE_RC` enter `$OBJTYPES$WORKFLOW` if you are creating a definition only; `$OBJTYPES$WORKFLOWREF` if you are creating an instance of an existing definition; and also if you are creating a new definition and an instance of it.

## Modify a Workflow

### Name

`CDR_PUB_DF_WORKFLOW.ModifyWorkFlow`

### Signature

```
PROCEDURE MODIFYWORKFLOW(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PIO_SOURCECDRNAMING IN OUT CDR_NAMING_VERSION_OBJ_TYPE
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

**PIO\_SOURCECDRNAMING** (Mandatory) This is a parameter of table type `CDR_NAMING_VERSIONS_OBJ_TYPE` that contains CDR Naming Version attributes.

For `OBJECT_TYPE_RC` enter `$OBJTYPES$WORKFLOW` if you are creating a definition only; `$OBJTYPES$WORKFLOWREF` if you are creating an instance of an existing definition; and also if you are creating a new definition and an instance of it.

## Modify a Workflow

Use this API to reorder workflow transitions.

### Name

`CDR_PUB_DF_WORKFLOW.ReorderWfTransitions`

### Signature

```
PROCEDURE REORDERWFTRANSITIONS(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
```

```

    PI_REORDEROBJCOLL IN CDR_REORDER_OBJ_COLL
);

```

### Parameters

This API has standard parameters (see "[Standard Parameters](#)") and the following parameter:

**PI\_REORDEROBJCOLL** Collection of the columns to be re-ordered.

## Check In a Workflow Definition

Use this API to check in a Workflow definition object.

### Name

CDR\_PUB\_DF\_WORKFLOW.CheckInWorkFlowDef

### Signature

```

PROCEDURE CHECKINWORKFLOWDEF(
    P_API_VERSION IN NUMBER,
    P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
    P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
    P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
    X_RETURN_STATUS OUT VARCHAR2,
    X_MSG_COUNT OUT NUMBER,
    X_MSG_DATA OUT VARCHAR2,
    PIO_CDRWORKFLOW IN OUT CDR_BASE_OBJ_TYPE,
    PI_COMMENT IN VARCHAR2
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_CDRWORKFLOW** This parameter refers to the workflow definition to be checked in.  
Initialize in `cdr_base_obj_type`, the basic naming details (COMPANY\_ID,OBJ\_ID,OBJ\_VER,NAMESPACE\_OBJ\_ID,NAMESPACE\_OBJ\_VERSION, OBJECT\_VERSION\_NUMBER) of the workflow to be checked in.
- **PI\_COMMENT** Comment to be associated with the check in operation

## Remove a Transition

Use this API to remove one or more Workflow transitions.

### Name

CDR\_PUB\_DF\_WORKFLOW.RemoveWfTransition

### Signature

```

PROCEDURE REMOVEWFTRANSITION(
    P_API_VERSION IN NUMBER,
    P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
    P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,

```

```

P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
X_RETURN_STATUS OUT VARCHAR2,
X_MSG_COUNT OUT NUMBER,
X_MSG_DATA OUT VARCHAR2,
PI_CDRCHILDOBJS IN CDR_BASE_OBJ_COLL
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PI\_CDRCHILDOBJS** (Mandatory) This is a collection of CDR\_BASE\_OBJ\_TYPES.

For each Workflow transition that you want to remove, initialize a CDR\_BASE\_OBJ\_TYPE and then extend the collection.

The following attributes are required for each Workflow transition: COMPANY\_ID, OBJ\_ID, OBJ\_VER, NAMESPACE\_OBJ\_ID, NAMESPACE\_OBJ\_VER, OBJECT\_VERSION\_NUMBER.

## Remove a Workflow Activity

Use this API to remove one or more Workflow activities. Workflow activities include all executable objects: Load Sets, Programs, Data Marts, and Report Sets; and also Workflow structures: And, Or, Start, End\_Success, End\_Warning, End\_Error, and Fork.

### Name

CDR\_PUB\_DF\_WORKFLOW.RemoveObjectsFromWorkflow

### Signature

```

PROCEDURE REMOVEOBJECTSFROMWORKFLOW(
P_API_VERSION IN NUMBER,
P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
X_RETURN_STATUS OUT VARCHAR2,
X_MSG_COUNT OUT NUMBER,
X_MSG_DATA OUT VARCHAR2,
PI_CDRCHILDOBJS IN CDR_BASE_OBJ_COLL
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PI\_CDRCHILDOBJS** (Mandatory) This is a collection of CDR\_BASE\_OBJ\_TYPES.

For each Workflow activity that you want to remove, initialize a CDR\_BASE\_OBJ\_TYPE and then extend the collection.

The following attributes are required for each Workflow activity: COMPANY\_ID, OBJ\_ID, OBJ\_VER, NAMESPACE\_OBJ\_ID, NAMESPACE\_OBJ\_VER, OBJECT\_VERSION\_NUMBER.

## Remove a Workflow Instance

Use this API to remove a Workflow instance object.

### Name

CDR\_PUB\_DF\_WORKFLOW.Remove

### Signature

```
PROCEDURE REMOVE(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  X_RETURN_STATUS OUT VARCHAR2,  
  X_MSG_COUNT OUT NUMBER,  
  X_MSG_DATA OUT VARCHAR2,  
  PI_BASEOBJCOLL IN OUT CDR_BASE_OBJ_COLL  
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PI\_BASEOBJCOLL** This refers to collection of workflow instances to be removed.

## Remove a Workflow Definition

Use this API to remove one or more Workflow definitions.

### Name

CDR\_PUB\_DF\_WORKFLOW.RemoveWorkFlow

### Signature

```
PROCEDURE REMOVEWORKFLOW(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  X_RETURN_STATUS OUT VARCHAR2,  
  X_MSG_COUNT OUT NUMBER,  
  X_MSG_DATA OUT VARCHAR2,  
  PIO_CDRWORKFLOW IN OUT CDR_BASE_OBJ_TYPE  
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PIO\_CDRWORKFLOW** (Mandatory) This is a parameter of CDR\_BASE\_OBJ\_TYPES.

For each Workflow that you want to remove, initialize a CDR\_BASE\_OBJ\_TYPE.

The following attributes are required: COMPANY\_ID, OBJ\_ID, OBJ\_VER, NAMESPACE\_OBJ\_ID, NAMESPACE\_OBJ\_VER, OBJECT\_VERSION\_NUMBER of the workflow to be removed should be initialized in cdr\_base\_obj\_type.

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## Workflow Notifications

This is a public interface for Notifications-related operations.

This chapter contains the following section:

- [Create and Modify Notifications](#)

### Create and Modify Notifications

This section contains the following topics:

- [Create a Notification](#)
- [Create a Notification Recipient](#)
- [Create a Notification Link](#)
- [Check Out a Notification Definition](#)
- [Modify a Notification Definition](#)
- [Modify a Notification Instance](#)
- [Send a Notification](#)
- [Check In a Notification Definition](#)
- [Remove a Notification Link](#)
- [Remove a Notification Recipient](#)
- [Remove a Notification](#)

### Create a Notification

Use this API to create a Notification definition or instance. This API also initializes the classification of the new Notification object.

#### Name

CDR\_PUB\_DF\_NOTIFICATIONS.CreateNotification

#### Signature

```
PROCEDURE CREATENOTIFICATION(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  X_RETURN_STATUS OUT VARCHAR2,  
  X_MSG_COUNT OUT NUMBER,  
  X_MSG_DATA OUT VARCHAR2,  
  PIO_SOURCECDRNAMING IN OUT CDR_NAMING_VERSION_OBJ_TYPE,  
  PI_CDRNOTIFICATION IN CDR_NOTIFICATION_OBJ_TYPE,  
  PI_CREATEOBJECT IN VARCHAR2,
```



```
PI_DEFCLASSIFICATIONCOLL IN CDR_CLASSIFICATIONS_COLL
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- PIO\_SOURCECDRNAMING** (Mandatory) This is a parameter of table type CDR\_NAMING\_VERSIONS\_OBJ\_TYPE that contains CDR Naming Version attributes.

If you are creating a new definition only or a new definition and an instance of it, enter values for the new definition.

If you are creating an instance of an existing definition, enter values to identify the existing definition.

For OBJECT\_TYPE\_RC enter \$OBJTYPES\$NOTIFICATION if you are creating a definition only; \$OBJTYPES\$NOTIFREF if you are creating an instance of an existing definition; and also if you are creating a new definition and an instance of it.
- PI\_CDRNOTIFICATION** (Mandatory) This is a parameter of table type CDR\_NOTIFICATION\_OBJ\_TYPE that contains Notification specific attributes. Enter FYI or APPROVAL for NOTIF\_TYPE\_RC.

Enter HIGH, MEDIUM, or LOW for NOTIF\_PRIORITY\_RC.

Enter ALL or ANY for ALL\_REPLIES\_FLAG\_RC for Notifications of type APPROVAL.
- PI\_CREATEOBJECT** Enter DEFN for creating a definition, INST for creating an instance, and BOTH for creating a definition and an instance of it.
- PI\_DEFCLASSIFICATIONCOLL** (Optional) By default the new definition is classified according to the subtype you assigned it in the CDR\_NAMING\_VERSION\_OBJ\_TYPE.

If you want to override the default classifications for one or more classification levels, use this parameter. This is a collection of CDR\_CLA\_OBJ\_TYPES, which have 5 attributes, including CLA\_LEVEL\_ID and CLASSIFICATION\_ID.

If you want the definition to inherit its classifications for a particular level from its parent, enter the classification level ID and, for the CLASSIFICATION\_ID, enter 0 (zero).

If you want to explicitly assign one or more terms for a particular level, initialize a CDR\_CLA\_OBJ\_TYPE for each term, entering the classification level ID and, for the CLASSIFICATION\_ID, the term ID.

The PAR\_ attributes are not relevant to Notifications. Do not enter any values for them.

## Create a Notification Recipient

Use this API to create Notification recipients. Notification recipients are group roles of a user group.

### Name

CDR\_PUB\_DF\_NOTIFICATIONS.CreateNotificationRecipient

## Signature

```
PROCEDURE CREATENOTIFICATIONRECIPIENT(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PI_CDRNOTIFRECIPIENTS IN CDR_NTFRCP_COLL
);
```

## Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PI\_CDRNOTIFRECIPIENTS** This is a collection of CDR\_NOTIF\_RECIPIENT\_OBJ\_TYPE.

If the Notification is of type APPROVAL, for the attribute FALLBACK\_FLAG\_RC you need to enter \$NOTIFRCPTTYPE\$PRIMARY if the recipient is Primary or \$NOTIFRCPTTYPE\$BACKUP if the recipient is Backup.

If the Primary recipients do not respond to an APPROVAL type of Notification within the defined time frame, then the Notification is sent to the Backup recipients.

# Create a Notification Link

Use this API to create links to Planned Outputs of executables owned by a Workflow.

## Name

CDR\_PUB\_DF\_NOTIFICATIONS.CreateNotificationLinks

## Signature

```
PROCEDURE CREATENOTIFICATIONLINKS(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PI_CDRNOTIFLINKS IN CDR_NOTIF_LINKS_OBJ_COLL
);
```

## Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

**PI\_CDRNOTIFLINKS** This is a collection of CDR\_NOTIF\_LINKS\_OBJ\_TYPE.

You need to enter values for the following attributes: COMPANY\_ID, NFINST\_OBJ\_ID, NFINST\_OBJ\_VER, PO\_COMPANY\_ID, PO\_OBJ\_ID, ACTIVITY\_COMPANY\_ID, ACTIVITY\_OBJ\_ID, ACTIVITY\_OBJ\_VER.

## Check Out a Notification Definition

Use this API to check out a Notification definition.

### Name

CDR\_PUB\_DF\_NOTIFICATIONS.CheckOutNotif

### Signature

```
PROCEDURE CHECKOUTNOTIF(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  X_RETURN_STATUS OUT VARCHAR2,  
  X_MSG_COUNT OUT NUMBER,  
  X_MSG_DATA OUT VARCHAR2,  
  PIO_CDRNOTIF IN OUT CDR_BASE_OBJ_TYPE,  
  PI_COMMENT IN VARCHAR2,  
  PI_ISINSTONLY IN VARCHAR2,  
  PI_OPTYPE IN VARCHAR2  
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_CDRNOTIF** [Mandatory] This is a parameter of table type `CDR_BASE_OBJ_TYPE`. Identify the Notification definition you want to check out. Provide the basic naming attributes: `COMPANY_ID`, `OBJECT_ID`, `OBJECT_VER`, `NAMESPACE_OBJ_ID`, `NAMESPACE_OBJ_VER`, `OBJECT_VERSION_NUMBER`. Initialize these attributes in `CDR_BASE_OBJ_TYPE`.
- **PI\_COMMENT** (Optional) Enter the reason you are checking in the Notification.
- **PI\_ISINSTONLY** Enter \$YESNO\$NO.
- **PI\_OPTYPE** Enter NULL for this parameter.

## Modify a Notification Definition

Use this API to modify a Notification definition. You need to check out the Notification definition first.

### Name

CDR\_PUB\_DF\_NOTIFICATIONS.ModifyNotification

### Signature

```
PROCEDURE MODIFYNOTIFICATION(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  X_RETURN_STATUS OUT VARCHAR2,
```

```

X_MSG_COUNT OUT NUMBER,
X_MSG_DATA OUT VARCHAR2,
PIO_SOURCECDRNAMING IN OUT CDR_NAMING_VERSION_OBJ_TYPE,
PI_CDRNOTIFICATION IN CDR_NOTIFICATION_OBJ_TYPE
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_SOURCECDRNAMING** (Mandatory) This is a parameter of table type CDR\_NAMING\_VERSIONS\_OBJ\_TYPE that contains CDR Naming Version attributes.  
Initialize the attributes COMPANY\_ID, OBJECT\_ID, and OBJECT\_VER.
- **PI\_CDRNOTIFICATION** (Mandatory) This is a parameter of table type CDR\_NOTIFICATION\_OBJ\_TYPE. Provide values for the attributes you want to modify.

## Modify a Notification Instance

Use this API to modify a Notification instance.

### Name

CDR\_PUB\_DF\_NOTIFICATIONS.ModifyNotificationInstance

### Signature

```

PROCEDURE MODIFYNOTIFICATIONINSTANCE(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PIO_SOURCECDRNAMING IN OUT CDR_NAMING_VERSION_OBJ_TYPE,
  PI_CDRNOTIFICATION IN CDR_NOTIFICATION_OBJ_TYPE
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_SOURCECDRNAMING** (Mandatory) This is a parameter of table type CDR\_NAMING\_VERSIONS\_OBJ\_TYPE that contains CDR Naming Version attributes.  
Initialize the attributes COMPANY\_ID, OBJECT\_ID, and OBJECT\_VER.
- **PI\_CDRNOTIFICATION** (Mandatory) This is a parameter of table type CDR\_NOTIFICATION\_OBJ\_TYPE. Provide values for the attributes you want to modify.

## Send a Notification

Use this API to send an information Notification either from a Program or from another database user.

### Name

CDR\_PUB\_DF\_NOTIFICATIONS.Send\_FYI\_Notification

### Signature

```

PROCEDURE SEND_FYI_NOTIFICATION
PI_JOB_ID          NUMBER          IN
PI_USER_GROUP      VARCHAR2        IN
PI_ROLE_CODE       VARCHAR2        IN
PI_SUBJECT         VARCHAR2        IN
PI_BODY           VARCHAR2        IN
PI_URL            VARCHAR2        IN
PI_URLNAME        VARCHAR2        IN          DEFAULT
PI_CDRNOTIFLINKS CDR_NOTIF_LINKS_OBJ_COLL IN          DEFAULT,
);

```

If the user wants to include just one URL in the notification, it can be passed in `pi_url` and the string to be shown for the hyperlink should be passed in `pi_urlName`.

On the other hand if the user wants to include links to some or all of the outputs generated by the job, then the list of the corresponding planned output IDs should be passed in the last collection parameter.

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_JOB\_ID** Enter the job ID created for the corresponding job for the notifications sent.
- **PI\_USER\_GROUP** Enter the user group identifier.
- **PI\_ROLE\_CODE** Enter the role code identifier.
- **PI\_SUBJECT** Enter the subject of the notification.
- **PI\_BODY** Enter the body content of the notification.
- **PI\_URL** Enter the URL to be embedded in the notification.

## Check In a Notification Definition

Use this API to check in a Notification definition.

### Name

CDR\_PUB\_DF\_NOTIFICATIONS.CheckInNotifDef

### Signature

```

PROCEDURE CHECKINNOTIFDEF (
  P_API_VERSION IN NUMBER,

```

```

P_INIT_MSG_LIST IN    VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
P_COMMIT IN    VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
P_VALIDATION_LEVEL IN    NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
X_RETURN_STATUS OUT    VARCHAR2,
X_MSG_COUNT OUT    NUMBER,
X_MSG_DATA OUT    VARCHAR2,
PIO_CDRNOTIF IN OUT    CDR_BASE_OBJ_TYPE,
PI_COMMENT IN    VARCHAR2
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_CDRNOTIF** [Mandatory] This is a parameter of table type `CDR_BASE_OBJ_TYPE` that object attributes. Identify the Notification definition you want to check in. Provide the basic naming attributes: `COMPANY_ID`, `OBJECT_ID`, `OBJECT_VER`, `NAMESPACE_OBJ_ID`, `NAMESPACE_OBJ_VER`, `OBJECT_VERSION_NUMBER`. Initialize these attributes in `CDR_BASE_OBJ_TYPE`.
- **PI\_COMMENT** (Optional) Enter the reason you are checking in the Notification.

## Remove a Notification Link

Use this API to remove links to Planned Outputs of executables owned by the Workflow.

### Name

`CDR_PUB_DF_NOTIFICATIONS.RemoveNotificationLinks`

### Signature

```

PROCEDURE REMOVE_NOTIFICATION_LINKS(
  P_API_VERSION IN    NUMBER,
  P_INIT_MSG_LIST IN    VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN    VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN    NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT    VARCHAR2,
  X_MSG_COUNT OUT    NUMBER,
  X_MSG_DATA OUT    VARCHAR2,
  PI_CDRNOTIF_LINKS IN    CDR_NOTIF_LINKS_OBJ_COLL
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

- **PI\_CDRNOTIF\_LINKS** (Mandatory) This is a collection of `CDR_NOTIF_LINKS_OBJ_TYPE`. For each Planned Output link that you want to remove, initialize a `CDR_NOTIF_LINKS_OBJ_TYPE` and then extend the collection.

## Remove a Notification Recipient

Use this API to remove a Notification recipient.

**Name**

CDR\_PUB\_DF\_NOTIFICATIONS.RemoveNotificationRecipients

**Signature**

```
PROCEDURE REMOVENOTIFICATIONRECIPIENTS(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PI_CDRNOTIFRECIPIENTS IN CDR_NTFRCP_COLL
);
```

**Parameters**

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

**PI\_CDRNOTIFRECIPIENTS** This is a collection of CDR\_NOTIF\_RECIPIENT\_OBJ\_TYPE.

For each Recipient that you want to remove, initialize a CDR\_NOTIF\_RECIPIENT\_OBJ\_TYPE and then extend the collection.

The following attributes are required:

COMPANY\_ID,OBJ\_ID,OBJ\_VER,USER\_GROUP\_ID,ROLE\_ID,FALLBACK\_FLAG\_R C.

## Remove a Notification

Use this API to remove a Notification definition.

**Name**

CDR\_PUB\_DF\_NOTIFICATIONS.RemoveNotifications

**Signature**

```
PROCEDURE REMOVENOTIFICATIONS(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PI_BASEOBJCOLL IN OUT CDR_BASE_OBJ_COLL
);
```

**Parameters**

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PI\_BASEOBJCOLL** (Mandatory) This is a collection of CDR\_BASE\_OBJ\_TYPE. For each Notification that you want to remove, initialize a CDR\_BASE\_OBJ\_TYPE and then extend the collection.

The following attributes are required:

COMPANY\_ID,OBJ\_ID,OBJ\_VER,OBJECT\_VERSION\_NUMBER,NAMESPACE\_OBJ\_ID,NAMESPACE\_OBJ\_VER.



# Part III

## Common APIs

This part of the Oracle Life Sciences Data Hub (Oracle LSH) API guide contains APIs that you can use to perform common tasks required for many different object types.

Part III contains the following chapters:

- [Setup Utilities](#)
- [Execution Setups](#)
- [Mappings](#)
- [Outputs](#)
- [Version Labels](#)
- [Classification](#)
- [Job Execution](#)
- [Security Policy](#)
- [Validation](#)

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## Setup Utilities

This is a public interface for operations related to the setting up of utilities in Oracle LSH.

This section contains the following topics:

- [Initialize APIs](#)
- [Get Factory Support](#)
- [Get Factory Utilities](#)
- [Get Factory Validations](#)
- [Get Data from Object Naming Tables](#)
- [Define and Modify Adapters](#)
- [Host Definition Constants](#)
- [Read Messages](#)
- [Change Tablespaces](#)

### Initialize APIs

This is a public interface that is used internally to initialize all other Oracle LSH external API packages. See [Calling the Security API Package](#) for details. See [Code Example Using Security and Error Message APIs](#) for an example of a program that calls the initialization API.

This section contains the following topics:

- [Initialize a Package](#)
- [Verify Whether an API is Enabled](#)
- [Enable an API](#)
- [Disable an API](#)

### Initialize a Package

This is used internally to initialize external Oracle LSH API packages.

#### Name

CDR\_PUB\_API\_INITIALIZATION.Initialization

#### Signature

```
PROCEDURE INITIALIZATION(  
    P_API_VERSION IN NUMBER,  
    P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
    P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
```

```

P_VALIDATION_LEVEL IN    NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
X_RETURN_STATUS   OUT    VARCHAR2,
X_MSG_COUNT       OUT    NUMBER,
X_MSG_DATA        OUT    VARCHAR2,
PI_VPKGNAME       IN     VARCHAR2
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PI\_VPKGNAME** This is used internally to pass the external API package name.

## Verify Whether an API is Enabled

Use this API to find out whether or not the API you want to use is enabled.

### Name

CDR\_PUB\_API\_INITIALIZATION.IsAPIenabled

### Signature

```

FUNCTION ISAPIENABLED(
  P_API_VERSION IN    NUMBER,
  P_INIT_MSG_LIST IN  VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN      VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN  NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL
) RETURN BOOLEAN;

```

### Return

BOOLEAN

- True: The API is enabled.
- False: It is disabled.

### Parameters

This API has standard parameters. See [Standard Parameters](#) for details.

## Enable an API

Use this API to enable LSH APIs that you want to use in a session. This API must be called at the beginning of each Program that uses LSH APIs.

### Name

CDR\_PUB\_API\_INITIALIZATION.EnableAPIs

### Signature

```

PROCEDURE ENABLEAPIS(
  P_API_VERSION IN    NUMBER,
  P_INIT_MSG_LIST IN  VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN      VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN  NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT    VARCHAR2,

```

```

X_MSG_COUNT OUT NUMBER,
X_MSG_DATA OUT VARCHAR2
);

```

### Parameters

This API has standard parameters. See [Standard Parameters](#) for details.

## Disable an API

Use this API to disable LSH APIs that you have used in a session. Call this API at the end of each Program that uses LSH APIs.

### Name

CDR\_PUB\_API\_INITIALIZATION.DisableAPIs

### Signature

```

Procedure disableAPIs (
p_api_version IN NUMBER
,p_init_msg_list IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE
,p_commit IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE
,p_validation_level IN NUMBER default CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL
,x_return_status OUT NOCOPY VARCHAR2
,x_msg_count OUT NOCOPY NUMBER
,x_msg_data OUT NOCOPY VARCHAR2
);

```

### Parameters

This API has standard parameters. See [Standard Parameters](#) for details.

## Get Factory Support

This is a public interface that hosts utility APIs for other packages.

This section contains the following topics:

- [Get a Naming Version Object](#)
- [Get a User ID](#)
- [Get a User Name](#)

## Get a Naming Version Object

Use this API to retrieve a valid CDR\_NAMING\_VERSION\_OBJ\_TYPE parameter by passing the primary keys COMPANY\_ID, OBJ\_ID, and OBJ\_VER to it.

### Name

CDR\_PUB\_DEF\_FACTORY\_SUPPORT.GetNamingObject

### Signature

```

FUNCTION GETNAMINGOBJECT(
P_API_VERSION IN NUMBER,
P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,

```

```

P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
PI_NCOMPANYID IN CDR_NAMINGS.COMPANY_ID%TYPE,
PI_NOBJID IN CDR_NAMINGS.OBJ_ID%TYPE,
PI_NOBJVER IN CDR_NAMING_VERSIONS.OBJ_VER%TYPE,
PO_CDRNAMING OUT CDR_NAMING_VERSION_OBJ_TYPE
) RETURN BOOLEAN;

```

**Return**

BOOLEAN

**Parameters**

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_NCOMPANYID** (Mandatory) Enter the COMPANY\_ID of the object. Use [Get a Company ID](#).
- **PI\_NOBJID** (Mandatory) Enter the OBJ\_ID of the object.
- **PI\_NOBJVER** (Mandatory) Enter the OBJ\_VER of the object.
- **PO\_CDRNAMING** (Mandatory) This is the output from the API.

## Get a User ID

Use this API to retrieve the User ID of a given LSH user name.

**Name**

CDR\_PUB\_DEF\_FACTORY\_SUPPORT.getUserID

**Signature**

```

FUNCTION getUserID(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  P_USERNAME IN VARCHAR2
  RETURN CDR_DF_NAMING_V.CHECKED_OUT_ID%type
);

```

**Parameters**

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

- **P\_USER\_NAME** (Mandatory) The LSH application user name.

## Get a User Name

Use this API to retrieve the current user name.

**Name**

CDR\_PUB\_DEF\_FACTORY\_SUPPORT.GetUserName

### Signature

```
FUNCTION GETUSERNAME(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  PI_USERID IN NUMBER  
) RETURN VARCHAR2;
```

### Return

Type VARCHAR2

Description VARCHAR2.

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PI\_USERID** (Mandatory) Enter the User ID. Use CDR\_PUB\_DEF\_FACTORY\_SUPPORT.GETUSERID to get the ID of the current user.

## Get Factory Utilities

This is a public interface that hosts utility APIs for other packages.

This section contains the following topics:

- [Get a Base Object Type](#)
- [Get a Company ID](#)

## Get a Base Object Type

Use this API to retrieve all details of an object from CDR\_BASE\_OBJ\_TYPE table, by passing the object's primary key values: COMPANY\_ID, OBJ\_ID, and OBJ\_VER.

### Name

CDR\_PUB\_DEF\_FACTORY\_UTILS.GetCDRBaseObject

### Signature

```
FUNCTION GETCDRBASEOBJECT(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  PI_COMPANYID IN CDR_NAMINGS.COMPANY_ID%TYPE,  
  PI_OBJID IN CDR_NAMINGS.OBJ_ID%TYPE,  
  PI_OBJVER IN CDR_NAMING_VERSIONS.OBJ_VER%TYPE  
) RETURN CDR_BASE_OBJ_TYPE;
```

### Return

Type CDR\_BASE\_OBJ\_TYPE

Description CDR\_BASE\_OBJ\_TYPE

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_COMPANYID** (Mandatory) Enter the COMPANY\_ID of the object
- **PI\_OBJID** (Mandatory) Enter the OBJ\_ID of the object
- **PI\_OBJVER** (Mandatory) Enter the OBJ\_VER of the object

## Get a Company ID

Use this API to retrieve the COMPANY\_ID of a given object. The object is identified from the context that this API is used in.

### Name

CDR\_PUB\_DEF\_FACTORY\_UTILS.GetCompanyID

### Signature

```
FUNCTION GETCOMPANYID(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL  
) RETURN NUMBER;
```

### Return

Type NUMBER

### Parameters

This API has standard parameters. See [Standard Parameters](#) for details.

## Get Factory Validations

This is a public interface that hosts APIs for checking object validation on various objects. These APIs are tools to automatically validate objects without having to manually set their attributes to validate them.

This section contains the following topics:

- [Validate a Namespace](#)
- [Validate a Reference](#)

## Validate a Namespace

Use this API to validate whether a given object is created in a valid parent; for example, you may want to check if a Program Definition is a valid parent of a Table Descriptor.

**Name**

CDR\_PUB\_DEF\_FACTORY\_VALIDATE.ValidateNamespace

**Signature**

```
FUNCTION VALIDATENAMESPACE(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  PIO_SOURCECDRNAMING IN OUT CDR_NAMING_VERSION_OBJ_TYPE  
) RETURN BOOLEAN;
```

**Return**

Type BOOLEAN

If the function returns True, then the reference is valid. Otherwise, it's invalid.

**Parameters**This API has standard parameters (see [Standard Parameters](#)) and the following parameter:**PIO\_SOURCECDRNAMING** (Mandatory) This is a parameter of table type CDR\_NAMING\_VERSIONS\_OBJ\_TYPE that contains CDR Naming Version attributes.

For OBJECT\_TYPE\_RC enter the appropriate value for the object for which you want to validate a reference.

Other required attributes are:

COMPANY\_ID,OBJ\_ID,OBJ\_VER,OBJECT\_TYPE\_RC,NAMESPACE\_OBJ\_ID,NAME\_SPACE\_OBJ\_VER,REF\_COMPANY\_ID,REF\_OBJ\_ID,REF\_OBJ\_VER

## Validate a Reference

Use this API to validate the definition specified for the given object id.

**Name**

CDR\_PUB\_DEF\_FACTORY\_VALIDATE.ValidateReference

**Signature**

```
FUNCTION VALIDATEREFERENCE(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  PIO_SOURCECDRNAMING IN OUT CDR_NAMING_VERSION_OBJ_TYPE  
) RETURN BOOLEAN;
```

**Return**

Type BOOLEAN



If the function returns True, then the reference is valid. Otherwise, it's invalid.

- True: The referenced object is valid.
- False: The references object is not valid.

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PIO\_SOURCECDRNAMING** (Mandatory) This is a parameter of table type CDR\_NAMING\_VERSIONS\_OBJ\_TYPE that contains CDR Naming Version attributes.

For OBJECT\_TYPE\_RC enter the appropriate value for the object for which you want to validate a reference.

Other required attributes are:

COMPANY\_ID,OBJ\_ID,OBJ\_VER,OBJECT\_TYPE\_RC,NAMESPACE\_OBJ\_ID,NAME SPACE\_OBJ\_VER,REF\_COMPANY\_ID,REF\_OBJ\_ID,REF\_OBJ\_VER

## Get Data from Object Naming Tables

This is a public interface that is used to retrieve data from naming-related tables.

This section contains the following topics:

- [Get the Latest Version](#)
- [Get a Maximum Version](#)
- [Get the Type of a Naming Object](#)
- [Get an Object's Naming Version](#)
- [Get an Object's Subtype ID](#)
- [Get an Object's Checkout Status](#)
- [Get Checkout Properties](#)
- [Get a Naming Object's Parent](#)
- [Get a Parent Naming Object](#)
- [Get the Latest Version of the Parent Object](#)
- [Get the Naming Status of a Parent Object](#)
- [Get the Validation Status of a Parent Object](#)
- [Get a Definition Object](#)
- [Get a Lookup Meaning](#)
- [Find Whether an Object is an Instance](#)
- [Find Whether Checked Out By Current User](#)
- [Find Whether a Checkout is User-Specific](#)
- [Find Whether Checkout is Implicit](#)

## Get the Latest Version

Use this API to retrieve the latest version available for a given object.

### Name

CDR\_PUB\_DF\_NAMING\_UTIL.GetLastVersion

### Signature

```
FUNCTION GETLASTVERSION(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  PI_BASEOBJECT IN CDR_BASE_OBJ_TYPE  
) RETURN NUMBER;
```

### Return

Type NUMBER

Description number

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PI\_BASEOBJECT** (Mandatory) This is a parameter of table type CDR\_BASE\_OBJ\_TYPE.

The required attributes are  
COMPANY\_ID,OBJECT\_ID,OBJECT\_VER,NAMESPACE\_OBJ\_ID,NAMESPACE\_OBJ\_VER.

## Get a Maximum Version

Use this API to get the maximum versions of a specified object and its namespace.

### Name

CDR\_PUB\_DF\_NAMING\_UTIL.GetMaxObjAndNsVersions

### Signature

```
PROCEDURE GETMAXOBJANDNSVERSIONS(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  X_RETURN_STATUS OUT VARCHAR2,  
  X_MSG_COUNT OUT NUMBER,  
  X_MSG_DATA OUT VARCHAR2,  
  PI_COMPID IN NUMBER,  
  PI_OBJID IN NUMBER,  
  PO_MAXOBJVER OUT NUMBER,
```

```

    PO_MAXNSOBJVER OUT NUMBER
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_COMPID** (Mandatory) Enter the COMPANY\_ID of the given object.
- **PI\_OBJID** (Mandatory) Enter the OBJ\_ID of the given object.
- **PO\_MAXOBJVER** This is an output parameter. It returns the maximum version of the given object.
- **PO\_MAXNSOBJVER** This is an output parameter. It returns the maximum version of the Namespace of the given object.

## Get the Type of a Naming Object

Use this API to get the type of a specified naming object.

### Name

CDR\_PUB\_DF\_NAMING\_UTIL.GetNamingObjectType

### Signature

```

FUNCTION GETNAMINGOBJECTTYPE(
    P_API_VERSION IN NUMBER,
    P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
    P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
    P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
    PIO_BASEOBJECT IN CDR_BASE_OBJ_TYPE
) RETURN VARCHAR2;

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PIO\_BASEOBJECT** (Mandatory) This is a parameter of table type CDR\_BASE\_OBJ\_TYPE. The required attributes are COMPANY\_ID,OBJECT\_ID,OBJECT\_VER,NAMESPACE\_OBJ\_ID,NAMESPACE\_OBJ\_VER.

## Get an Object's Naming Version

Use this API to retrieve an initialized object of table type CDR\_NAMING\_VERSION\_OBJ\_TYPE for a given naming object.

### Name

CDR\_PUB\_DF\_NAMING\_UTIL. GetNamingVersionObject

### Signature

```

FUNCTION GETNAMINGVERSIONOBJECT(
    P_API_VERSION IN NUMBER,

```

```

P_INIT_MSG_LIST IN    VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
P_COMMIT IN    VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
P_VALIDATION_LEVEL IN    NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
PI_BASEOBJECT IN    CDR_BASE_OBJ_TYPE
) RETURN CDR_NAMING_VERSION_OBJ_TYPE;

```

**Return**

Type CDR\_NAMING\_VERSION\_OBJ\_TYPE

**Parameters**

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PI\_BASEOBJECT** (Mandatory) This is a parameter of table type CDR\_BASE\_OBJ\_TYPE.

The required attributes are  
COMPANY\_ID,OBJECT\_ID,OBJECT\_VER,NAMESPACE\_OBJ\_ID,NAMESPACE\_OBJ\_VER.

## Get an Object's Subtype ID

Use this API to retrieve the object subtype ID of a given naming object.

**Name**

CDR\_PUB\_DF\_NAMING\_UTIL.GetObjectSubtypeID

**Signature**

```

FUNCTION GETOBJECTSUBTYPEID(
P_API_VERSION IN    NUMBER,
P_INIT_MSG_LIST IN    VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
P_COMMIT IN    VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
P_VALIDATION_LEVEL IN    NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
PI_BASEOBJECT IN    CDR_BASE_OBJ_TYPE
) RETURN NUMBER;

```

**Return**

Type NUMBER

Description Number

**Parameters**

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PI\_BASEOBJECT** (Mandatory) This is a parameter of table type CDR\_BASE\_OBJ\_TYPE.

The required attributes are  
COMPANY\_ID,OBJECT\_ID,OBJECT\_VER,NAMESPACE\_OBJ\_ID,NAMESPACE\_OBJ\_VER.

## Get an Object's Checkout Status

Use this API to find out whether or not a naming object is checked out.

### Name

CDR\_PUB\_DF\_NAMING\_UTIL.IsNamingCheckedOut

### Signature

```
FUNCTION ISNAMINGCHECKEDOUT(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  PIO_BASEOBJECT IN CDR_BASE_OBJ_TYPE  
) RETURN BOOLEAN;
```

### Return

Type BOOLEAN

Description Boolean

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PIO\_BASEOBJECT** (Mandatory) This is a parameter of table type CDR\_BASE\_OBJ\_TYPE.

The required attributes are COMPANY\_ID,OBJECT\_ID,OBJECT\_VER,NAMESPACE\_OBJ\_ID,NAMESPACE\_OBJ\_VER.

## Get Checkout Properties

Use this API to retrieve the checkout status and implicit checkout property of a specified object.

### Name

CDR\_PUB\_DF\_NAMING\_UTIL.GetChkoutProp

### Signature

```
PROCEDURE GETCHKOUTPROP(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  X_RETURN_STATUS OUT VARCHAR2,  
  X_MSG_COUNT OUT NUMBER,  
  X_MSG_DATA OUT VARCHAR2,  
  PI_COMPID IN NUMBER,  
  PI_OBJID IN NUMBER,  
  PO_CHKOUTSTATUS OUT VARCHAR2,
```

```

    PO_CHKIMPLPROP OUT VARCHAR2
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_COMPID** (Mandatory) Enter the COMPANY\_ID of the given object.
- **PI\_OBJID** (Mandatory) Enter the OBJ\_ID of the given object.
- **PO\_CHKOUTSTATUS** This is an output parameter. It returns the checkout status of the given object
- **PO\_CHKIMPLPROP** This is an output parameter. It returns the implicit checkout property of the given object.

## Get a Naming Object's Parent

Use this API to retrieve the parent object of a given naming object.

### Name

CDR\_PUB\_DF\_NAMING\_UTIL.GetParentNaming

### Signature

```

FUNCTION GETPARENTNAMING(
    P_API_VERSION IN NUMBER,
    P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
    P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
    P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
    PI_BASEOBJECT IN CDR_BASE_OBJ_TYPE
) RETURN CDR_BASE_OBJ_TYPE;

```

### Return

Type CDR\_BASE\_OBJ\_TYPE

Description CDR\_BASE\_OBJ\_TYPE

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PI\_BASEOBJECT** (Mandatory) This is a parameter of table type CDR\_BASE\_OBJ\_TYPE.

The required attributes are  
COMPANY\_ID,OBJECT\_ID,OBJECT\_VER,NAMESPACE\_OBJ\_ID,NAMESPACE\_OBJ\_VER.

## Get a Parent Naming Object

Use this API to retrieve the parent object of a naming object.

**Name**

CDR\_PUB\_DF\_NAMING\_UTIL.GetParentNaming

**Signature**

```
FUNCTION GETPARENTNAMING(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  PI_BASEOBJECT IN CDR_BASE_OBJ_TYPE  
) RETURN CDR_BASE_OBJ_TYPE;
```

**Return**

Type CDR\_BASE\_OBJ\_TYPE

Description CDR\_BASE\_OBJ\_TYPE

**Parameters**

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PI\_BASEOBJECT** (Mandatory) This is a parameter of table type CDR\_BASE\_OBJ\_TYPE.

The required attributes are  
COMPANY\_ID,OBJECT\_ID,OBJECT\_VER,NAMESPACE\_OBJ\_ID,NAMESPACE\_OBJ\_VER

## Get the Latest Version of the Parent Object

Use this API to retrieve the latest version of the parent of the given object.

**Name**

CDR\_PUB\_DF\_NAMING\_UTIL.GetLatestVersionOfParent

**Signature**

```
FUNCTION GETLATESTVERSIONOFPARENT(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  PI_BASEOBJECT IN CDR_BASE_OBJ_TYPE  
) RETURN CDR_BASE_OBJ_TYPE;
```

**Return**

Type CDR\_BASE\_OBJ\_TYPE

Description cdr\_base\_obj\_type

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PI\_BASEOBJECT** (Mandatory) This is a parameter of table type CDR\_BASE\_OBJ\_TYPE.

The required attributes are  
COMPANY\_ID,OBJECT\_ID,OBJECT\_VER,NAMESPACE\_OBJ\_ID,NAMESPACE\_OBJ\_VER.

## Get the Naming Status of a Parent Object

Use this API to get the naming status of the parent object of the specified object

### Name

CDR\_PUB\_DF\_NAMING\_UTIL.GetParentNamingStatus

### Signature

```
FUNCTION GETPARENTNAMINGSTATUS(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  PI_COMPANYID IN CDR_NAMINGS.COMPANY_ID%TYPE,  
  PI_NSOBJID IN CDR_NAMINGS.OBJ_ID%TYPE,  
  PI_NSOBJVER IN CDR_NAMING_VERSIONS.OBJ_VER%TYPE  
) RETURN VARCHAR2;
```

### Return

Type VARCHAR2

Description varchar2

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_COMPANYID** (Mandatory) Enter the COMPANY\_ID of the object.
- **PI\_NSOBJID** (Mandatory) Enter the OBJ\_ID of the given object.
- **PI\_NSOBJVER** (Mandatory) Enter the OBJ\_VER of the given object.

## Get the Validation Status of a Parent Object

Use this API to get the validation status of the parent object of the specified object

### Name

CDR\_PUB\_DF\_NAMING\_UTIL.GetParentValidationStatus



## Signature

```
FUNCTION GETPARENTVALIDATIONSTATUS(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  PI_COMPANYID IN CDR_NAMINGS.COMPANY_ID%TYPE,  
  PI_NSOBJID IN CDR_NAMINGS.OBJ_ID%TYPE,  
  PI_NSOBJVER IN CDR_NAMING_VERSIONS.OBJ_VER%TYPE  
) RETURN VARCHAR2;
```

## Return

Type VARCHAR2

Description varchar2

## Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_COMPANYID** (Mandatory) This refers to the company id of the given object.
- **PI\_NSOBJID** (Mandatory) Enter the OBJ\_ID of the given object.
- **PI\_NSOBJVER** (Mandatory) Enter the OBJ\_VER of the given object.

## Get a Definition Object

Use this API to retrieve the definition object that the given instance object points to.

### Name

CDR\_PUB\_DF\_NAMING\_UTIL.GetRefNaming

### Signature

```
FUNCTION GETREFNAMING(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  PI_BASEOBJECT IN CDR_BASE_OBJ_TYPE  
) RETURN CDR_BASE_OBJ_TYPE;
```

### Return

Type CDR\_BASE\_OBJ\_TYPE

Description CDR\_BASE\_OBJ\_TYPE

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PI\_BASEOBJECT** (Mandatory) This is a parameter of table type CDR\_BASE\_OBJ\_TYPE.

The required attributes are  
COMPANY\_ID,OBJECT\_ID,OBJECT\_VER,NAMESPACE\_OBJ\_ID,NAMESPACE\_OBJ\_VER.

## Get a Lookup Meaning

Use this API to get the Lookup Meaning for a Lookup Type and Code

### Name

CDR\_PUB\_DF\_NAMING\_UTIL.GetLookupMeaning

### Signature

```
PROCEDURE GETLOOKUPMEANING(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  X_RETURN_STATUS OUT VARCHAR2,  
  X_MSG_COUNT OUT NUMBER,  
  X_MSG_DATA OUT VARCHAR2,  
  PI_LOOKUPTYPE IN VARCHAR2,  
  PI_LOOKUPCODE IN VARCHAR2,  
  PO_LOOKUPMEANING OUT VARCHAR2  
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_LOOKUPTYPE** (Mandatory) Enter the Lookup Type
- **PI\_LOOKUPCODE** (Mandatory) Enter the Lookup Code
- **PO\_LOOKUPMEANING** This is an output parameter. It returns the Lookup Meaning.

## Find Whether an Object is an Instance

Use this API to check if the given naming object is an instance.

### Name

CDR\_PUB\_DF\_NAMING\_UTIL.IsInstance

### Signature

```
FUNCTION ISINSTANCE(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  PI_OBJECT_TYPE_RC IN VARCHAR2  
) RETURN VARCHAR2;
```

### Return

Type VARCHAR2

Description varchar2

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PI\_OBJECT\_TYPE\_RC** (Mandatory) Object Type RC.

## Find Whether Checked Out By Current User

Use this API to find out whether the given naming object is checked out by the current user.

### Name

CDR\_PUB\_DF\_NAMING\_UTIL.IsCheckedOutByUser

### Signature

```
FUNCTION ISCHECKEDOUTBYUSER(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  PIO_BASEOBJECT IN CDR_BASE_OBJ_TYPE
) RETURN BOOLEAN;
```

### Return

Type BOOLEAN Description boolean

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PIO\_BASEOBJECT** (Mandatory) This is a parameter of table type CDR\_BASE\_OBJ\_TYPE.

The required attributes are  
COMPANY\_ID,OBJECT\_ID,OBJECT\_VER,NAMESPACE\_OBJ\_ID,NAMESPACE\_OBJ\_VER.

## Find Whether a Checkout is User-Specific

Use this API to find out if an object checkout is user specific or non-user specific. Only the user who checked out a user specific object can check it in; whereas any user may check in a non-user specific object.

### Name

CDR\_PUB\_DF\_NAMING\_UTIL.IsCheckOutUserSpecific

### Signature

```
FUNCTION ISCHECKOUTUSERSPECIFIC(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
```

```

P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
PI_SOURCECDRNAMING IN CDR_NAMING_VERSION_OBJ_TYPE
) RETURN BOOLEAN;

```

**Return**

Type BOOLEAN

Description Boolean True or False

**Parameters**

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PI\_SOURCECDRNAMING** (Mandatory) This is a parameter of type `cdr_naming_versions_obj_type`.

The following attributes are required: `COMPANY_ID`, `OBJECT_TYPE_RC`, `NAME`, `NAMESPACE_OBJ_ID`, `NAMESPACE_OBJ_VER`, `OWNING_LOCATION_RC`, `OBJECT_SUBTYPE_ID`, `DESCRIPTION`, `REF_COMPANY_ID`, `REF_OBJ_ID`, `REF_OBJ_VER`.

## Find Whether Checkout is Implicit

Use this API to find out whether a naming object is checked out implicitly.

**Name**

CDR\_PUB\_DF\_NAMING\_UTIL.IsCheckOutImplicit

**Signature**

```

FUNCTION ISCHECKOUTIMPLICIT(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  PI_OBJECT_TYPE_RC IN VARCHAR2,
  PI_ISINSTONLY IN VARCHAR2
) RETURN BOOLEAN;

```

**Return**

Type BOOLEAN Description boolean

**Parameters**

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_OBJECT\_TYPE\_RC** (Mandatory) Enter the Object Type.
- **PI\_ISINSTONLY** (Mandatory) This will have the value 'YES' or 'NO', to indicate whether it is called from an Instance or a Definition.

## Define and Modify Adapters

This package is used to create adapter domains and adapter areas for user defined adapters.

This section contains the following topics:

- [Create an Adapter Domain](#)
- [Modify an Adapter Domain](#)
- [Create an Adapter Area](#)
- [Modify an Adapter Area](#)
- [Populate a Tech Type Table](#)
- [Modify a Tech Type Table](#)

### Create an Adapter Domain

Use this API to create an Adapter Domain.

#### Name

CDR\_PUB\_ATK\_ADAPTER.CreateAdapterDomain

#### Signature

```
PROCEDURE CREATEADAPTERDOMAIN(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  X_RETURN_STATUS OUT VARCHAR2,  
  X_MSG_COUNT OUT NUMBER,  
  X_MSG_DATA OUT VARCHAR2,  
  PIO_ADAPTERDOMAINNAMING IN OUT CDR_NAMING_VERSION_OBJ_TYPE  
);
```

#### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PIO\_ADAPTERDOMAINNAMING** (Mandatory) This is a parameter of table type CDR\_NAMING\_VERSION\_OBJ\_TYPE. Enter values for the Adapter Domain that you are creating. For OBJECT\_TYPE\_RC enter \$OBJTYPES\$ADAPTERDOMAIN.

The following attributes are required: COMPANY\_ID,NAME

### Modify an Adapter Domain

Use this API to modify an Adapter Domain.

#### Name

CDR\_PUB\_ATK\_ADAPTER.ModifyAdapterDomain

## Signature

```
PROCEDURE MODIFYADAPTERDOMAIN(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER DEFAULT CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  X_RETURN_STATUS OUT NOCOPY VARCHAR2,  
  X_MSG_COUNT OUT NOCOPY NUMBER,  
  X_MSG_DATA OUT NOCOPY VARCHAR2,  
  PIO_ADAPTERDOMAINNAMING IN OUT NOCOPY CDR_NAMING_VERSION_OBJ_TYPE  
);
```

## Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- PARAM P\_API\_VERSION (Mandatory). Enter the current version of the API you are calling. The API compares the version numbers of incoming calls to its current version number and returns an error if they are incompatible.
- PARAM P\_INIT\_MSG\_LIST (Optional). Accept the default value (FND\_API.G\_FALSE) to ensure that this individual API does not initialize the message list upon completion. Pass FND\_API.G\_TRUE to override the default behavior.
- PARAM P\_COMMIT (Optional). Accept the default value (FND\_API.G\_FALSE) to ensure that this individual API does not get committed upon completion. Pass FND\_API.G\_TRUE to override the default behavior.
- PARAM P\_VALIDATION\_LEVEL (Optional). Accept the default value to perform full validation. No other values are currently supported.
- PARAM X\_RETURN\_STATUS. This output parameter returns the end status of the API: (S) Success, (E) Error or (U) Unexpected Error.
- PARAM X\_MSG\_COUNT. This output parameter returns the count of error messages if the return status is other than *Success*.
- PARAM X\_MSG\_DATA. This output parameter returns the text of the error message, if the message count is 1. If there are more than one message, use `cdr_pub_msg_pub.get` to retrieve the messages.
- PARAM PIO\_ADAPTERDOMAINNAMING (Mandatory). This is a parameter of table type CDR\_NAMING\_VERSION\_OBJ\_TYPE. Enter values to identify the Adapter Domain and enter new values for the attributes you want to modify. All attributes are required. For OBJECT\_TYPE\_RC enter \$OBJTYPES\$ADAPTERDOMAIN.

## Create an Adapter Area

Use this API to create an Adapter Area.

### Name

CDR\_PUB\_ATK\_ADAPTER.CreateAdapterArea

## Signature

```
PROCEDURE CREATEADAPTERAREA(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PIO_ADAPTERAREANAMING IN OUT CDR_NAMING_VERSION_OBJ_TYPE,
  PIO_ADAPTERAREAROW IN OUT CDR_ADAPTER_AREAS%ROWTYPE
);
```

## Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_ADAPTERAREANAMING** (Mandatory) This is a parameter of table type `CDR_NAMING_VERSION_OBJ_TYPE`. Enter values for the adapter area that you are creating.
- **PIO\_ADAPTERAREAROW** (Mandatory) This is a parameter of row type `CDR_ADAPTER_AREAS` table. Enter values specific for the adapter area that you are creating. For `OBJECT_TYPE_RC` enter `$OBJTYPES$ADAPTERAREA`. The following attributes are required: `COMPANY_ID,NAME`

## Modify an Adapter Area

Use this API to modify an Adapter Area.

### Name

`CDR_PUB_ATK_ADAPTER.ModifyAdapterArea`

### Signature

```
PROCEDURE MODIFYADAPTERAREA(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER DEFAULT CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT NOCOPY VARCHAR2,
  X_MSG_COUNT OUT NOCOPY NUMBER,
  X_MSG_DATA OUT NOCOPY VARCHAR2,
  PIO_ADAPTERAREANAMING IN OUT NOCOPY CDR_NAMING_VERSION_OBJ_TYPE,
  PIO_ADAPTERAREAROW IN OUT NOCOPY CDR_ADAPTER_AREAS%ROWTYPE,
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PARAM P\_INIT\_MSG\_LIST** (Optional). Accept the default value (`FND_API.G_FALSE`) to ensure that this individual API does not initialize the message list upon completion. Pass `FND_API.G_TRUE` to override the default behavior.

- PARAM P\_COMMIT (Optional). Accept the default value (FND\_API.G\_FALSE) to ensure that this individual API does not get committed upon completion. Pass FND\_API.G\_TRUE to override the default behavior.
- PARAM P\_VALIDATION\_LEVEL (Optional). Accept the default value to perform full validation. No other values are currently supported.
- PARAM X\_RETURN\_STATUS. This output parameter returns the end status of the API: (S) Success, (E) Error or (U) Unexpected Error.
- PARAM X\_MSG\_COUNT. This output parameter returns the count of error messages if the return status is other than *Success*.
- PARAM X\_MSG\_DATA. This output parameter returns the text of the error message, if the message count is 1. If there are more than one message, use `cdr_pub_msg_pub.get` to retrieve the messages.
- PARAM PIO\_ADAPTERDOMAINNAMING (Mandatory). This is a parameter of table-type CDR\_NAMING\_VERSION\_OBJ\_TYPE. Enter values to identify the Adapter Area and enter new values for the attributes you want to modify. All attributes are required.
- PARAM PIO\_ADAPTERAREAROW (Mandatory). This is a parameter of row-type CDR\_ADAPTER\_AREAS table.
- PARAM P\_API\_VERSION (Mandatory). Enter the current version of the API you are calling. The API compares the version numbers of incoming calls to its current version number and returns an error if they are incompatible. For OBJECT\_TYPE\_RC enter \$OBJTYPES\$ADAPTERAREA.

## Populate a Tech Type Table

Use this API to populate a Tech Type Table.

### Name

CDR\_PUB\_ATK\_ADAPTER.PopulateTechTypes

### Signature

```
PROCEDURE POPULATETECHTYPES(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PIO_TECHTYPEROW IN OUT CDR_TECH_TYPES%ROWTYPE
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PIO\_TECHTYPEROW** (Mandatory) This is a parameter of row type `cdr_tech_types` table. Enter values specific for the tech type that you are creating.



## Modify a Tech Type Table

Use this API to modify a Tech Type Table.

### Name

CDR\_PUB\_ATK\_ADAPTER.ModifyTechTypes

### Signature

```
PROCEDURE MODIFYTECHTYPE(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER DEFAULT CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  X_RETURN_STATUS OUT NOCOPY VARCHAR2,  
  X_MSG_COUNT OUT NOCOPY NUMBER,  
  X_MSG_DATA OUT NOCOPY VARCHAR2,  
  PIO_TECHTYPEROW IN OUT NOCOPY CDR_Tech_Types%ROWTYPE,  
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- PARAM P\_API\_VERSION (Mandatory). Enter the current version of the API you are calling. The API compares the version numbers of incoming calls to its current version number and returns an error if they are incompatible.
- PARAM P\_INIT\_MSG\_LIST (Optional). Accept the default value (FND\_API.G\_FALSE) to ensure that this individual API does not initialize the message list upon completion. Pass FND\_API.G\_TRUE to override the default behavior.
- PARAM P\_COMMIT (Optional). Accept the default value (FND\_API.G\_FALSE) to ensure that this individual API does not get committed upon completion. Pass FND\_API.G\_TRUE to override the default behavior.
- PARAM P\_VALIDATION\_LEVEL (Optional). Accept the default value to perform full validation. No other values are currently supported.
- PARAM X\_RETURN\_STATUS. This output parameter returns the end status of the API: (S) Success, (E) Error or (U) Unexpected Error.
- PARAM X\_MSG\_COUNT. This output parameter returns the count of error messages if the return status is other than *Success*.
- PARAM X\_MSG\_DATA. This output parameter returns the text of the error message, if the message count is 1. If there are more than one message, use `cdr_pub_msg_pub.get` to retrieve the messages.
- PARAM PIO\_TECHTYPEROW (Mandatory). This is a parameter of row type `cdr_tech_types` table. Enter values specific for the tech type that you want to update.

## Host Definition Constants

This is a public interface that hosts definition constants for Oracle LSH APIs.

**Name**

CDR\_PUB\_DEF\_CONSTANTS

## Read Messages

This is a public interface for reporting using messages from the system's message stack. See [Code Example Using Security and Error Message APIs](#) for an example of a program that calls this reporting API.

This section contains the following topics:

- [Get a Message](#)
- [Get a Message Count](#)
- [Initialize a Message Stack](#)

## Get a Message

Use this API to retrieve messages from the message stack.

**Name**

CDR\_PUB\_MSG\_PUB.Get

**Signature**

```
FUNCTION GET(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  P_MSG_INDEX IN NUMBER := G_NEXT,  
  P_ENCODED IN VARCHAR2 := 'T'  
) RETURN VARCHAR2;
```

**Return**

Type VARCHAR2

Description varchar2 Message Text

**Parameters**

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **P\_MSG\_INDEX** (Mandatory) Enter the number of the message you want to retrieve; for example, if you enter the number 1, the first message is retrieved from the message stack.
- **P\_ENCODED** (Mandatory) Enter "T" if you want the message to be encoded, and "F" if you do not.

## Get a Message Count

Use this API to retrieve the count of messages in the message stack. This API returns the G\_MSG\_COUNT value.

### Name

CDR\_PUB\_MSG\_PUB.Count\_Msg

### Signature

```
FUNCTION COUNT_MSG(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL  
) RETURN NUMBER;
```

### Return

Type NUMBER

Description Number of messages in the stack

### Parameters

This API has standard parameters (see [Standard Parameters](#)).

## Initialize a Message Stack

Use this API to initialize the global message table. This API clears the G\_MSG\_TBL and resets all its global variables, except the message level threshold value.

### Name

CDR\_PUB\_MSG\_PUB.Initialize

### Signature

```
PROCEDURE INITIALIZE(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  X_RETURN_STATUS OUT VARCHAR2,  
  X_MSG_COUNT OUT NUMBER,  
  X_MSG_DATA OUT VARCHAR2  
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)).

## Change Tablespaces

Use this API to alter the tablespace of Table instances and indexes in a single container—Domain, Application Area, or Work Area—identified recursively. This may

be helpful if you want to archive data or if the current tablespace runs out of room. You can associate Table instances and indexes with the same tablespace or two different ones.

The API generates a script to change the tablespace attribute of all table instances and indexes in the container you specify. It also analyzes the effect of the change and generates a log file that may include errors or warnings.

#### To Use this API:

1. Take a backup of the database.
2. Run the API with a database account associated with an application user.
3. Check the generated log file for errors and warnings before running the generated script.
4. Run the script with a database account with DBA privileges.

#### Note:

If a Work Area is installed after its Table instances and indexes have been changed to a different tablespace, some of the new tablespace associations are lost:

- Table instances remain in the new tablespace.
- Temporary tables revert to the default tablespace.
- Nonunique and bitmap indexes are associated with the new tablespace of the Table instances, even if they had been in a different new tablespace.
- All other indexes revert to the default tablespace.

You can run the script again to properly reassociate all objects with the preferred tablespaces.

#### Name

CDR\_PUB\_REORG\_TABLES.genTablesTablespaceAlterScript

#### Signature

```
procedure genTablesTablespaceAlterScript(
    p_api_version      IN NUMBER ,
    p_init_msg_list    IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,
    p_validation_level IN NUMBER DEFAULT
        CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
    pi_companyId       IN cdr_namings.company_id%TYPE,
    pi_objId            IN cdr_namings.obj_id%TYPE,
    pi_targetTabTablespace IN VARCHAR2,
    pi_targetIdxTablespace IN VARCHAR2,
    po_cReturnClob     OUT NOCOPY clob,
    po_cReturnLogClob  OUT NOCOPY clob,
    x_return_status    OUT NOCOPY VARCHAR2,
    x_msg_count        OUT NOCOPY NUMBER,
    x_msg_data         OUT NOCOPY VARCHAR2);
```

## Parameters

This API has standard parameters (see the *Oracle Health Sciences Life Sciences Data Hub API Guide*) and the following parameters:

 **Note:**

Unlike other LSH public APIs, this API has the standard P\_COMMIT parameter permanently set to FALSE.

- **PI\_COMPANYID** (Mandatory). Enter the company ID of the container object—Domain, Application Area, or Work Area—that contains the table instances whose tablespace you want to change. To get your company ID, use CDR\_PUB\_DEF\_FACTORY\_UTILS.GetCompanyId.
- **PI\_OBJID** (Mandatory). Enter the object ID of the container object—Domain, Application Area, or Work Area—that contains the table instances whose tablespace you want to change.
- **PI\_TARGETTABTABLESPACE** (Mandatory). Enter the name of the new tablespace for tables.
- **PI\_TARGETIDXTABLESPACE** (Mandatory). Enter the name of the new tablespace for indexes.
- **PO\_CRETURNCLOB** The API returns a generated script CLOB output.
- **PO\_CRETURNLOGCLOB** The API returns a generated log CLOB output.

# 19

## Execution Setups

This is a public interface for Execution Setup-related operations, including creating, modifying, and removing Execution Setups. It also includes functions for checking Execution Setups in and out.

This chapter contains this section:

- [Create and Modify Execution Setups](#)

### Create and Modify Execution Setups

This section contains the following topics:

- [Create an Execution Setup](#)
- [Check Out an Execution Setup](#)
- [Modify an Execution Setup](#)
- [Modify a Parameter](#)
- [Modify an Execution Setup Parameter](#)
- [Load Parameter Details](#)
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- [Make an Execution Setup Active](#)
- [Remove an Execution Setup](#)

### Create an Execution Setup

Use this API to create a new Execution Setup.

#### Name

CDR\_PUB\_DF\_EXECUTIONSETUP.CreateExecutionSetup

#### Signature

```
PROCEDURE CREATEEXECUTIONSETUP(  
    P_API_VERSION IN NUMBER,  
    P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
```

```

P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
X_RETURN_STATUS OUT VARCHAR2,
X_MSG_COUNT OUT NUMBER,
X_MSG_DATA OUT VARCHAR2,
PIO_SOURCECDRNAMING IN OUT CDR_NAMING_VERSION_OBJ_TYPE,
PO_DEFCLASSIFICATIONCOLL IN CDR_CLASSIFICATIONS_COLL
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_SOURCECDRNAMING** (Mandatory) This is a parameter of table type CDR\_NAMING\_VERSIONS\_OBJ\_TYPE that contains CDR Naming Version attributes. For OBJECT\_TYPE\_RC enter \$OBJTYPE\$EXECSETUP.
- **PO\_DEFCLASSIFICATIONCOLL** (Optional) By default the new definition is classified according to the subtype you assigned it in the CDR\_NAMING\_VERSION\_OBJ\_TYPE.  
If you want to override the default classifications for one or more classification levels, use this parameter. This is a collection of CDR\_CLA\_OBJ\_TYPEs, which have 5 attributes, including CLA\_LEVEL\_ID and CLASSIFICATION\_ID.  
  
If you want the definition to inherit its classifications for a particular level from its parent, enter the classification level ID and, for the CLASSIFICATION\_ID, enter 0 (zero).  
  
If you want to explicitly assign one or more terms for a particular level, initialize a CDR\_CLA\_OBJ\_TYPE for each term, entering the classification level ID and, for the CLASSIFICATION\_ID, the term ID. The PAR\_ attributes are not relevant to Execution Setups. Do not enter any values for them. If you are not creating a new definition, do not enter values here.

## Check Out an Execution Setup

Use this API to check out an Execution Setup.

### Name

CDR\_PUB\_DF\_EXECUTIONSETUP.CheckOutExecutionSetup

### Signature

```

PROCEDURE CHECKOUTEXECUTIONSETUP(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PIO_BASEOBJECT IN OUT CDR_BASE_OBJ_TYPE,
  PI_COMMENT IN VARCHAR2,
  PI_ISINSTONLY IN VARCHAR2
);

```

## Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_BASEOBJECT** (Mandatory) This is a parameter of table type CDR\_BASE\_OBJ\_TYPE. Enter values to identify the Execution Setup that you want to check out.  
The following attributes are required:  
COMPANY\_ID,OBJ\_ID,OBJ\_VER,OBJECT\_VERSION\_NUMBER,NAMESPACE\_OBJ\_ID,NAMESPACE\_OBJ\_VER.
- **PI\_COMMENT** (Optional) Enter the reason you are checking out the Execution Setup.
- **PI\_ISINSTONLY** (Mandatory) Enter \$YESNO\$NO.

## Modify an Execution Setup

Use this API to modify an Execution Setup. You can change an Execution Setup's name and description. You must check out the Execution Setup before modifying it.

### Name

CDR\_PUB\_DF\_EXECUTIONSETUP.ModifyExecutionSetup

### Signature

```

PROCEDURE MODIFYEXECUTIONSETUP(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PIO_SOURCECDRNAMING IN OUT CDR_NAMING_VERSION_OBJ_TYPE
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

- **PIO\_SOURCECDRNAMING** (Mandatory) This is a parameter of table type CDR\_NAMING\_VERSION\_OBJ\_TYPE. Enter values to identify the Execution Setup and enter new values for the attributes you want to modify. All attributes are required.

#### Note:

Use separate APIs for modifying the validation status and the version label: CDR\_PUB\_VL\_VALIDATION.UPDATEVALSTATUS and CDR\_PUB\_DF\_NAMING.UPDATEVERSIONLABEL.



## Modify a Parameter

Use this API to modify Execution Setup parameters.

### Name

CDR\_PUB\_DF\_EXECUTIONSETUP.ModifyParameter

### Signature

```
PROCEDURE MODIFYPARAMETER(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  X_RETURN_STATUS OUT VARCHAR2,  
  X_MSG_COUNT OUT NUMBER,  
  X_MSG_DATA OUT VARCHAR2,  
  PI_CHANGEDPARAMETERCOLL IN CDR_SUBMISSION_DETAILS_COLL  
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PI\_CHANGEDPARAMETERCOLL** (Mandatory) This is a collection of CDR\_SUBMISSION\_DETAILS.Collection of Parameter Instances on which the modify operation has been requested.

## Modify an Execution Setup Parameter

Use this API to modify the parameters of an Execution Setup.

### Name

CDR\_PUB\_DF\_EXECUTIONSETUP.ModifYesParameters

### Signature

```
PROCEDURE MODIFYYESPARAMETERS(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  X_RETURN_STATUS OUT VARCHAR2,  
  X_MSG_COUNT OUT NUMBER,  
  X_MSG_DATA OUT VARCHAR2,  
  PIO_PARAMETERCOLL IN OUT CDR_PARAMETER_COLL  
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PIO\_PARAMETERCOLL** (Mandatory) This is a collection of cdr\_parameter\_coll. Enter the values for parameters you want to change.

The attributes you can change are: `read_only_flag_rc`, `mandatory_flag_rc`, and `visible_flag_rc`. Enter `$yesno$yes` for yes, and `$yesno$no` for no.

## Load Parameter Details

Use this API to insert all parameters into a `CDR_ES_TEMP` table before submitting Report Set instance and Work Flow instance jobs.

### Name

`CDR_PUB_DF_EXECUTIONSETUP.LoadESTempTable`

### Signature

```
PROCEDURE LOADESTEMPTABLE(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PI_BASEOBJ IN CDR_BASE_OBJ_TYPE,
  PI_NODEPRREFID IN NUMBER := NULL,
  PI_NODEPRREFVER IN NUMBER := NULL,
  PI_JOBID IN NUMBER := NULL
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_BASEOBJ** (Mandatory) This is a parameter of `cdr_base_obj` type for the Execution Setup. Enter the necessary attributes.
- **PI\_NODEPRREFID** (Mandatory) If you are submitting a single RSE, enter the `pref_id` of that RSE, else enter NULL.
- **PI\_NODEPRREFVER** (Mandatory) If you are submitting a single RSE, enter the `pref_ver` of that RSE, else enter NULL.
- **PI\_JOBID** (Mandatory) If you are re-submitting an existing job, enter the previous `job_id`, else enter NULL.

## Copy an Execution Setup

Use this API to duplicate one or more Execution Setups for an object.

### Name

`CDR_PUB_DF_EXECUTIONSETUP.CopyExecutionSetup`

### Signature

```
PROCEDURE COPYEXECUTIONSETUP(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
```

```

X_RETURN_STATUS OUT   VARCHAR2,
X_MSG_COUNT OUT     NUMBER,
X_MSG_DATA OUT      VARCHAR2,
PI_EXECUTIONSETUP IN OUT  CDR_BASE_OBJ_COLL
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

- **PI\_EXECUTIONSETUP** (Mandatory) This is a collection of CDR\_BASE\_OBJ\_TYPES. For each Execution Setup that you want to copy, initialize a CDR\_BASE\_OBJ\_TYPE and then extend the collection. The following attributes are required: COMPANY\_ID,OBJ\_ID,OBJ\_VER,OBJECT\_VERSION\_NUMBER,NAMESPACE\_OBJ\_ID,NAMESPACE\_OBJ\_VER.

## Check In an Execution Setup

Use this API to check in an Execution Setup.

### Name

CDR\_PUB\_DF\_EXECUTIONSETUP.CheckInExecutionSetup

### Signature

```

PROCEDURE CHECKINEXECUTIONSETUP(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PIO_BASEOBJECT IN OUT CDR_BASE_OBJ_TYPE,
  PI_COMMENT IN VARCHAR2
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_BASEOBJECT** (Mandatory) This is a parameter of table type CDR\_BASE\_OBJ\_TYPE. Enter values to identify the Execution Setup that you want to check in. The following attributes are required: COMPANY\_ID,OBJ\_ID,OBJ\_VER,OBJECT\_VERSION\_NUMBER,NAMESPACE\_OBJ\_ID,NAMESPACE\_OBJ\_VER
- **PI\_COMMENT** (Optional) Enter the reason you are checking in the Execution Setup.

## Submit an Execution Setup

Use this API to submit an Execution Setup.

**Name**

CDR\_PUB\_DF\_EXECUTIONSETUP.SubmitExecutionSetup

**Signature**

```
PROCEDURE SUBMITEXECUTIONSETUP (
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PI_EXECUTIONSETUP IN CDR_BASE_OBJ_TYPE,
  PI_CHANGEDSYSTEMPARAMETERCOLL IN CDR_SUBMISSION_DETAILS_COLL,
  PI_TICOLL IN CDR_SNAPSHOT_TABLE_COLL,
  PI_INCLUDEDOBJCOLL IN CDR_SUBMISSION_DETAILS_COLL,
  PI_CURRENTJOBID OUT VARCHAR2,
  PI_OUTPUTTITLE IN VARCHAR2,
  PI_OUTPUTDESC IN VARCHAR2
);
```

**Parameters**

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- PI\_EXECUTIONSETUP** (Mandatory) This is a parameter of table type CDR\_BASE\_OBJ\_TYPE. Enter values to identify the Execution Setup that you want to submit.  
 The following attributes are required:  
 COMPANY\_ID,OBJ\_ID,OBJ\_VER,OBJECT\_VERSION\_NUMBER,NAMESPACE\_OBJ\_ID,NAMESPACE\_OBJ\_VER.
- PIO\_CHANGEDSYSTEMPARAMETERCOLL** (Mandatory) This is a parameter of cdr\_submission\_details\_coll type.  
 You must provide values for the following system parameters: company\_id (use CDR\_DF\_PUB\_DEF\_CONSTANTS.CURRENT\_COMPANY\_ID); submission\_id (enter null); prref\_id (enter -1), prref\_ver (enter -1), parameter\_ref\_obj\_id, and parameter\_ref\_obj\_id. Query cdr\_parameters on company\_id, obj\_id, and obj\_ver to find values for the default\_value attribute. Use this value to set the attribute parameter\_value.
- PI\_TICOLL** (Mandatory) This is a collection of CDR\_SNAPSHOT\_TABLE\_OBJ\_TYPE.
- PI\_INCLUDEDOBJCOLL** (Mandatory) This is a collection of CDR\_SUBMISSION\_DETAILS\_OBJ\_TYPE that contains PRREF\_IDs of Programs to include in the Execution Setup. For Report Sets and Report Set Entries, the user can include only selected Report Sets for execution. Enter only those PRREF\_IDs.
- PI\_CURRENTJOBID** (Mandatory) Enter the JOB\_ID of the Job that this Execution Setup submission created. This parameter is used to generate user's feedback.
- PI\_OUTPUTTITLE** (Mandatory) Enter a title for the output from this Execution Setup.

- **PI\_OUTPUTDESC** (Mandatory) Enter the description for the output from this Execution Setup.

## Submit an Execution Setup for Instances

Use this API to submit an Execution Setup for Report Set instances and Workflow instances. You must call the loadESTempTable API before calling this API.

### Name

CDR\_PUB\_DF\_EXECUTIONSETUP.SubmitExecutionSetup

### Signature

```
PROCEDURE SUBMITEXECUTIONSETUP(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PI_EXECUTIONSETUP IN OUT CDR_BASE_OBJ_TYPE,
  PIO_CHANGEDSYSTEMPARAMETERCOLL IN OUT CDR_SUBMISSION_DETAILS_COLL,
  PI_TICOLL IN CDR_SNAPSHOT_TABLE_COLL,
  PO_CURRENTJOBID OUT VARCHAR2,
  PI_OUTPUTTITLE IN VARCHAR2,
  PI_OUTPUTDESC IN VARCHAR2
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_EXECUTIONSETUP** (Mandatory) This is a parameter of cdr\_base\_obj\_type. Enter values for attributes that describe the Execution Setup: COMPANY\_ID, OBJ\_ID, OBJ\_VER, NAMESPACE\_OBJ\_ID, NAMESPACE\_OBJ\_VER, OBJECT\_VERSION\_NUMBER.
- **PIO\_CHANGEDSYSTEMPARAMETERCOLL** (Mandatory) This is a parameter of cdr\_submission\_details\_coll type. You must provide values for the following system parameters: company\_id (use CDR\_DF\_PUB\_DEF\_CONSTANTS.CURRENT\_COMPANY\_ID); submission\_id (enter null); prref\_id (enter -1), prref\_ver (enter -1), parameter\_ref\_obj\_id, and parameter\_ref\_obj\_id. Query cdr\_parameters on company\_id, obj\_id, and obj\_ver to find values for the default\_value attribute. Use this value to set the attribute parameter\_value.
- **PI\_TICOLL** (Mandatory) This is a collection of data snapshots. This value may be null if you want to use current data. Otherwise the required attributes are: TI\_OBJ\_ID, TI\_OBJ\_VER, SRC\_MASTER\_JOB\_ID, SRC\_COMPANY\_ID
- **PO\_CURRENTJOBID** (Mandatory) This is an output parameter. The system generates a Job ID for the submitted Execution Setup. You can print this parameter through your program.

- **PI\_OUTPUTTITLE** (Mandatory) Enter a title for the Execution Setup. It is easy to track an Execution Setup with a meaningful title.
- **PI\_OUTPUTDESC** (Mandatory) Enter a description for the Execution Setup output.

## Submit an Execution Setup for Compound Objects

Use this API to submit an Execution Setup for compound objects such as Report Sets and Workflows.

The API takes care of both, populating the temporary tables for execution and submitting the job, so that you do not need to invoke the loadESTempTable explicitly.

### Name

CDR\_PUB\_DF\_EXECUTIONSETUP.SubmitExecutionSetup

### Signature

```
PROCEDURE SUBMITEXECUTIONSETUP(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE
  P_COMMIT IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER DEFAULT CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT NOCOPY VARCHAR2,
  X_MSG_COUNT OUT NOCOPY NUMBER,
  X_MSG_DATA OUT NOCOPY VARCHAR2,
  PI_EXECUTIONSETUP IN OUT NOCOPY CDR_BASE_OBJ_TYPE,
  PIO_CHANGEDSYSTEMPARAMETERCOLL IN OUT NOCOPY CDR_SUBMISSION_DETAILS_COLL,
  PI_TICOLL IN CDR_SNAPSHOT_TABLE_COLL,
  PI_EXEPARAMCOLL IN OUT NOCOPY CDR_PARAMETER_COLL,
  PI_EXEOBJCOLL IN OUT NOCOPY CDR_PARAMETER_COLL,
  PI_NODEPRREFID IN NUMBER DEFAULT NULL,
  PI_NODEPRREFVER IN NUMBER DEFAULT NULL,
  PI_JOBID IN NUMBER DEFAULT NULL,
  PO_JOBID OUT NOCOPY VARCHAR2,
  PI_OUTPUTTITLE IN VARCHAR2,
  PI_OUTPUTDESC IN VARCHAR2);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- PARAM P\_API\_VERSION. The API uses this parameter to compare the version numbers of incoming calls to its current version number, and returns an unexpected error if the versions are incompatible.
- PARAM P\_INIT\_MSG\_LIST. Use this parameter to request that the API initialize the message list. By default, this parameter is set to FND\_API.G\_FALSE, meaning that APIs do not initialize the message list unless specifically instructed by the user.
- PARAM P\_COMMIT. Use this parameter to instruct the API to commit after performing its function. By default, this parameter is set to FND\_API.G\_FALSE, meaning that APIs do not commit unless instructed by the user.

- PARAM P\_VALIDATION\_LEVEL. This parameter helps the API to determine those validation steps to execute and those to skip. The current behavior is that the API performs a full validation.
- PARAM PI\_EXECUTIONSETUP. The base object type of Execution setup for which a Submit is requested.
- PARAM PIO\_CHANGEDSYSTEMPARAMETERCOLL. The collection of SYSTEM parameters.
- PARAM PI\_TICOLL. The collection of Table Instances referenced from the Object Instance hierarchy with the Currency information as specified by the user.
- PARAM PI\_EXEPARAMCOLL. The collection of CDR\_PARAMETER\_OBJ\_TYPE parameters. This can be passed as null, but if you want to overwrite a parameter's value for submission, then populate this with the Parameter object details and assign the DEFAULT\_VALUE attribute to the overwritten parameter value. The other required attributes are COMPANY\_ID, OBJ\_ID, OBJ\_VER and DEFAULT\_VALUE.
- PARAM PI\_EXEOBJCOLL. This is a collection of CDR\_PARAMETER\_OBJ\_TYPE parameters that contains the PRREF\_IDs of Programs to be included in the Execution Setup.  
For Report Sets and Report Set Entries, enter the PRREF\_IDs of those selected Report Sets that may be included for execution. Use PRREF\_ID, PRREF\_VER of Objects to OBJ\_ID, OBJ\_VER of CDR\_PARAMETER\_OBJ\_TYPE. Set DEFAULT\_VALUE as 'Y'. You do not need to assign other attributes except COMPANY\_ID, OBJ\_ID, OBJ\_VER and DEFAULT\_VALUE.
- PARAM PI\_NODEPRREFID. To submit only a single node(RSE), pass its PrrefId; else, pass this parameter as null.
- PARAM PI\_NODEPRREFVER. To submit only a single node, pass its PrrefVer; else, pass as null.
- PARAM PI\_JOBID. To resubmit a job, pass the previous JobId; else, pass as null.
- PARAM PO\_JOBID. The Job ID that is created during the submission.
- PARAM PI\_OUTPUTTITLE. The suffix of the output's title.
- PARAM PI\_OUTPUTDESC. The suffix of the output's description.

## Upgrade an Execution Setup

Use this API to upgrade one single Execution Setup.

### Name

CDR\_PUB\_DF\_EXECUTIONSETUP.UpgradeExecSetup

### Signature

```
PROCEDURE UPGRADEEXECSETUP(
    P_API_VERSION IN NUMBER,
    P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
    P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
    P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
    X_RETURN_STATUS OUT VARCHAR2,
    X_MSG_COUNT OUT NUMBER,
    X_MSG_DATA OUT VARCHAR2,
    PI_ESCOMPID IN NUMBER,
```

```

PI_ESOBJID IN NUMBER,
PI_ESOBJVER IN NUMBER,
PO_UPGRADESTATUS IN OUT VARCHAR2
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_ESCOMPID** (Mandatory) Enter the COMPANY\_ID of the Execution Setup.
- **PI\_ESOBJID** (Mandatory) Enter the OBJ\_ID of the Execution Setup.
- **PI\_ESOBJVER** (Mandatory) Enter the OBJ\_VER of the Execution Setup.
- **PO\_UPGRADESTATUS** This is an output parameter that indicates whether or not the Execution Setup's upgrade was successful.

## Upgrade All Execution Setups

Use this API to upgrade all the Execution Setups associated with an object.

### Name

CDR\_PUB\_DF\_EXECUTIONSETUP.UpgradeExecSetups

### Signature

```

PROCEDURE UPGRADEEXECSETUPS(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PI_EOICOMPID IN NUMBER,
  PI_EOIOBJID IN NUMBER,
  PI_EOIOBJVER IN NUMBER,
  PO_NOTRUNNABLEESLIST OUT CDR_BASE_OBJ_COLL
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_EOICOMPID** (Mandatory) Enter the COMPANY\_ID of the executable object instance for which the Execution Setup is intended.
- **PI\_EOIOBJID** (Mandatory) Enter the OBJ\_ID of the executable object instance for which the Execution Setup is intended.
- **PI\_EOIOBJVER** (Mandatory) Enter the OBJ\_VER of the executable object instance for which the Execution Setup is intended.
- **PO\_NOTRUNNABLEESLIST** This is an output parameter that returns a collection of CDR\_BASE\_OBJ\_TYPE containing Execution Setups whose status has changed from Runnable to Not-Runnable.



## Make an Execution Setup Active

Use this API to set the status of an Execution Setup to Active.

### Name

CDR\_PUB\_DF\_EXECUTIONSETUP.SetActive

### Signature

```
PROCEDURE SETACTIVE(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  X_RETURN_STATUS OUT VARCHAR2,  
  X_MSG_COUNT OUT NUMBER,  
  X_MSG_DATA OUT VARCHAR2,  
  PI_ESCOMPID IN NUMBER,  
  PI_ESOBJID IN NUMBER,  
  PI_ESOBJVER IN NUMBER  
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_ESCOMPID** (Mandatory) Enter the COMPANY\_ID of the Execution Setup.
- **PI\_ESOBJID** (Mandatory) Enter the OBJ\_ID of the Execution Setup.
- **PI\_ESOBJVER** (Mandatory) Enter the OBJ\_VER of the Execution Setup.

## Remove an Execution Setup

Use this API to delete an Execution Setup.

### Name

CDR\_PUB\_DF\_EXECUTIONSETUP.RemoveExecutionSetup

### Signature

```
PROCEDURE REMOVEEXECUTIONSETUP(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  X_RETURN_STATUS OUT VARCHAR2,  
  X_MSG_COUNT OUT NUMBER,  
  X_MSG_DATA OUT VARCHAR2,  
  PI_EXECUTIONSETUP IN OUT CDR_BASE_OBJ_COLL  
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PI\_EXECUTIONSETUP** (Mandatory) This is a collection of CDR\_BASE\_OBJ\_TYPES. For each Execution Setup that you want to remove, initialize a CDR\_BASE\_OBJ\_TYPE and then extend the collection.

The following attributes are required:

COMPANY\_ID,OBJ\_ID,OBJ\_VER,OBJECT\_VERSION\_NUMBER,NAMESPACE\_OBJ\_ID,NAMESPACE\_OBJ\_VER.

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## Mappings

This is a public interface for mapping-related operations; including—creating and modifying mappings at the Table Descriptor and Column levels, creating a Table Descriptor from a Table instance, or a Table instance from a Table Descriptor, and mapping the two. It also includes functions for getting the unique PRREF\_ID and PRREF\_VER for the executables and Business Areas that contain Table Descriptors. You need these identifiers to run most of the mapping APIs.

This chapter contains the following section:

- [Create and Modify Mappings](#)

### Create and Modify Mappings

This section contains the following topics:

- [Map a Column](#)
- [Map a Table Descriptor to a Table Instance](#)
- [Get a Table Instance ID](#)
- [Create a Table Descriptor from a Table Instance](#)
- [Create a Table Instance from a Table Descriptor](#)
- [Modify a Mapping Column](#)
- [Modify a Mapping at the Table Descriptor Level](#)
- [Get a PRREF\\_ID for an Executable in a Workflow](#)
- [Get a PRREF\\_ID for an Object in a Work Area](#)
- [Get a PRREF\\_ID for a Program in a Report Set](#)

### Map a Column

Use this API to map a Table Descriptor's Columns to a Table instance's Columns using default criteria such as Name, Data Type, and Length. Before you run this API you must map the Table Descriptor and instance and note the Mapping ID and version.

#### Name

CDR\_PUB\_DF\_MAPPING.GenerateDefaultMapping

#### Signature

```
PROCEDURE GENERATEDEFAULTMAPPING(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  X_RETURN_STATUS OUT VARCHAR2,
```

```

X_MSG_COUNT OUT NUMBER,
X_MSG_DATA OUT VARCHAR2,
PI_MAPPING_NAMING IN CDR_NAMING_VERSION_OBJ_TYPE
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PI\_MAPPING\_NAMING** (Mandatory) This is a parameter of table type `CDR_NAMING_VERSION_OBJ_TYPE`. Enter values to identify the Mapping that you want to extend to the Column level.

The following attributes are required: `OBJ_ID` and `OBJ_VER`.

## Map a Table Descriptor to a Table Instance

Use this API to map a Table Descriptor to a Table instance. You specify the Table Descriptor and Table instance and the API maps the columns if it is possible.

### Name

`CDR_PUB_DF_MAPPING.AutoMapTableDesc`

### Signature

```

PROCEDURE AUTOMAPTABLEDESC(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PI_PREFID IN CDR_PROGRAM_REFS.PRREF_ID%TYPE,
  PI_PREFVER IN CDR_PROGRAM_REFS.PRREF_VER%TYPE,
  PI_TDOBJ IN CDR_NAMING_VERSION_OBJ_TYPE,
  PI_TIOBJ IN CDR_NAMING_VERSION_OBJ_TYPE
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_PREFID** (Mandatory) Enter the `PRREF_ID` of the executable object—Program, Load Set, Data Mart, Business Area that owns the Table Descriptor that you want to map. (Use other APIs in this package to get the `PRREF_ID`.)
- **PI\_PREFVER** (Mandatory) Enter the `PRREF_VER` of the executable object or Business Area that owns the Table Descriptors that you want to map. (Use other APIs in this package to get the `PRREF_VER`.)
- **PI\_TDOBJ** (Mandatory) This is a parameter of table type `CDR_NAMING_VERSIONS_OBJ_TYPE` that contains CDR Naming Version attributes. Enter values to identify the Table Descriptor you want to map. The required attributes are: `COMPANY_ID`, `OBJ_ID`, `OBJ_VER`.

- **PI\_TIOBJ** (Mandatory) This is a parameter of table type CDR\_NAMING\_VERSIONS\_OBJ\_TYPE that contains CDR Naming Version attributes. Enter values to identify the Table instance to which you want to map the Table Descriptor.  
The required attributes are: COMPANY\_ID, OBJ\_ID, OBJ\_VER.

## Get a Table Instance ID

Use this API to get the Object ID of the table instance that is mapped to a particular table descriptor. You can invoke this function within a PLSQL program.

While transforming source data into target data in Oracle Health Sciences Data Management Workbench (DMW), it is needed at times, to flag target data. The DMW API used to assign flags to target data requires the Obj ID of the Table Instance as input. This API performs the task of getting the required Obj ID of the target Table Instance, in order that the Flag-related DMW APIs can be invoked.

### Name

CDR\_PUB\_DF\_MAPPING.Get\_Tab\_Inst\_ID

### Signature

```
FUNCTION GETTABINSTID(
PI_TABDESCNAME IN VARCHAR2,
)RETURN NUMBER;
```

### Return

Type NUMBER

### Parameters

This API has the following parameter:

**PI\_TABDESCNAME** (Mandatory). Enter the Oracle Name of the Table Descriptor whose mapped Table Instance ID you want to retrieve.

## Create a Table Descriptor from a Table Instance

Use this API to create a Table Descriptor from an existing Table instance and map the two.

### Name

CDR\_PUB\_DF\_MAPPING.CreateTabDescFromTabInst

### Signature

```
PROCEDURE CREATETABDESCFROMTABINST(
P_API_VERSION IN NUMBER,
P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
X_RETURN_STATUS OUT VARCHAR2,
X_MSG_COUNT OUT NUMBER,
X_MSG_DATA OUT VARCHAR2,
PI_PREFID IN CDR_PROGRAM_REFS.PREF_ID%TYPE,
```

```

    PI_PRRFVER IN CDR_PROGRAM_REFS.PRRF_VER%TYPE,
    PI_TIOBJ IN CDR_NAMING_VERSION_OBJ_TYPE
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_PRRFID** (Mandatory) Enter the PRRF\_ID of the executable object—Program, Load Set, Data Mart or Business Area, in which you want to create a Table Descriptor. (Use other APIs in this package to get this value.)
- **PI\_PRRFVER** (Mandatory) Enter the PRRF\_VER of the executable object or Business Area in which you want to create a Table Descriptor. (Use other APIs in this package to get this value.)
- **PI\_TIOBJ** (Mandatory) This is a parameter of table type CDR\_NAMING\_VERSIONS\_OBJ\_TYPE that contains CDR Naming Version attributes.  
Enter values for the Table instance from which you want to create a Table Descriptor. The required attributes are: COMPANY\_ID, OBJ\_ID, OBJ\_VER.

## Create a Table Instance from a Table Descriptor

Use this API to create a Table instance from a Table Descriptor and map the two.

### Name

CDR\_PUB\_DF\_MAPPING.CreateTabInstFromTabDesc

### Signature

```

PROCEDURE CREATETABINSTFROMTABDESC(
    P_API_VERSION IN NUMBER,
    P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
    P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
    P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
    X_RETURN_STATUS OUT VARCHAR2,
    X_MSG_COUNT OUT NUMBER,
    X_MSG_DATA OUT VARCHAR2,
    PI_PRRFID IN CDR_PROGRAM_REFS.PRRF_ID%TYPE,
    PI_PRRFVER IN CDR_PROGRAM_REFS.PRRF_VER%TYPE,
    PI_TDOBJ IN CDR_NAMING_VERSION_OBJ_TYPE,
    PI_INSTANCESUBTYPEID IN CDR_NAMINGS.OBJECT_SUBTYPE_ID%TYPE
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_PRRFID** (Mandatory) Enter the PRRF\_ID of the executable object instance—Program, Load Set, Data Mart, OR Business Area instance that owns the Table Descriptors that you want to map. (Use other APIs in this package to get this value.)
- **PI\_PRRFVER** (Mandatory) Enter the PRRF\_VER of the executable object instance or Business Area instance that owns the Table Descriptors that you want to map. (Use other APIs in this package to get this value.)

- **PI\_TDOBJ** (Mandatory) This is a parameter of table type CDR\_NAMING\_VERSIONS\_OBJ\_TYPE that contains CDR Naming Version attributes.  
Enter values for the Table Descriptor from which you want to create a Table Descriptor. The required attributes are: COMPANY\_ID, OBJ\_ID, OBJ\_VER.
- **PI\_INSTANCESUBTYPEID** (Mandatory) Enter a value for the Table instance's subtype.

## Modify a Mapping Column

Use this API to update a mapping at the Column level. You can map currently unmapped Columns, map Table Descriptor Columns to different Columns in the Table instance, change the default value for any Column, and supply or change a format string for a Column. This API enforces all Column mapping rules.

### Name

CDR\_PUB\_DF\_MAPPING.UpdateMappingColumns

### Signature

```
PROCEDURE UPDATERMAPPINGCOLUMNS(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PI_MAPPING_COLUMNS IN CDR_MAPPING_COLUMNS_COLL
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PI\_MAPPING\_COLUMNS** (Mandatory) This is a collection of CDR\_MAPPING\_COLUMNS\_TYPES. For each Column that you want to modify, initialize a CDR\_MAPPING\_COLUMNS\_TYPE and then extend the collection. All the attributes are required.

## Modify a Mapping at the Table Descriptor Level

Use this API to update a mapping at the Table Descriptor level in accordance with all validation rules.

### Name

CDR\_PUB\_DF\_MAPPING.ModifyMapping

### Signature

```
PROCEDURE UPDATERMAPPINGCOLUMNS(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
```

```

P_VALIDATION_LEVEL IN    NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
X_RETURN_STATUS   OUT    VARCHAR2,
X_MSG_COUNT      OUT    NUMBER,
X_MSG_DATA       OUT    VARCHAR2,
PI_MAPPING_COLUMNS IN    CDR_MAPPING_COLUMNS_COLL
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

**PI\_MAPPING\_COLUMNS** (Mandatory) This is a collection of `CDR_MAPPING_COLUMNS_TYPES`. For each Column that you want to modify, initialize a `CDR_MAPPING_COLUMNS_TYPE` and then extend the collection. All the attributes are required.

## Get a PRREF\_ID for an Executable in a Workflow

Use this API to get the `PRREF_ID` and `PRREF_VER` for an executable Object instance contained in a Workflow. You need these values to run Mapping APIs.

### Name

`CDR_PUB_DF_MAPPING.GetPRREFIDforObjUnderWF`

### Signature

```

PROCEDURE GETPRREFIDFOROBJUNDERWF(
  P_API_VERSION IN    NUMBER,
  P_INIT_MSG_LIST IN    VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN    VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN    NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT    VARCHAR2,
  X_MSG_COUNT OUT    NUMBER,
  X_MSG_DATA OUT    VARCHAR2,
  PI_SIMPLEOBJ IN    CDR_BASE_OBJ_TYPE,
  PI_RSIOBJ IN    CDR_BASE_OBJ_TYPE,
  PI_WFI OBJ IN    CDR_BASE_OBJ_TYPE,
  PO_PRREFID OUT    CDR_PROGRAM_REFS.PRREF_ID%TYPE,
  PO_PRREFVER OUT    CDR_PROGRAM_REFS.PRREF_VER%TYPE
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_SIMPLEOBJ** (Mandatory) This is a parameter of table type `CDR_BASE_OBJ_TYPE`. Enter values to identify the Program, Load Set, or Data Mart instance whose `PRREFID` you need. The following attributes are required: `COMPANY_ID`, `OBJ_ID`, `OBJ_VER`.
- **PI\_RSIOBJ** (Optional) If you are getting the `PRREFID` for a Program instance contained in a Report Set that within a Workflow, enter values to identify the Report Set instance in which the Program instance is located. This is a parameter of table type `CDR_BASE_OBJ_TYPE`. The following attributes are required: `COMPANY_ID`, `OBJ_ID`, `OBJ_VER`.



- **PI\_WFIOBJ** (Mandatory) This is a parameter of table type CDR\_BASE\_OBJ\_TYPE. Enter values to identify the Workflow instance that contains the Program, Load Set, or Data Mart instance whose PRREFID you need.  
The following attributes are required: COMPANY\_ID, OBJ\_ID, OBJ\_VER.
- **PO\_PRREFID** This output parameter returns the executable object instance's PRREF\_ID.
- **PO\_PRREFVER** This output parameter returns the executable object instance's PRREF\_VER.

## Get a PRREF\_ID for an Object in a Work Area

Use this API to get the PRREF\_ID and PRREF\_VER for a Program, Load Set, Data Mart, or Business Area instance contained directly in a Work Area. You need these values to run Mapping APIs.

### Name

CDR\_PUB\_DF\_MAPPING.GetPRREFIDforSimpleObject

### Signature

```
PROCEDURE GETPRREFIDFORSIMPLEOBJECT(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PI_SIMPLEOBJ IN CDR_BASE_OBJ_TYPE,
  PO_PRREFID OUT CDR_PROGRAM_REFS.PRREF_ID%TYPE,
  PO_PRREFVER OUT CDR_PROGRAM_REFS.PRREF_VER%TYPE
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_SIMPLEOBJ** (Mandatory) This is a parameter of table type CDR\_BASE\_OBJ\_TYPE. Enter values to identify the Program, Load Set, Data Mart, or Business Area instance whose PRREFID you need in order to map its Table Descriptors.  
The following attributes are required: COMPANY\_ID, OBJ\_ID, OBJ\_VER.
- **PO\_PRREFID** This output parameter returns the Program, Load Set, Data Mart, or Business Area instance's PRREF\_ID.
- **PO\_PRREFVER** This output parameter returns the Program, Load Set, Data Mart, or Business Area instance's PRREF\_VER.

## Get a PRREF\_ID for a Program in a Report Set

Use this API to get the PRREF\_ID and PRREF\_VER for a Program instance contained in a Report Set. You need these values to run Mapping APIs.

**Name**

CDR\_PUB\_DF\_MAPPING.GetPRREFIDforPgmUnderRSE

**Signature**

```
PROCEDURE GETPRREFIDFORPGMUNDERRSE(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  X_RETURN_STATUS OUT VARCHAR2,  
  X_MSG_COUNT OUT NUMBER,  
  X_MSG_DATA OUT VARCHAR2,  
  PI_SIMPLEOBJ IN CDR_BASE_OBJ_TYPE,  
  PI_RSIOBJ IN CDR_BASE_OBJ_TYPE,  
  PO_PRREFID OUT CDR_PROGRAM_REFS.PRREF_ID%TYPE,  
  PO_PRREFVER OUT CDR_PROGRAM_REFS.PRREF_VER%TYPE  
);
```

**Parameters**

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_SIMPLEOBJ** (Mandatory) This is a parameter of table type CDR\_BASE\_OBJ\_TYPE. Enter values to identify the Program instance whose PRREFID you need in order to map its Table Descriptors. The following attributes are required: COMPANY\_ID, OBJ\_ID, OBJ\_VER.
- **PI\_RSIOBJ** (Mandatory) This is a parameter of table type CDR\_BASE\_OBJ\_TYPE. Enter values to identify the Report Set instance that contains the Program instance whose PRREFID you need. The following attributes are required: COMPANY\_ID, OBJ\_ID AND OBJ\_VER.
- **PO\_PRREFID** Output Prref\_Id
- **PO\_PRREFVER** Output Prref Ver

# 21

## Outputs

This package includes APIs for submitting a job for printing, and for retrieving the BLOB and CLOB objects associated with Oracle LSH output.

This chapter contains the following section:

- [Generate Outputs](#)

## Generate Outputs

This section contains the following topics:

- [Submit a Print Request](#)
- [Get an Output's BLOB](#)
- [Get an Output's CLOB](#)

## Submit a Print Request

Use this API to print a specified output. The API submits a request to the Oracle LSH printing concurrent program that prints the specified output.

### Name

CDR\_PUB\_PRINT\_OUTPUT.SubmitPrintRequest

### Signature

```
FUNCTION SUBMITPRINTREQUEST(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  X_RETURN_STATUS OUT VARCHAR2,  
  X_MSG_COUNT OUT NUMBER,  
  X_MSG_DATA OUT VARCHAR2,  
  PI_NCOMPANYID IN CDR_NAMINGS.COMPANY_ID%TYPE,  
  PI_NOUTPUTID IN CDR_NAMINGS.OBJ_ID%TYPE,  
  PI_NOUTPUTOBJVER IN CDR_NAMING_VERSIONS.OBJ_VER%TYPE,  
  PI_VPRINTERNAME IN FND_PRINTER.PRINTER_NAME%TYPE := NULL,  
  PI_VCOVERSHEET IN VARCHAR2 := NULL  
) RETURN NUMBER;
```

### Return

Type NUMBER

Description Concurrent Request Id

## Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_NCOMPANYID** (Mandatory) Enter your company ID.  
To get your company ID, use  
CDR\_DF\_PUB\_DEF\_CONSTANTS.Current\_Company\_ID.
- **PI\_NOUTPUTID** (Mandatory) Enter the obj\_id of the output you want to print.
- **PI\_NOUTPUTOBJVER** (Mandatory) Enter the obj\_ver of the output you want to print.
- **PI\_VPRINTERNAME** (Mandatory) Enter the printer name.
- **PI\_VCOVERSHEET** (Mandatory) Enter the text for the coversheet. You can enter text only up to 4000 bytes.

## Get an Output's BLOB

Use this API to retrieve the BLOB associated with an output object.

### Name

CDR\_PUB\_PRINT\_OUTPUT.GetOutPutBlob

### Signature

```
FUNCTION GETOUTPUTBLOB(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  PI_NCOMPANYID IN CDR_NAMINGS.COMPANY_ID%TYPE,  
  PI_NOUTPUTID IN CDR_NAMINGS.OBJ_ID%TYPE,  
  PI_NOUTPUTOBJVER IN CDR_NAMING_VERSIONS.OBJ_VER%TYPE  
) RETURN BLOB;
```

### Return

Type BLOB

Description BLOB

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_NCOMPANYID** (Mandatory) Enter your company ID.  
To get your company ID, use  
CDR\_DF\_PUB\_DEF\_CONSTANTS.Current\_Company\_ID.
- **PI\_NOUTPUTID** (Mandatory) Enter the obj\_ID of the output whose BLOB you want to retrieve.
- **PI\_NOUTPUTOBJVER** (Mandatory) Enter the obj\_ver of the output whose BLOB you want to retrieve.

## Get an Output's CLOB

Use this API to retrieve the CLOB associated with a specified output object.

### Name

CDR\_PUB\_PRINT\_OUTPUT.GetOutputCLOB

### Signature

```
FUNCTION GETOUTPUTCLOB(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  PI_NCOMPANYID IN CDR_NAMINGS.COMPANY_ID%TYPE,  
  PI_NOUTPUTID IN CDR_NAMINGS.OBJ_ID%TYPE,  
  PI_NOUTPUTOBJVER IN CDR_NAMING_VERSIONS.OBJ_VER%TYPE  
) RETURN CLOB;
```

### Return

Type CLOB

Description Clob

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_NCOMPANYID** (Mandatory) Enter your company ID.  
To get your company ID, use  
CDR\_DF\_PUB\_DEF\_CONSTANTS.Current\_Company\_ID.
- **PI\_NOUTPUTID** (Mandatory) Enter the obj\_ID of the output whose CLOB you want to retrieve.
- **PI\_NOUTPUTOBJVER** (Mandatory) Enter the obj\_ver of the output whose CLOB you want to retrieve.

# 22

## Version Labels

This is a public interface which hosts the Naming API for updating the Version label.

This chapter contains the following section:

- [Modify Version Labels](#)

### Modify Version Labels

This section contains one API for updating a version label. See the following topic for details:

- [Update a Version Label](#)

### Update a Version Label

Use this API to create or modify an object version label. If the same label exists for another version of the object, the API returns that version number.

#### Name

CDR\_PUB\_DF\_NAMING.UpdateVersionLabel

#### Signature

```
PROCEDURE UPDATEVERSIONLABEL(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  X_RETURN_STATUS OUT VARCHAR2,  
  X_MSG_COUNT OUT NUMBER,  
  X_MSG_DATA OUT VARCHAR2,  
  PIO_NAMING IN OUT CDR_NAMING_VERSION_OBJ_TYPE  
);
```

#### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **P\_API\_VERSION** (Mandatory) Enter the current version of the API you are calling. The API compares the version numbers of incoming calls to its current version number and returns an error if they are incompatible.
- **PIO\_NAMING** (Mandatory) This is a parameter of table type CDR\_NAMING\_VERSION\_OBJ\_TYPE. Enter values to identify the object version that you want to label.  
The following attributes are required:  
COMPANY\_ID,OBJ\_ID,OBJ\_VER,VERSION\_LABEL. For VERSION\_LABEL enter the text of the label you want to apply to this object version.

# 23

## Classification

This section contains the following topics:

- [Classify Objects](#)
- [Classify Subtypes](#)
- [Create and Modify Classification Hierarchy Values](#)

### Classify Objects

This is a public interface for assigning and removing object classifications.

This section contains the following topics:

- [Classify an Object](#)
- [Declassify an Object](#)

### Classify an Object

Use this API to classify Objects

#### Name

CDR\_PUB\_CLA\_OBJ\_CLASSIFICATION.AssignObjectClassification

#### Signature

```
PROCEDURE ASSIGNOBJECTCLASSIFICATION(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  X_RETURN_STATUS OUT VARCHAR2,  
  X_MSG_COUNT OUT NUMBER,  
  X_MSG_DATA OUT VARCHAR2,  
  PIO_SOURCECDRNAMING IN OUT CDR_NAMING_VERSION_OBJ_TYPE,  
  PI_OCLASSIFICATIONS IN CDR_CLASSIFICATIONS_COLL  
);
```

#### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_SOURCECDRNAMING** (Mandatory) This is a parameter of table type CDR\_NAMING\_VERSION\_OBJ\_TYPE. Enter values to identify the object that you want to classify.  
The following attributes are required:  
COMPANY\_ID,OBJ\_ID,OBJ\_VER,OBJECT\_VERSION\_NUMBER,NAMESPACE\_OBJ\_ID,NAMESPACE\_OBJ\_VER,OBJECT\_SUBTYPE\_ID.

- **PI\_OCLASSIFICATIONS** This is a collection of CDR\_CLA\_OBJ\_TYPEs, which have 5 attributes, including CLA\_LEVEL\_ID and CLASSIFICATION\_ID. If you want the OBJECT to inherit its classifications for a particular level from its parent, enter the classification level ID and, for the CLASSIFICATION\_ID, enter 0 (zero).

If you want to explicitly assign one or more terms for a particular level, initialize a CDR\_CLA\_OBJ\_TYPE for each term, entering the classification level ID and, for the CLASSIFICATION\_ID, the term ID. The PAR\_ attributes are relevant only to Planned Outputs.

If you are not classifying a Planned Output, do not enter any values for them.

If you are classifying a Planned Output and want to use a Parameter with a classification-driven list of values, use the PAR attributes to identify the Parameter you want to use.

## Declassify an Object

Use this procedure to remove a single classification value from a defined Object.

### Name

CDR\_PUB\_CLA\_OBJ\_CLASSIFICATION.Declassify

### Signature

```
PROCEDURE DECLASSIFY(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PI_NOBJECTID IN CDR_NAMINGS.OBJ_ID%TYPE,
  PI_NCLALEVELID IN PLS_INTEGER,
  PI_NCLASSIFICATIONID IN PLS_INTEGER
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_NOBJECTID** (Mandatory) Enter the object ID of the object from which you want to remove classifications.)
- **PI\_NCLALEVELID** (Mandatory) Enter the ID of the classification hierarchy level that contains the classification value, or term, that you want to remove.
- **PI\_NCLASSIFICATIONID** (Mandatory) Enter the ID of the classification value, or term, that you want to remove.

## Classify Subtypes

This is a public interface for all Classification functions related to Subtypes.

This section contains the following topics:



- [Get a Subtype Classification Level](#)
- [Get an Object Classification Value](#)
- [Get Child Terms](#)

## Get a Subtype Classification Level

Use this API to retrieve all the classification hierarchy levels assigned to an Object Subtype. The function returns a collection of CDR\_HIER\_LEVEL\_VAL\_OBJ\_TYPE.

### Name

CDR\_PUB\_CLA\_SUBTYPES.GetClassificationLevels

### Signature

```
FUNCTION GETCLASSIFICATIONLEVELS(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  POBJECTSUBTYPEID IN CDR_OBJECT_SUBTYPES_TL.OBJECT_SUBTYPE_ID%TYPE
) RETURN CDR_HIER_LEVEL_VALUES_COLL;
```

### Return

Type CDR\_HIER\_LEVEL\_VALUES\_COLL

Description classification levels.

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PIBJECTSUBTYPEID** Enter the ID of the Object Subtype whose assigned classification levels you want to retrieve.

## Get an Object Classification Value

Use this API to get the classifications assigned to the given object ID and version.

### Name

CDR\_PUB\_CLA\_SUBTYPES.GetObjectClavalues

### Signature

```
FUNCTION GETOBJECTCLAVALUES(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  POBJECTID IN CDR_OBJ_CLA_MAPPINGS.OBJ_ID%TYPE,
  POBJECTSUBTYPEID IN CDR_OBJECT_SUBTYPES_TL.OBJECT_SUBTYPE_ID%TYPE
) RETURN CDR_HIER_LEVEL_VALUES_COLL;
```

**Return**

Type CDR\_HIER\_LEVEL\_VALUES\_COLL

Description Classification values

**Parameters**

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **OBJECTID** (Mandatory) Enter the Object Id.
- **PIBJECTSUBTYPEID** (Mandatory) Enter the Object Subtype Id.

## Get Child Terms

Use this API to retrieve some or all of the terms on a particular level that are children of a particular parent term. The function returns a collection of CDR\_HIER\_LEVEL\_VAL\_OBJ\_TYPES.

**Name**

CDR\_PUB\_CLA\_SUBTYPES.GetClaHierValues

**Signature**

```
FUNCTION GETCLAHIERVALUES(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  PLEVELIDS IN CDR_OPA_ID_COLL,
  PTERMS IN CDR_OPA_STRING_COLL,
  PDOMAINID IN PLS_INTEGER,
  PCLALEVELID IN CDR_SUBTYPE_CLA_LEVELS.CLA_LEVEL_ID%TYPE
) RETURN CDR_HIER_LEVEL_VALUES_COLL;
```

**Return**

Type CDR\_HIER\_LEVEL\_VALUES\_COLL

Description Classification hierarchy values

**Parameters**

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PLEVELIDS** (Mandatory) This is a collection of CDR\_OPA\_ID\_OBJ\_TYPES. For each hierarchy level from the top level to the level from which you want to retrieve terms (but not lower), initialize a CDR\_OPA\_ID\_OBJ\_TYPE and then extend the collection.  
The following attribute is required: CDR\_OPA\_ID.
- **PTERMS** (Mandatory) This is a collection of CDR\_OPA\_STRING\_OBJ\_TYPES. For each hierarchy level from the top level to the one from which you want to retrieve terms (but not lower), initialize a CDR\_OPA\_ID\_OBJ\_TYPE and then

extend the collection. For the required attribute, CDR\_OPA\_STRING, enter the term whose related terms you want to retrieve, in order starting with the top level.

- **PDOMAINID** Enter the ID of the LSH Instance Domain. Use the following query to get this ID: `select * from TMS.TMS_DEF_DOMAINS where name = 'CDR_USER_HIER'`
- **PCLALEVELID** Enter the ID of the classification hierarchy level that contains the terms you are searching for.

## Create and Modify Classification Hierarchy Values

This is a public interface for classification hierarchy value-related operations.

This section contains the following topics:

- [Insert a Classification Value](#)
- [Update a Classification Value](#)
- [Delete a Classification Value](#)

### Insert a Classification Value

Use this API to insert values, or terms, into a classification hierarchy level, related to a term in the next higher level. The function returns 0 if the transaction failed and 1 if it succeeded.

#### Name

CDR\_PUB\_CLA\_HIERARCHY\_VALS.InsertValues

#### Signature

```
FUNCTION INSERTVALUES(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  PPARENTCONTENTID IN TMS.TMS_DICT_CONTENTS.DICT_CONTENT_ID%TYPE,
  PLEVELID IN TMS.TMS_DEF_LEVELS.DEF_LEVEL_ID%TYPE,
  PVALUES IN OUT CDR_HIER_VAL_COLL
) RETURN PLS_INTEGER;
```

#### Return

Type PLS\_INTEGER

- 0 is returned if the transaction fails.
- 1 is returned if the transaction succeeds.

#### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PPARENTCONTENTID** Enter the ID of a term that serves as a parent to the terms you are inserting.

- **PLEVELID** Enter the ID of the classification hierarchy level into which you want to insert the terms.
- **PVALUES** (Mandatory) This is a collection of CDR\_HIER\_VAL\_TYPEs. For each classification value (term) that you want to add as a child to the term you specified, initialize a CDR\_HIER\_VAL\_TYPE and then extend the collection.  
The following attributes are required:  
CONTENT\_ID,TERM,ERROR\_MSG,APPROVED\_FLAG.

## Update a Classification Value

Use this API to modify classification hierarchy values. It returns 1 for transaction success and 0 for failure. It also returns a PVALUES collection that includes error messages for any terms that could not be updated.

### Name

CDR\_PUB\_CLA\_HIERARCHY\_VALS.UpdateValues

### Signature

```
FUNCTION UPDATEVALUES(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  PVALUES IN OUT CDR_HIER_VAL_COLL
) RETURN PLS_INTEGER;
```

### Return

Type PLS\_INTEGER

- 0 is returned if the transaction fails.
- 1 is returned if the transaction succeeds.

PVALUES returns a collection that includes error messages for any terms that could not be updated.

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PVALUES** (Mandatory) This is a collection of CDR\_HIER\_VAL\_TYPEs. For each classification value (term) that you want to modify, initialize a CDR\_HIER\_VAL\_TYPE and then extend the collection.

The following attributes are required: CONTENT\_ID,TERM,APPROVED\_FLAG.

You can modify the term itself or its Approved flag value.

## Delete a Classification Value

Use this API to delete classification values (terms). The API does not delete terms if they have been assigned as the default value for an object subtype or if they have been assigned to any object. If neither case is true, then the API deletes the term and any related terms it may have lower in the classification hierarchy.

## Name

CDR\_PUB\_CLA\_HIERARCHY\_VALS.DeleteValues

## Signature

```
PROCEDURE DELETEVALUES(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  X_RETURN_STATUS OUT VARCHAR2,  
  X_MSG_COUNT OUT NUMBER,  
  X_MSG_DATA OUT VARCHAR2,  
  PVALUES IN OUT CDR_HIER_VAL_COLL  
);
```

## Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PVALUES** (Mandatory) This is a collection of CDR\_HIER\_VAL\_TYPES. For each classification value (term) that you want to delete, initialize a CDR\_HIER\_VAL\_TYPE and then extend the collection.

The following attribute is required: CONTENT\_ID.

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## Job Execution

This section contains the following topics:

- [Create and Execute Output LOBs](#)
- [Retrieve Information about Ongoing Jobs](#)
- [Set Execution Statuses](#)
- [Submit Messages](#)
- [Create Submission Records](#)

### Create and Execute Output LOBs

This is a public API for uploading output CLOBs into Oracle LSH. These output CLOBs are generated by Oracle LSH executables outside the Oracle LSH database. For example, a PDF file output from a SAS print program or a SAS CPORT file output from a Data Mart. It also includes APIs that adapters may need to call during the execution of a Load Set, Data Mart, or Program.

This section contains the following topics:

- [Create a Binary Output](#)
- [Upload an Output BLOB](#)
- [Upload an Output CLOB](#)
- [Upload a LOB to a Temporary Table](#)
- [Download a Job Output BLOB](#)
- [Queue a Job](#)
- [Wait for a Job to Complete](#)
- [Generate an XML Payload](#)

### Create a Binary Output

Use this API to create a binary output object.

#### Name

CDR\_PUB\_EXE\_EXTERNAL.CreateBinaryOutput

#### Signature

```
PROCEDURE CREATEBINARYOUTPUT(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
```

```

X_RETURN_STATUS OUT   VARCHAR2,
X_MSG_COUNT OUT     NUMBER,
X_MSG_DATA OUT      VARCHAR2,
PI_NCOMPANYID IN    NUMBER,
PI_VFILENAME IN     VARCHAR2,
PI_VDATA IN        RAW := NULL
);

```

### Parameters

This API has standard parameters (see "[Standard Parameters](#)") and the following parameters:

- **PI\_NCOMPANYID** (Mandatory) Enter Company Id.
- **PI\_VFILENAME** (Mandatory) Enter the File Name.
- **PI\_VDATA** (Optional) Enter the RAW input to stream up the output.

## Upload an Output BLOB

Use this API to upload an output BLOB generated by an external processing engine into Oracle LSH.

### Name

CDR\_PUB\_EXE\_EXTERNAL.UploadBlobOutput

### Signature

```

PROCEDURE UPLOADBLOBOUTPUT(
  P_API_VERSION IN    NUMBER,
  P_INIT_MSG_LIST IN  VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN       VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT    NUMBER,
  X_MSG_DATA OUT     VARCHAR2,
  PI_NJOBID IN      VARCHAR2,
  PI_VFILENAME IN   VARCHAR2,
  PI_NPRREFID IN   VARCHAR2,
  PIO_BLOBSTREAM IN OUT BLOB
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_NJOBID** (Mandatory) Enter the JOB\_ID of the job that generated the output.
- **PI\_VFILENAME** (Mandatory) Enter the filename associated with the Planned Output.
- **PI\_NPRREFID** (Mandatory) Enter the PRREF\_ID of the Oracle LSH executable. This attribute is available from the `cdr_jobs_v` view.
- **PIO\_BLOBSTREAM** (Mandatory) This is a parameter of type BLOB. Enter BLOB to be uploaded.

## Upload an Output CLOB

Use this API to upload an output CLOB into Oracle LSH.

### Name

CDR\_PUB\_EXE\_EXTERNAL.UploadClobOutput

### Signature

```
PROCEDURE UPLOADCLOBOUTPUT(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  X_RETURN_STATUS OUT VARCHAR2,  
  X_MSG_COUNT OUT NUMBER,  
  X_MSG_DATA OUT VARCHAR2,  
  PI_NJOBID IN VARCHAR2,  
  PI_VFILENAME IN VARCHAR2,  
  PI_NPRREFID IN VARCHAR2,  
  PIO_CLOBSTREAM IN OUT CLOB  
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_NJOBID** (Mandatory) Enter the JOB\_ID of the job that generated the output.
- **PI\_VFILENAME** (Mandatory) Enter the filename associated with the Planned Output.
- **PI\_NPRREFID** (Mandatory) Enter the PRREFID of the Oracle LSH executable. This attribute is available from the CDR\_JOBS table.
- **PIO\_CLOBSTREAM** (Mandatory) Enter the variable name for the CLOB in the database.

## Upload a LOB to a Temporary Table

Use this API to upload one or more BLOBs or CLOBs (binary or character large objects) to a temporary table.

### Name

CDR\_PUB\_EXE\_EXTERNAL.CreateTempLobs

### Signature

```
PROCEDURE CREATETEMPLOBS(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  X_RETURN_STATUS OUT VARCHAR2,  
  X_MSG_COUNT OUT NUMBER,  
  X_MSG_DATA OUT VARCHAR2,
```



```

PI_NJOBID IN     NUMBER,
PI_BZIP IN      BOOLEAN,
PI_BLOBNAMES IN   CDR_VC_LIST_COLL,
PI_BLOBENTRIES IN  CDR_BLOB_LIST_COLL,
PI_CLOBNAMES IN   CDR_VC_LIST_COLL,
PI_CLOBENTRIES IN  CDR_CLOB_LIST_COLL
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_NJOBID** (Mandatory) Enter the Job\_ID. You can get the Job ID by running CDR\_PUB\_EXE\_RUNTIME.GETCURRENTLYEXECUTINGJOBID.
- **PI\_BZIP** Is the input lobs in zip format? Enter TRUE or FALSE.
- **PI\_BLOBNAMES** This parameter is of type cdr\_vc\_list\_coll which is a collection of varchar2(2000). The varchar contains the BLOB file name.
- **PI\_BLOBENTRIES** This parameter is a collection of cdr\_blob\_list\_coll which is a collection of BLOB types. This parameter contains the actual file BLOBs. This is always a collection so even if you are uploading a single CLOB, initialize the collection with that BLOB and pass it here.
- **PI\_CLOBNAMES** This parameter is of type cdr\_vc\_list\_coll which is a collection of varchar2(2000). The varchar contains the CLOB file name.
- **PI\_CLOBENTRIES** This parameter is a collection of cdr\_clob\_list\_coll which is a collection of CLOB type. This contains the actual file CLOBs. This is always a collection so even if you are uploading a single CLOB, initialize the collection with that CLOB and pass it here.

## Download a Job Output BLOB

Use this API to download a job output BLOB.

### Name

CDR\_PUB\_EXE\_EXTERNAL.DownloadTempBlob

### Signature

```

FUNCTION DOWNLOADTEMPBLOB(
  P_API_VERSION IN     NUMBER,
  P_INIT_MSG_LIST IN   VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN        VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN  NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  PI_NOBJID IN        NUMBER,
  PO_VFILENAME OUT     VARCHAR2
) RETURN BLOB;

```

### Return

Type BLOB

Description returns the output file as a BLOB.

## Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_NOBJID** (Mandatory) Enter the tmp\_blob\_id of the job output LOB. You can use the following query to get this ID:

```
SELECT tmp_blob_id FROM cdr_temp_blobs_v WHERE job_id = pi_nJobId;
```

- **PO\_VFILENAME** (Mandatory) This Out parameter contains the file name of the downloaded LOB file.

## Queue a Job

Use this API to queue the job into a service location for execution.

### Name

CDR\_PUB\_EXE\_EXTERNAL.SendJob

### Signature

```
PROCEDURE SENDJOB(  
    P_API_VERSION IN NUMBER,  
    P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
    P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
    P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
    X_RETURN_STATUS OUT VARCHAR2,  
    X_MSG_COUNT OUT NUMBER,  
    X_MSG_DATA OUT VARCHAR2,  
    PI_VRECEIVER IN VARCHAR2,  
    PI_NJOBID IN NUMBER,  
    PI_VPAYLOAD IN VARCHAR2  
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_VRECEIVER** (Mandatory) Enter the name of the Service Location.
- **PI\_NJOBID** (Mandatory) Enter the Job\_ID. You can get the Job ID by running CDR\_PUB\_EXE\_RUNTIME.GETCURRENTLYEXECUTINGJOBID.
- **PI\_VPAYLOAD** (Mandatory) Enter the actual XML Payload generated by the CDR\_PUB\_EXE\_EXTERNAL.GenerateXMLPayload API.

## Wait for a Job to Complete

Use this API to enable synchronous execution so that program control waits for a Job to complete before proceeding with the rest of the logic.

### Name

CDR\_PUB\_EXE\_EXTERNAL.WaitForFinalStatus

## Signature

```
PROCEDURE WAITFORFINALSTATUS(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PI_NJOBID IN NUMBER,
  PI_NTIMEOUT IN NUMBER,
  PI_NSERVICEINSTANCEID IN NUMBER
);
```

## Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_NJOBID** (Mandatory) Enter the Job ID of the Job in process. The Job\_ID is returned by the API CDR\_PUB\_EXE\_SUBMISSION.CREATE SUBMISSION and in the UI.
- **PI\_NTIMEOUT** (Mandatory) Enter in seconds, the job completion period before the API times out.
- **PI\_NSERVICEINSTANCEID** (Mandatory) Enter the service instance that is processing the job. Get the ID from the cdr\_jobs\_v view using the Job\_Id.

## Generate an XML Payload

Use this API to generate the required XML payload for a job execution.

### Name

CDR\_PUB\_EXE\_EXTERNAL.GenerateXmlPayload

### Signature

```
FUNCTION GENERATEXMLPAYLOAD(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  PI_NJOBID IN NUMBER,
  PI_VJOBTYPE IN VARCHAR2,
  PI_NDOWNLOADCONFIGID IN NUMBER,
  PI_VPROGRAM IN VARCHAR2,
  PI_VWORKDIRECTORY IN VARCHAR2,
  PI_VRUNSCRIPT IN VARCHAR2,
  PI_VOUTPUTPATH IN VARCHAR2,
  PI_VPRIORITY IN VARCHAR2,
  PI_VSCHEMA IN VARCHAR2,
  PI_VUSERID IN VARCHAR2,
  PI_VSUBDIRECTORIES IN CDR_VC_LIST_COLL,
  PI_NSURROGATEJOBID IN CDR_JOBS_V.JOB_ID%TYPE := NULL,
  PI_VTECHTYPE IN VARCHAR2 := NULL,
  PI_NSURROGATEPRREFID IN CDR_JOBS_V.PRREF_ID%TYPE := NULL
) RETURN CLOB;
```

## Return

Type CLOB Description Returns the generated XML as a CLOB.

## Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_NJOBID** (Mandatory) Enter the Job\_ID.
- **PI\_VJOBTYPE** (Mandatory) Enter the Job Type—either *tmp* for an internal job or *exe* for a user-executed job
- **PI\_NDOWNLOADCONFIGID** (Optional) If the entire job configuration is stored in *cdr\_temp\_blobs* (against the Job\_ID), you can enter the ID of the BLOB for the job.  
Query *CDR\_TEMP\_BLOBS\_V* to get the value. If you do not enter a BLOB ID, enter 0.
- **PI\_VPROGRAM** (Mandatory) Enter the command to be executed on the server.
- **PI\_VWORKDIRECTORY** (Mandatory) Enter the full path of the root folder in the DP server Home under which the job folder gets created.
- **PI\_VRUNSCRIPT** (Mandatory) Enter the name of the main script to be executed for the job.
- **PI\_VOUTPUTPATH** (Mandatory) Enter the path where the output will be generated, relative to the work directory/ folder.
- **PI\_VPRIORITY** (Mandatory) Enter the job priority. The possible values are the lookup codes in the lookup type 'CDR\_JOB\_PRIORITIES'.
- **PI\_VSCHEMA** (Mandatory) Enter the ID of the ZZ\_Schema allocated for the current job. You can query *CDR\_JOBS\_V* to get this ID.
- **PI\_VUSERID** (Mandatory) Enter the UserId that is executing the job. Use the API *CDR\_PUB\_DEF\_FACTORY\_SUPPORT.GETUSERID* to get this ID.
- **PI\_VSUBDIRECTORIES** This is a collection of type *CDR\_VC\_LIST\_COLL*. Enter the names of subdirectories that should be created under the Job directory in the DP Server.
- **PI\_NSURROGATEJOBID** SurrogateJobId. (Optional) Enter the job ID under which the created outputs will be uploaded if it is different from the current job; for example, a master job.
- **PI\_VTECHTYPE** (Mandatory) Enter the TechType name being used for the job.
- **PI\_NSURROGATEPRREFID** SurrogatePrrefId(Optional) Enter the ID of the master job for this job, if any.

## Retrieve Information about Ongoing Jobs

This is a public interface to retrieve information about an ongoing job.

This section contains the following topics:

- [Get an Ongoing Job ID](#)
- [Get Currently Executing Parameters](#)

- [Get Information About a Job](#)
- [Get Additional Job Information \(Overloaded\)](#)

## Get an Ongoing Job ID

Use this API to retrieve the job ID of the job that is currently running.

### Name

CDR\_PUB\_EXE\_RUNTIME.GetCurrentlyExecutingJobID

### Signature

```
FUNCTION GETCURRENTLYEXECUTINGJOBID(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL  
) RETURN CDR_JOBS.JOB_ID%TYPE;
```

### Return

Type CDR\_JOBS.JOB\_ID%TYPE

Description the job ID of the job which is executing in the current session.

### Parameters

This API has standard parameters. See [Standard Parameters](#) for details.

## Get Currently Executing Parameters

Use this API to retrieve the parameters in use by the job that is currently running.

### Name

CDR\_PUB\_EXE\_RUNTIME.GetCurrentlyExecutingParams

### Signature

```
FUNCTION GETCURRENTLYEXECUTINGPARAMS(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL  
) RETURN CDR_PARAMETER_VALUES_COLL;
```

### Return

Type CDR\_PARAMETER\_VALUES\_COLL

### Parameters

This API has standard parameters. See [Standard Parameters](#) for details.

## Get Information About a Job

Use this API to retrieve information about a Job by passing its JOB\_ID.

**Name**

CDR\_PUB\_EXE\_RUNTIME.GetJobInfo

**Signature**

```
PROCEDURE GETJOBINFO(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PI_NJOBID IN CDR_JOBS.JOB_ID%TYPE,
  PO_RSUBMISSION_V OUT CDR_SUBMISSIONS_V%ROWTYPE,
  PO_RJOB_V OUT CDR_JOBS_V%ROWTYPE
);
```

**Parameters**

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_NJOBID** (Mandatory) Enter the JOB\_ID of the job you want information about. You can get the Job ID by running CDR\_PUB\_EXE\_RUNTIME. Get Currently Executing Job ID.
- **PO\_RSUBMISSION\_V** This is an output parameter. The API returns the row corresponding to the SUBMISSION\_ID associated with the JOB\_ID value in CDR\_JOBS from the CDR\_SUBMISSIONS table.
- **PO\_RJOB\_V** This is an output parameter. The API returns the row corresponding to the JOB\_ID from the CDR\_JOBS table.

## Get Additional Job Information (Overloaded)

Use this API to retrieve information about a Job, including whether it is a Master job or a Top Level job, by passing its JOB\_ID.

**Name**

CDR\_PUB\_EXE\_RUNTIME.GetJobInfo

**Signature**

```
PROCEDURE GETJOBINFO(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PI_NJOBID IN CDR_JOBS.JOB_ID%TYPE,
  PO_RSUBMISSION OUT CDR_SUBMISSIONS%ROWTYPE,
  PO_RJOB OUT CDR_JOBS%ROWTYPE,
  PO_BISTOPLEVELJOB OUT BOOLEAN,
```

```

    PO_BISMASTERJOB OUT    BOOLEAN
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_NJOBID** (Mandatory) Enter the JOB ID.
- **PO\_RSUBMISSION** This is an output parameter. The API returns the row corresponding to the SUBMISSION\_ID (associated with the JOB\_ID value in CDR\_JOBS) from the CDR\_SUBMISSIONS table.
- **PO\_RJOB** This is an output parameter. The API returns the row corresponding to the JOB\_ID from the CDR\_JOBS table.
- **PO\_BISTOPLEVELJOB** This is an output parameter. The API returns "T" if the Job is a Top Level Job.
- **PO\_BISMASTERJOB** This is an output parameter. The API returns "T" if the job is a Master job.

## Set Execution Statuses

This package contains APIs for setting and retrieving the execution status of Oracle LSH Programs. It also contains APIs for setting output parameters from external tools.

This section contains the following topics:

- [Set a User-specific Completion Status](#)
- [Set a Customized Output Title](#)
- [Set a Customized Output Subtitle](#)
- [Set an Output Parameter](#)
- [Get a Completion Status](#)

### Set a User-specific Completion Status

Use this API to set the completion status to a user specified value. Valid status values are: 1 for OK; 2 for OK With Warnings; 3 for Failure.

#### Name

CDR\_PUB\_EXE\_USER\_UTILS.SetCompletionStatus

#### Signature

```

PROCEDURE SETCOMPLETIONSTATUS(
    P_API_VERSION IN    NUMBER,
    P_INIT_MSG_LIST IN  VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
    P_COMMIT IN        VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
    P_VALIDATION_LEVEL IN  NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
    X_RETURN_STATUS OUT   VARCHAR2,
    X_MSG_COUNT OUT      NUMBER,
    X_MSG_DATA OUT       VARCHAR2,
    PI_NCOMPLETIONSTATUS IN  NUMBER := 1
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PI\_NCOMPLETIONSTATUS** (Mandatory) Enter the completion status value. Valid values are 1, 2, or 3.

## Set a Customized Output Title

Use this API to set a title for individual RSE outputs.

### Name

CDR\_PUB\_EXE\_USER\_UTILS.SetCustomOutputTitle

### Signature

```

PROCEDURE SETCUSTOMOUTPUTTITLE(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PI_VFILEREFF IN CDR_PLANNED_OUTPUTS.FILEREFF%TYPE,
  PI_VVALUE IN VARCHAR2
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_VFILEREFF** (Mandatory) Enter the file reference name of the Planned Output to which you want to assign the title.
- **PI\_VVALUE** (Mandatory) Enter the title text.

## Set a Customized Output Subtitle

Use this API to set a subtitle for individual RSE outputs.

### Name

CDR\_PUB\_EXE\_USER\_UTILS.SetCustomOutputSubtitle

### Signature

```

PROCEDURE SETCUSTOMOUTPUTSUBTITLE(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,

```



```

    PI_VFILEREF IN    CDR_PLANNED_OUTPUTS.FILEREF%TYPE,
    PI_VVALUE IN    VARCHAR2
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_VFILEREF** (Mandatory) Enter the file reference name of the Planned Output to which you want to assign the subtitle.
- **PI\_VVALUE** (Mandatory) Enter the subtitle text.

## Set an Output Parameter

Use this API to send custom parameters and their values to Oracle LSH from external sources such as SAS. Parameter names and their values passed to this API get added to the `cdr_temp_output_params` table.

### Name

CDR\_PUB\_EXE\_USER\_UTILS.SetOutputParams

### Signature

```

PROCEDURE SETOUTPUTPARAMS(
    P_API_VERSION IN    NUMBER,
    P_INIT_MSG_LIST IN    VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
    P_COMMIT IN    VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
    P_VALIDATION_LEVEL IN    NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
    X_RETURN_STATUS OUT    VARCHAR2,
    X_MSG_COUNT OUT    NUMBER,
    X_MSG_DATA OUT    VARCHAR2,
    PI_VPARAMNAME IN    CDR_TEMP_OUTPUT_PARAMS.PARAMETER_NAME%TYPE,
    PI_VPARAMVALUE IN    CDR_TEMP_OUTPUT_PARAMS.PARAMETER_VALUE%TYPE
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_VPARAMNAME** (Mandatory) Enter the parameter name.
- **PI\_VPARAMVALUE** (Mandatory) Enter a value for the parameter.

## Get a Completion Status

Use this API to retrieve a completion status value. The completion status value can only be one of the following: 1 for OK; 2 for OK With Warnings; 3 for Failure.

### Name

CDR\_PUB\_EXE\_USER\_UTILS.GetCompletionStatus

### Signature

```

FUNCTION GETCOMPLETIONSTATUS(
    P_API_VERSION IN    NUMBER,

```

```

P_INIT_MSG_LIST IN    VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
P_COMMIT IN    VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
P_VALIDATION_LEVEL IN    NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL
) RETURN NUMBER;

```

**Return**

Type NUMBER

Description Completion Status. The values are 1: OK 2: OK\_WITH\_WARNINGS 3: FAILURE

**Parameters**

This API has standard parameters. See [Standard Parameters](#)) for details.

## Submit Messages

This package contains one API related to the submission of messages. See the following topic for details:

- [Submit a Message](#)

## Submit a Message

Use this API to add a submission request to the message queue.

**Name**

CDR\_PUB\_EXE\_MSG\_API.Submit\_Message

**Signature**

```

PROCEDURE SUBMIT_MESSAGE(
  P_API_VERSION IN    NUMBER,
  P_INIT_MSG_LIST IN    VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN    VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN    NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT    VARCHAR2,
  X_MSG_COUNT OUT    NUMBER,
  X_MSG_DATA OUT    VARCHAR2,
  PI_MSG IN    VARCHAR2 := NULL
);

```

**Parameters**

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PI\_MSG** (Mandatory). Enter in XML format, the message that you want to add to the message queue.

## Create Submission Records

This package contains procedures to log messages during a job run and to create a submission record.

This section contains the following topics:

- [Start a Job](#)
- [Create a Submission, Get Job ID](#)
- [Create a Submission](#)
- [Add a Job Log](#)

## Start a Job

Use this API to start the execution of a job.

### Name

CDR\_PUB\_EXE\_SUBMISSION.StartJob

### Signature

```
PROCEDURE STARTJOB(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  X_RETURN_STATUS OUT VARCHAR2,  
  X_MSG_COUNT OUT NUMBER,  
  X_MSG_DATA OUT VARCHAR2,  
  PI_VEXECCODE IN VARCHAR2 := 'NONE',  
  PI_NJOBID IN CDR_JOBS_V.JOB_ID%TYPE,  
  PI_NSTREAMID IN NUMBER := NULL  
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_VEXECCODE** (Mandatory) Enter the mode of execution. There are four possible values: SYNCHRONOUS (start the job and wait for completion), QUEUE (enqueue the job on the LSH queues), DIRECT (directly submit the job to OWB but do not wait), STREAM (The stream ID has to be set if this mode is used).
- **PI\_NJOBID** (Mandatory) Enter the Job\_ID of the job to be executed.
- **PI\_NSTREAMID** Enter the OWB Stream ID. The default value is Null. This parameter is required only if mode=STREAM.

## Create a Submission, Get Job ID

Use this API to create a submission before starting the job.

### Name

CDR\_PUB\_EXE\_SUBMISSION.CreateSubmission

### Signature

```
FUNCTION CREATESUBMISSION(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
```

```

P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
PIO_OSUBMISSION IN OUT CDR_SUBMISSION_OBJ_TYPE,
PIO_COSUBDETAILS IN OUT CDR_SUBMISSION_DETAILS_COLL,
PI_JOBCONTEXTRC IN CDR_JOBS_V.JOB_CONTEXT_RC%TYPE,
PI_EXECMODE IN VARCHAR2,
PI_REFRESHTS IN CDR_JOBS_V.REFRESH_TS%TYPE
) RETURN CDR_JOBS_V.JOB_ID%TYPE;

```

**Return**

CDR\_JOBS\_V.JOB\_ID%TYPE: The Job ID.

**Parameters**

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_OSUBMISSION** (Mandatory) This parameter is of type CDR\_SUBMISSION\_OBJ\_TYPE. Enter values for the following attributes: COMPANY\_ID, EXECUTION\_SETUP\_OBJ\_ID, EXECUTION\_SETUP\_OBJ\_VER, WA\_OBJ\_ID, MASTER\_PRRF\_ID, MASTER\_PRRF\_VER, ACTIVE\_FLAG\_RC, SUBMISSION\_TYPE\_RC.  
  
You can query MASTER\_PRRF\_ID and MASTER\_PRRF\_VER from CDR\_PROGRAM\_REFS\_V with the Object ID and version of the object to be executed as the Prrf Obj Id and Prrf Obj ver.
- **PIO\_COSUBDETAILS** (Mandatory) This parameter is part of a collection of runtime parameters. It is of type CDR\_SUBMISSION\_DETAILS\_COLL. Enter values for the runtime parameters that you want to include in the job submission. The required attributes are: COMPANY\_ID, SUBMISSION\_ID, PRRF\_ID, PRRF\_VER, PARAMETER\_REF\_OBJ\_ID, PARAMETER\_REF\_OBJ\_VER, PARAMETER\_VALUE.
- **PI\_JOBCONTEXTRC** (Mandatory) Enter the Job Context. The possible values are the lookup\_codes inside the lookup\_type CDR\_JOB\_CONTEXTS: \$JOBCONTEXT\$BACKCHAIN, \$JOBCONTEXT\$COMPONENT, \$JOBCONTEXT\$SCHEDULED; \$JOBCONTEXT\$SUBMISSION.
- **PI\_EXECMODE** (Mandatory) Enter a value for the execution mode. There are 3 possible values: SYNCHRONOUS (start the job and wait for completion), QUEUE (enqueue the job on the LSH queues), DIRECT (directly submit the job to OWB but would not wait).
- **PI\_REFRESHTS** (Mandatory) Enter the Refresh timestamp you want to have associated with the job. It is normally 'sysdate,' but if you want to explicitly set a timestamp you can enter it here; for example, for a recovery job.

## Create a Submission

This API creates a Submission from the initial Job.

**Name**

CDR\_PUB\_EXE\_SUBMISSION.CreateSubmission

## Signature

```

PROCEDURE CREATESUBMISSION(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PIO_OSUBMISSION IN OUT CDR_SUBMISSION_OBJ_TYPE,
  PIO_COPROGRAMSUBDETAILS IN OUT CDR_SUBMISSION_DETAILS_COLL,
  PIO_COSYSTEMSUBDETAILS IN OUT CDR_SUBMISSION_DETAILS_COLL,
  PI_NOACCOUNTID IN CDR_SUBMISSIONS.OA_ACCOUNT_ID%TYPE := NULL,
  PI_COSNAPSHOT IN CDR_SNAPSHOT_TABLE_COLL := CDR_SNAPSHOT_TABLE_COLL()
);

```

## Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_OSUBMISSION** Object containing Submission attributes like `submission_type_rc`, `execution_setup_id`, `master_prref_id` etc.
- **PIO\_COPROGRAMSUBDETAILS** This is part of submission details which is a collection of runtime parameters.
- **PIO\_COSYSTEMSUBDETAILS** This is part of submission details which is a collection of system parameters.
- **PI\_NOACCOUNTID** Enter the OA account ID of the user making the submission.
- **PI\_COSNAPSHOT** This is a collection of snapshots attributes like `Tables_Obj_id`, `Obj_Ver`, `source_master_job_id` etc.

## Add a Job Log

Use this API to populate the `cdr_job_log` with the log entry for a given job.

### Name

`CDR_PUB_EXE_SUBMISSION.AddJobLogEntry`

### Signature

```

PROCEDURE ADDJOBLOGENTRY(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PI_NCOMPANYID IN CDR_JOB_LOG.COMPANY_ID%TYPE,
  PI_NJOBID IN CDR_JOB_LOG.JOB_ID%TYPE,
  PI_VLOGENTRY IN VARCHAR2
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_NCOMPANYID** Enter the Company ID.
- **PI\_NJOBID** Enter the Job ID.
- **PI\_VLOGENTRY** Enter a Log Entry. This accepts a text message.

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## Security Policy

This is a public interface for object security-related operations. You need the application role `CDR_SECURITY_ADMIN` or `CDR_DATA_SECURITY_ADMIN` to use any of these APIs.

This chapter contains the following section:

- [Create and Modify Security Policies](#)

### Create and Modify Security Policies

This section contains the following topics:

- [Create a Subtype](#)
- [Copy a Subtype](#)
- [Modify a Subtype](#)
- [Assign Roles to a Subtype Operation](#)
- [Assign Operations to a Subtype Role](#)
- [Remove a Subtype](#)
- [Create a Role](#)
- [Modify a Role](#)
- [Add a Group Role](#)
- [Get Roles for a User](#)
- [Remove a Role](#)
- [Remove a Group Role](#)
- [Create a User Group](#)
- [Add Users to a Group](#)
- [Remove Users from a Role in a User Group](#)
- [Assign a User Group to an Object](#)
- [Copy a User Group](#)
- [Copy a User Group with its Users](#)
- [Modify a User Group](#)
- [Remove All Group Roles from a User Group](#)
- [Remove All Users in a Group](#)
- [Revoke a User Group From an Object](#)
- [Undo a Revoke a User Group Action](#)
- [Remove a User Group](#)

- [Unassign a User Group From an Object](#)
- [Unassign Roles from an Operation on an Object's Subtype](#)
- [Unassign Operations on an Object Subtype's Role](#)
- [Initialize Access to a Security View](#)
- [Prevent Access to a Security View](#)
- [Get the Resource Timeout Limit](#)
- [Set the Resource Timeout Limit](#)
- [Reset the Resource Timeout Limit](#)

## Create a Subtype

Use this API to create a new subtype.

### Name

CDR\_PUB\_SECURITY\_PKG.CreateSubtype

### Signature

```
PROCEDURE CREATESUBTYPE(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  X_RETURN_STATUS OUT VARCHAR2,  
  X_MSG_COUNT OUT NUMBER,  
  X_MSG_DATA OUT VARCHAR2,  
  PIO_SUBTYPE IN OUT CDR_SUBTYPE_OBJ_TYPE  
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PIO\_SUBTYPE** (Mandatory) This is a collection of CDR\_USER\_GROUPS\_OBJ\_TYPE that contain attributes related to User Groups.

The required attributes are: NAME,OBJECT\_SUBTYPE\_ID,OBJECT\_TYPE\_RC.

## Copy a Subtype

Use this API to make a copy of a subtype.

### Name

CDR\_PUB\_SECURITY\_PKG.CopySubtype

### Signature

```
PROCEDURE COPYSUBTYPE(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
```



```

X_RETURN_STATUS OUT VARCHAR2,
X_MSG_COUNT OUT NUMBER,
X_MSG_DATA OUT VARCHAR2,
PI_SUBTYPE IN CDR_SUBTYPE_OBJ_TYPE
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PI\_SUBTYPE** (Mandatory) This a parameter of table type CDR\_SUBTYPE\_OBJ\_TYPE that contains information about the subtype.

## Modify a Subtype

Use this API to update a subtype.

### Name

CDR\_PUB\_SECURITY\_PKG.ModifySubtype

### Signature

```

PROCEDURE MODIFYSUBTYPE(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PIO_SUBTYPE IN OUT CDR_SUBTYPE_OBJ_TYPE
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PIO\_SUBTYPE** (Mandatory) This is a parameter of table type CDR\_SUBTYPE\_OBJ\_TYPE that contains information about the object subtype.

## Assign Roles to a Subtype Operation

Use this API to assign a role to an operation for a subtype of an object.

### Name

CDR\_PUB\_SECURITY\_PKG.AssignRolesToSubtypeOperation

### Signature

```

PROCEDURE ASSIGNROLESUBTYPEOPERATION(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,

```

```

X_MSG_COUNT OUT NUMBER,
X_MSG_DATA OUT VARCHAR2,
PIO_ROLESTOOPR IN OUT CDR_SUBTYPE_OPR_ROLES_COLL
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_ROLESTOOPR** (Mandatory) This is a collection of CDR\_SUBTYPE\_OPR\_ROLE\_OBJ\_TYPE.
- **PI\_REPLACEALL** This parameter allows you to choose either replace the role(s) already assigned with a new list of roles or to add new assignments to the existing ones. If you do not specify a value for this parameter, the existing assignments are replaced by default.
  - Set to **T** to unassign all currently assigned roles when the new role is assigned.
  - Set to **F** to retain all currently assigned roles when the new role is assigned.

## Assign Operations to a Subtype Role

Use this API to assign an operation to a role of an object subtype.

### Name

CDR\_PUB\_SECURITY\_PKG.AssignOprToSubtypeRole

### Signature

```

PROCEDURE ASSIGNOPRTOSUBTYPEROLE(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PIO_ROLESTOOPR IN OUT CDR_SUBTYPE_OPR_ROLES_COLL
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

- **PIO\_ROLESTOOPR** (Mandatory) This is a collection of CDR\_SUBTYPE\_OPR\_ROLE\_OBJ\_TYPE.

## Remove a Subtype

Use this API to delete a subtype that is not Active. If objects are assigned to the subtype, you cannot delete it even if it is Inactive.

**Name**

CDR\_PUB\_SECURITY\_PKG.RemoveSubtype

**Signature**

```
PROCEDURE REMOVESUBTYPE(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PI_SUBTYPEID IN CDR_OBJECT_SUBTYPES_B.OBJECT_SUBTYPE_ID%TYPE,
  PI_COMPANYID IN CDR_OBJECT_SUBTYPES_B.COMPANY_ID%TYPE,
  PI_OBJECTTYPERC IN CDR_OBJECT_SUBTYPES_B.OBJECT_TYPE_RC%TYPE
);
```

**Parameters**

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_SUBTYPEID** (Mandatory) Enter the OBJECT\_SUBTYPE\_ID of the subtype you want to delete.
- **PI\_COMPANYID** (Mandatory) Enter the COMPANY\_ID associated with the OBJ\_SUBTYPE\_ID.
- **PI\_OBJECTTYPERC** (Mandatory) Enter the OBJECT\_TYPE\_RC value for the object type associated with the subtype.

## Create a Role

Use this API to create a new Role.

**Name**

CDR\_PUB\_SECURITY\_PKG.CreateRole

**Signature**

```
PROCEDURE CREATEROLE(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PIO_ROLE IN OUT CDR_ROLE_OBJ_TYPE
);
```

**Parameters**

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

**PIO\_ROLE** (Mandatory) This is a parameter of table type CDR\_ROLE\_OBJ\_TYPE that contains attributes related to a Role.

Required Attributes are: NAME, CODE, OBJECT VERSION NUMBER.

## Modify a Role

Use this API to update a Role. You can change the name, description, and Active status of a Role.

### Name

CDR\_PUB\_SECURITY\_PKG.ModifyRole

### Signature

```
PROCEDURE MODIFYROLE(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  X_RETURN_STATUS OUT VARCHAR2,  
  X_MSG_COUNT OUT NUMBER,  
  X_MSG_DATA OUT VARCHAR2,  
  PIO_ROLE IN OUT CDR_ROLE_OBJ_TYPE  
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PIO\_ROLE** (Mandatory) This is a parameter of table type CDR\_ROLE\_OBJ\_TYPE that contains attributes related to a Role.

Required Attributes are: NAME, CODE, OBJECT VERSION NUMBER (pass 1 for this).

## Add a Group Role

Use this API to create roles for a User Group.

### Name

CDR\_PUB\_SECURITY\_PKG.AddGrpRoles

### Signature

```
PROCEDURE ADDGRPROLES(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  X_RETURN_STATUS OUT VARCHAR2,  
  X_MSG_COUNT OUT NUMBER,  
  X_MSG_DATA OUT VARCHAR2,  
  PIO_ROLES IN OUT CDR_UG_ROLE_OBJ_TYPE  
);
```

**Parameters**

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PIO\_ROLES** (Mandatory) This is a parameter of table type CDR\_UG\_ROLE\_OBJ\_TYPE.

Following attributes are required:

COMPANY\_ID,USER\_GROUP\_ID,ROLE\_ID,OBJECT\_VERSION\_NUMBER

## Get Roles for a User

Use this API to retrieve all Roles assigned to a user.

**Name**

CDR\_PUB\_SECURITY\_PKG.GetRolesForUser

**Signature**

```
FUNCTION GETROLESFORUSER(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  P_USERID IN VARCHAR2
) RETURN CLOB;
```

**Return**

Type CLOB

Description CLOB for all roles for given user.

**Parameters**

This API has standard parameters. See [Standard Parameters](#)) for details.

## Remove a Role

Use this API to delete a role.

**Name**

CDR\_PUB\_SECURITY\_PKG.RemoveRole

**Signature**

```
PROCEDURE REMOVEROLE(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PI_COMPANYID IN NUMBER,
```

```

    PI_ROLEID IN    NUMBER
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_COMPANYID** (Mandatory) Enter the COMPANY\_ID associated with the Role.
- **PI\_ROLEID** (Mandatory) Enter the ROLE\_ID of the Role that you want to delete.

## Remove a Group Role

Use this API to remove a single Role from a User Group. You can remove all Roles from the User Group at the same time by using the Remove All Group Roles API.

### Name

CDR\_PUB\_SECURITY\_PKG.RemoveGrpRoles

### Signature

```

PROCEDURE REMOVEGRPROLES(
    P_API_VERSION IN    NUMBER,
    P_INIT_MSG_LIST IN  VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
    P_COMMIT IN      VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
    P_VALIDATION_LEVEL IN  NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
    X_RETURN_STATUS OUT   VARCHAR2,
    X_MSG_COUNT OUT      NUMBER,
    X_MSG_DATA OUT       VARCHAR2,
    PIO_ROLES IN        CDR_UG_ROLE_OBJ_TYPE
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PIO\_ROLES** (Mandatory) This parameter is of table type CDR\_UG\_ROLE\_OBJ\_TYPE that contains information about User Groups and Roles.

## Create a User Group

Use this API to create a new User Group.

### Name

CDR\_PUB\_SECURITY\_PKG.CreateUserGroup

### Signature

```

PROCEDURE CREATEUSERGROUP(
    P_API_VERSION IN    NUMBER,
    P_INIT_MSG_LIST IN  VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
    P_COMMIT IN      VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
    P_VALIDATION_LEVEL IN  NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
    X_RETURN_STATUS OUT   VARCHAR2,
    X_MSG_COUNT OUT      NUMBER,

```

```
X_MSG_DATA OUT VARCHAR2,
PIO_USERGRP IN OUT CDR_USER_GROUP_OBJ_TYPE
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

**PIO\_USERGRP** (Mandatory) This is a collection of CDR\_USER\_GROUPS\_OBJ\_TYPE that contains attributes related to User Groups.

Required attributes are: USER\_GROUP\_ID,COMPANY\_ID, NAME.

## Add Users to a Group

Use this API to add users to a User Group.

### Name

CDR\_PUB\_SECURITY\_PKG.AddUserToGrp

### Signature

```
PROCEDURE ADDUSERTOGRP(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PIO_USERUGROLES IN OUT CDR_USER_UG_ROLE_OBJ_TYPE
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

**PIO\_USERUGROLES** (Mandatory) This is a parameter of table type CDR\_USER\_UG\_ROLE\_OBJ\_TYPE.

Required Attributes are: UG\_COMPANY\_ID, USER\_GROUP\_ID, ROLE\_ID, USER\_ID, ROLE\_ID

## Remove Users from a Role in a User Group

Use this API to delete users from a Role in a User Group.

### Name

CDR\_PUB\_SECURITY\_PKG.RemoveUsersInGrp

### Signature

```
PROCEDURE REMOVEUSERSINGRP(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
```

```

P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
X_RETURN_STATUS OUT VARCHAR2,
X_MSG_COUNT OUT NUMBER,
X_MSG_DATA OUT VARCHAR2,
PIO_USERUGROLES IN OUT CDR_USER_UG_ROLE_OBJ_TYPE
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PIO\_USERUGROLES** (Mandatory) This parameter is of table type `CDR_USER_UG_ROLE_OBJ_TYPE` that contains information about user, User Groups, and Roles.

## Assign a User Group to an Object

Use this API to assign a User Group to an object.

### Name

`CDR_PUB_SECURITY_PKG.AssignUsrGrpToObj`

### Signature

```

PROCEDURE ASSIGNUSRGRPTOOBJ(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PI_BASEOBJECTTYPE IN OUT CDR_BASE_OBJ_TYPE,
  PI_CDROBJUGCOLL IN CDR_OBJ_UG_COLL
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_BASEOBJECTTYPE** (Mandatory) This is a parameter of table type `CDR_BASE_OBJ_TYPE`. Provide the basic naming attributes for the object to which you want to assign the User Group. (`COMPANY_ID`, `OBJECT_ID`, `OBJECT_VER`, `NAMESPACE_OBJ_ID`, `NAMESPACE_OBJ_VER`, `OBJECT_VERSION_NUMBER`). Initialize these attributes in `CDR_BASE_OBJ_TYPE`.
- **PI\_CDROBJUGCOLL** (Mandatory) This is a collection of `CDR_OBJ_UG_OBJ_TYPE`. Enter User Group details in this parameter. The following are required parameters: `UG_COMPANY_ID`, `OBJ_COMPANY_ID`, `USER_GROUP_ID`, `OBJ_ID` and `EXCLUSION_FLAG`.



## Copy a User Group

Use this API to make a copy of a User Group including its Roles but not its users.

### Name

CDR\_PUB\_SECURITY\_PKG.CopyUserGroup

### Signature

```
PROCEDURE COPYUSERGROUP(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  X_RETURN_STATUS OUT VARCHAR2,  
  X_MSG_COUNT OUT NUMBER,  
  X_MSG_DATA OUT VARCHAR2,  
  PIO_USERGRP IN OUT CDR_USER_GROUPS_COLL  
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PIO\_USERGRP** (Mandatory) This is a collection of CDR\_USER\_GROUPS\_OBJ\_TYPE that contains attributes related to User Groups.

Required attributes are: USER\_GROUP\_ID,COMPANY\_ID, NAME.

## Copy a User Group with its Users

Use this API to make a copy of a User Group including its roles and users.

### Name

CDR\_PUB\_SECURITY\_PKG.CopyUserGroupWithUsers

### Signature

```
PROCEDURE COPYUSERGROUPWITHUSERS(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  X_RETURN_STATUS OUT VARCHAR2,  
  X_MSG_COUNT OUT NUMBER,  
  X_MSG_DATA OUT VARCHAR2,  
  PIO_USERGRP IN OUT CDR_USER_GROUPS_COLL  
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PIO\_USERGRP** (Mandatory) This is a collection of CDR\_USER\_GROUPS\_OBJ\_TYPE that contains attributes related to User Groups. Enter the attribute values of the user group you want to copy.

Required attributes are: USER\_GROUP\_ID,COMPANY\_ID, NAME.

This parameter does not return any values.

## Modify a User Group

Use this API to modify a User Group.

### Name

CDR\_PUB\_SECURITY\_PKG.ModifyUserGroup

### Signature

```
PROCEDURE MODIFYUSERGROUP(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  X_RETURN_STATUS OUT VARCHAR2,  
  X_MSG_COUNT OUT NUMBER,  
  X_MSG_DATA OUT VARCHAR2,  
  PIO_USERGRP IN OUT CDR_USER_GROUP_OBJ_TYPE  
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

**PIO\_USERGRP** (Mandatory) This is a collection of CDR\_USER\_GROUPS\_OBJ\_TYPE that contains attributes related to User Groups.

Required attributes are: USER\_GROUP\_ID,COMPANY\_ID, NAME.

## Remove All Group Roles from a User Group

Use this API to remove all Roles from the User Group.

### Name

CDR\_PUB\_SECURITY\_PKG.RemoveAllGrpRoles

### Signature

```
PROCEDURE REMOVEALLGRPROLES(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  X_RETURN_STATUS OUT VARCHAR2,  
  X_MSG_COUNT OUT NUMBER,  
  X_MSG_DATA OUT VARCHAR2,  
  PI_USERGRPID IN NUMBER,
```

```
PI_COMPANY_ID IN NUMBER
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_USERGRPID** (Mandatory) Enter the numeric ID to identify the User Group. This parameter is of type Number and corresponds to the CDR\_UG\_ROLES.USER\_GROUP\_ID%TYPE column.
- **PI\_COMPANY\_ID** (Mandatory) Enter the Company Id.

## Remove All Users in a Group

Use this API to remove all users from a Role in a User Group.

### Name

CDR\_PUB\_SECURITY\_PKG.RemoveAllUsersInGrp

### Signature

```
PROCEDURE REMOVEALLUSERSINGRP(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PIO_USERUGROLES IN OUT CDR_USER_UG_ROLE_OBJ_TYPE
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PIO\_USERUGROLES** (Mandatory) This parameter is of table type CDR\_USER\_UG\_ROLE\_OBJ\_TYPE that contains information about users, User Groups, and Roles.

## Revoke a User Group From an Object

Use this API to revoke a User Group from an object.

To remove access to an object through an inherited User Group, you must revoke the User Group assignment.

Use Unassign User Group from Object (UNASSIGNUSRGRPFROMOBJ) for User Groups assigned explicitly.)

### Name

CDR\_PUB\_SECURITY\_PKG.RevokeUsrGrpFromObj

## Signature

```
PROCEDURE REVOKEUSRGRPFROMOBJ(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PI_BASEOBJECTTYPE IN OUT CDR_BASE_OBJ_TYPE,
  PI_CDROBJUGOBJTYPE IN CDR_OBJ_UG_OBJ_TYPE,
  PO_HASVIEWPERMAFTERREVOKE OUT VARCHAR2
);
```

## Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_BASEOBJECTTYPE** (Mandatory) This is a parameter of table type CDR\_BASE\_OBJ\_TYPE. Enter values to identify the object from which the User Group is to be revoked.  
The following attributes are required:  
COMPANY\_ID,OBJ\_ID,OBJ\_VER,OBJECT\_VERSION\_NUMBER,NAMESPACE\_OBJ\_ID,NAMESPACE\_OBJ\_VER.
- **PI\_CDROBJUGOBJTYPE** (Mandatory) This is a parameter of table type CDR\_OBJ\_UG\_OBJ\_TYPE that contains information about the object and the User Group.
- **PO\_HASVIEWPERMAFTERREVOKE** (Mandatory) Enter appropriate values for this parameter to specify whether view permissions exist after the revoking of the User Group from the object.

## Undo a Revoke a User Group Action

Use this API to undo the revoking of a User Group from an object.

### Name

CDR\_PUB\_SECURITY\_PKG.UnrevokeUsrGrpFromObj

### Signature

```
PROCEDURE UNREVOKEUSRGRPFROMOBJ(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PI_BASEOBJECTTYPE IN OUT CDR_BASE_OBJ_TYPE,
  PI_CDROBJUGOBJTYPE IN CDR_OBJ_UG_OBJ_TYPE
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_BASEOBJECTTYPE** (Mandatory) This is a parameter of table type CDR\_BASE\_OBJ\_TYPE. Enter values to identify the object.  
The following attributes are required:  
COMPANY\_ID,OBJ\_ID,OBJ\_VER,OBJECT\_VERSION\_NUMBER,NAMESPACE\_OBJ\_ID,NAMESPACE\_OBJ\_VER.
- **PI\_CDROBJUGOBJTYPE** (Mandatory) This is a parameter of table type CDR\_OBJ\_UG\_OBJ\_TYPE that contains information about the object and the User Group.

## Remove a User Group

Use this API to delete a User Group from the system. Once deleted, a User Group cannot be reactivated.

### Name

CDR\_PUB\_SECURITY\_PKG.RemoveUserGroup

### Signature

```
PROCEDURE REMOVEUSERGROUP(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PIO_USERGRP IN OUT CDR_USER_GROUPS_COLL
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PIO\_USERGRP** (Mandatory) This is a collection of CDR\_USER\_GROUPS\_OBJ\_TYPE that contains attributes related to User Groups.

The required attributes are: USER\_GROUP\_ID, COMPANY\_ID.

## Unassign a User Group From an Object

Use this API to unassign a User Group from an object. You can unassign User Groups explicitly assigned to the Object. You have to revoke User Groups that are inherited.

### Name

CDR\_PUB\_SECURITY\_PKG.UnassignUsrGrpFromObj

## Signature

```
PROCEDURE UNASSIGNUSRGRPFROMOBJ(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PI_BASEOBJECTTYPE IN OUT CDR_BASE_OBJ_TYPE,
  PI_CDROBJUGOBJTYPE IN CDR_OBJ_UG_OBJ_TYPE,
  PO_HASVIEWPERMAFTERUNASSIGN OUT VARCHAR2
);
```

## Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_BASEOBJECTTYPE** (Mandatory) This is a parameter of table type CDR\_BASE\_OBJ\_TYPE. Enter values to identify the object. The required attributes are COMPANY\_ID,OBJ\_ID,OBJ\_VER,OBJECT\_VERSION\_NUMBER,NAMESPACE\_OBJ\_ID,NAMESPACE\_OBJ\_VER.
- **PI\_CDROBJUGOBJTYPE** (Mandatory) This is a parameter of table type CDR\_OBJ\_UG\_OBJ\_TYPE that contains information about the object and the User Group.
- **PO\_HASVIEWPERMAFTERUNASSIGN** (Mandatory) Enter appropriate values for this parameter to specify whether view permissions exist after unassigning the User Group from the object.

# Unassign Roles from an Operation on an Object's Subtype

Use this API to unassign Roles from an Operation on an object's subtype.

## Name

CDR\_PUB\_SECURITY\_PKG.UnassignRoleToSubtypeOperation

## Signature

```
PROCEDURE UNASSIGNROLETOSUBTYPEOPERATION(
  P_API_VERSION IN NUMBER,
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT VARCHAR2,
  X_MSG_COUNT OUT NUMBER,
  X_MSG_DATA OUT VARCHAR2,
  PI_STOPROLE IN OUT CDR_SUBTYPE_OPR_ROLE_OBJ_TYPE
);
```

## Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PI\_STOPROLE** (Mandatory) This parameter is of table type `CDR_SUBTYPE_OPR_ROLE_OBJ_TYPE` that contains information about object subtype, Role, and operation.

## Unassign Operations on an Object Subtype's Role

Use this API to unassign operations on an object subtype's role.

### Name

`CDR_PUB_SECURITY_PKG.UnassignOprToSubtypeRole`

### Signature

```
PROCEDURE UNASSIGNOPRTOSUBTYPEROLE(  
    P_API_VERSION IN NUMBER,  
    P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
    P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
    P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
    X_RETURN_STATUS OUT VARCHAR2,  
    X_MSG_COUNT OUT NUMBER,  
    X_MSG_DATA OUT VARCHAR2,  
    PI_STOPROLE IN OUT CDR_SUBTYPE_OPR_ROLE_OBJ_TYPE  
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PI\_STOPROLE** (Mandatory) This parameter is of table type `CDR_SUBTYPE_OPR_ROLE_OBJ_TYPE` that contains information about object subtype, Role, and operation.

## Initialize Access to a Security View

Use this API to initialize access to a Security View for a certain session, to a specific application user.

The API also checks whether the application user has relevant LSH functional security permission to access the Security View data. If the validation is successful, access permission is granted for a given session.

### Name

`CDR_PUB_SECURITY_PKG.InitializeAccessToSecView`

### Return

Boolean

- True: The user has the functional security permission.
- False: The user does not have the functional security permission.

### Signature

```
FUNCTION INITIALIZEACCESSSTOSECVIEW(  
    P_API_VERSION IN NUMBER,
```

```
P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
P_VIEW_NAME VARCHAR2)
RETURN BOOLEAN;
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

- **P\_VIEW\_NAME** (Mandatory) Enter the public Security View name you need access for:
  - CDR\_PUB\_UG\_ROLES\_V
  - CDR\_PUB\_USER\_UG\_ROLES\_V
  - CDR\_PUB\_SUBTYPE\_OPR\_ROLES\_V
  - CDR\_PUB\_OBJ\_UG\_V

To access all security views in given session, enter CDR\_ALL\_PUB\_SEC\_V.

The following attributes are required: COMPANY\_ID, OBJ\_ID, OBJ\_VER, OBJECT\_VERSION\_NUMBER, NAMESPACE\_OBJ\_ID, NAMESPACE\_OBJ\_VER.

## Prevent Access to a Security View

Use this API to check the functional security permissions of an application user and prevent access to a Security View if the user does not have the required permissions.

### Name

CDR\_PUB\_SECURITY\_PKG.uninitializeAccessToSecView

### Return

Boolean

- True: The user has the functional security permission.
- False: The user does not have the functional security permission.

### Signature

```
FUNCTION UNINITIALIZEACCESSTOSECVIEW(
P_API_VERSION IN NUMBER,
P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,
P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
PIO_BASEOBJECT IN OUT CDR_BASE_OBJ_TYPE,
PI_COMMENT IN VARCHAR2
RETURN BOOLEAN;
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)).



## Get the Resource Timeout Limit

Use this API to get the current session timeout limit for all user database accounts.

### Name

CDR\_PUB\_ResourceLimits.getResourceLimit

### Signature

```
PROCEDURE getResourceLimit
( p_api_version      IN VARCHAR2
, p_init_msg_list    IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE
, p_commit           IN VARCHAR2 default CDR_PUB_DEF_CONSTANTS.G_FALSE
, p_validation_level IN NUMBER default CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL
, x_return_status    OUT NOCOPY VARCHAR2
, x_msg_count        OUT NOCOPY NUMBER
, x_msg_data         OUT NOCOPY VARCHAR2
, p_name             IN cdr_db_resource_limits.name%TYPE
, p_value            OUT NOCOPY cdr_db_resource_limits.current_value%TYPE
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **P\_NAME** (Mandatory) Enter the current value set for the database profile name.
- **P\_VALUE** (Mandatory) Shows the current limit.

## Set the Resource Timeout Limit

Use this API to set the current session timeout limit for all user database accounts (for example, change the default limit of 24 hours to 8 hours). This parameter has a default of 180 minutes with a minimum of 30 minutes and a maximum of 1440 minutes (24 hours)

### Name

CDR\_PUB\_ResourceLimits.setResourceLimit

### Signature

```
PROCEDURE setResourceLimit
( p_api_version      IN VARCHAR2
, p_init_msg_list    IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE
, p_commit           IN VARCHAR2 default CDR_PUB_DEF_CONSTANTS.G_FALSE
, p_validation_level IN NUMBER default CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL
, x_return_status    OUT NOCOPY VARCHAR2
, x_msg_count        OUT NOCOPY NUMBER
, x_msg_data         OUT NOCOPY VARCHAR2
, p_name             IN VARCHAR2
, p_value            IN VARCHAR2
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **P\_NAME** (Mandatory) Enter the current value set for the database profile name.
  - CONNECT\_TIME
- **P\_VALUE** (Mandatory) Enter a minimum of 30 minutes and a maximum of 1440 minutes (24 hours). (The default is 180 minutes [24 hours]).

## Reset the Resource Timeout Limit

Use this API to reset the current session timeout limit for all user database accounts to the default limit of 24 hours.

### Name

CDR\_PUB\_ResourceLimits.resetResourceLimitToDefault

### Signature

```
PROCEDURE resetResourceLimitToDefault
( p_api_version      IN VARCHAR2
, p_init_msg_list    IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE
, p_commit           IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE
, p_validation_level IN NUMBER DEFAULT CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL
, x_return_status    OUT NOCOPY VARCHAR2
, x_msg_count        OUT NOCOPY NUMBER
, x_msg_data         OUT NOCOPY VARCHAR2
, p_name             IN cdr_db_resource_limits.name%TYPE
, p_all              IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **P\_NAME** (Mandatory) Enter the current value set for the database profile name.
  - CONNECT\_TIME
- **P\_ALL** (Mandatory) Enter **T** (to reset all profile limits to the default and ignore the P\_NAME setting) or **F** (to reset the limit to default for the specified name).

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## Validation

This is a public interface for validation-related operations.

This section contains the following topics:

- [Validate Objects](#)
- [Create and Modify Validation Supporting Documents](#)

### Validate Objects

This section contains one API for updating the validation status of an object. See the following topic for details:

- [Update an Object's Validation Status](#)

### Update an Object's Validation Status

Use this API to update an object's validation status. The API performs a cascade validation on this object and its related objects.

If this object is an instance, the API also validates its source definition. If this object contains other objects with a validation status, the API updates the validation status of all of them; and if they are instances, their source definitions.

The operation fails if any of the underlying definitions are checked out. If you are validating a Report Set, the operation also fails if any of the Program instances in the Report Set have a validation status lower than the one to which the Report Set is being upgraded.

#### Name

CDR\_PUB\_VL\_VALIDATION.UpdateValStatus

#### Signature

```
PROCEDURE UPDATEVALSTATUS(  
  P_API_VERSION IN NUMBER,  
  P_INIT_MSG_LIST IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_COMMIT IN VARCHAR2 := CDR_PUB_DEF_CONSTANTS.G_FALSE,  
  P_VALIDATION_LEVEL IN NUMBER := CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
  X_RETURN_STATUS OUT VARCHAR2,  
  X_MSG_COUNT OUT NUMBER,  
  X_MSG_DATA OUT VARCHAR2,  
  PI_VALOBJ IN CDR_VAL_STATUS_OBJ_TYPE,  
  PO_CASCADEDOBJCOLL OUT CDR_BASE_OBJ_COLL,  
  PO_ERRORNAMINGCOLL OUT CDR_BASE_OBJ_COLL  
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_VALOBJ** (Mandatory) This is a parameter of table type CDR\_VAL\_STATUS\_OBJ\_TYPE. Enter values to identify the object whose validation status you want to update. The following attributes are required: COMPANY\_ID, OBJ\_ID, OBJ\_VER, OBJ\_TYPE\_RC, VALIDATION\_STATUS\_RC, OBJECT\_VERSION\_NUMBER.
- **PO\_CASCADEDOBJCOLL** This output parameter is a collection of all the objects whose validation status was updated due to cascading. If this parameter contains a value, the validation update operation succeeded.
- **PO\_ERRORNAMINGCOLL** This output parameter is a collection of objects whose validation status could not be updated. If this parameter contains a value, the validation update operation failed.

## Create and Modify Validation Supporting Documents

This section contains the following topics:

- [Create a Validation Supporting Document](#)
- [Update a Validation Supporting Document](#)
- [Obsolete a Validation Supporting Document](#)

### Create a Validation Supporting Document

Use this API to create a validation supporting document.

#### Name

CDR\_PUB\_VL\_VALIDATION.CreateValDocument

#### Signature

```
PROCEDURE CREATEVALDOCUMENT(
  P_API_VERSION IN NUMBER
  ,P_INIT_MSG_LIST IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE
  ,P_COMMIT IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE
  ,P_VALIDATION_LEVEL IN NUMBER DEFAULT CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL
  ,X_RETURN_STATUS OUT NOCOPY VARCHAR2
  ,X_MSG_COUNT OUT NOCOPY NUMBER
  ,X_MSG_DATA OUT NOCOPY VARCHAR2
  , PI_VALDOCOBJ IN CDR_VAL_DOC_BLOB_OBJ_TYPE
) ;
```

#### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

- **PI\_VALDOCOBJ** (Mandatory) This is a parameter of type CDR\_VAL\_DOC\_BLOB\_OBJ\_TYPE.

The following attributes are required: COMPANY\_ID, OBJ\_ID, OBJ\_VER, DOCUMENT\_NAME, DESCRIPTION, FILE\_NAME, OS\_FILE\_PATH, FILE\_BLOB, FILE\_CONTENT\_TYPE.

## Update a Validation Supporting Document

You can use this API to upload a new document, change attributes such as its description, or both.

### Name

CDR\_PUB\_VL\_VALIDATION.UpdateValDocument

### Signature

```
PROCEDURE UPDATEVALDOCUMENT(
  P_API_VERSION IN NUMBER
  ,P_INIT_MSG_LIST IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE
  ,P_COMMIT IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE
  ,P_VALIDATION_LEVEL IN NUMBER DEFAULT CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL
  ,X_RETURN_STATUS OUT NOCOPY VARCHAR2
  ,X_MSG_COUNT OUT NOCOPY NUMBER
  ,X_MSG_DATA OUT NOCOPY VARCHAR2
  , PI_VALDOCOBJ IN CDR_VAL_DOC_BLOB_OBJ_TYPE
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PI\_VALDOCOBJ** (Mandatory) This is a parameter of type CDR\_VAL\_DOC\_BLOB\_OBJ\_TYPE. The following attributes of the document to be updated are required: DOCUMENT\_ID, COMPANY\_ID, OBJ\_ID, OBJ\_VER, DOCUMENT\_NAME, DOC\_STATUS\_RC, DOCUMENT\_VER, DESCRIPTION, CHANGE\_REASON, FILE\_ID, FILE\_NAME, OS\_FILE\_PATH, FILE\_BLOB, FILE\_CONTENT\_TYPE, OBJECT\_VERSION\_NUMBER.

To get the OBJECT\_VERSION\_NUMBER, enter the following query:

```
select Max(OBJECT_VERSION_NUMBER) from cdr_vl_val_docs_v
where OBJ_ID = <objid> and OBJ_VER = <objver> and DOC_STATUS_RC =
'$VALINFOSTATUS$ACTIVE';
```

## Obsolete a Validation Supporting Document

Use this API to remove a validation supporting document.

### Name

CDR\_PUB\_VL\_VALIDATION.RemoveValDocument

### Signature

```
PROCEDURE REMOVEVALDOCUMENT(
  P_API_VERSION IN NUMBER
  ,P_INIT_MSG_LIST IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE ,P_COMMIT IN
  VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE
  ,P_VALIDATION_LEVEL IN NUMBER DEFAULT CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL
```

```
,X_RETURN_STATUS OUT NOCOPY VARCHAR2  
,X_MSG_COUNT OUT NOCOPY NUMBER  
,X_MSG_DATA OUT NOCOPY VARCHAR2  
, PI_VALDOCOBJ IN CDR_VAL_DOC_BLOB_OBJ_TYPE  
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PI\_VALDOCOBJ** (Mandatory) This is a parameter of type CDR\_VAL\_DOC\_BLOB\_OBJ\_TYPE.

The following attributes of the document to be obsoleted are required: DOCUMENT\_ID, COMPANY\_ID, DOCUMENT\_VER, OBJECT\_VERSION\_NUMBER.

To get the OBJECT\_VERSION\_NUMBER, enter the following query:

```
select Max(OBJECT_VERSION_NUMBER) from cdr_vl_val_docs_v  
where OBJ_ID = <objid> and OBJ_VER = <objver> and DOC_STATUS_RC =  
'$VALINFOSTATUS$ACTIVE';
```

# Part IV

## Oracle Health Sciences Data Management Workbench APIs

This part of the Oracle Life Sciences Data Hub (Oracle LSH) API guide contains public APIs included in Oracle Health Sciences Data Management Workbench (Oracle DMW). You can call these APIs from custom programs used in Oracle DMW.

To use these APIs you need to understand defined objects in Oracle LSH. Refer to [Essential Information](#) to know more about running APIs in Oracle LSH. Part 1 includes [Reference Information](#), which contains details about the Standard Parameters required to call APIs.

[Setup Utilities](#) contains information on utility APIs that you can use to get the information and IDs you need, to invoke Oracle DMW APIs.

This section includes the following chapters:

- [Introduction to Oracle DMW APIs](#)
- [Clinical Data Models](#)
- [Codelists](#)
- [Flags, Categories, and Actions](#)
- [Transformations](#)
- [Validation Checks](#)

# Introduction to Oracle DMW APIs

Oracle Health Sciences Data Management Workbench (Oracle DMW) is built on top of Oracle Life Sciences Data Hub (Oracle LSH) and shares the same database and execution engine. Be sure to read the following sections, which apply to Oracle DMW as well as Oracle LSH APIs:

- [Using Application Programming Interfaces](#)
- [Reference Information](#)
- [Setup Utilities](#)

For information on Oracle DMW functionality and structure, see the user documentation, including information on object ownership (namespaces).

## Note:

- Even though an Oracle DMW Study is an Oracle LSH domain, it has additional attributes and you cannot create a study using the API for creating a domain. The API for creating a study is not public. Create studies in the user interface.
- During its initial development, Oracle DMW was known as DME. Therefore many internal names contain the string `dme`. Think of DME as a synonym for DMW—just as CDR was the early name for Oracle LSH.

This section includes:

- [Set Up the Study Environment](#)
- [Create or Modify an Expression](#)

## Set Up the Study Environment

The program you are writing must call `DME_PUB_INITIALIZATION.SetupAPIStudyEnvironment` before it calls any other Oracle DMW API or uses any public view.

This procedure checks that the study ID and lifecycle value you pass in are valid and then uses those values and the study's partition ID for the lifecycle to set `SYS_CONTEXT` appropriately. Call it again to change the study or lifecycle context. See the following topic for details:

- [Initialize a Study and Lifecycle](#)



## Initialize a Study and Lifecycle

### Name

DME\_PUB\_INITIALIZATION.SetupAPIStudyEnvironment

### Signature

```
PROCEDURE SETUPAPISTUDYENVIRONMENT,  
( P_API_VERSION IN NUMBER, P_INIT_MSG_LIST IN VARCHAR2 DEFAULT  
  CDR_PUB_DEF_CONSTANTS.G_FALSE, P_COMMIT IN VARCHAR2 DEFAULT  
  CDR_PUB_DEF_CONSTANTS.G_FALSE, P_VALIDATION_LEVEL IN NUMBER DEFAULT  
  CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL, X_RETURN_STATUS OUT NOCOPY  
  VARCHAR2, X_MSG_COUNT OUT NOCOPY NUMBER, X_MSG_DATA OUT NOCOPY VARCHAR2,  
  PI_COMPANY_ID IN NUMBER, PI_STUDY_ID IN NUMBER, PI_LIFECYCLE IN VARCHAR2,  
  );
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_COMPANY\_ID** (Mandatory). Enter COMPANY\_ID of Study.
- **PI\_STUDY\_ID** (Mandatory). Enter OBJ\_ID of Study.
- **PI\_LIFECYCLE** (Mandatory). Enter Lifecycle context values like \$LIFECYCLE\$DEV, \$LIFECYCLE\$QC or \$LIFECYCLE\$PROD.

## Create or Modify an Expression

In Oracle DMW, expressions in both validation checks and transformations are defined in the `EXPR_OBJ_TYPE` attribute of the `DME_MAP_ENTITY_OBJ_TYPE`. The `EXPR_OBJ_TYPE` attribute is of the `DME_XFORM_EXPR_OBJ_TYPE` object and its required values are:

- **EXPRESSION\_ID**: If you are modifying an expression, enter the expression object ID.
- **EXPRESSION\_MODE**: Enter one:
  - \$EXPRMODE\$CRITERIA if it is a criteria expression.
  - \$EXPRMODE\$EXPR if it is a column expression.
- **EXPRESSION\_TEXT**: Enter the string representation of expression, adhering to the following rules:
  - All the values should be single quoted. Numeric values can be applied without single quotes.
  - The column names should be specified in the following format: `{ModelName.TableName.ColumnName}`. For example, to specify a condition on the 'AGE' column from 'DM' table in 'Source' data model that AGE should be greater than 30, the expression\_text should be passed as: `{Source.DM.AGE} > 30`
  - To specify a user-defined functions, the package should be available in the view `DME_PUB_XFM_EXPR_STATIC_PKGS_V`. Refer to the static reference details for the package that contains the function.

- **EXPRESSION\_ITEM\_COLL** - Use this parameter only if you are calling a function in the expression. This is a parameter of collection type `DME_XFORM_EXPR_ITEM_OBJ_COLL` which is a table of `DME_XFORM_EXPR_ITEM_OBJ_TYPE` object type. For each `expression_text`, the collection must be populated with one record with the following attribute assignments:

```
PARENT_ROW_ID = -1; ROW_ID=0; ROW_POS=1; ITEM_TYPE_RC=' $EXPITEMTYPE$GROUP'
```

If user-defined functions are used in `expression_text`, the collection should be populated with a separate record for each distinct user-defined function used in expression. The following attributes should be assigned for a record used for the user defined function:

- **PARENT\_ROW\_ID** = 0;
- **ROW\_POS** = 1;

 **Note:**

The above two values should always be 0 and 1, respectively.

- **ROW\_ID** - The `row_id` must be unique and sequential starting from 1 for each distinct user defined function used in the given expression.
- **ITEM\_TYPE\_RC** = ' \$EXPITEMTYPE\$FUNCTION';

Enter values for the following two attributes from the `DME_XFM_EXPR_STATIC_PKGS_V` view.

- **ITEM** - Enter the name of the user-defined function.
- **STATIC\_REFS** - Enter the function ID corresponding to the function used in expression.

# Clinical Data Models

This section contains the following topics:

- [Create and Modify Clinical Data Models](#)
- [Get a Custom Listing Business Area ID for a Model](#)

## Create and Modify Clinical Data Models

This is a public interface for clinical data model-related operations, including creating, modifying, and removing models, and checking models in and out. It also includes APIs for adding, modifying, and removing tables and constraints to tables within models.

 **Note:**

You can also create tables with columns and constraints within a model by uploading metadata files. See the *Oracle Health Sciences Data Management Workbench User's Guide* for more information.

This section contains the following topics:

- [Create a Study Clinical Data Model](#)
- [Create a Study Clinical Data Model from a Library Model](#)
- [Modify a Model's Name and Description](#)
- [Check Out a Clinical Data Model](#)
- [Check In a Clinical Data Model](#)
- [Undo a Clinical Data Model Checkout](#)
- [Install a Study Clinical Data Model](#)
- [Promote a Clinical Data Model to Quality Control or Production](#)
- [Remove a Clinical Data Model](#)
- [Upgrade a Clinical Data Model to the Latest Library Model Version](#)
- [Copy the Subject and/or Subject/Visit Table](#)
- [Add a Table to a Clinical Data Model](#)
- [Modify Table in Clinical Data Model](#)
- [Remove Table from Clinical Data Model](#)
- [Add a Column to a Table in a Clinical Data Model](#)
- [Modify Column Display Characteristics in a Clinical Data Model Table](#)
- [Modify a Column in a Clinical Data Model Table](#)

- [Remove Column from Clinical Data Model Table](#)
- [Add a Constraint to a Clinical Data Model Table](#)
- [Modify a Constraint in a Clinical Data Model Table](#)
- [Remove Constraint from a Clinical Data Model Table](#)
- [Reorder Columns in a Clinical Data Model Table](#)
- [Display Metadata Differences between Tables](#)

## Create a Study Clinical Data Model

Use this API to create a study clinical data model in a study domain. The model contains no tables. Use [Add a Table to a Clinical Data Model](#) to add tables to the model. You can use this API to create either target models, whose data is populated from other Oracle DMW study models, or input models, whose data is loaded from InForm or from files. However, for input models you must complete the configuration in the user interface.

The procedure returns an S if the model is created successfully. Otherwise it returns an error.

### Name

DME\_PUB\_DF\_DATA\_MODEL.CreateStudyDataModel

### Signature

```
PROCEDURE CreateStudyDataModel
(P_API_VERSION          IN NUMBER,
P_INIT_MSG_LIST        IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,
P_COMMIT               IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,
P_VALIDATION_LEVEL    IN NUMBER DEFAULT CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
PIO_STDYMODOBJ        IN OUT NOCOPY CDR_NAMING_VERSION_OBJ_TYPE,
PIO_DMOBJ             IN OUT CDR_DATA_MODEL_OBJ_TYPE,
PIFILETYPE            IN VARCHAR2,
X_RETURN_STATUS      OUT NOCOPY VARCHAR2,
X_MSG_COUNT          OUT NOCOPY   NUMBER,
X_MSG_DATA           OUT NOCOPY   VARCHAR2,
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_STDYMODOBJ** (Mandatory). This is a parameter of type `CDR_NAMING_VERSION_OBJ_TYPE`. Enter values for the following attributes for the new model and its namespace, which is the study domain. To get naming version attribute values for the namespace object, which is the study category domain, see [Get a Naming Version Object](#).
  - **COMPANY\_ID** To get your company ID, use `CDR_PUB_DEF_FACTORY_UTILS.GetCompanyId`.
  - **NAME** Enter a name for the new clinical data model.
  - **NAMESPACE\_OBJ\_ID** Enter the object ID of the parent study domain.
  - **NAMESPACE\_OBJ\_VER** Enter the object version of the study domain.

- **NAMESPACE\_START\_OBJ\_VER** Enter 1
- **NAMESPACE\_END\_OBJ\_VER** Enter 999999
- **DESCRIPTION** Enter a description for the new clinical data model.
- **OBJECT\_TYPE\_RC** Enter '\$OBJTYPES\$DATAMODEL'
- **PIO\_DMOBJ** (Mandatory). This is a parameter of type `CDR_DATA_MODEL_OBJ_TYPE`. Enter values for the following attributes for the new clinical data model. This parameter is used for validation purposes.
  - **DM\_NAME** Enter null.
  - **DM\_NAMESPACE\_OBJ\_ID** Enter the object ID of the parent study domain.
  - **DM\_DESCRIPTION** Enter null.
  - **DM\_TABLE\_COLL** Leave blank. To add tables use [Add a Table to a Clinical Data Model](#).
  - **LIBRARY\_FLAG\_RC** Enter \$YESNO\$NO because this is a study model, not a library model.
  - **MODEL\_TYPE\_RC**
    - \* To create a target model, enter \$MODELTYPE\$TARGET.
    - \* To create an input model, enter \$MODELTYPE\$INPUT.
  - **MODEL\_SUBTYPE\_RC**
    - \* If the Model Type is \$MODELTYPE\$TARGET, then Model Subtype is null.
    - \* If the Model Type is \$MODELTYPE\$INPUT, then model subtype can be either \$INPUTMODTYPE\$INFORM or \$INPUTMODTYPE\$FILE.
  - **CREATE\_BA\_FLAG\_RC** Enter \$YESNO\$YES to create a Business Area to enable visualizations of data in the model or \$YESNO\$NO.
  - **BA\_SCHEMA\_NAME** By default, the schema uses the model name. If you want a different schema name, enter it. It must be unique across the DMW instance.
- **PIFILETYPE** (Mandatory). To create a target model or an InForm input model, enter NULL. To create a file-type input model, enter either SAS or TEXT for the type of data files to be loaded. For file-type input models, a value here is required to make the File Watcher Configuration tab appear in the user interface so you can complete the model definition.

## Create a Study Clinical Data Model from a Library Model

Use this API to create a study clinical data model in a study domain from a clinical data model in a library. The complete model is copied, including all tables, columns, and constraints. The system maintains a relationship between the library model and the study model. If the library model is modified, you can upgrade the study model to the new version—see [Upgrade a Clinical Data Model to the Latest Library Model Version](#). However, any local changes you have made to the study model are lost.

### Name

DME\_PUB\_DF\_DATA\_MODEL.CreateStudyDMFromLibDM

## Signature

```

PROCEDURE CreateStudyDMFromLibDM
(P_API_VERSION          IN NUMBER,
P_INIT_MSG_LIST        IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,
P_COMMIT                IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,
P_VALIDATION_LEVEL     IN NUMBER DEFAULT CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
PI_LIBMODOBJ           IN NOCOPY CDR_NAMING_VERSION_OBJ_TYPE,
PI_STDYMODOBJ          IN NOCOPY CDR_NAMING_VERSION_OBJ_TYPE,
PIO_DMOBJ              IN CDR_DATA_MODEL_OBJ_TYPE,
X_RETURN_STATUS        OUT NOCOPY VARCHAR2,
X_MSG_COUNT            OUT NOCOPY   NUMBER,
X_MSG_DATA             OUT NOCOPY   VARCHAR2,
);

```

## Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_LIBMODOBJ** (Mandatory). This is a parameter of type `CDR_NAMING_VERSION_OBJ_TYPE`. Enter values for the following attributes for the library model and its namespace, which is the library domain for the therapeutic area or other category. Use `CDR_PUB_DEF_FACTORY_SUPPORT.GetNamingObject` to get the naming version attributes.
  - **COMPANY\_ID** To get your company ID, use `CDR_PUB_DEF_FACTORY_UTILS.GetCompanyId`.
  - **NAME** Enter a name for the library clinical data model.
  - **NAMESPACE\_OBJ\_ID** Enter the object ID of the parent library domain.
  - **NAMESPACE\_OBJ\_VER** Enter the object version of the library domain.
  - **NAMESPACE\_START\_OBJ\_VER** Enter 1
  - **NAMESPACE\_END\_OBJ\_VER** Enter 999999
  - **DESCRIPTION** Enter a description for the library clinical data model.
  - **OBJECT\_TYPE\_RC** Enter '`OBJECTTYPES$DATAMODEL`'
- **PI\_STDYMODOBJ** (Mandatory). This is a parameter of type `CDR_NAMING_VERSION_OBJ_TYPE`. Enter values for the following attributes for the new study model and its namespace, which is the study domain.
  - **COMPANY\_ID** To get your company ID, use `CDR_PUB_DEF_FACTORY_UTILS.GetCompanyId`.
  - **NAME** Enter a name for the study clinical data model.
  - **NAMESPACE\_OBJ\_ID** Enter the object ID of the parent study domain.
  - **NAMESPACE\_OBJ\_VER** Enter the object version of the study domain.
  - **NAMESPACE\_START\_OBJ\_VER** Enter 1
  - **NAMESPACE\_END\_OBJ\_VER** Enter 999999
  - **DESCRIPTION** Enter a description for the study clinical data model.
  - **OBJECT\_TYPE\_RC** Enter '`OBJECTTYPES$DATAMODEL`'

- **PIO\_DMOBJ** (Mandatory). This is a parameter of type `CDR_DATA_MODEL_OBJ_TYPE`. Enter values for the following attributes for the new study clinical data model:
  - **DM\_NAME** Enter null.
  - **DM\_NAMESPACE\_OBJ\_ID** Enter the object ID of the parent study domain.
  - **DM\_DESCRIPTION** Enter null.
  - **DM\_TABLE\_COLL** Leave empty. To add tables use [Add a Table to a Clinical Data Model](#).
  - **LIBRARY\_FLAG\_RC** Enter `$YESNO$NO` because this is a study model, not a library model.
  - **MODEL\_TYPE\_RC**
    - \* To create a target model, enter `$MODELTYPE$TARGET`.
    - \* To create an input model, enter `$MODELTYPE$INPUT`.
  - **MODEL\_SUBTYPE\_RC**
    - \* If the model type is `$MODELTYPE$TARGET`, then model subtype is null.
    - \* If the model type is `$MODELTYPE$INPUT`, then model subtype can be either `$INPUTMODTYPE$INFORM` or `$INPUTMODTYPE$FILE`.
  - **CREATE\_BA\_FLAG\_RC** Enter `$YESNO$YES` to create a Business Area to enable visualizations of data in the model or `$YESNO$NO`.
  - **BA\_SCHEMA\_NAME** By default, the schema uses the model name. If you want a different schema name, enter it. It must be unique across the DMW instance.

## Modify a Model's Name and Description

Use this API to modify a study clinical data model's name and description.

### Name

`DME_PUB_DF_DATA_MODEL.ModifyStudyDataModel`

### Signature

```
PROCEDURE ModifyStudyDataModel
(P_API_VERSION          IN NUMBER,
P_INIT_MSG_LIST        IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,
P_COMMIT               IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,
P_VALIDATION_LEVEL     IN NUMBER DEFAULT CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
PIO_STDYMODOBJ         IN OUT NOCOPY CDR_NAMING_VERSION_OBJ_TYPE,
PIO_DMOBJ              IN OUT CDR_DATA_MODEL_OBJ_TYPE,
X_RETURN_STATUS        OUT NOCOPY VARCHAR2,
X_MSG_COUNT            OUT NOCOPY NUMBER,
X_MSG_DATA             OUT NOCOPY VARCHAR2,
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_STDYMODOBJ** (Mandatory). This is a parameter of type CDR\_NAMING\_VERSION\_OBJ\_TYPE. Enter values for the new name and description.
- **PIO\_DMOBJ** (Mandatory). This is a parameter of type CDR\_DATA\_MODEL\_OBJ\_TYPE. Enter values for the following attributes for the new clinical data model:
  - **DM\_NAME** Enter a name for the model.
  - **DM\_NAMESPACE\_OBJ\_ID** Enter the object ID of the study or library domain.
  - **DM\_DESCRIPTION** Enter a description for the model.
  - **DM\_TABLE\_COLL** Leave empty. To add tables see [Add a Table to a Clinical Data Model](#).
  - **LIBRARY\_FLAG\_RC** Enter \$YESNO\$NO if this is a study model or \$YESNO\$YES if it is a library model.
  - **MODEL\_TYPE\_RC** Enter the value for the model: \$MODELTYPE\$TARGET or \$MODELTYPE\$INPUT.
  - **MODEL\_SUBTYPE\_RC** Enter the model's subtype:  
If the model type is \$MODELTYPE\$TARGET, then model subtype is null.  
  
If the model type is \$MODELTYPE\$INPUT, then model subtype can be either \$INPUTMODTYPE\$INFORM or \$INPUTMODTYPE\$FILE.
  - **CREATE\_BA\_FLAG\_RC** Enter \$YESNO\$YES to create a Business Area to enable visualizations of data in the model or \$YESNO\$NO.
  - **BA\_SCHEMA\_NAME** By default, the schema uses the model name. If you want a different schema name, enter it. It must be unique across the DMW instance.
- **PIFILETYPE** (Mandatory). If you are modifying a target model or an InForm input model, enter NULL. If you are modifying a file-type input model, enter either SAS or TEXT.

## Check Out a Clinical Data Model

Use this API to check out a study or library clinical data model.

### Name

DME\_PUB\_DF\_DATA\_MODEL.CheckoutDataModel

### Signature

```
procedure CheckoutDataModel(
  p_api_version IN NUMBER
  p_init_msg_list      IN VARCHAR2 default CDR_PUB_DEF_CONSTANTS.G_FALSE
  p_commit            IN VARCHAR2 default CDR_PUB_DEF_CONSTANTS.G_FALSE
  p_validation_level  IN NUMBER default
  CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL
  pio_naming          IN OUT NOCOPY cdr_naming_version_obj_type,
  pi_comment          IN VARCHAR2,
  x_return_status     OUT NOCOPY VARCHAR2,
  x_msg_count         OUT NOCOPY NUMBER,
  x_msg_data          OUT NOCOPY VARCHAR2);
```



### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_NAMING** (Mandatory). This is a parameter of type CDR\_NAMING\_VERSION\_OBJ\_TYPE. Enter attributes for the clinical data model you are checking out.
- **PI\_COMMENT** Enter a checkout comment.

## Check In a Clinical Data Model

Use this API to check in a study or library clinical data model.

### Name

DME\_PUB\_DF\_DATA\_MODEL.CheckinDataModel

### Signature

```

procedure CheckinDataModel(
  p_api_version IN NUMBER,
  p_init_msg_list IN VARCHAR2 default CDR_PUB_DEF_CONSTANTS.G_FALSE
  p_commit IN VARCHAR2 default CDR_PUB_DEF_CONSTANTS.G_FALSE
  p_validation_level IN NUMBER default CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL
  pio_naming IN OUT NOCOPY cdr_naming_version_obj_type
  pi_comment IN VARCHAR2
  x_return_status OUT NOCOPY VARCHAR2
  x_msg_count OUT NOCOPY NUMBER
  x_msg_data OUT NOCOPY VARCHAR2);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_NAMING** (Mandatory). This is a parameter of type CDR\_NAMING\_VERSION\_OBJ\_TYPE. Enter attributes for the clinical data model you are checking in.
- **PI\_COMMENT** Enter a checkin comment.

## Undo a Clinical Data Model Checkout

Use this API to undo the checkout of a study or library clinical data model.

### Name

DME\_PUB\_DF\_DATA\_MODEL.UncheckoutModel

### Signature

```

PROCEDURE UncheckoutModel(
  p_api_version          IN NUMBER
  p_init_msg_list        IN VARCHAR2 default CDR_PUB_DEF_CONSTANTS.G_FALSE
  p_commit               IN VARCHAR2 default CDR_PUB_DEF_CONSTANTS.G_FALSE
  p_validation_level     IN NUMBER default CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL
  pio_naming             IN OUT NOCOPY cdr_naming_version_obj_type

```

```
x_return_status      OUT NOCOPY VARCHAR2
x_msg_count          OUT NOCOPY NUMBER
x_msg_data           OUT NOCOPY VARCHAR2);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_NAMING** (Mandatory). This is a parameter of type `CDR_NAMING_VERSION_OBJ_TYPE`. Enter attributes for the clinical data model for which you are undoing the checkout.

## Install a Study Clinical Data Model

Use this API to install a study clinical data model.

### Name

DME\_PUB\_DF\_DATA\_MODEL.DeployStudyDataModel

### Signature

```
procedure DeployStudyDataModel(
  p_api_version IN NUMBER
  p_init_msg_list IN VARCHAR2 default CDR_PUB_DEF_CONSTANTS.G_FALSE
  p_commit IN VARCHAR2 default CDR_PUB_DEF_CONSTANTS.G_FALSE
  p_validation_level IN NUMBER default CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL
  x_return_status OUT NOCOPY VARCHAR2
  x_msg_count OUT NOCOPY NUMBER
  x_msg_data OUT NOCOPY VARCHAR2
  pi_StudyModObj IN OUT NOCOPY cdr_naming_version_obj_type
  pi_Context IN VARCHAR2);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_STUDYMOBJ** (Mandatory): This is a parameter of type `CDR_NAMING_VERSION_OBJ_TYPE`. Enter attributes for the clinical data model that you are installing.
- **PI\_CONTEXT** (Mandatory): Enter the lifecycle area in which you are installing the clinical data model:
  - '\$LIFECYCLE\$DEV'
  - '\$LIFECYCLE\$PROD'
  - '\$LIFECYCLE\$QC'

## Promote a Clinical Data Model to Quality Control or Production

Use this API to promote a study clinical data model to either the Quality Control or Production validation status.

### Name

DME\_PUB\_DF\_DATA\_MODEL.UpdateValStatus

### Signature

```
PROCEDURE updateValStatus(
  p_api_version      IN NUMBER
  p_init_msg_list    IN VARCHAR2 default CDR_PUB_DEF_CONSTANTS.G_FALSE
  p_commit           IN VARCHAR2 default CDR_PUB_DEF_CONSTANTS.G_FALSE
  p_validation_level IN NUMBER default CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL
  pio_naming         in out nocopy cdr_naming_version_obj_type
  x_return_status    OUT NOCOPY VARCHAR2
  x_msg_count        out nocopy number
  x_msg_data         OUT NOCOPY VARCHAR2);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **P\_VALIDATION\_LEVEL**
- **PIO\_NAMING** (Mandatory): This is a parameter of type `CDR_NAMING_VERSION_OBJ_TYPE`. Enter attributes for the clinical data model that you are promoting.  
**PIO\_NAMING.VALIDATION\_STATUS\_RC** (Mandatory): Enter the validation status to which you are promoting the clinical data model:
  - '\$SYSVALDNSTEPS\$DEVELOPMENT'
  - '\$SYSVALDNSTEPS\$QUALITYCONTROL'
  - '\$SYSVALDNSTEPS\$PRODUCTION'

## Remove a Clinical Data Model

Use this API to delete a study clinical data model.

### Name

DME\_PUB\_DF\_DATA\_MODEL.RemoveStudyDataModel

### Signature

```
Procedure RemoveStudyDataModel(
  p_api_version IN NUMBER
  p_init_msg_list IN VARCHAR2 default CDR_PUB_DEF_CONSTANTS.G_FALSE
  p_commit IN VARCHAR2 default CDR_PUB_DEF_CONSTANTS.G_FALSE
  p_validation_level IN NUMBER default CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL
  pio_StdyModObj IN OUT NOCOPY cdr_naming_version_obj_type
  x_return_status OUT NOCOPY VARCHAR2
  x_msg_count OUT NOCOPY NUMBER
  x_msg_data OUT NOCOPY VARCHAR2);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

- **PIO\_STDYMOBJ** (Mandatory): This is a parameter of type `CDR_NAMING_VERSION_OBJ_TYPE`. Enter attributes for the clinical data model that you are removing.

## Upgrade a Clinical Data Model to the Latest Library Model Version

Use this API to upgrade a study clinical data model that was created from a library model to the latest version of the library model.

### Name

DME\_PUB\_DF\_DATA\_MODEL.UpgradeSDMToLatestLDM

### Signature

```
PROCEDURE UpgradeSDMToLatestLDM(p_api_version          IN NUMBER
p_init_msg_list      IN VARCHAR2 default CDR_PUB_DEF_CONSTANTS.G_FALSE
p_commit             in varchar2 default cdr_pub_def_constants.g_false
p_validation_level   in number default cdr_pub_def_constants.g_valid_level_full
pio_StudyModObj      IN OUT NOCOPY  cdr_naming_version_obj_type
x_return_status      OUT NOCOPY VARCHAR2
x_msg_count          OUT NOCOPY NUMBER
x_msg_data           OUT NOCOPY VARCHAR2);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PIO\_STDYMODOBJ** (Mandatory): This is a parameter of type CDR\_NAMING\_VERSION\_OBJ\_TYPE. Enter attributes for the clinical data model that you are upgrading.

## Copy the Subject and/or Subject/Visit Table

Use this API to copy the SUBJECT table, the SUBJECT/VISIT table, or both tables from a library data model or from the shipped default structures.

### Name

DME\_PUB\_DF\_DATA\_MODEL.Copy\_Subj\_Vist\_From\_Lib

### Signature

```
procedure copy_subj_vist_from_lib(
p_api_version          IN NUMBER
p_init_msg_list      IN VARCHAR2 default CDR_PUB_DEF_CONSTANTS.G_FALSE
p_commit             in varchar2 default cdr_pub_def_constants.g_false
p_validation_level   in number default cdr_pub_def_constants.g_valid_level_full
pilibmod             in cdr_naming_version_obj_type
pitgtstdymod         in cdr_naming_version_obj_type
piCopySel            IN VARCHAR2
x_return_status      out nocopy varchar2
x_msg_count          out nocopy number
x_msg_data           out nocopy varchar2);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PILIBMOD** (Mandatory): Enter values for the library model from which you want to copy the tables, if any. This is a parameter of type CDR\_NAMING\_VERSION\_OBJ\_TYPE.
  - To copy from a library data model, enter attribute values for the library data model.
  - To copy default table structures, enter null values.
- **PITGTSTDYMOD** (Mandatory): Enter values for the study clinical data model **into which** you want to copy one or both tables. This is a parameter of type CDR\_NAMING\_VERSION\_OBJ\_TYPE.
- **PICOPYSEL** (Mandatory) Specify which table(s) to copy:
  - SUB to copy the Subject table only.
  - VIS to copy the Subject/Visit table only.
  - BOTH to copy both tables.

## Add a Table to a Clinical Data Model

Use this API to add a table to clinical data model. The table is created without columns or constraints. To add columns, see [Add a Column to a Table in a Clinical Data Model](#). To add constraints, see [Add a Constraint to a Clinical Data Model Table](#). Note that you can create a table with columns and constraints by uploading a metadata file through the user interface. See *Oracle Health Sciences Data Management Workbench User's Guide* for more information.

### Name

DME\_PUB\_DF\_DATA\_MODEL.AddTableToDataModel

### Signature

```
Procedure AddTableToDataModel (
  p_api_version      IN NUMBER
  p_init_msg_list    IN VARCHAR2 default CDR_PUB_DEF_CONSTANTS.G_FALSE
  p_commit           IN VARCHAR2 default CDR_PUB_DEF_CONSTANTS.G_FALSE
  p_validation_level IN NUMBER default CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL
  x_return_status    OUT NOCOPY VARCHAR2
  x_msg_count        OUT NOCOPY NUMBER
  x_msg_data         OUT NOCOPY VARCHAR2
  pio_naming         IN OUT NOCOPY          cdr_naming_version_obj_type
  pio_table          IN OUT NOCOPY          cdr_dm_table_obj_type
  pi_defClassificationColl IN CDR_CLASSIFICATIONS_COLL);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_NAMING** (Mandatory): Enter values for the study clinical data model to which you want to add a table. This is a parameter of type CDR\_NAMING\_VERSION\_OBJ\_TYPE.
  - **COMPANY\_ID** Company ID of the Data Model.
  - **OBJECT\_TYPE\_RC** Enter \$OBJTYPES\$TABLE.
  - **NAME** Name of the Table.

- **NAMESPACE\_OBJ\_ID** Object ID of the Model.
- **NAMESPACE\_OBJ\_VER** Object Version of the Model.
- **DESCRIPTION** Description of the Table.
- **PIO\_TABLE** (Mandatory): Enter values for the table:
  - **COMPANY\_ID** To get your company ID, use `CDR_PUB_DEF_FACTORY_UTILS.GetCompanyId`.
  - **ORACLE\_NAME**: Enter an Oracle name.
  - **SAS\_NAME**: Enter a SAS name.
  - **SAS\_LABEL**: Enter a SAS label.
  - **SAS\_V6\_FLAG\_RC**: If you are using SAS version 6, enter '\$YESNO\$YES'. If you are using a more recent version, enter '\$YESNO\$NO'.
  - **AUDIT\_TABC\_COMPANY\_ID, AUDIT\_TABC\_OBJ\_ID, AUDIT\_TABC\_OBJ\_VER**: Leave these three blank.
  - **SNAPSHOT\_FLAG\_RC**: To allow creating snapshots on this table, enter '\$YESNO\$YES'. To prevent creating snapshots on this table, enter '\$YESNO\$NO'.
  - **PROCESS\_TYPE\_RC**: Enter '\$PROCESSTYPES\$STAGINGWAUDIT'. This is the required type for newly created tables in Oracle DMW.
  - **BLINDING\_FLAG\_RC**: If this table may ever contain sensitive data that should be blinded or masked, enter '\$YESNO\$YES'. If not, enter '\$YESNO\$NO'.
  - **REQUIRED\_FLAG\_RC**: Enter '\$YESNO\$YES' or '\$YESNO\$NO'. This value is not used by the system.
  - **DM\_TAB\_COL\_COLL**: Pass all null values to this collection. To add columns to the table, see [Add a Column to a Table in a Clinical Data Model](#).
  - **DM\_TAB\_CONS\_COLL**: Pass all null values to this collection. To add constraints to the table, see [Add a Constraint to a Clinical Data Model Table](#).
  - **STAGING\_FLAG\_RC**: If this is a temporary staging table required for use in a transformation, enter '\$YESNO\$YES'. Otherwise enter '\$YESNO\$NO'.
  - **USABLE\_FLAG\_RC**: Enter '\$YESNO\$YES' or '\$YESNO\$NO'. This value is not used by the system.
  - **IDENTIFIER\_TAB\_COMP\_ID**: If you are assigning an SDTM ID to the table, enter the company ID of SDTM identifier. To find this and related values, query public view `DME_SDTM_TAB_IDENTIFIERS_V`.
  - **IDENTIFIER\_TAB\_OBJ\_ID**: If you are assigning an SDTM ID to the table, enter the object ID of SDTM identifier.
  - **IDENTIFIER\_TAB\_OBJ\_VER**: If you are assigning an SDTM ID to the table, enter the object version of SDTM identifier.
  - **BLINDING\_CRITERIA**: If the table has row-level blinding (set in the `MASKING_TYPE_RC` attribute below), enter the blinding criteria as a SQL expression.
  - **ALIASES**: Enter one or more alternate names for the column in a comma-separated list with no spaces, for use in automapping transformations.
  - **INFORM\_REF\_PATH\_NAME**: Leave blank.

- **MASKING\_TYPE\_RC:** If the table's **BLINDING\_FLAG\_RC** is set to '\$YESNO\$NO', enter '\$MASKING\_TYPE\$NONE'.  
If the table's **BLINDING\_FLAG\_RC** is set to '\$YESNO\$YES', specify the type of blinding: '\$MASKING\_TYPE\$COLUMN', '\$MASKING\_TYPE\$ROW', or '\$MASKING\_TYPE\$TABLE'.

- **BLINDING\_CRITERIA\_EXPR\_ID:** Enter null.

- **BLINDING\_CRITERIA\_EXPRESSION:** This is a parameter of type **DME\_XFORM\_EXPRESSION\_OBJ\_TYPE**. Enter details for the blinding criteria:

**EXPRESSION\_ID:** Enter null (to create a new expression ID).

**POSITION:** Position of component.

**COMPONENT\_TYPE\_RC:** Enter '\$EXPCOMPTYPE\$OPERATOR' or '\$EXPCOMPTYPE\$CONSTANT'

**COMPONENT:** Enter component **STATIC\_REFS:** If the expression references an existing function, enter the function ID.

For example, the expression:

```
BLINDING_CRITERIA= 'ADDN_TABL1.DEPTNO>0';
```

has three components:

```
"ADDN_TABL1.DEPTNO"  
">"  
"0"
```

To create a collection of type **DME\_XFORM\_EXPRESSION\_OBJ\_TYPE** with these components:

```
oExprType :=DME_XFORM_EXPRESSION_OBJ_TYPE(NULL,1,'$EXPCOMPTYPE$CONSTANT',  
'ADDN_TABL1.DEPTNO',NULL);  
oExprColl.extend;  
oExprColl(oExprColl.last):=oExprType;  
  
oExprType :=DME_XFORM_EXPRESSION_OBJ_TYPE(NULL,2,'$EXPCOMPTYPE$OPERATOR',  
'>',NULL);  
oExprColl.extend;  
oExprColl(oExprColl.last):=oExprType;  
oExprType :=DME_XFORM_EXPRESSION_OBJ_TYPE(NULL,3,'$EXPCOMPTYPE$CONSTANT',  
'0',NULL);  
  
oExprColl.extend;  
oExprColl(oExprColl.last) :=oExprType;  
  
BLINDING_CRITERIA_EXPR_COLL:=oExprColl;
```

- **UOW\_PROCESS\_TYPE\_RC:**

If programs writing to the table do not use Unit of Work processing, it uses Reload processing. Enter '\$UOWPROCTYPES\$NONUOW'.

If programs writing to the table use Subject Visit Unit of Work processing, enter '\$UOWPROCTYPES\$SUBJ\_VISIT'.

If programs writing to the table use Subject Unit of Work processing, enter '\$UOWPROCTYPES\$SUBJ'.

- **PI\_DEFCLASSIFICATIONCOLL:** This is a parameter of type **CDR\_CLASSIFICATIONS\_COLL**. Pass all null values to this collection.

## Modify Table in Clinical Data Model

Use this API to modify a table in a study or library clinical data model.

### Name

DME\_PUB\_DF\_DATA\_MODEL.ModifyTableInDataModel

### Signature

```
procedure ModifyTableInDataModel(  
  p_api_version          IN NUMBER  
  p_init_msg_list        IN VARCHAR2 default CDR_PUB_DEF_CONSTANTS.G_FALSE  
  p_commit                IN VARCHAR2 default CDR_PUB_DEF_CONSTANTS.G_FALSE  
  p_validation_level      IN NUMBER default CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL  
  x_return_status        OUT NOCOPY VARCHAR2  
  x_msg_count            OUT NOCOPY NUMBER  
  x_msg_data             OUT NOCOPY VARCHAR2  
  pio_naming             IN OUT NOCOPY cdr_naming_version_obj_type  
  pio_table              IN OUT NOCOPY  cdr_dm_table_obj_type );
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PIO\_NAMING** (Mandatory): Enter current or modified values for the table as required. This is a parameter of type CDR\_NAMING\_VERSION\_OBJ\_TYPE.

## Remove Table from Clinical Data Model

Use this API to remove a table from a study or library clinical data model.

### Name

DME\_PUB\_DF\_DATA\_MODEL.RemoveTablesInDataModel

### Signature

```
procedure RemoveTablesInDataModel(  
  p_api_version          IN NUMBER  
  p_init_msg_list        IN VARCHAR2 default CDR_PUB_DEF_CONSTANTS.G_FALSE  
  p_commit                IN VARCHAR2 default CDR_PUB_DEF_CONSTANTS.G_FALSE  
  p_validation_level      IN NUMBER default CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL  
  x_return_status        OUT NOCOPY VARCHAR2  
  x_msg_count            OUT NOCOPY NUMBER  
  x_msg_data             OUT NOCOPY VARCHAR2  
  pi_naming_coll         IN  cdr_naming_list_coll);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PIO\_NAMING\_COLL** (Mandatory): Enter values to identify the table to be removed. This is a parameter of type CDR\_NAMING\_VERSION\_OBJ\_TYPE.



## Add a Column to a Table in a Clinical Data Model

Use this API to add a column to a table in a clinical data model.

### Name

DME\_PUB\_DF\_DATA\_MODEL.AddColumnToDataModelTab

### Signature

```
procedure AddColumnToDataModelTab(
  p_api_version      IN NUMBER
  p_init_msg_list    IN VARCHAR2 default CDR_PUB_DEF_CONSTANTS.G_FALSE
  p_commit           IN VARCHAR2 default CDR_PUB_DEF_CONSTANTS.G_FALSE
  p_validation_level IN NUMBER default CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL
  x_return_status    OUT NOCOPY VARCHAR2
  x_msg_count        OUT NOCOPY NUMBER
  x_msg_data         OUT NOCOPY VARCHAR2
  pio_naming         IN OUT NOCOPY cdr_naming_version_obj_type
  pio_variable       IN OUT NOCOPY cdr_var_obj_type
  pio_column         IN OUT NOCOPY cdr_dm_column_obj_type );
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_NAMING** This is a parameter of type CDR\_NAMING\_VERSION\_OBJ\_TYPE. Enter values for the column and its namespace, the table. Six attributes are required:
  - **COMPANY\_ID** Company ID of the Table.
  - **OBJECT\_TYPE\_RC** Enter \$OBJTYPES\$COLUMN.
  - **NAME** Name of the column.
  - **NAMESPACE\_OBJ\_ID** Object ID of the Table.
  - **NAMESPACE\_OBJ\_VER** Object Version of the Table.
  - **DESCRIPTION** Description of the column.
- **PIO\_VARIABLE** (Mandatory): This is a parameter of type CDR\_VAR\_OBJ\_TYPE. Column objects are based on variable objects. Enter values as follows:
  - **COMPANY\_ID** To get your company ID, use CDR\_PUB\_DEF\_FACTORY\_UTILS.GetCompanyId.
  - **ORACLE\_NAME**: Enter an Oracle name for the column.
  - **ORACLE\_DATATYPE\_RC**: Specify the data type. Enter one: '\$ORADATATYPES\$VARCHAR2', '\$ORADATATYPES\$DATE', or '\$ORADATATYPES\$NUMBER'
  - **LENGTH**:
    - For Date data type columns, no length is required.
    - For VARCHAR2 data type columns, the value must be between 1 and 4000.
    - For Number data type columns, the maximum value is 38.
  - **PRECISION**: If the column is of data type Number, enter the precision.

- **SAS\_V6\_NAME:** Enter a name that conforms to SAS V6 requirements, if needed.
- **SAS\_V8\_NAME:** Enter a name that conforms to SAS V8 requirements, if needed.
- **SAS\_LABEL:** Enter a SAS label, up to 200 characters.
- **SAS\_FORMAT:** Enter a SAS format or leave blank to default to the value you entered for LENGTH preceded by a dollar sign (\$).
- **NULLABLE\_FLAG\_RC:** If null values are allowed in the column, enter '\$YESNO\$YES'. If not (the column is mandatory) enter '\$YESNO\$NO'.
- **DEFAULT\_VALUE:** Enter NULL or, if the column should always have a particular data value, enter the value.
- **PIO\_COLUMN:** This is a parameter of type CDR\_DM\_COLUMN\_OBJ\_TYPE. Some attributes are the same as for the variable parameter PIO\_VARIABLE. The following attributes are required: COMPANY\_ID, OBJ\_ID, OBJ\_VER, POSITION, SAS\_LABEL, NULLABLE\_FLAG\_RC. Enter the same values you did for the variable. In addition:
  - **OBJ\_ID** and **OBJ\_VER:** Enter NULL.
  - **POSITION:** Enter the column's position in the table relative to other columns.
  - **REQUIRED\_FLAG\_RC:** Enter the opposite value that you entered for Nullable in the Variable parameter.
  - **NULLABLE\_FLAG\_RC:** Enter the same value that you entered for Nullable in the Variable parameter.
  - **CODE\_LIST\_COMPANY\_ID:** To associate the column with a codelist, enter the company ID of the codelist. To find this and related values, query public view DME\_PUB\_CODELIST\_V.
  - **CODE\_LIST\_OBJ\_ID:** To associate the column the column with a codelist, enter the object ID of the codelist.
  - **CODE\_LIST\_OBJ\_VER:** To associate the column the column with a codelist, enter the object version of the codelist.
  - **IDENTIFIER\_VAR\_COMP\_ID:** If you are assigning an SDTM ID to the column, enter the company ID of SDTM identifier. To find this and related values, query public view DME\_SDTM\_COL\_IDENTIFIERS\_V.
  - **IDENTIFIER\_VAR\_OBJ\_ID:** If you are assigning an SDTM ID to the column, enter the object ID of SDTM identifier.
  - **IDENTIFIER\_VAR\_OBJ\_VER:** If you are assigning an SDTM ID to the column, enter the object version of SDTM identifier.
  - **USABLE\_FLAG\_RC:** Enter '\$YESNO\$YES' or '\$YESNO\$NO'. This value is not used by the system.
  - **MAPPABLE\_FLAG\_RC:** Enter '\$YESNO\$YES' if the column can be mapped to a source column in a transformation. Internal columns such as CDR\$DUP\_NUM and CDR\$SKEY should have the value '\$YESNO\$NO'. If set to '\$YESNO\$NO', the system ignores the column when calculating mapping completeness and when automapping.
  - **MASKING\_VALUE:** If the column belongs to a table with column-level blinding and should be blinded, enter the masking value.

- **MASKING\_CRITERIA**: If the column data values should be masked only in some rows, enter the masking criteria as a SQL expression.
- **SOURCE\_KEY\_FLAG\_RC**: Enter null.
- **ALIASES**: Enter one or more alternate names for the column in a comma-separated list with no spaces, for use in automapping transformations.
- **INFORM\_REF\_PATH\_NAME**: Leave blank.
- **MASKING\_LEVEL\_RC**: Specify the masking level for the column: , '\$MASKING\_LEVEL\$NONE', '\$MASKING\_LEVEL\$COLUMN', or '\$MASKING\_LEVEL\$CELL'.
- **MASK\_VALUE\_EXPR\_ID**: To use a predefined expression to generate masking values, enter the expression's object ID.
- **MASK\_VALUE\_EXPRESSION**: If Masking Value is '\$MASKING\_LEVEL\$NONE' then pass NULL values. For others pass expression details to parameter DME\_XFORM\_EXPR\_OBJ\_TYPE type; see [Add a Table to a Clinical Data Model](#) parameter **BLINDING\_CRITERIA\_EXPRESSION**.
- **MASK\_CRITERIA\_EXPR\_ID**: To use a predefined expression to determine which cells to mask, enter the expression's object ID.
- **MASK\_CRITERIA\_EXPRESSION**: If Masking value is '\$MASKING\_LEVEL\$COLUMN' or '\$MASKING\_LEVEL\$NONE' then pass the NULL values. For '\$MASKING\_LEVEL\$CELL' pass criteria expression details to parameter DME\_XFORM\_EXPR\_OBJ\_TYPE type; see [Add a Table to a Clinical Data Model](#) parameter **BLINDING\_CRITERIA\_EXPRESSION**.

## Modify Column Display Characteristics in a Clinical Data Model Table

Use this API to update display characteristic attributes of columns.

### Name

DME\_PUB\_DF\_DATA\_MODEL.ModifyColDispChars

### Signature

```
procedure dme_pubdf_data_model.ModifyColDisPChars
(p_api_version           IN NUMBER
,p_init_msg_list        IN VARCHAR2 default
CDR_PUB_DEF_CONSTANTS.G_FALSE
,p_commit               IN VARCHAR2 default
CDR_PUB_DEF_CONSTANTS.G_FALSE
,p_validation_level     IN NUMBER default
CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL
,x_return_status        OUT NOCOPY VARCHAR2
,x_msg_count            OUT NOCOPY NUMBER
,x_msg_data             OUT NOCOPY VARCHAR2
,piModTabDCColl        IN DME_MOD_DC_COLL
,pi_lifeCycleRc        in varchar2 default '$LIFECYCLE$DEV') ;
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)).

**API Input Collections**

This API takes a nested collection of model-table-columns.

**DME\_MOD\_DC\_COLL:**

Table of **DME\_MOD\_DC\_TYPE**

**DME\_MOD\_DC\_TYPE:**

```
OBJECT
(
COMPANY_ID                NUMBER(6),
OBJ_ID                    NUMBER(22),
OBJ_VER                   NUMBER(7),
OBJECT_VERSION_NUMBER    NUMBER(9),
NAMESPACE_OBJ_ID         NUMBER(22),
NAMESPACE_OBJ_VER        NUMBER(7),
OBJECT_SUBTYPE_ID        NUMBER(22),
TABDISPCHARCOLL         DME_TAB_DC_COLL,
constructor function DME_MOD_DC_TYPE return self as result
)
```

**DME\_TAB\_DC\_COLL:**

Table Of **DME\_TAB\_DC\_TYPE**

**DME\_TAB\_DC\_TYPE:**

```
OBJECT
(
COMPANY_ID                NUMBER(6),
OBJ_ID                    NUMBER(22),
OBJ_VER                   NUMBER(7),
OBJECT_VERSION_NUMBER    NUMBER(9),
NAMESPACE_OBJ_ID         NUMBER(22),
NAMESPACE_OBJ_VER        NUMBER(7),
MODIFY_DISPLAY_ORDER     VARCHAR2(10),
colDispCharColl         DME_COL_DISP_CHARS_COLL,
constructor function DME_TAB_DC_TYPE return self as result
)
```

**DME\_DISP\_CHARS\_COLL:**

Table Of **DME\_COL\_DISP\_CHARS\_TYPE**

**DME\_COL\_DISP\_CHARS\_TYPE:**

```
OBJECT
(
"COMPANY_ID"              NUMBER(6),
"COL_OBJ_ID"              NUMBER(22),
"LIFECYCLE_AREA_RC"      VARCHAR2(30),
"DISPLAY_WIDTH"          NUMBER(22),
"DISPLAY_HEADER"         VARCHAR2(4000),
"DISPLAY_HOVER_TEXT"     VARCHAR2(4000),
"DISPLAY_FLAG_RC"        VARCHAR2(30),
"NOT_USED_FLAG_RC"       VARCHAR2(30),
"DISPLAY_ORDER"          NUMBER(10),
"OBJECT_VERSION_NUMBER"  NUMBER(9),
constructor function DME_COL_DISP_CHARS_TYPE return self as result
)
```

## Modify a Column in a Clinical Data Model Table

Use this API to modify a column.

### Name

DME\_PUB\_DF\_DATA\_MODEL.ModifyColumnInDataModelTab

### Signature

```
procedure ModifyColumnInDataModelTab(p_api_version      IN NUMBER
p_init_msg_list   IN VARCHAR2 default CDR_PUB_DEF_CONSTANTS.G_FALSE
p_commit          IN VARCHAR2 default CDR_PUB_DEF_CONSTANTS.G_FALSE
p_validation_level IN NUMBER default CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL
x_return_status   OUT NOCOPY VARCHAR2
x_msg_count       OUT NOCOPY NUMBER
x_msg_data        OUT NOCOPY VARCHAR2
pio_naming        IN OUT NOCOPY cdr_naming_version_obj_type
pio_column        IN OUT NOCOPY cdr_dm_column_obj_type );
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_NAMING** (Mandatory): Enter values for the column. This is a parameter of type CDR\_NAMING\_VERSION\_OBJ\_TYPE.
- **PIO\_COLUMN** (Mandatory): This is a parameter of type CDR\_DM\_COLUMN\_OBJ\_TYPE. Enter current or modified values for the column as required.

## Remove Column from Clinical Data Model Table

Use this API to delete a column from a table.

### Name

DME\_PUB\_DF\_DATA\_MODEL.RemoveColumnsInDataModelTab

### Signature

```
procedure RemoveColumnsInDataModelTab(
p_api_version      IN NUMBER
p_init_msg_list   IN VARCHAR2 default CDR_PUB_DEF_CONSTANTS.G_FALSE
p_commit          IN VARCHAR2 default CDR_PUB_DEF_CONSTANTS.G_FALSE
p_validation_level IN NUMBER default CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL
x_return_status   OUT NOCOPY VARCHAR2
x_msg_count       OUT NOCOPY NUMBER
x_msg_data        OUT NOCOPY VARCHAR2
pi_naming_coll    IN  cdr_naming_list_coll);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

**PI\_NAMING\_COLL** (Mandatory): Identify the column to be removed. This is a parameter of type CDR\_NAMING\_LIST\_COLL.

## Add a Constraint to a Clinical Data Model Table

Use this API to add a constraint to a table in a study or library clinical data model.

### Name

DME\_PUB\_DF\_DATA\_MODEL.AddConstraintToDataModelTab

### Signature

```
procedure AddConstraintToDataModelTab(
  p_api_version      IN NUMBER
  p_init_msg_list    IN VARCHAR2 default CDR_PUB_DEF_CONSTANTS.G_FALSE
  p_commit           IN VARCHAR2 default CDR_PUB_DEF_CONSTANTS.G_FALSE
  p_validation_level IN NUMBER default CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL
  x_return_status    OUT NOCOPY VARCHAR2
  x_msg_count        OUT NOCOPY NUMBER
  x_msg_data         OUT NOCOPY VARCHAR2
  pio_naming         IN OUT NOCOPY cdr_naming_version_obj_type
  pio_constraint     IN OUT NOCOPY cdr_dm_tab_cons_obj_type
  pi_constraintColumns IN OUT NOCOPY cdr_table_concols_list_coll
  pi_vals            IN cdr_vals_coll);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_NAMING** This is a parameter of type CDR\_NAMING\_VERSION\_OBJ\_TYPE. Enter values for the new constraint and the parent table. The following attributes are required:
  - **COMPANY\_ID**: Company ID of the Data Model,
  - **OBJECT\_TYPE\_RC**: Enter '\$OBJTYPES\$TABLECNSTR'
  - **NAME**: Name of the constraint.
  - **NAMESPACE\_OBJ\_ID**: Object ID of the Data Model.
  - **NAMESPACE\_OBJ\_VER**: Object Version of the Data Model.
- **PIO\_CONSTRAINT** (Mandatory): This is a parameter of type CDR\_DM\_TAB\_CONS\_OBJ\_TYPE. Enter values as follows:
  - **COMPANY\_ID**: To get your company ID, use CDR\_PUB\_DEF\_FACTORY\_UTILS.GetCompanyId.
  - **OBJ\_ID** and **OBJ\_VER**: Enter NULL.
  - **CONSTRAINT\_NAME**: Enter a name.
  - **CONSTRAINT\_TYPE\_RC**: Identify the type of constraint:
    - \$CONSTRAINTYPES\$CHECK
    - \$CONSTRAINTYPES\$PRIMARYKEY
    - \$CONSTRAINTYPES\$BITMAP
    - \$CONSTRAINTYPES\$UNIQUE

\$CONSTRAINTYPES\$NUINDEX

- **SURROGATE\_KEY\_FLAG\_RC**: Enter null. If you are creating a primary key and a surrogate key column does not exist in the table, the system creates it as CDR\$KEY. The column stores surrogate key values, which are required for data lineage tracing.
- **DUPLICATE\_RECORD\_FLAG\_RC**: The system uses this value only for primary keys. In most cases this should be set to '\$YESNO\$NO' but you can enable loading records with the same primary key value by entering '\$YESNO\$YES'. See the *Oracle Health Sciences Data Management Workbench User's Guide* for more information.
- **DM\_CONS\_COL\_COLL**: Pass NULL values.
- **PI\_CONSTRAINTCOLUMNS**: This is a parameter of type CDR\_TABLE\_CONCOLS\_LIST\_COLL. Identify the table and the table's columns where you want to apply the constraints. Depending on the constraint, you must also provide values for attributes that define foreign key, or that identify the list of values object to store the values for a CHECK constraint.
  - **TABC\_COMPANY\_ID**: To get your company ID, use CDR\_PUB\_DEF\_FACTORY\_UTILS.GetCompanyId.
  - **TABC\_OBJ\_ID** and **TABC\_OBJ\_VER**: Enter NULL.
  - FK\_COL\_COMPANY\_ID**: Enter NULL.
  - FK\_COL\_OBJ\_ID**: Enter NULL.
  - FK\_COL\_OBJ\_VER**: Enter NULL.
  - POSITION**: Enter the position of the constraint column in constraint.
  - COL\_COMPANY\_ID**: Enter the column company ID.
  - COL\_OBJ\_ID**: Enter the column's object ID.
  - COL\_OBJ\_VER**: Enter the column's object version.
  - LOV\_COMPANY\_ID**: Enter the column company ID.
  - LOV\_OBJ\_ID**: Enter NULL.
  - LOV\_OBJ\_VER**: Enter NULL.
- **PI\_VALS**. This is a parameter of type CDR\_VALS\_COLL that is based on CDR\_VAL\_OBJ\_TYPE type. It applies only to Check constraints. The type has two attributes for each value.
  - **POSITION**: The position of the value in the list.
  - **VALUE**: The valid value.

## Modify a Constraint in a Clinical Data Model Table

Use this API to modify an existing constraint.

**Name**

DME\_PUB\_DF\_DATA\_MODEL.ModifyConsInDataModelTab

### Signature

```

procedure ModifyConsInDataModelTab(p_api_version      IN NUMBER
p_init_msg_list      IN VARCHAR2 default CDR_PUB_DEF_CONSTANTS.G_FALSE
p_commit             IN VARCHAR2 default CDR_PUB_DEF_CONSTANTS.G_FALSE
p_validation_level   IN NUMBER default CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL
x_return_status      OUT NOCOPY VARCHAR2
x_msg_count          OUT NOCOPY NUMBER
x_msg_data           OUT NOCOPY VARCHAR2
pio_naming           IN OUT NOCOPY cdr_naming_version_obj_type
pio_constraint       IN OUT NOCOPY cdr_dm_tab_cons_obj_type
pi_constraintColumns IN OUT NOCOPY cdr_table_concols_list_coll
pi_vals IN cdr_vals_coll );

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_NAMING** (Mandatory): Enter values for the constraint. This is a parameter of type CDR\_NAMING\_VERSION\_OBJ\_TYPE.
- **PIO\_CONSTRAINT**(Mandatory): This is a parameter of type CDR\_DM\_TAB\_CONS\_OBJ\_TYPE. Enter current or modified values for the constraint as required.
- **PI\_VALS**. This is a parameter of type CDR\_VALS\_COLL that is based on CDR\_VAL\_OBJ\_TYPE type. Enter current or modified values for a check constraint as required.

## Remove Constraint from a Clinical Data Model Table

Use this API to remove a constraint from a table.

### Name

DME\_PUB\_DF\_DATA\_MODEL.RemoveConsInDataModelTab

### Signature

```

procedure RemoveConsInDataModelTab(
p_api_version      IN NUMBER
p_init_msg_list      IN VARCHAR2 default CDR_PUB_DEF_CONSTANTS.G_FALSE
p_commit             IN VARCHAR2 default CDR_PUB_DEF_CONSTANTS.G_FALSE
p_validation_level   IN NUMBER default CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL
x_return_status      OUT NOCOPY VARCHAR2
x_msg_count          OUT NOCOPY NUMBER
x_msg_data           OUT NOCOPY VARCHAR2
pi_naming_coll       IN  cdr_naming_list_coll);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

**PI\_NAMING\_COLL** (Mandatory): Identify the constraint to be removed. This is a parameter of type CDR\_NAMING\_LIST\_COLL that contains list of CDR naming version attributes.



## Reorder Columns in a Clinical Data Model Table

Use this API to change the order of columns in a table.

### Name

DME\_PUB\_DF\_DATA\_MODEL.ReorderColumnInDMTable

### Signature

```
procedure ReorderColumnInDMTable(  
    p_api_version          IN NUMBER  
    p_init_msg_list       IN VARCHAR2 default CDR_PUB_DEF_CONSTANTS.G_FALSE  
    p_commit              in varchar2 default cdr_pub_def_constants.g_false  
    p_validation_level    in number default cdr_pub_def_constants.g_valid_level_full  
    pi_reorderObjColl IN cdr_reorder_obj_coll  
    x_return_status      OUT NOCOPY VARCHAR2  
    x_msg_count         OUT NOCOPY NUMBER  
    x_msg_data          OUT NOCOPY VARCHAR2);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

**PI\_REORDEROBJCOLL** (Mandatory): This is a parameter of type `CDR_REORDER_OBJ_COLL`, which is based on the `CDR_REORDER_OBJ_TYPE` type. Pass one set of `CDR_REORDER_OBJ_TYPE` to `CDR_REORDER_OBJ_COLL` for each column whose order needs to be changed.

- **COMPANY\_ID**: To get your company ID, use `CDR_PUB_DEF_FACTORY_UTILS.GetCompanyId`.
- **OBJ\_ID**: Enter the column's object ID.
- **OBJ\_VER**: Enter the column's object version.
- **NAMESPACE\_OBJ\_ID**: Enter the table's object ID.
- **NAMESPACE\_OBJ\_VER**: Enter the table's object version.
- **POSITION**: Enter the new position for the column, relative to other columns in the table.
- **ENTRY\_NUMBER**: Enter null.
- **OBJECT\_VERSION\_NUMBER**: Enter null.

## Display Metadata Differences between Tables

Use this API to display the differences found when comparing metadata in two tables.

### Name

DME\_PUB\_DF\_DATA\_MODEL.get\_tab\_metadata\_diff

### Signature

```
FUNCTION GET_TAB_METADATA_DIFF  
(piCompID          IN CDR_NAMINGS.COMPANY_ID%TYPE
```

```

,piSrcTabObjID      IN CDR_NAMINGS.OBJ_ID%TYPE
,piSrcTabObjVer     IN CDR_NAMING_VERSIONS.OBJ_VER%TYPE
,piTgtTabObjID      IN CDR_NAMINGS.OBJ_ID%TYPE
,piTgtTabObjVer     IN CDR_NAMING_VERSIONS.OBJ_VER%TYPE
) RETURN dme_char_coll;

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **COMPANY\_ID** (Mandatory): To get your company ID, use CDR\_PUB\_DEF\_FACTORY\_UTILS.GetCompanyId.
- **TABLE1\_OBJID** (Mandatory): The object ID of the first table being compared.
- **TABLE1\_OBJVER** (Mandatory): The object version of the first table being compared.
- **TABLE2\_OBJID** (Mandatory): The object ID of the second table being compared.
- **TABLE2\_OBJVER** (Mandatory): The object version of the second table being compared.

## Get a Custom Listing Business Area ID for a Model

When a user logs into a visualization tool, the visualization tool must call an API to initialize the primary data model schema and, if the user wants to see custom listings through the tool, the schema for custom listings. The initialization API requires the business area instance ID, which is not available to a user in DMW.

Use this API to fetch the ID of the business area instance that contains all the custom listings defined in the model.

### Name

CDR\_PUB\_API\_GVA.getCustomListingBA

### Signature

```

FUNCTION getCustomListingBA(
pi_nDataModelId IN NUMBER,
pi_vContext IN VARCHAR2)
RETURN NUMBER;

```

### Parameters

**pi\_nDataModelId** Enter the ID of the data model.

**pi\_vContext** Enter the life cycle context value. The allowed values are: \$LIFECYCLE\$DEV, \$LIFECYCLE\$PROD, or \$LIFECYCLE\$QC.

See the following topic for details:

- [Required Profile for Custom Listing BAs](#)

## Required Profile for Custom Listing BAs

You must set profile DMW : Synch Custom Listing BA synonyms with Primary Datamodel Business Area to Yes to generate custom listing business areas.

- If set to **No**, custom listing business area synonyms are not added to the primary business area for the model. This is the default value.
- If set to **Yes**, and if the data model is set to allow business areas, during installation of either the model or any custom listing that reads from it, the system creates synonyms in the primary schema based on custom listing names.

# 29

## Codelists

This is a public interface for all operations related to codelists, including creation, deletion, modification, and checking in and out of these objects.

This section contains the following topic:

- [Create and Modify Codelists](#)

## Create and Modify Codelists

This section contains the following public APIs in package DME\_PUB\_CODE\_LISTS:

- [Create a Codelist](#)
- [Modify a Codelist](#)
- [Remove a Codelist](#)
- [Check In a Codelist](#)
- [Check Out a Codelist](#)
- [Add Values to a Codelist](#)
- [Remove Values from a Codelist](#)
- [Get Codelist Details for a Given Column](#)

## Create a Codelist

Use this API to create a codelist under a library domain. Codelists created with this API can be verified through public view 'DME\_PUB\_CODELIST\_V'. For values refer 'DME\_PUB\_CODELIST\_VALUES\_V'.

### Name

DME\_PUB\_CODE\_LISTS.CreateCodeList

### Signature

```
PROCEDURE CREATECODELIST
(P_API_VERSION      IN NUMBER,
P_INIT_MSG_LIST     IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,
P_COMMIT            IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,
P_VALIDATION_LEVEL IN NUMBER DEFAULT CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
P_NAMING            IN OUT NOCOPY cdr_naming_version_obj_type,
P_CODELISTCOLL     IN CDR_CODE_LIST_COLL,
X_RETURN_STATUS OUT NOCOPY VARCHAR2,
X_MSG_COUNT OUT NOCOPY NUMBER,
X_MSG_DATA OUT NOCOPY VARCHAR2,
);
```

## Parameters

This API has standard parameters (see [Standard Parameters](#)) as well as the following parameters:

- **P\_NAMING** (Mandatory). This is a parameter of type `CDR_NAMING_VERSION_OBJ_TYPE`. For `OBJECT_TYPE_RC` enter '\$OBJTYPES\$CODELIST'.
- **P\_CODELISTCOLL** (Optional). This is a parameter of type `CDR_CODE_LIST_COLL`. Collection of code value pairs. For example:  

```
CDR_CODE_LIST_COLL(CDR_CODE_LIST_OBJ_TYPE('CDE1', 'VAL1'),  
CDR_CODE_LIST_OBJ_TYPE('CDE2', 'VAL2'));
```

## Modify a Codelist

Use this API to modify the name and description of a codelist. Codelists modified with this API can be verified through public view 'DME\_PUB\_CODELIST\_V'.



### Note:

To add code-value pairs, see [Add Values to a Codelist](#).

## Name

DME\_PUB\_CODE\_LISTS.ModifyCodeList

## Signature

```
PROCEDURE MODIFYCODELIST
(P_API_VERSION          IN NUMBER,
P_INIT_MSG_LIST        IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,
P_COMMIT               IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,
P_VALIDATION_LEVEL     IN NUMBER DEFAULT CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
P_NAMING               IN OUT NOCOPY CDR_NAMING_VERSION_OBJ_TYPE,
X_RETURN_STATUS        OUT NOCOPY VARCHAR2,
X_MSG_COUNT            OUT NOCOPY NUMBER,
X_MSG_DATA             OUT NOCOPY VARCHAR2,
);
```

## Parameters

This API has standard parameters (see [Standard Parameters](#)) as well as the following parameter:

- **P\_NAMING** (Mandatory). This is a parameter of type `CDR_NAMING_VERSION_OBJ_TYPE`. Enter values for the codelist whose code-value pairs you are modifying and the new attribute values, such as Name and Description. To get naming version attribute values see [Get a Naming Version Object](#).

## Remove a Codelist

Use this API to remove a codelist. After this API is executed, public view 'DME\_PUB\_CODELIST\_V' will not display the codelist.

**Name**

DME\_PUB\_CODE\_LISTS.RemoveCodeList

**Signature**

```
PROCEDURE REMOVECODELIST
  (P_API_VERSION      IN NUMBER ,    P_INIT_MSG_LIST      IN VARCHAR2
  DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,    P_COMMIT          IN VARCHAR2
  DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,    P_VALIDATION_LEVEL IN NUMBER DEFAULT
  CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,    P_NAMING          IN OUT NOCOPY
  cdr_naming_version_obj_type,    X_RETURN_STATUS OUT NOCOPY VARCHAR2,
  X_MSG_COUNT OUT NOCOPY    NUMBER,    X_MSG_DATA OUT NOCOPY    VARCHAR2
  );
```

**Parameters**

This API has standard parameters (see [Standard Parameters](#)) as well as the following parameters:

- **P\_NAMING** (Mandatory). This is a parameter of type CDR\_NAMING\_VERSION\_OBJ\_TYPE. Enter values for the codelist from which the code-value pairs have to be removed.

## Check In a Codelist

Use this API to check in a codelist. Changed status can be verified through public view 'DME\_PUB\_CODELIST\_V'.

**Name**

DME\_PUB\_CODE\_LISTS.CheckinCodeList

**Signature**

```
PROCEDURE CHECKINCODELIST
  (P_API_VERSION      IN NUMBER,    P_INIT_MSG_LIST      IN VARCHAR2
  DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,    p_commit          IN VARCHAR2
  DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,    p_validation_level IN NUMBER DEFAULT
  CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,    p_naming          IN OUT NOCOPY
  cdr_naming_version_obj_type,    x_return_status OUT NOCOPY VARCHAR2,
  x_msg_count OUT NOCOPY    NUMBER,    x_msg_data OUT NOCOPY    VARCHAR2
  );
```

**Parameters**

This API has standard parameters (see [Standard Parameters](#)) as well as the following parameter:

- **P\_NAMING** (Mandatory). This is a parameter of type CDR\_NAMING\_VERSION\_OBJ\_TYPE. Enter values for the codelist you are checking in.

## Check Out a Codelist

Use this API to check out a codelist. Changed status can be verified through public view 'DME\_PUB\_CODELIST\_V'.

**Name**

DME\_PUB\_CODE\_LISTS.CheckoutCodeList

**Signature**

```
PROCEDURE CHECKOUTCODELIST
  ( P_API_VERSION      IN NUMBER ,    P_INIT_MSG_LIST    IN VARCHAR2
  DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,    P_COMMIT        IN VARCHAR2
  DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,    P_VALIDATION_LEVEL IN NUMBER DEFAULT
  CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,    P_NAMING        IN OUT NOCOPY
  cdr_naming_version_obj_type,    X_RETURN_STATUS OUT NOCOPY VARCHAR2,
  X_MSG_COUNT OUT NOCOPY    NUMBER,    X_MSG_DATA OUT NOCOPY    VARCHAR2)
);
```

**Parameters**

This API has standard parameters (see [Standard Parameters](#)) as well as the following parameter:

**P\_NAMING** (Mandatory). This is a parameter of type CDR\_NAMING\_VERSION\_OBJ\_TYPE. Enter values for the codelist you are checking out.

## Add Values to a Codelist

Use this API to add code value pairs to a codelist. Codelist values created with this API can be verified through public view 'DME\_PUB\_CODELIST\_VALUES\_V'.

 **Note:**

You can add new code-value pairs but you cannot modify existing ones using this API. You can do that in the user interface, or you can remove existing pairs (see [Remove a Codelist](#)) and add new ones using APIs.

**Name**

DME\_PUB\_CODE\_LISTS.AddCodeListValues

**Signature**

```
PROCEDURE ADDCODELISTVALUES
  (P_API_VERSION      IN NUMBER ,    P_INIT_MSG_LIST    IN VARCHAR2
  DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,    P_COMMIT        IN VARCHAR2
  DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,    P_VALIDATION_LEVEL IN NUMBER DEFAULT
  CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,    P_NAMING        IN OUT NOCOPY
  cdr_naming_version_obj_type ,    P_CODELISTCOLL    IN CDR_CODE_LIST_COLL ,
  X_RETURN_STATUS OUT NOCOPY VARCHAR2 ,    X_MSG_COUNT OUT NOCOPY    NUMBER ,
  X_MSG_DATA OUT NOCOPY    VARCHAR2)
);
```

**Parameters**

This API has standard parameters (see [Standard Parameters](#)) as well as the following parameters:

- **P\_NAMING** (Mandatory). This is a parameter of type `CDR_NAMING_VERSION_OBJ_TYPE`. Enter values for the codelist to which you are added code-value pairs.
- **P\_CODELISTCOLL** (Mandatory). This is a parameter of type `CDR_CODE_LIST_COLL`. Collection of code value pairs. For example:

```
CDR_CODE_LIST_COLL(CDR_CODE_LIST_OBJ_TYPE('CDE1', 'VAL1'),
CDR_CODE_LIST_OBJ_TYPE('CDE2', 'VAL2'));
```

## Remove Values from a Codelist

Use this API to remove code value pairs to a codelist. After this API is executed, public view 'DME\_PUB\_CODELIST\_V' will not display the codelist values.

### Name

DME\_PUB\_CODE\_LISTS.AddCodeListValues

### Signature

```
PROCEDURE REMOVECODELISTVALUES
  (P_API_VERSION      IN NUMBER,    P_INIT_MSG_LIST   IN VARCHAR2
  DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,    P_COMMIT       IN VARCHAR2
  DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,    P_VALIDATION_LEVEL IN NUMBER DEFAULT
  CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,    P_NAMING       IN OUT NOCOPY
  cdr_naming_version_obj_type,    P_CODELISTCOLL  IN CDR_CODE_LIST_COLL,
  X_RETURN_STATUS OUT NOCOPY VARCHAR2,    X_MSG_COUNT OUT NOCOPY    NUMBER,
  X_MSG_DATA OUT NOCOPY    VARCHAR2
  );
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) as well as the following parameters:

- **P\_NAMING** (Mandatory). This is a parameter of type `CDR_NAMING_VERSION_OBJ_TYPE`. Whole naming object needs to be populated for the object which needs code values to be added to it. API 'CDR\_PUB\_DEF\_FACTORY\_SUPPORT.GETNAMINGOBJECT' can be used to populate naming object.
- **P\_CODELISTCOLL** (Mandatory). This is a parameter of type `CDR_CODE_LIST_COLL`. Collection of code value pairs. For example:

```
CDR_CODE_LIST_COLL(CDR_CODE_LIST_OBJ_TYPE('CDE1', 'VAL1'),
CDR_CODE_LIST_OBJ_TYPE('CDE2', 'VAL2'));
```

## Get Codelist Details for a Given Column

Use this API to get the codelist details for a given column.

### Name

DME\_PUB\_CODE\_LISTS.getCodeListDetail

### Signature

```
PROCEDURE GETCODELISTDETAIL
  (P_API_VERSION      IN NUMBER ,    P_INIT_MSG_LIST   IN VARCHAR2
```



```
DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,      P_COMMIT           IN VARCHAR2
DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,      P_VALIDATION_LEVEL IN NUMBER
DEFAULT CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL, X_RETURN_STATUS OUT NOCOPY
VARCHAR2 ,      X_MSG_COUNT OUT NOCOPY      NUMBER,      X_MSG_DATA OUT NOCOPY
VARCHAR2,      PI_COLCOMPANYID   IN cdr_naming_versions.company_id%type,
PI_COLOBJID    IN cdr_naming_versions.obj_id%type,      PI_COLOBJVER
IN cdr_naming_versions.obj_ver%type,      PO_CODELISTID      OUT NOCOPY
cdr_naming_versions.obj_id%type,      PO_CODELISTVER    OUT NOCOPY
cdr_naming_versions.obj_ver%type
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) as well as the following parameters:

- **PI\_COLCOMPANYID** (Mandatory). COMPANY\_ID of a Column.
- **PI\_COLOBJID** (Mandatory). Object Identifier of a Column
- **PI\_COLOBJVER** (Mandatory). Object Version of a Column
- **PO\_CODELISTID** This is out parameter. It returns the Object Id of associated codelist.
- **PO\_CODELISTVER** This is out parameter. It returns the Object Version of associated codelist.

# 30

## Flags, Categories, and Actions

This is a public interface for operations related to flags and actions. It contains the following topics:

- [Flag-Related APIs](#)
- [Flag Name-Related APIs](#)
- [Get Flag States](#)
- [Clinical Data Model Category-Related APIs](#)
- [Action-Related APIs](#)

### Flag-Related APIs

This section contains the following procedures related to flags in the package DME\_PUB\_FLAG\_DATA.

 **Note:**

A program that calls any of these flag APIs must call DME\_PUB\_INITIALIZATION.SetupAPIStudyEnvironment to set the study and lifecycle context after calling CDR\_PUB\_API\_INITIALIZATION.enableAPIs.

- [Set Flag](#)
- [Get Flag](#)
- [Get Flags on Data](#)
- [Get Flags on Data Fuller](#)
- [Delete Flag](#)
- [Get Surrogate Key Values for Records in a Flag State](#)

### Set Flag

Use this API to set the state of a single flag for a given record.

**Name**

DME\_PUB\_FLAG\_DATA.SetFlag

**Signature**

```
PROCEDURE SETFLAG,  
  ( P_API_VERSION IN VARCHAR2,  
    P_INIT_MSG_LIST IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,
```

```

P_COMMIT IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,
P_VALIDATION_LEVEL IN NUMBER DEFAULT CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
X_RETURN_STATUS OUT NOCOPY VARCHAR2,
X_MSG_COUNT OUT NOCOPY NUMBER,
X_MSG_DATA OUT NOCOPY VARCHAR2,
PI_COMPANY_ID IN NUMBER,
PI_TAB_OBJ_ID IN NUMBER,
PI_SKEY_VALUE IN VARCHAR2,
PI_TIMESTAMP IN DATE,
PI_FLAG_ID IN NUMBER,
PI_FLAG_STATE IN VARCHAR2,
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_COMPANY\_ID** (Mandatory). Enter the company ID.
- **PI\_TAB\_OBJ\_ID** (Mandatory). Enter the object ID of the table instance that contains the data record.
- **PI\_SKEY\_VALUE** (Mandatory). Enter the surrogate key of the record.
- **PI\_TIMESTAMP** Enter the latest timestamp of the data record. The system tracks which version of the record the flag was initially applied to.
- **PI\_FLAG\_ID** (Mandatory). Enter the unique ID of the flag (from `dme_flag_names`).
- **PI\_FLAG\_STATE** (Mandatory). The flag state to be applied for the data record.

## Get Flag

Use this API to retrieve information about an Oracle DMW flag setting.

### Name

DME\_PUB\_FLAG\_DATA.GetFlag

### Signature

```

PROCEDURE GETFLAG
( P_API_VERSION IN VARCHAR2,
P_INIT_MSG_LIST IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,
P_COMMIT IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,
P_VALIDATION_LEVEL IN NUMBER DEFAULT CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
X_RETURN_STATUS OUT NOCOPY VARCHAR2,
X_MSG_COUNT OUT NOCOPY NUMBER,
X_MSG_DATA OUT NOCOPY VARCHAR2,
PI_COMPANY_ID IN NUMBER,
PI_TAB_OBJ_ID IN NUMBER,
PI_SKEY_VALUE IN VARCHAR2,
PI_FLAG_ID IN NUMBER,
PO_FLAG_STATE OUT NOCOPY VARCHAR2,
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_COMPANY\_ID** (Mandatory). Enter the company ID.
- **PI\_TAB\_OBJ\_ID** (Mandatory). Enter the obj\_id of the table instance that contains the data record.
- **PI\_SKEY\_VALUE** (Mandatory). The surrogate key of the record
- **PI\_FLAG\_ID** (Mandatory). The unique ID of the flag (from dme\_flag\_names)
- **PO\_FLAG\_STATE** (Mandatory). This output parameter inherits the flag state for this record.

## Get Flags on Data

This API retrieves all the flags and their states, assigned to a particular data record, plus the latest update timestamp for each flag category per record.

It does not provide a timestamp for each individual flag update. If you want to see the update timestamp for a particular flag, you can create a category for that one flag.

### Name

DME\_PUB\_FLAG\_DATA.GetFlagsOnDataMore

### Signature

```
PROCEDURE getFlagsOnDataMore
(
  p_api_version IN VARCHAR2
  , p_init_msg_list IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE
  , p_commit IN VARCHAR2 default CDR_PUB_DEF_CONSTANTS.G_FALSE
  , p_validation_level IN NUMBER default CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL
  , x_return_status OUT NOCOPY VARCHAR2
  , x_msg_count OUT NOCOPY NUMBER
  , x_msg_data OUT NOCOPY VARCHAR2
  , pi_company_id IN NUMBER
  , pi_tab_obj_id IN NUMBER
  , pi_skey_value IN VARCHAR2
  , pi_include_nulls IN NUMBER
  , po_flags OUT NOCOPY dme_flag_show_more_coll
) ;
```

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_COMPANY\_ID** (Mandatory). Enter the company ID.
- **PI\_TAB\_OBJ\_ID** (Mandatory). This input parameter is an object ID for a namings object of type \$OBJTYPES\$TABLEREF (table instance).
- **PI\_SKEY\_VALUE** (Mandatory). Enter the surrogate key of the record whose flags you want to retrieve.
- **PI\_INCLUDE\_NULLS** (Mandatory). Set this input parameter to 1 to include information for flags with NULL state, else 0.
- **PO\_FLAGS** (Output). This is a parameter of type DME\_FLAG\_SHOW\_MORE\_COLL that returns:
  - Flag ID
  - Flag Name
  - Flag Value

- Flag State Priority Code
- Flag State Priority Meaning
- Category ID
- Most Recent Category Update Date (The most recent update of any flag in the category.)
- Category Update User ID (The user ID of the user or validation check that performed the most recent flag assignment update in the category.)
- Category Update Username (The name of the user or validation check that performed the most recent flag assignment update in the category.)

## Get Flags on Data Fuller

This API retrieves information about all the flag states on a particular record.

### Name

DME\_PUB\_FLAG\_DATA.GetFlagsOnDataFuller

### Signature

```
PROCEDURE getFlagsOnDataFuller
(
  p_api_version IN VARCHAR2
  , p_init_msg_list IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE
  , p_commit IN VARCHAR2 default CDR_PUB_DEF_CONSTANTS.G_FALSE
  , p_validation_level IN NUMBER default CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL
  , x_return_status OUT NOCOPY VARCHAR2
  , x_msg_count OUT NOCOPY NUMBER
  , x_msg_data OUT NOCOPY VARCHAR2
  , pi_company_id IN NUMBER
  , pi_tab_obj_id IN NUMBER
  , pi_skey_value IN VARCHAR2
  , po_flags OUT NOCOPY dme_flag_show_ver4_coll
);
```

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_COMPANY\_ID** (Mandatory). Enter the company ID.
- **PI\_TAB\_OBJ\_ID** (Mandatory). This input parameter is an object ID for a namings object of type \$OBJTYPES\$TABLEREF (table instance).
- **PI\_SKEY\_VALUE** (Mandatory). Enter the surrogate key of the record whose flags you want to retrieve.
- **PO\_FLAGS** (Mandatory). This is a parameter of type DME\_FLAG\_SHOW\_VER4\_COLL that returns: or the returned values (names, states, priorities, last category update date and last category update user)
  - Flag Name
  - Flag State Priority Code
  - Flag State Priority Meaning
  - Most Recent Category Update Date (The most recent update of any flag in the category.)

- Category Update Username (The name of the user or validation check that performed the most recent flag assignment update in the category.)

## Delete Flag

Use this API to delete an existing DMW Flag state.

### Name

DME\_PUB\_FLAG\_DATA.DeleteFlag

### Signature

```
PROCEDURE DELETEFLAG
(P_API_VERSION IN VARCHAR2,
P_INIT_MSG_LIST IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,
P_COMMIT IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,
P_VALIDATION_LEVEL IN NUMBER DEFAULT CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
X_RETURN_STATUS OUT NOCOPY VARCHAR2,
X_MSG_COUNT OUT NOCOPY NUMBER,
X_MSG_DATA OUT NOCOPY VARCHAR2,
PI_COMPANY_ID IN NUMBER,
PI_TAB_OBJ_ID IN NUMBER,
PI_SKEY_VALUE IN VARCHAR2,
PI_FLAG_ID IN NUMBER,
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_COMPANY\_ID** (Mandatory). Enter the company ID.
- **PI\_TAB\_OBJ\_ID** (Mandatory). This input parameter is an object id for a namings object of type \$OBJTYPES\$TABLEREF (table instance).
- **PI\_SKEY\_VALUE** (Mandatory). The surrogate key of the record.
- **PI\_FLAG\_ID** (Mandatory). This input parameter is the ID of the flag whose state you want to remove.

## Get Surrogate Key Values for Records in a Flag State

Use this API to get the surrogate keys for all records in a table that have the given state for the given flag.

### Name

DME\_PUB\_FLAG\_DATA.getRecordsForFlagState

### Signature

```
PROCEDURE getRecordsForFlagState
( p_api_version IN VARCHAR2
, p_init_msg_list IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE
, p_commit IN VARCHAR2 default CDR_PUB_DEF_CONSTANTS.G_FALSE
, p_validation_level IN NUMBER default CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL
, x_return_status OUT NOCOPY VARCHAR2
, x_msg_count OUT NOCOPY NUMBER
, x_msg_data OUT NOCOPY VARCHAR2
```

```
, pi_company_id IN NUMBER
, pi_tab_obj_id IN NUMBER
, pi_flag_id IN NUMBER
, pi_flag_state IN VARCHAR2
, pi_records OUT NOCOPY dme_char_coll);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_COMPANY\_ID** (Mandatory). Enter the company ID.
- **PI\_TAB\_OBJ\_ID** (Mandatory). Enter the object id for a namings object of type \$OBJTYPES\$TABLEREF (table instance) that contains the record.
- **PI\_FLAG\_ID** (Mandatory). Enter the ID of the flag.
- **PI\_FLAG\_STATE** (Mandatory). Enter the flag state.
- **PI\_RECORDS** This output parameter is a collection of type dme\_char\_coll.

## Flag Name-Related APIs

Use the following APIs in the package DME\_PUB\_FLAG\_NAME to retrieve DMW flag names definitions and states. Use the first version of these APIs if you know the flag ID; use the second one if you know its name.



### Note:

A program that calls any of these flag APIs must call DME\_PUB\_INITIALIZATION.SetupAPIStudyEnvironment to set the study and lifecycle context after calling CDR\_PUB\_API\_INITIALIZATION.enableAPIs.

This section includes the following:

- [Get Flag Name Definition, Version 1](#)
- [Get Flag Name Definition, Version 2](#)
- [Get Flag Name Definitions](#)

## Get Flag Name Definition, Version 1

Use this API to retrieve information about an Oracle DMW flag name definition. Use this API if you know the Flag Name ID.

### Name

DME\_PUB\_FLAG\_NAME.GetFlagName

### Signature

```
PROCEDURE GETFLAGNAME
(P_API_VERSION IN VARCHAR2,
P_INIT_MSG_LIST IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,
```

```
P_COMMIT IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,
P_VALIDATION_LEVEL IN NUMBER DEFAULT CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
X_RETURN_STATUS OUT NOCOPY VARCHAR2,
X_MSG_COUNT OUT NOCOPY NUMBER,
X_MSG_DATA OUT NOCOPY VARCHAR2,
PI_COMPANY_ID IN NUMBER,
PI_FLAG_NAME_ID IN NUMBER,
PIO_DME_FLAG_NAME IN OUT NOCOPY DME_FLAG_NAME_TYPE,
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_COMPANY\_ID** (Mandatory). Enter the company ID.
- **PI\_FLAG\_NAME\_ID** (Mandatory). Enter the ID of the flag name definition to be retrieved.
- **PIO\_DME\_FLAG\_NAME** (Mandatory). This is a parameter of type `DME_FLAG_DEF_NAME` for the returned values.

## Get Flag Name Definition, Version 2

Use this API to retrieve information about an Oracle DMW flag name definition. Use this API if you know the flag name.

### Name

`DME_PUB_FLAG_NAME.GetFlagName`

### Signature

```
PROCEDURE GETFLAGNAME
(P_API_VERSION IN VARCHAR2,
P_INIT_MSG_LIST IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,
P_COMMIT IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,
P_VALIDATION_LEVEL IN NUMBER DEFAULT CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
X_RETURN_STATUS OUT NOCOPY VARCHAR2,
X_MSG_COUNT OUT NOCOPY NUMBER,
X_MSG_DATA OUT NOCOPY VARCHAR2,
PI_COMPANY_ID IN NUMBER,
PI_FLAG_NAMESTR IN VARCHAR2,
PIO_DME_FLAG_NAME IN OUT NOCOPY DME_FLAG_NAME_TYPE,
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_COMPANY\_ID** (Mandatory). Enter the company ID.
- **PI\_FLAG\_NAMESTR** (Mandatory). Enter the name of the flag name definition to be retrieved.
- **PIO\_DME\_FLAG\_NAME** (Mandatory). This is a parameter of type `DME_FLAG_DEF_NAME` for the returned values.



## Get Flag Name Definitions

Use this API to retrieve information about DMW flag name definitions.

### Name

DME\_PUB\_FLAG\_NAME.GetFlagNames

### Signature

```
PROCEDURE GETFLAGNAMES
( P_API_VERSION IN VARCHAR2,
  P_INIT_MSG_LIST IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_COMMIT IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,
  P_VALIDATION_LEVEL IN NUMBER DEFAULT CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  X_RETURN_STATUS OUT NOCOPY VARCHAR2,
  X_MSG_COUNT OUT NOCOPY NUMBER,
  X_MSG_DATA OUT NOCOPY VARCHAR2,
  PI_CATEGORY_ID IN NUMBER DEFAULT NULL,
  PI_SUBJECT_VISIT IN VARCHAR2 DEFAULT NULL,
  PI_USER_SETTABLE IN VARCHAR2 DEFAULT NULL,
  PO_FLAG_NAMES OUT NOCOPY DME_FLAG_NAME_COLL,
  );
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_CATEGORY\_ID** (Optional). Set to null to retrieve flags in all categories. To get flags from a given category, provide a valid category ID.
- **PI\_SUBJECT\_VISIT** (Optional). Set to null to retrieve all flags irrespective of their being marked as subject\_visit flags or not. To retrieve only subject\_visit flags, enter either \$YESNO\$YES. To retrieve only record flags, enter \$YESNO\$NO.
- **PI\_USER\_SETTABLE** (Optional). Set to null to retrieve flags whether or not they are settable by the user. To retrieve only user-settable flags, enter \$YESNO\$YES. To retrieve flags not settable by users, enter \$YESNO\$NO.
- **PO\_FLAG\_NAMES** (Mandatory). This is a parameter of type DME\_FLAG\_NAME\_COLL for the returned values.

## Get Flag States

Use this API to retrieve information about all the DMW flag states for a single flag.

### Name

DME\_PUB\_FLAG\_STATE.GetFlagStates

### Signature

```
PROCEDURE GETFLAGSTATES
(P_API_VERSION IN VARCHAR2,
 P_INIT_MSG_LIST IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,
 P_COMMIT IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,
 P_VALIDATION_LEVEL IN NUMBER DEFAULT CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
```

```
X_RETURN_STATUS OUT NOCOPY VARCHAR2,
X_MSG_COUNT OUT NOCOPY NUMBER,
X_MSG_DATA OUT NOCOPY VARCHAR2,
PI_COMPANY_ID IN NUMBER,
PI_FLAG_NAME_ID IN NUMBER,
PO_DME_FLAG_STATES OUT NOCOPY DME_FLAG_STATE_COLL,
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_COMPANY\_ID** (Mandatory). Enter the company ID.
- **PI\_FLAG\_NAME\_ID** (Mandatory). Enter the ID of the flag.
- **PO\_DME\_FLAG\_STATES** (Mandatory). This is a parameter of type `DME_FLAG_STATE_COLL` for the returned information.

## Clinical Data Model Category-Related APIs

This section includes the following:

### Note:

You can create categories in the Oracle DMW Administration user interface.

- [Create Model Flag Category Mapping](#)
- [Get Categories for Model](#)

## Create Model Flag Category Mapping

Use this API to create a map between a model type and subtype and a flag category.

### Name

`DME_PUB_MODEL_FLAGCAT.CreateModelFlagcatMap`

### Signature

```
PROCEDURE CREATEMODELFLAGCATMAP,
(P_API_VERSION IN VARCHAR2,
P_INIT_MSG_LIST IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,
P_COMMIT IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,
P_VALIDATION_LEVEL IN NUMBER DEFAULT CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
X_RETURN_STATUS OUT NOCOPY VARCHAR2,
X_MSG_COUNT OUT NOCOPY NUMBER,
X_MSG_DATA OUT NOCOPY VARCHAR2,
PI_COMPANY_ID IN NUMBER,
PI_MODEL_TYPE_RC IN VARCHAR2,
PI_MODEL_SUBTYPE_RC IN VARCHAR2,
PI_CATEGORY_ID IN NUMBER,
);
```

## Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_COMPANY\_ID** (Mandatory). Enter the company ID.
- **PI\_MODEL\_TYPE\_RC** (Mandatory). Enter a model type from the lookup CDR\_MODELTYPES such as \$MODELTYPE\$INPUT.  
If you want to map a flag category to input models that come from files, pass these two arguments as '\$MODELTYPE\$INPUT' and '\$INPUTMODTYPE\$FILE'.  
If you want to map a flag category to input models from InForm, pass these two arguments as '\$MODELTYPE\$INPUT' and '\$INPUTMODTYPE\$INFORM'.  
If you want to map a flag category to target models, pass these arguments as '\$MODELTYPE\$TARGET' and NULL.
- **PI\_MODEL\_SUBTYPE\_RC** (Mandatory). Enter a model subtype; for example, \$MODELTYPE\$INPUT or \$MODELTYPE\$TARGET
- **PI\_CATEGORY\_ID** (Mandatory). Enter the unique ID of the category (from dme\_categories in the Administration Area of the DMW User Interface).

## Get Categories for Model

Use this API to get all categories that are valid for a model type and subtype.

### Name

DME\_PUB\_MODEL\_FLAGCAT.GetCategoriesForModel

### Signature

```
PROCEDURE GETCATEGORIESFORMODEL,
P_API_VERSION IN VARCHAR2,
P_INIT_MSG_LIST IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,
P_COMMIT IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,
P_VALIDATION_LEVEL IN NUMBER DEFAULT CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
X_RETURN_STATUS OUT NOCOPY VARCHAR2,
X_MSG_COUNT OUT NOCOPY NUMBER,
X_MSG_DATA OUT NOCOPY VARCHAR2,
PI_COMPANY_ID IN NUMBER,
PI_MODEL_TYPE_RC IN VARCHAR2,
PI_MODEL_SUBTYPE_RC IN VARCHAR2,
PO_CATEGORIES OUT NOCOPY DME_NUMBER_COLL,
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_COMPANY\_ID** (Mandatory). Enter the company ID.
- **PI\_MODEL\_TYPE\_RC** (Mandatory). Enter a model type such as \$MODELTYPE\$INPUT, from the lookup CDR\_MODELTYPES.
- **PI\_MODEL\_SUBTYPE\_RC** (Mandatory). Enter a model subtype; for example, \$INPUTMODTYPE\$FILE.

- **PO\_CATEGORIES** Output parameter returns an array of category IDs.

## Action-Related APIs

Use the following APIs to perform tasks related to discrepancy actions:

- [Create Discrepancy Action](#)
- [Get Discrepancy Action, Version 1](#)
- [Get Discrepancy Action, Version 2](#)
- [Update Discrepancy Action](#)
- [Delete Discrepancy Action](#)

### Create Discrepancy Action

Use this API to create a new discrepancy action.

#### Name

DME\_PUB\_DISC\_ACTION.CreateDiscAction

#### Signature

```
PROCEDURE CREATEDISCACTION (P_API_VERSION IN VARCHAR2, P_INIT_MSG_LIST
IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE, P_COMMIT IN VARCHAR2
DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE, P_VALIDATION_LEVEL IN NUMBER
DEFAULT CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULLL, X_RETURN_STATUS OUT NOCOPY
VARCHAR2, X_MSG_COUNT OUT NOCOPY NUMBER, X_MSG_DATA OUT NOCOPY VARCHAR2,
PIO_DME_DISC_ACTION IN OUT NOCOPY DME_DISC_ACTION_TYPE, ) ;
```

#### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PIO\_DME\_DISC\_ACTION** (Mandatory). This is a parameter of type DME\_DISC\_ACTION\_TYPE that contains action attributes.

Enter the Start State, one of Candidate, Open, Answered, Cancelled, Closed. (In the API those are specified as \$DISC\_STATES\$CANDIDATE, \$DISC\_STATES\$OPEN, \$DISC\_STATES\$ANSWERED, \$DISC\_STATES\$CANCELLED, and \$DISC\_STATES\$CLOSED).

### Get Discrepancy Action, Version 1

Use this API to retrieve information about an Oracle DMW Discrepancy Action.

#### Name

DME\_PUB\_DISC\_ACTION.GetDiscAction

#### Signature

```
PROCEDURE GETDISCACTION( P_API_VERSION IN VARCHAR2, P_INIT_MSG_LIST IN
VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE, P_COMMIT IN VARCHAR2
DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE, P_VALIDATION_LEVEL IN NUMBER DEFAULT
```

```
CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL, X_RETURN_STATUS OUT NOCOPY VARCHAR2,  
X_MSG_COUNT OUT NOCOPY NUMBER, X_MSG_DATA OUT NOCOPY VARCHAR2, PI_ACTION_ID IN  
NUMBER, PIO_DME_DISC_ACTION IN OUT NOCOPY DME_DISC_ACTION_TYPE, );
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_ACTION\_ID** (Mandatory). Enter the ID of the discrepancy action to retrieve information for it.
- **PIO\_DME\_DISC\_ACTION** (Mandatory). This is a parameter of type `DME_DISC_ACTION_TYPE` for the returned values.

## Get Discrepancy Action, Version 2

Use this API to retrieve information about an Oracle DMW Discrepancy Action.

### Name

DME\_PUB\_DISC\_ACTION.GetDiscAction

### Signature

```
PROCEDURE GETDISCACTION,  
( P_API_VERSION IN VARCHAR2,  
P_INIT_MSG_LIST IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,  
P_COMMIT IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,  
P_VALIDATION_LEVEL IN NUMBER DEFAULT CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,  
X_RETURN_STATUS OUT NOCOPY VARCHAR2,  
X_MSG_COUNT OUT NOCOPY NUMBER,  
X_MSG_DATA OUT NOCOPY VARCHAR2,  
PI_ACTION_NAME IN VARCHAR2,  
PIO_DME_DISC_ACTION IN OUT NOCOPY DME_DISC_ACTION_TYPE,  
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_ACTION\_NAME** (Mandatory). Provide the name of the discrepancy action to retrieve information for it.
- **PIO\_DME\_DISC\_ACTION** (Mandatory). This is a parameter of type `DME_DISC_ACTION_TYPE` for the returned values.

## Update Discrepancy Action

Use this API to modify an existing DMW Discrepancy Action.

### Name

DME\_PUB\_DISC\_ACTION.UpdateDiscAction

### Signature

```
PROCEDURE UPDATEDISCACTION,  
( P_API_VERSION IN VARCHAR2,
```

```

P_INIT_MSG_LIST IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,
P_COMMIT IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,
P_VALIDATION_LEVEL IN NUMBER DEFAULT CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
X_RETURN_STATUS OUT NOCOPY VARCHAR2,
X_MSG_COUNT OUT NOCOPY NUMBER,
X_MSG_DATA OUT NOCOPY VARCHAR2,
PIO_DME_DISC_ACTION IN OUT NOCOPY DME_DISC_ACTION_TYPE,
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

- **PIO\_DME\_DISC\_ACTION** (Mandatory). This is a parameter of type `DME_DISC_ACTION_TYPE` that contains the discrepancy action attributes to be updated.

## Delete Discrepancy Action

Use this API to delete an existing DMW Discrepancy Action.

### Name

`DME_PUB_DISC_ACTION.DeleteDiscAction`

### Signature

```

PROCEDURE DELETEDISCACTION,
(P_API_VERSION IN VARCHAR2,
P_INIT_MSG_LIST IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,
P_COMMIT IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,
P_VALIDATION_LEVEL IN NUMBER DEFAULT CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
X_RETURN_STATUS OUT NOCOPY VARCHAR2,
X_MSG_COUNT OUT NOCOPY NUMBER,
X_MSG_DATA OUT NOCOPY VARCHAR2,
PI_DME_DISC_ACTION_ID IN NUMBER,
);

```

### Parameters:

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_DME\_DISC\_ACTION\_ID** (Mandatory). This is a parameter of type `NUMBER`, that contains the unique ID of the category to be disabled.

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## Transformations

This is a public interface for all operations related to Transformation Maps, including creation, deletion, modification, and checking in and out of these objects.

See [Refresh Static Packages](#) for information about the package you must run whenever you add, change, or delete a custom program to be used in validation checks.

This chapter contains the following section:

- [Create and Modify Transformation Maps](#)

### Create and Modify Transformation Maps

This section contains the following public APIs:

- [Create Transformation Maps](#)
- [Modify Transformation Maps](#)
- [Mark Table Maps Not Used](#)
- [Mark Column Maps Not Used](#)
- [Check In Transformation Maps](#)
- [Check Out Transformation Maps](#)
- [Undo Checkout Transformation Map](#)
- [Auto Map Tables](#)
- [Accept Table Mappings](#)
- [Auto Map Columns](#)
- [Get MappedTo Target Columns](#)
- [Accept Column Mappings](#)
- [Upgrade Transformation Map](#)
- [Install Transformation Map](#)
- [Remove Transformation Map](#)
- [Validate Transformation Maps](#)
- [Update Validation Status](#)
- [Execute Transformation Map](#)
- [Validate Expression](#)
- [Refresh Static Packages](#)

## Create Transformation Maps

Use this API to create model-, table- and column-level transformation maps. Run this API multiple times to create the model-level mapping first, then each table mapping, and then each column mapping.

### Name

DME\_PUB\_XFORM\_MAP.CreateTransformationMap

### Signature

```
PROCEDURE CREATETRANSFORMATIONMAP,
(P_API_VERSION IN VARCHAR2, P_INIT_MSG_LIST IN VARCHAR2
DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE, P_COMMIT IN VARCHAR2 DEFAULT
CDR_PUB_DEF_CONSTANTS.G_FALSE, P_VALIDATION_LEVEL IN NUMBER DEFAULT
CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL, X_RETURN_STATUS OUT NOCOPY VARCHAR2,
X_MSG_COUNT OUT NOCOPY NUMBER, X_MSG_DATA OUT NOCOPY VARCHAR2, PIO_XFORMMAP IN
OUT NOCOPY DME_XFORM_MAP_EX_OBJ_TYPE
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_XFORMMAP** (Mandatory). This is a parameter of DME\_XFORM\_MAP\_EX\_OBJ\_TYPE object type. The attributes required for this API are:
  - **NAMING** This is an attribute of table type CDR\_NAMING\_VERSION\_OBJ\_TYPE.
    - \* **Company\_ID** To get your company ID, use CDR\_PUB\_DEF\_FACTORY\_UTILS.GetCompanyId.
    - \* **OBJECT\_TYPE\_RC** Enter the OBJECT\_TYPE\_RC as '\$OBJTYPES\$XFORMMAP'
    - \* **NAMESPACE\_OBJ\_ID** Enter the object ID of the parent in which you want to create transformation map. Parent object ID will be study ID, model map ID and table map ID for creating a model, table and column map respectively.
    - \* **NAMESPACE\_OBJ\_VER** Enter the parent object version in which you want to create transformation map: study version, model map version and table map version for creating a model, table and column map respectively.
  - **MAP\_LEVEL** (Mandatory) Enter either: MODEL, TABLE, or COLUMN.
  - **MAP\_TYPE** Enter Map\_Type as '\$MAPTYPE\$DEFAULT' for transformation at model, table and column level.
  - **XFORM\_TYPE** For model and column maps enter: '\$XFORMTYPE\$DIRECT'. For table level maps, enter one of the following values based on the table map type:
    - \* \$XFORMTYPE\$DIRECT
    - \* \$XFORMTYPE\$UNION



- \* \$XFORMTYPE\$JOIN
- \* \$XFORMTYPE\$CUSTOM
- \* \$XFORMTYPE\$PIVOT
- \* \$XFORMTYPE\$UNPIVOT
- \* \$XFORMTYPE\$CUSTOM

 **Tip:**

Specify the type of transformation that your custom program actually does, if possible. Use the value \$XFORMTYPE\$CUSTOM only if the transformation does not do any of the other transformation types. This is to support data lineage tracing.

- **PROGRAM\_TYPE** When creating a table-level map for a transformation with \$XFORMTYPE\$CUSTOM, enter either SYSTEM or CUSTOM, depending on the program source. Otherwise enter null.
- **PROGRAM\_ID** Enter Program Obj\_Id while creating a table level map of transformation type as '\$XFORMTYPE\$CUSTOM', otherwise, enter null.
- **PROGRAM\_VER** Enter Program Obj\_Ver while creating a table level map of transformation type as '\$XFORMTYPE\$CUSTOM', otherwise, enter null.
- **PIVOT\_COLUMN\_ID** Enter Object Id of the pivot column while creating a table transformations of pivot type, otherwise, enter null.
- **PIVOT\_COLUMN\_VER** Enter Object Version of the pivot column while creating a table transformations of pivot type, otherwise, enter null.
- **OPERATION\_TYPE** Enter operation type as '\$OPER\$CREATE'.
- **MAP\_ENTITY\_COLL** This attribute is a collection of DME\_MAP\_ENTITY\_OBJ\_TYPE object type attributes. The following attributes are required:
  - \* **DATA\_ENTITY\_ID** For transformation map at model level, enter Source Data Model Object Id for Source Map Entity and Target Data Model Object ID for Target Map Entity.  
For transformation map at table level, enter Source Table Definition Object Id for Source Map Entity and Target Table Definition Object ID for Target Map Entity.  
For transformation map at column level, enter Source Column Object Id for Source Map Entity and Target Column Object ID for Target Map Entity.

 **Tip:**

If you are mapping multiple tables or columns, pass the source and target Object IDs through a loop to enter values one after the other and commit to the database at the end.

- \* **DATA\_ENTITY\_VER** Enter Object Version corresponding to the object selected for DATA\_ENTITY\_ID population.
- \* **MAP\_RELATION** Map\_relation should be passed as 'SOURCE' for source map entities and 'TARGET' for target map entities.

- \* **EXPR\_OBJ\_TYPE** This parameter is a object type of DME\_XFORM\_EXPR\_OBJ\_TYPE. Pass the expression details for source filter for source tables in case of table level transformations. Refer to the following section [Create or Modify an Expression](#), for more details.
- \* **OPERATION\_TYPE** The operation type should be passed as '\$OPER\$CREATE' for all source and target entities.
- **JOIN\_COLL** This is a parameter of collection type CDR\_DM\_JOIN\_OBJ\_COLL and CDR\_DM\_JOIN\_OBJ\_COLL is table of CDR\_DM\_JOIN\_OBJ\_TYPE object type. This collection is required for creating table level transformations of 'Join' Type. The following attributes are required for join transformations:
  - \* COMPANY\_ID - Company Id
  - \* TAB\_COMPANY\_ID -Table Company Id
  - \* TAB\_OBJ\_ID - Table Obj Id
  - \* TAB\_ALIAS - Table Alias
  - \* FK\_TAB\_COMPANY\_ID - Enter the Company ID of the foreign key table.
  - \* FK\_TAB\_OBJ\_ID - Enter the Object ID of the foreign key table.
  - \* FK\_TAB\_ALIAS - Alias for second table
  - \* TD\_OUTERJOIN\_RC- Set to '\$YESNO\$YES' if outer joined defined on first table, otherwise '\$YESNO\$NO'.
  - \* FK\_TD\_OUTERJOIN\_RC- Set to '\$YESNO\$YES' if outer joined defined on second table, otherwise '\$YESNO\$NO'.
  - \* DM\_JOIN\_COL\_OBJ\_COLL - This is a parameter of collection type CDR\_DM\_JOIN\_COL\_OBJ\_COLL and CDR\_DM\_JOIN\_COL\_OBJ\_COLL is table of CDR\_DM\_JOIN\_COL\_OBJ\_TYPE object type. This collection is required for populating the join conditions. The attributes required for this API are:
    - \* COMPANY\_ID - Company Id
    - \* TAB\_COMPANY\_ID -Table Company Id
    - \* TAB\_OBJ\_ID - Table Obj Id
    - \* TAB\_ALIAS - Table Alias
    - \* TAB\_COL\_COMPANY\_ID -Joined Table Column Company Id
    - \* TAB\_COL\_OBJ\_ID - Table Column Obj Id
    - \* FK\_TAB\_COMPANY\_ID - Second table company Id which is joined with first table
    - \* FK\_TAB\_OBJ\_ID - Second table obj Id which is joined with first table
    - \* FK\_TAB\_ALIAS - Alias for second table
    - \* FK\_TAB\_COL\_COMPANY\_ID -Table Column Company Id from second table which is joined with first table
    - \* FK\_TAB\_COL\_OBJ\_ID - Table Column Obj Id from second table which is joined with first table
    - \* POSITION - Sequence of join condition. The sequence should start for first join condition from 1.

- \* JOIN\_OPERATOR\_RC - This refers to type of join condition. This can have the following values:  
 \$JOINOPER\$EQUALS  
 \$JOINOPER\$EQUALS  
 \$JOINOPER\$GREATER  
 \$JOINOPER\$GREATEREQUAL  
 \$JOINOPER\$LESS  
 \$JOINOPER\$LESSEQUAL  
 \$JOINOPER\$NOTEQUALS

## Modify Transformation Maps

Use this API to modify model, table and column level transformation maps.

### Name

DME\_PUB\_XFORM\_MAP.ModifyTransformationMap

### Signature

```
PROCEDURE MODIFYTRANSFORMATIONMAP
(P_API_VERSION IN VARCHAR2, P_INIT_MSG_LIST IN VARCHAR2
DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE, P_COMMIT IN VARCHAR2 DEFAULT
CDR_PUB_DEF_CONSTANTS.G_FALSE, P_VALIDATION_LEVEL IN NUMBER DEFAULT
CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL, X_RETURN_STATUS OUT NOCOPY VARCHAR2,
X_MSG_COUNT OUT NOCOPY NUMBER, X_MSG_DATA OUT NOCOPY VARCHAR2, PIO_XFORMMAP IN
OUT NOCOPY DME_XFORM_MAP_EX_OBJ_TYPE,
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_XFORMMAP** (Mandatory). This is a parameter of DME\_XFORM\_MAP\_EX\_OBJ\_TYPE object type. The attributes required for this API are:
  - **NAMING** This is an attribute of table type CDR\_NAMING\_VERSION\_OBJ\_TYPE.
    - \* **Company\_ID** To get your company ID, use CDR\_PUB\_DEF\_FACTORY\_UTILS.GetCompanyId.
    - \* **OBJECT\_TYPE\_RC** Enter the OBJECT\_TYPE\_RC as '\$OBJTYPES\$XFORMMAP'
    - \* **NAMESPACE\_OBJ\_ID** Enter the object ID of the parent in which you want to create transformation map. Parent object ID will be study ID, model map ID and table map ID for creating a model, table and column map respectively.
    - \* **NAMESPACE\_OBJ\_VER** Enter the parent object version in which you want to create transformation map: study version, model map version and table map version for creating a model, table and column map respectively.

- **MAP\_LEVEL** (Mandatory) Enter either: MODEL, TABLE, or COLUMN.
- **MAP\_TYPE** Enter Map\_Type of the transformation map. It can be specified as '\$MAPTYPE\$DEFAULT'.
- **XFORM\_TYPE** Enter map\_Type of transformation map being modified. For table map, same of modified map type can be:
  - \* \$XFORMTYPE\$DIRECT
  - \* \$XFORMTYPE\$UNION
  - \* \$XFORMTYPE\$JOIN
  - \* \$XFORMTYPE\$CUSTOM
  - \* \$XFORMTYPE\$PIVOT
  - \* \$XFORMTYPE\$UNPIVOT
  - \* \$XFORMTYPE\$CUSTOM



**Tip:**

Specify the type of transformation that your custom program actually does, if possible. Use the value \$XFORMTYPE\$CUSTOM only if the transformation does not do any of the other transformation types. This is to support data lineage tracing.

- **PROGRAM\_TYPE** Enter either: SYSTEM or CUSTOM.
- **PROGRAM\_ID** Enter the program object id, if table level transformation of custom type being modified, otherwise NULL.
- **PROGRAM\_VER** Enter the program object version, if table level transformation of custom type being modified, otherwise NULL.
- **PIVOT\_COLUMN\_ID** Enter Object Id of a Column, if table level pivot transformations being modified, otherwise NULL.
- **PIVOT\_COLUMN\_VER** Enter Object Version of a Column, if table level pivot transformations being modified, otherwise NULL.
- **OPERATION\_TYPE** Enter operation type as '\$OPER\$MODIFY'.
- **MAP\_ENTITY\_COLL** This attribute is a collection of DME\_MAP\_ENTITY\_OBJ\_TYPE object type attributes. All attributes are required including identifying attributes along with required modifications. The operation\_type should be passed as '\$OPER\$CREATE', '\$OPER\$MODIFY' or '\$OPER\$REMOVE' depending upon the modification required for a map entity.

The EXPR\_OBJ\_TYPE is one of the attribute in DME\_MAP\_ENTITY\_OBJ\_TYPE object type. This is a object type of DME\_XFORM\_EXPR\_OBJ\_TYPE. Pass the expression details for source filter for source tables in case of table level transformations. Refer to [Create or Modify an Expression](#), for details.

- **JOIN\_COLL** - This is a parameter of collection type CDR\_DM\_JOIN\_OBJ\_COLL and CDR\_DM\_JOIN\_OBJ\_COLL is a table of CDR\_DM\_JOIN\_OBJ\_TYPE object type. This collection is required for modifying table level transformations of 'Join' Type.

The attributes of CDR\_DM\_JOIN\_OBJ\_TYPE required for this API, including the modifications which are required in the join condition, are:

- COMPANY\_ID
- OBJ\_ID
- OBJ\_VER
- TABLE\_NAME
- FK\_TABLE\_NAME
- TAB\_COMPANY\_ID
- TAB\_OBJ\_ID
- TAB\_ALIAS
- TAB\_MAP\_ENTITY\_ID
- FK\_TAB\_COMPANY\_ID
- FK\_TAB\_OBJ\_ID
- FK\_TAB\_ALIAS
- FK\_TAB\_MAP\_ENTITY\_ID
- TD\_OUTERJOIN\_RC
- FK\_TD\_OUTERJOIN\_RC
- DM\_JOIN\_COL\_OBJ\_COLL

The DM\_JOIN\_COL\_OBJ\_COLL attribute is a parameter of collection type CDR\_DM\_JOIN\_COL\_OBJ\_COLL, and CDR\_DM\_JOIN\_COL\_OBJ\_COLL is table of CDR\_DM\_JOIN\_COL\_OBJ\_TYPE object type.

The attributes of CDR\_DM\_JOIN\_COL\_OBJ\_TYPE required for this API, including the modifications which are required in the join condition, are:

- COMPANY\_ID
- DM\_JOIN\_OBJ\_ID
- DM\_JOIN\_OBJ\_VER
- TAB\_COMPANY\_ID
- TAB\_OBJ\_ID
- TAB\_ALIAS
- TABLE\_NAME
- TAB\_COL\_COMPANY\_ID
- TAB\_COL\_OBJ\_ID
- TABLE\_COLUMN\_NAME
- FK\_TAB\_COMPANY\_ID
- FK\_TAB\_OBJ\_ID
- FK\_TAB\_ALIAS
- FK\_TABLE\_NAME
- FK\_TAB\_COL\_COMPANY\_ID

- FK\_TAB\_COL\_OBJ\_ID
- FK\_TABLE\_COL\_NAME
- POSITION
- JOIN\_OPERATOR\_RC

The JOIN\_OPERATOR\_RC refers to type of join condition. This can have the following values:

- \$JOINOPER\$EQUALS
- \$JOINOPER\$EQUALS
- \$JOINOPER\$GREATER
- \$JOINOPER\$GREATEREQUAL
- \$JOINOPER\$LESS
- \$JOINOPER\$LESSEQUAL
- \$JOINOPER\$NOTEQUALS

## Mark Table Maps Not Used

Use this API to mark table mappings as Not Used.

### Name

DME\_PUB\_XFORM\_MAP.MarkTableMapNotUsed

### Signature

```
PROCEDURE MARKTABLEMAPNOTUSED
( P_API_VERSION IN VARCHAR2, P_INIT_MSG_LIST IN VARCHAR2
DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE, P_COMMIT IN VARCHAR2 DEFAULT
CDR_PUB_DEF_CONSTANTS.G_FALSE, P_VALIDATION_LEVEL IN NUMBER DEFAULT
CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL, X_RETURN_STATUS OUT NOCOPY
VARCHAR2, X_MSG_COUNT OUT NOCOPY NUMBER, X_MSG_DATA OUT NOCOPY
VARCHAR2, PI_MAPOBJID IN CDR_NAMING_VERSIONS.OBJ_ID%TYPE, PI_MAPOBJVER IN
CDR_NAMING_VERSIONS.OBJ_VER%TYPE
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_MAPOBJID** (Mandatory). Enter object Id of Table Transformation Map.
- **PI\_MAPOBJVER** (Mandatory). Enter object Version of Table Transformation Map.

## Mark Column Maps Not Used

Use this API to mark column mappings as Not Used.

### Name

DME\_PUB\_XFORM\_MAP.MarkColumnMapNotUsed

### Signature

```
PROCEDURE MARKCOLUMNMAPNOTUSED
(P_API_VERSION IN VARCHAR2, P_INIT_MSG_LIST IN VARCHAR2
DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE, P_COMMIT IN VARCHAR2 DEFAULT
CDR_PUB_DEF_CONSTANTS.G_FALSE, P_VALIDATION_LEVEL IN NUMBER DEFAULT
CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL, X_RETURN_STATUS OUT NOCOPY
VARCHAR2, X_MSG_COUNT OUT NOCOPY NUMBER, X_MSG_DATA OUT NOCOPY
VARCHAR2, PI_MAPOBJID IN CDR_NAMING_VERSIONS.OBJ_ID%TYPE, PI_MAPOBJVER IN
CDR_NAMING_VERSIONS.OBJ_VER%TYPE
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_MAPOBJID** (Mandatory). Enter object Id of Column Transformation Map.
- **PI\_MAPOBJVER** (Mandatory). Enter object Version of Column Transformation Map.

## Check In Transformation Maps

Use this API to check in the given transformation map.

### Name

DME\_PUB\_XFORM\_MAP.CheckinTransformationMap

### Signature

```
PROCEDURE CHECKINTRANSFORMATIONMAP
(P_API_VERSION IN VARCHAR2, P_INIT_MSG_LIST IN VARCHAR2
DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE, P_COMMIT IN VARCHAR2 DEFAULT
CDR_PUB_DEF_CONSTANTS.G_FALSE, P_VALIDATION_LEVEL IN NUMBER DEFAULT
CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL, X_RETURN_STATUS OUT NOCOPY VARCHAR2,
X_MSG_COUNT OUT NOCOPY NUMBER, X_MSG_DATA OUT NOCOPY VARCHAR2, PIO_NAMING IN
OUT NOCOPY CDR_NAMING_VERSION_OBJ_TYPE
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_NAMING** (Mandatory). This is a parameter of table type CDR\_NAMING\_VERSION\_OBJ\_TYPE. Enter values to identify the transformation map that you want to check in. The following attributes are required:
  - COMPANY\_ID
  - OBJ\_ID
  - OBJ\_VER
  - NAMESPACE\_OBJ\_ID
  - NAMESPACE\_OBJ\_VER
  - OBJECT\_VERSION\_NUMBER

## Check Out Transformation Maps

Use this API to check out the given transformation map.

### Name

DME\_PUB\_XFORM\_MAP.CheckoutTransformationMap

### Signature

```
PROCEDURE CHECKOUTTRANSFORMATIONMAP
(P_API_VERSION IN VARCHAR2, P_INIT_MSG_LIST IN VARCHAR2
DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE, P_COMMIT IN VARCHAR2 DEFAULT
CDR_PUB_DEF_CONSTANTS.G_FALSE, P_VALIDATION_LEVEL IN NUMBER DEFAULT
CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL, X_RETURN_STATUS OUT NOCOPY VARCHAR2,
X_MSG_COUNT OUT NOCOPY NUMBER, X_MSG_DATA OUT NOCOPY VARCHAR2, PIO_NAMING IN
OUT NOCOPY CDR_NAMING_VERSION_OBJ_TYPE
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_NAMING** (Mandatory). This is a parameter of table type CDR\_NAMING\_VERSION\_OBJ\_TYPE. Enter values to identify the transformation map.

The attributes for this API are:

- COMPANY\_ID
- OBJ\_ID
- OBJ\_VER
- NAMESPACE\_OBJ\_ID
- NAMESPACE\_OBJ\_VER
- OBJECT\_VERSION\_NUMBER

## Undo Checkout Transformation Map

Use this API to undo check out the given transformation map.

### Name

DME\_PUB\_XFORM\_MAP.UndoCheckoutTransformationMap

### Signature

```
PROCEDURE UNDOCHECKOUTTRANSFORMATIONMAP
(P_API_VERSION IN VARCHAR2, P_INIT_MSG_LIST IN VARCHAR2 DEFAULT
CDR_PUB_DEF_CONSTANTS.G_FALSE, P_COMMIT IN VARCHAR2 DEFAULT
CDR_PUB_DEF_CONSTANTS.G_FALSE, P_VALIDATION_LEVEL IN NUMBER DEFAULT
CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL, X_RETURN_STATUS OUT NOCOPY
VARCHAR2, X_MSG_COUNT OUT NOCOPY NUMBER, X_MSG_DATA OUT NOCOPY VARCHAR2,
PIO_NAMING IN OUT NOCOPY CDR_NAMING_VERSION_OBJ_TYPE
);
```



### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PIO\_NAMING** (Mandatory). This is a parameter of table type CDR\_NAMING\_VERSION\_OBJ\_TYPE. Enter values to identify the transformation map.

The following attributes are required: COMPANY\_ID, OBJ\_ID, OBJ\_VER, NAMESPACE\_OBJ\_ID, NAMESPACE\_OBJ\_VER, OBJECT\_VERSION\_NUMBER.

## Auto Map Tables

Use this API to create candidate auto Maps for table & Column transformation mappings. This operation accepts the target data model identifier object details as parameter for which auto maps has to be generated. The API creates the potential auto maps based on Oracle Name, Data Type & Length and Alias Match.

### Name

DME\_PUB\_XFORM\_MAP.AutoMapTables

### Signature

```
PROCEDURE AUTOMAPTABLES
(P_API_VERSION IN VARCHAR2, P_INIT_MSG_LIST IN VARCHAR2
DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE, P_COMMIT IN VARCHAR2 DEFAULT
CDR_PUB_DEF_CONSTANTS.G_FALSE, P_VALIDATION_LEVEL IN NUMBER DEFAULT
CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL, X_RETURN_STATUS OUT NOCOPY VARCHAR2,
X_MSG_COUNT OUT NOCOPY NUMBER, X_MSG_DATA OUT NOCOPY VARCHAR2,
PI_DATAENTITYID IN CDR_NAMING_VERSIONS.OBJ_ID%TYPE, PI_DATAENTITYVER IN
CDR_NAMING_VERSIONS.OBJ_VER%TYPE
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_DATAENTITYID** (Mandatory). Enter the object Id of the model transformation map on which auto map has to be performed.
- **PI\_DATAENTITYVER** (Mandatory). Enter the object Version of the model transformation map on which auto map has to be performed.

## Accept Table Mappings

Use this API to create persistent Auto Maps by accepting the auto generated table and column transformation mappings created from dme\_pub\_xform\_map.autoMapTables public API. User refers to DME\_PUB\_XFM\_AUTOMAPS\_V view to populate the attributes of input collection required as a parameter.

### Name

DME\_PUB\_XFORM\_MAP.AcceptTableAutoMappings

## Signature

```
PROCEDURE ACCEPTTABLEAUTOMAPPINGS
(P_API_VERSION IN VARCHAR2, P_INIT_MSG_LIST IN VARCHAR2
DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE, P_COMMIT IN VARCHAR2 DEFAULT
CDR_PUB_DEF_CONSTANTS.G_FALSE, P_VALIDATION_LEVEL IN NUMBER DEFAULT
CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL, X_RETURN_STATUS OUT NOCOPY VARCHAR2,
X_MSG_COUNT OUT NOCOPY NUMBER, X_MSG_DATA OUT NOCOPY VARCHAR2,
PIO_TABLEAUTOMAPCOLL IN OUT NOCOPY DME_XFORM_AUTO_MAP_COLL
);
```

## Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_TABLEAUTOMAPCOLL** (Mandatory). This is a parameter of table type collection `DME_XFORM_AUTO_MAP_COLL` of `DME_XFORM_AUTO_MAP_TYPE` table type. All attributes are required including:
  - COMPANY\_ID
  - MAP\_ID
  - MAP\_VER
  - MAP\_ENTITY\_ID
  - MAP\_ENTITY\_VER
  - CANDIDATE\_FLAG\_RC - with the possible values:
    - \* \$YESNO\$YES
    - \* \$YESNO\$NO - use this value for auto map suggestions which are applicable to save as real maps.

## Auto Map Columns

Use this API to create candidate auto Maps for Column transformation mappings. This operation accepts the target table object identifier details as parameter for which auto maps has to be generated. The API creates the potential auto maps based on Oracle Name, Data Type & Length and Alias Match.

### Name

DME\_PUB\_XFORM\_MAP.AutoMapColumns

### Signature

```
PROCEDURE AUTOMAPCOLUMNS
( P_API_VERSION IN VARCHAR2, P_INIT_MSG_LIST IN VARCHAR2
DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE, P_COMMIT IN VARCHAR2 DEFAULT
CDR_PUB_DEF_CONSTANTS.G_FALSE, P_VALIDATION_LEVEL IN NUMBER DEFAULT
CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL, X_RETURN_STATUS OUT NOCOPY
VARCHAR2, X_MSG_COUNT OUT NOCOPY NUMBER, X_MSG_DATA OUT
NOCOPY VARCHAR2, PI_DATAENTITYID IN CDR_NAMING_VERSIONS.OBJ_ID%TYPE,
PI_DATAENTITYVER IN CDR_NAMING_VERSIONS.OBJ_VER%TYPE
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_DATAENTITYID** (Mandatory). Enter the object Id of the target table on which auto map has to be performed.
- **PI\_DATAENTITYVER** (Mandatory). Enter the object Version of the target table.

## Get MappedTo Target Columns

Use this API to find all the target columns for particular source column in a table map.

### Name

DME\_PUB\_XFORM\_MAP.GetMappedToTargetColumns

### Signature

```
PROCEDURE GetMappedToTargetColumns (
  p_api_version IN NUMBER,
  p_init_msg_list IN VARCHAR2 default CDR_PUB_DEF_CONSTANTS.G_FALSE,
  p_commit IN VARCHAR2 default CDR_PUB_DEF_CONSTANTS.G_FALSE,
  p_validation_level IN NUMBER default CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
  x_return_status      OUT NOCOPY  VARCHAR2,
  x_msg_count          OUT NOCOPY  NUMBER,
  x_msg_data           OUT NOCOPY  VARCHAR2,
  p_companyId in cdr_namings.company_id%type,
  pi_tabMapId in cdr_namings.obj_id%type,
  pi_tabMapVer in cdr_naming_versions.obj_ver%type,
  pi_columnId in cdr_namings.obj_id%type,
  pi_columnVer in cdr_naming_versions.obj_ver%type,
  po_targetColumnsColl      OUT NOCOPY  dme_char_coll
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **P\_COMPANYID** (Mandatory). Enter the company ID of the object.
- **PI\_TABMAPID** (Mandatory). Enter the table map object ID.
- **PI\_TABMAPVER** (Mandatory). Enter the table map object version.
- **PI\_COLUMNID** (Mandatory). Enter the column object ID.
- **PI\_COLUMNVER** (Mandatory). Enter the column object version.
- **PO\_TARGETCOLUMNSCOLL**. Output collection of target columns in the format of Model\_NAME.Table\_NAME.Column\_NAME.

## Accept Column Mappings

Use this API to create persistent Auto Maps by accepting the auto generated column transformation mappings.

**Name**

DME\_PUB\_XFORM\_MAP.AcceptColumnAutoMappings

**Signature**

```
PROCEDURE ACCEPTCOLUMNAUTOMAPPINGS
(P_API_VERSION IN VARCHAR2, P_INIT_MSG_LIST IN VARCHAR2
DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE, P_COMMIT IN VARCHAR2 DEFAULT
CDR_PUB_DEF_CONSTANTS.G_FALSE, P_VALIDATION_LEVEL IN NUMBER DEFAULT
CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL, X_RETURN_STATUS OUT NOCOPY VARCHAR2,
X_MSG_COUNT OUT NOCOPY NUMBER, X_MSG_DATA OUT NOCOPY VARCHAR2,
PIO_COLUMNAUTOMAPCOLL IN OUT NOCOPY DME_XFORM_AUTO_MAP_COLL
);
```

**Parameters**

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

**PIO\_COLUMNAUTOMAPCOLL** (Mandatory). This is a parameter of table type collection DME\_XFORM\_AUTO\_MAP\_COLL of DME\_XFORM\_AUTO\_MAP\_TYPE table type. All attributes are required including:

- COMPANY\_ID
- MAP\_ID
- MAP\_VER
- MAP\_ENTITY\_ID
- MAP\_ENTITY\_VER
- CANDIDATE\_FLAG\_RC - with the possible values:
  - \$YESNO\$YES
  - \$YESNO\$NO - use this value for auto map suggestions which are applicable to save as real maps.

## Upgrade Transformation Map

Use this API to upgrade the maps defined at model level.

**Name**

DME\_PUB\_XFORM\_MAP.UpgradeXformMap

**Signature**

```
PROCEDURE UPGRADEXFORMMAPS
(P_API_VERSION IN VARCHAR2, P_INIT_MSG_LIST IN VARCHAR2
DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE, P_COMMIT IN VARCHAR2 DEFAULT
CDR_PUB_DEF_CONSTANTS.G_FALSE, P_VALIDATION_LEVEL IN NUMBER DEFAULT
CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL, X_RETURN_STATUS OUT NOCOPY VARCHAR2,
X_MSG_COUNT OUT NOCOPY NUMBER, X_MSG_DATA OUT NOCOPY VARCHAR2
);
```

## Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_XFORMMAPCOMPID** (Mandatory). Enter the COMPANY\_ID for the transformation map to be upgraded.
- **PI\_XFORMMAPOBJID** (Mandatory). Enter the OBJ\_ID for the transformation map to be upgraded.
- **PI\_XFORMMAPOBJVER** (Mandatory). Enter the OBJ\_VER for the transformation map to be upgraded.

## Install Transformation Map

Use this API to install transformation mappings.

### Name

DME\_PUB\_XFORM\_MAP.InstallXform

### Signature

```
PROCEDURE INSTALLXFORM
( P_API_VERSION IN VARCHAR2,    P_INIT_MSG_LIST IN VARCHAR2
  DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,    P_COMMIT IN VARCHAR2 DEFAULT
  CDR_PUB_DEF_CONSTANTS.G_FALSE,    P_VALIDATION_LEVEL IN NUMBER DEFAULT
  CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,    X_RETURN_STATUS OUT NOCOPY
  VARCHAR2,    X_MSG_COUNT OUT NOCOPY NUMBER,    X_MSG_DATA OUT NOCOPY
  VARCHAR2,    PI_MAPCOMPANYID IN CDR_NAMINGS.COMPANY_ID%TYPE,    PI_MAPOBJID IN
  CDR_NAMINGS.OBJ_ID%TYPE,    PI_MAPOBJVER IN CDR_NAMING_VERSIONS.OBJ_VER%TYPE,
  PI_CONTEXT IN VARCHAR2 DEFAULT '$LIFECYCLE$DEV',    PO_JOBID OUT NOCOPY
  CDR_JOBS.JOB_ID%TYPE
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_MAPCOMPANYID** (Mandatory). Enter values for the company Id for Model Transformation Map.
- **PI\_MAPOBJID** (Mandatory). Enter values for the object Id for Model Transformation Map.
- **PI\_MAPOBJVER** (Mandatory). Enter values for the object Version for Model Transformation Map.
- **PI\_CONTEXT** (Mandatory). Enter values for the lifecycle context. The possible values are:
  - \$LIFECYCLE\$DEV (also the default value)
  - \$LIFECYCLE\$QC
  - \$LIFECYCLE\$PROD

- **PO\_JOBID** This is the out parameter as job id generated from installation of given transformation map. Installation of Transformation Mapping submits a job. So this output parameter returns a JOB\_ID for Transformation Mapping Batch installation.

## Remove Transformation Map

Use this API to remove the transformation map at Model, Table or Column Level.

### Name

DME\_PUB\_XFORM\_MAP.RemoveTransformationMap

### Signature

```
PROCEDURE REMOVETRANSFORMATIONMAP
(P_API_VERSION IN VARCHAR2, P_INIT_MSG_LIST IN VARCHAR2
DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE, P_COMMIT IN VARCHAR2 DEFAULT
CDR_PUB_DEF_CONSTANTS.G_FALSE, P_VALIDATION_LEVEL IN NUMBER DEFAULT
CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL, X_RETURN_STATUS OUT NOCOPY VARCHAR2,
X_MSG_COUNT OUT NOCOPY NUMBER, X_MSG_DATA OUT NOCOPY VARCHAR2, PIO_NAMING IN
OUT NOCOPY CDR_NAMING_VERSION_OBJ_TYPE
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PIO\_NAMING** (Mandatory). This is a parameter of table type CDR\_NAMING\_VERSION\_OBJ\_TYPE. Enter values to identify the transformation map. The following attributes are required:

- COMPANY\_ID
- OBJ\_ID
- OBJ\_VER

## Validate Transformation Maps

Use this API to validate the transformation maps defined at model and table level. If a transformation map is invalid, the status of transformation map is invalidated to 'Invalid', description field is updated with validation errors and red icon is shown on UI corresponding to invalid transformation maps.

### Name

DME\_PUB\_XFORM\_MAP.ValidateXform

### Signature

```
PROCEDURE VALIDATEXFORM
(P_API_VERSION IN VARCHAR2, P_INIT_MSG_LIST IN VARCHAR2
DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE, P_COMMIT IN VARCHAR2 DEFAULT
CDR_PUB_DEF_CONSTANTS.G_FALSE, P_VALIDATION_LEVEL IN NUMBER DEFAULT
CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL, X_RETURN_STATUS OUT NOCOPY VARCHAR2,
X_MSG_COUNT OUT NOCOPY NUMBER, X_MSG_DATA OUT NOCOPY VARCHAR2, PIO_NAMING IN
OUT NOCOPY CDR_NAMING_VERSION_OBJ_TYPE
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameter:

**PIO\_NAMING** (Mandatory). This is a parameter of table type CDR\_NAMING\_VERSION\_OBJ\_TYPE. Enter values to identify the transformation map. The following attributes are required:

- COMPANY\_ID
- OBJ\_ID
- OBJ\_VER

## Update Validation Status

Use this API to modify the validation status.

### Name

DME\_PUB\_XFORM\_MAP.UpdateValStatus

### Signature

```
PROCEDURE UPDATEVALSTATUS
(P_API_VERSION IN VARCHAR2, P_INIT_MSG_LIST IN VARCHAR2 DEFAULT
CDR_PUB_DEF_CONSTANTS.G_FALSE, P_COMMIT IN VARCHAR2 DEFAULT
CDR_PUB_DEF_CONSTANTS.G_FALSE, P_VALIDATION_LEVEL IN NUMBER DEFAULT
CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL, X_RETURN_STATUS OUT NOCOPY
VARCHAR2, X_MSG_COUNT OUT NOCOPY NUMBER, X_MSG_DATA OUT NOCOPY VARCHAR2,
PIO_NAMING IN OUT NOCOPY CDR_NAMING_VERSION_OBJ_TYPE
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

**PIO\_NAMING** (Mandatory). This is a parameter of table type CDR\_NAMING\_VERSION\_OBJ\_TYPE. All attributes are required including:

- COMPANY\_ID
- OBJ\_ID
- OBJ\_VER
- NAMESPACE\_OBJ\_ID
- NAMESPACE\_OBJ\_VER
- OBJECT\_TYPE\_RC
- CHECKED\_OUT\_FLAG\_RC
- VALIDATION\_STATUS\_RC

The new validation status should be assigned to field VALIDATION\_STATUS\_RC. The possible valid values for validation status are:

- \$\$SYSVALDNSTEPS\$DEVELOPMENT

- \$SYSVALDNSTEPS\$QUALITYCONTROL
- \$SYSVALDNSTEPS\$PRODUCTION
- \$SYSVALDNSTEPS\$RETIRED

## Execute Transformation Map

Use this API to execute a Transformation Map.

### Name

DME\_PUB\_XFORM\_MAP.ExecuteXform

### Signature

```
PROCEDURE EXECUTEXFORM
(P_API_VERSION IN VARCHAR2, P_INIT_MSG_LIST IN VARCHAR2
DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE, P_COMMIT IN VARCHAR2 DEFAULT
CDR_PUB_DEF_CONSTANTS.G_FALSE, P_VALIDATION_LEVEL IN NUMBER DEFAULT
CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL, X_RETURN_STATUS OUT NOCOPY VARCHAR2,
X_MSG_COUNT OUT NOCOPY NUMBER, X_MSG_DATA OUT NOCOPY VARCHAR2,
PI_MODELCOMPANYID IN CDR_NAMINGS.COMPANY_ID%TYPE, PI_MODELOBJID IN
CDR_NAMINGS.OBJ_ID%TYPE, PI_MODELOBJVER IN CDR_NAMING_VERSIONS.OBJ_VER%TYPE,
PI_SUBMISSION_TYPE IN VARCHAR2 DEFAULT '$SUBMISSTYPES$IMMEDIATE', PI_CONTEXT
IN VARCHAR2 DEFAULT '$LIFECYCLE$DEV', PI_SCHED_START_TS IN DATE DEFAULT
NULL, PI_SCHED_END_TS IN DATE DEFAULT NULL, PI_SCHED_REPEAT_INTERVAL IN
VARCHAR2 DEFAULT NULL, PI_SCHED_REPEAT_LIST IN VARCHAR2 DEFAULT NULL,
PI_FORCE_EXECUTION_FLAG_RC IN VARCHAR2 DEFAULT '$YESNO$NO', PI_RUN_MODE_RC
IN VARCHAR2, PI_TRIGGER_DOWNSTREAM IN VARCHAR2, PO_JOBID OUT NOCOPY
CDR_JOBS.JOB_ID%TYPE
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_MODELCOMPANYID** (Mandatory). Company id of Target Data Model.
- **PI\_MODELOBJID** (Mandatory). Object Id of Target Data Model.
- **PI\_MODELOBJVER** (Mandatory). Object Version of Target Data Model
- **PI\_SUBMISSION\_TYPE**. Enter '\$SUBMISSTYPES\$IMMEDIATE' or '\$SUBMISSTYPES\$\$SCHEDULED' or '\$SUBMISSTYPES\$\$DEFERRED'.
- **PI\_CONTEXT**. Lifecycle context values like \$LIFECYCLE\$DEV, \$LIFECYCLE\$QC or \$LIFECYCLE\$PROD.
- **PI\_SCHED\_START\_TS**. Enter start time if submission is scheduled/deferred.
- **PI\_SCHED\_END\_TS**. Enter end time if submission is scheduled.
- **PI\_SCHED\_REPEAT\_INTERVAL**. Enter interval time if submission is scheduled.
- **PI\_SCHED\_REPEAT\_LIST**. Enter Unit like Hour(s), Day(s), Week(s).
- **PI\_FORCE\_EXECUTION\_FLAG\_RC**. Enter '\$YESNO\$NO' or '\$YESNO\$YES'.
- **PI\_RUN\_MODE\_RC**. Enter '\$RUNMODES\$FULL' or '\$RUNMODES\$INCREMENT'
- **PI\_TRIGGER\_DOWNSTREAM**. Enter '\$YESNO\$YES' or '\$YESNO\$NO'.



## Validate Expression

Use this API to validate user defined map column or criteria expression.

### Name

DME\_PUB\_XFORM\_MAP.ValidateExpression

### Signature

```
PROCEDURE VALIDATEEXPRESSION
(P_API_VERSION IN VARCHAR2, P_INIT_MSG_LIST IN VARCHAR2
DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE, P_COMMIT IN VARCHAR2 DEFAULT
CDR_PUB_DEF_CONSTANTS.G_FALSE, P_VALIDATION_LEVEL IN NUMBER DEFAULT
CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL, X_RETURN_STATUS OUT NOCOPY VARCHAR2,
X_MSG_COUNT OUT NOCOPY NUMBER, X_MSG_DATA OUT NOCOPY VARCHAR2, PI_OBJID
IN CDR_NAMINGS.OBJ_ID%TYPE, PI_OBJVER IN CDR_NAMING_VERSIONS.OBJ_VER%TYPE,
PI_EXPROBJ IN DME_XFORM_EXPR_OBJ_TYPE
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_OBJID** (Mandatory). Enter the object Id of the model transformation map in which expression is applied for one of the map entity. In case of Create operations, map will not exist in DB. Pass the table definition id from which column has been selected into the expression. Pass NULL, in case, no column is used in expression text.
- **PI\_OBJVER** (Mandatory). Enter the object Version of the model transformation map or table definition from which column is used in expression. Pass NULL, in case there is no column used in expression.
- **PI\_EXPROBJ** (Mandatory). This parameter is a object type of DME\_XFORM\_EXPR\_OBJ\_TYPE. Refer to the following section [Create or Modify an Expression](#), for more details.

## Refresh Static Packages

Run this API after you add, modify, or delete a static package to be used in a transformation or validation check. This is required for the changes to take effect.

### Name

DME\_PUB\_XFORM\_MAP.populateStaticPackages

### Signature

```
PROCEDURE dme_pub_xform_map.populateStaticPackages
( p_api_version IN VARCHAR2
, p_init_msg_list IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE
, p_commit IN VARCHAR2 default CDR_PUB_DEF_CONSTANTS.G_FALSE
, p_validation_level IN NUMBER default CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL
, x_return_status OUT NOCOPY VARCHAR2
, x_msg_count OUT NOCOPY NUMBER
, x_msg_data OUT NOCOPY VARCHAR2);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)).

# Validation Checks

This is a public interface for all operations related to Validation Checks Batch(es), including creation, deletion, modification, and checking in and out of these objects. It also includes information on how to create or modify expressions.

This section includes the Validation Checks APIs from the following package: DME\_PUB\_VALIDATION\_CHECK.

See [Refresh Static Packages](#) for information about the API you must run whenever you add, change, or delete a static package to be used in validation checks.

This chapter contains the following section:

- [Create and Modify Validation Checks and Batches](#)

## Create and Modify Validation Checks and Batches

This section contains the following public APIs:

- [Create a Validation Check Batch](#)
- [Modify a Validation Check Batch](#)
- [Remove Validation Check Batch](#)
- [Create a Validation Check](#)
- [Update a Validation Check](#)
- [Install a Validation Check Batch](#)
- [Submit a Validation Check Batch](#)
- [Check In a Validation Check Batch](#)
- [Check Out a Validation Check Batch](#)
- [Undo Checkout For a Validation Check Batch](#)
- [Update Validation Status of a Validation Check Batch](#)
- [Upgrade a Validation Check Batch](#)
- [Remove Validation Check\(s\)](#)
- [Enable or Disable Validation Checks](#)
- [Reorder Validation Checks](#)

### Create a Validation Check Batch

Use this API to create a validation check batch.

**Name**

DME\_PUB\_VALIDATION\_CHECK.CreateValidationCheckBatch

## Signature

```
PROCEDURE CREATEVALIDATIONCHECKBATCH,
( P_API_VERSION IN VARCHAR2, P_INIT_MSG_LIST IN VARCHAR2
DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE, P_COMMIT IN VARCHAR2 default
CDR_PUB_DEF_CONSTANTS.G_FALSE, P_VALIDATION_LEVEL IN NUMBER default
CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL, X_RETURN_STATUS OUT NOCOPY
VARCHAR2, X_MSG_COUNT OUT NOCOPY NUMBER, X_MSG_DATA OUT NOCOPY
VARCHAR2, PI_SOURCEMODELCOMPID IN OUT NOCOPY CDR_NAMINGS.COMPANY_ID%TYPE,
PI_SOURCEMODELOBJID IN OUT NOCOPY CDR_NAMINGS.OBJ_ID%TYPE, PI_SOURCEMODELOBJVER
IN OUT NOCOPY CDR_NAMING_VERSIONS.OBJ_VER%TYPE, PI_BATCHNAME
IN OUT NOCOPY CDR_NAMINGS.NAME%TYPE, PI_BATCHDESCRIPTION IN
CDR_NAMING_VERSIONS.DESCRPTION%TYPE, PI_ISORDEREDFOREXECUTION IN VARCHAR2,
PI_CANBETRIGGERED IN VARCHAR DEFAULT '$YESNO$NO',
);
```

## Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_SOURCEMODELCOMPID** (Mandatory). Enter COMPANY\_ID of Source Data Model.
- **PI\_SOURCEMODELOBJID** (Mandatory). Enter the obj\_id of the table instance which contains the data record.
- **PI\_SOURCEMODELOBJVER** (Mandatory). Enter OBJ\_VER of Source Data Model.
- **PI\_BATCHNAME** (Mandatory). Enter Batch Name for new VC Batch.
- **PI\_BATCHDESCRIPTION** (Optional). Enter Batch Description if you want for new VC Batch.
- **PI\_ISORDEREDFOREXECUTION** (Optional). Enter \$YESNO\$YES, if Validation Checks under new Batch must be executed in particular order. Otherwise enter \$YESNO\$NO. If entered as NULL, systems defaults it to \$YESNO\$NO.
- **PI\_CANBETRIGGERED** (Mandatory). Enter \$YESNO\$YES. This allows the successful completion of a transformation writing to the clinical data model that this batch runs against to trigger the execution of this batch. Entering a different value may result in unexpected behavior.

## Modify a Validation Check Batch

Use this API to modify a validation check batch.

### Name

DME\_PUB\_VALIDATION\_CHECK.UpdateValidationCheckBatch

### Signature

```
PROCEDURE UPDATEVALIDATIONCHECKBATCH
( P_API_VERSION IN VARCHAR2, P_INIT_MSG_LIST IN VARCHAR2
DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE, P_COMMIT IN VARCHAR2 DEFAULT
CDR_PUB_DEF_CONSTANTS.G_FALSE, P_VALIDATION_LEVEL IN NUMBER DEFAULT
CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL, X_RETURN_STATUS OUT NOCOPY
VARCHAR2, X_MSG_COUNT OUT NOCOPY NUMBER, X_MSG_DATA OUT NOCOPY
```

```

VARCHAR2, PI_BATCHMAPCOMPID IN OUT NOCOPY CDR_NAMINGS.COMPANY_ID%TYPE,
PI_BATCHMAPOBJID IN OUT NOCOPY CDR_NAMINGS.OBJ_ID%TYPE, PI_BATCHMAPOBJVER
IN OUT NOCOPY CDR_NAMING_VERSIONS.OBJ_VER%TYPE, PI_BATCHNAME
IN OUT NOCOPY CDR_NAMINGS.NAME%TYPE, PI_BATCHDESCRIPTION IN
CDR_NAMING_VERSIONS.DESCRPTION%TYPE, PI_ISORDEREDFOREXECUTION IN VARCHAR2,
PI_CANBETRIGGERED IN VARCHAR DEFAULT '$YESNO$NO'
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_BATCHMAPCOMPID** (Mandatory). Enter COMPANY\_ID of Validation Checks Batch Map.
- **PI\_BATCHMAPOBJID** (Mandatory). Enter OBJ\_ID of Validation Checks Batch Map.
- **PI\_BATCHMAPOBJVER** (Mandatory). Enter OBJ\_VER of Validation Checks Batch Map.
- **PI\_BATCHNAME** (Mandatory). Enter Batch Name for new Validation Checks Batch
- **PI\_BATCHDESCRIPTION** (Optional). Enter Batch Description for new Validation Checks Batch.
- **PI\_ISORDEREDFOREXECUTION** (Optional). Enter \$YESNO\$YES, if Validation Checks under new Batch must be executed in particular order. Otherwise enter \$YESNO\$NO. If entered as NULL, systems defaults it to \$YESNO\$NO.
- **PI\_CANBETRIGGERED** (Optional). Enter \$YESNO\$YES to allow the successful completion of a transformation writing to the clinical data model that this batch runs against to trigger the execution of this batch. Otherwise enter \$YESNO\$NO. If entered as NULL, systems defaults it to \$YESNO\$NO.

## Remove Validation Check Batch

Use this API to remove Validation Check batch(es).

### Name

DME\_PUB\_VALIDATION\_CHECK.RemoveValidationCheckBatches

### Signature

```

PROCEDURE REMOVEVALIDATIONCHECKBATCHES
(P_API_VERSION IN VARCHAR2, P_INIT_MSG_LIST IN VARCHAR2
DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE, P_COMMIT IN VARCHAR2 DEFAULT
CDR_PUB_DEF_CONSTANTS.G_FALSE, P_VALIDATION_LEVEL IN NUMBER DEFAULT
CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL, X_RETURN_STATUS OUT NOCOPY
VARCHAR2, X_MSG_COUNT OUT NOCOPY NUMBER, X_MSG_DATA OUT NOCOPY
VARCHAR2, PIO_VC_BATCH_COLL IN OUT NOCOPY CDR_NAMING_LIST_COLL
);

```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_VC\_BATCH\_COLL** (Mandatory). This is a parameter of collection type `CDR_NAMING_LIST_COLL` that contains CDR Naming Version attributes. The following attributes are required for Validation Checks Batch maps:
  - `COMPANY_ID`
  - `OBJ_ID`
  - `OBJ_VER`

## Create a Validation Check

Use this API to create a validation check.

### Name

`DME_PUB_VALIDATION_CHECK.CreateValidationCheck`

### Signature

```
PROCEDURE CREATEVALIDATIONCHECK
( P_API_VERSION IN VARCHAR2, P_INIT_MSG_LIST IN VARCHAR2
  DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE, P_COMMIT IN VARCHAR2 DEFAULT
  CDR_PUB_DEF_CONSTANTS.G_FALSE, P_VALIDATION_LEVEL IN NUMBER DEFAULT
  CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL, X_RETURN_STATUS OUT NOCOPY
  VARCHAR2, X_MSG_COUNT OUT NOCOPY NUMBER, X_MSG_DATA OUT NOCOPY
  VARCHAR2, PI_XFORMMAPCOLL IN OUT NOCOPY DME_XFORM_MAP_EX_COLL,
  PI_VCBATCHMODELOBJ IN CDR_BASE_OBJ_TYPE, PI_VCSECONDARYVARCOLL IN
  DME_VC_SECONDARY_VAR_OBJ_COLL DEFAULT NULL
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_XFORMMAPCOLL** (Mandatory). This is a parameter of collection type `DME_XFORM_MAP_EX_COLL`. `DME_XFORM_MAP_EX_COLL` is a table of `DME_XFORM_MAP_EX_OBJ_TYPE`. This collection is prepared with both Table level and Column Level maps. Validation Checks Details are set at Table level mapping.

The following attributes from `DME_XFORM_MAP_EX_OBJ_TYPE` are required for this API:

- **NAMING**: Table type `CDR_NAMING_VERSION_OBJ_TYPE`

For Table Level mapping and Validation Checks Create, mandatory attributes are:

- `COMPANY_ID`
- **NAME** - Refers to Validation Checks name
- `OBJECT_TYPE_RC` - Enter the value: '\$OBJTYPES\$XFORMMAP'.

For Column Level mapping and Validation Checks Create, mandatory attributes are:

- `COMPANY_ID`
- `OBJECT_TYPE_RC` - Enter the value: '\$OBJTYPES\$XFORMMAP'.
- **MAP\_TYPE**. Enter '\$MAPTYPE\$VC'

- **XFORM\_TYPE.** Enter '\$XFORMTYPE\$DIRECT' for single source table and '\$XFORMTYPE\$JOIN' for multiple source table.
- **PROGRAM\_ID.** If the validation check uses a custom program, enter the Program obj\_id, else leave blank.
- **PROGRAM\_VER.** If the validation check uses a custom program, enter the Program obj\_ver, else leave blank.
- **PROGRAM\_TYPE.** 'CUSTOM' for Custom program. Else leave blank. When creating Validation Checks using Custom Program, column level maps are not required in the collection parameter (PI\_XFORMMAPCOLL).
- **AUTH\_FLAG\_RC.** Enter '\$YESNO\$YES' to authorize Validation Checks listing to read blinded data. Otherwise leave blank. It defaults to '\$YESNO\$NO'.
- **OPERATION\_TYPE.** '\$OPER\$CREATE' for Validation Checks create.
- **MAP\_ENTITY\_COLL.** Its collection type DME\_MAP\_ENTITY\_COLL which is table of DME\_MAP\_ENTITY\_OBJ\_TYPE type.  
For table level mapping, only source entities are required in MAP\_ENTITY\_COLL collection. Enter COMPANY\_ID, DATAENTITY\_ID, DATAENTITY\_VER, MAP\_RELATION as SOURCE, expression details (see [Create or Modify an Expression](#).) and OPERATION\_TYPE as '\$OPER\$CREATE'.
- For column level mapping, both source and target entities are required in MAP\_ENTITY\_COLL collection. For source entities, enter company\_id, dataentity\_id, dataentity\_ver, map\_relation as SOURCE, expression details and operation\_type as '\$OPER\$CREATE' and for target entity, enter ALIAS, map\_relation as TARGET and operation\_type as '\$OPER\$CREATE'.
- **JOIN\_COLL.** Required only for VC using multiple source tables. This is a collection of type CDR\_DM\_JOIN\_OBJ\_COLL. Set only in table level mapping.  
CDR\_DM\_JOIN\_OBJ\_COLL is table of type CDR\_DM\_JOIN\_OBJ\_TYPE.  
CDR\_DM\_JOIN\_OBJ\_TYPE is for Table Joins and set the source and target table ids. This object type has an attribute of collection type DM\_JOIN\_COL\_OBJ\_COLL for column joins.  
DM\_JOIN\_COL\_OBJ\_COLL is table of type CDR\_DM\_JOIN\_COL\_OBJ\_TYPE. Table and Column related fields are required along with JOIN\_OPERATOR\_RC. For POSITION enter 1.
- **VC\_DETAILS.** Table of dme\_val\_check\_details\_obj\_type. Set only in table level mapping.  
COMPANY\_ID, DISC\_OPEN\_STATE, DISCREPANCY\_TEXT, PRIMARY\_SOURCE\_COLUMN\_ID are mandatory.  
AUTO\_CLOSE\_FLAG, CATEGORY\_ID and INITIAL\_DISC\_ACTION\_ID are optional.
  - \* **DISC\_OPEN\_STATE.** Possible values are '\$DISC\_STATES\$OPEN' and '\$DISC\_STATES\$CANDIDATE'.
  - \* **DISCREPANCY\_TEXT.** Enter a text as comment for created discrepancies from Validation Checks.
  - \* **PRIMARY\_SOURCE\_COLUMN\_ID.** Source Column OBJ\_ID on which discrepancy is created.

- \* **AUTO\_CLOSE\_FLAG**. Possible values are '\$YESNO\$YES' and '\$YESNO\$NO'. Enter '\$YESNO\$YES', if Validation Check can auto close the discrepancy.
  - \* **CATEGORY\_ID**. Enter a valid Validation Check category Id from DME\_CATEGORIES.
  - \* **INITIAL\_DISC\_ACTION\_ID**. : If discrepancies need DM review, enter 31 when DISC\_OPEN\_STATE='\$DISC\_STATES\$CANDIDATE' or enter 32 when DISC\_OPEN\_STATE='\$DISC\_STATES\$OPEN'.
- **PI\_VCBATCHMODELOBJ** (Mandatory). This is a parameter of table type CDR\_BASE\_OBJ\_TYPE. Enter values to identify the Validation Checks Batch Model under which you want to create Validation Checks.
  - **PI\_VCSECONDARYVARCOLL** (Optional). This is a parameter of collection type DME\_VC\_SECONDARY\_VAR\_SECONDARY\_VAR\_OBJ and DME\_VC\_SECONDARY\_VAR\_OBJ\_COLL is a table type of DME\_VC\_SECONDARY\_VAR\_OBJ\_TYPE. Enter the validation check column details where you want to set the secondary flag variable as Yes. Mandatory attribute types are:
    - DM\_COL\_OBJ\_ID - Add the source column object ID that mapped to the validation check column.
    - VC\_COLUMN\_NAME - Enter the validation check display column name.

 **Note:**

This only applies to validation checks created without a custom program. For custom validation checks, define the secondary columns in Oracle LSH by adding **\$DMWVCSECONDARYVAR\$** at the end of any text in the **Description** field of the target table column. (Or, just add it to the **Description** field without any other text.)

## Update a Validation Check

Use this API to update a validation check.

### Name

DME\_PUB\_VALIDATION\_CHECK.UpdateValidationCheck

### Signature

```
PROCEDURE UPDATEVALIDATIONCHECK
(P_API_VERSION IN VARCHAR2, P_INIT_MSG_LIST IN VARCHAR2
DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE, P_COMMIT IN VARCHAR2 DEFAULT
CDR_PUB_DEF_CONSTANTS.G_FALSE, P_VALIDATION_LEVEL IN NUMBER DEFAULT
CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL, X_RETURN_STATUS OUT NOCOPY VARCHAR2,
X_MSG_COUNT OUT NOCOPY NUMBER, X_MSG_DATA OUT NOCOPY VARCHAR2,
PI_XFORMMAPCOLL IN OUT NOCOPY DME_XFORM_MAP_EX_COLL, PI_VCSECONDARYVARCOLL IN
DME_VC_SECONDARY_VAR_OBJ_COLL DEFAULT NULL
);
```



## Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_XFORMMAPCOLL** (Mandatory). This is a parameter of collection type DME\_XFORM\_MAP\_EX\_COLL and DME\_XFORM\_MAP\_EX\_COLL is table of DME\_XFORM\_MAP\_EX\_OBJ\_TYPE. This collection is prepared with both Table level and Column Level maps. Validation Check Details are set at Table level mapping.

The attributes required for this API from DME\_XFORM\_MAP\_EX\_OBJ\_TYPE are:

- For Table Level mapping, all the attributes are required. Name refers to Validation Checks name and enter OBJECT\_TYPE\_RC = '\$OBJTYPES\$XFORMMAP'.
- For Column Level mapping all the attributes are required. Enter OBJECT\_TYPE\_RC = '\$OBJTYPES\$XFORMMAP'.
- **MAP\_TYPE**. Enter '\$MAPTYPE\$VC'.
- **XFORM\_TYPE**. Enter '\$XFORMTYPE\$DIRECT' for single source table and '\$XFORMTYPE\$JOIN' for multiple source table.
- **PROGRAM\_ID**. Enter Custom Program Obj\_Id when Create Validation Checks using custom program. In other cases leave blank.
- **PROGRAM\_VER**. Enter Custom Program Obj\_Ver when Create Validation Checks using custom program. In other cases leave blank.
- **PROGRAM\_TYPE**. Write 'CUSTOM' for Custom program, else leave blank. When creating Validation Checks using Custom Program, column level maps are not required in the collection parameter (PI\_XFORMMAPCOLL).
- **AUTH\_FLAG\_RC**. Enter '\$YESNO\$YES' to authorize Validation Checks listing to read blinded data. Otherwise leave blank. It defaults to '\$YESNO\$NO'.
- **OPERATION\_TYPE**. '\$OPER\$MODIFY' for Validation Checks modify.
- **MAP\_ENTITY\_COLL**. It'ss collection type DME\_MAP\_ENTITY\_COLL which is table of DME\_MAP\_ENTITY\_OBJ\_TYPE type. Leave blank, if you do not want to update anything.  
For table level, enter both source and target entities with entity identifiers, data\_entity indentyfiers, map\_relation as SOURCE or TARGET, expression details (see [Create or Modify an Expression](#),) for source and operation type as '\$OPER\$MODIFY'.

For column level:

1. Adding a new column, both source and target entities are required in MAP\_ENTITY\_COLL collection. For source entities, enter COMPANY\_ID, DATAENTITY\_ID, DATAENTITY\_VER, MAP\_RELATION as SOURCE, expresion details (see [Create or Modify an Expression](#),) and operation\_type as '\$OPER\$CREATE' and for target entity, enter ALIAS, map\_relation as TARGET and operation\_type as '\$OPER\$CREATE'.
2. Updating a column, both source and target entities are required in MAP\_ENTITY\_COLL collection. For source entities, enter COMPANY\_ID, MAP\_ENTITY\_ID, MAP\_ENTITY\_VER, DATAENTITY\_ID, DATAENTITY\_VER, MAP\_RELATION as SOURCE, expression details

(see [Create or Modify an Expression](#).) and operation\_type as '\$OPER\$MODIFY' and for target entity, COMPANY\_ID, MAP\_ENTITY\_ID, MAP\_ENTITY\_VER, DATAENTITY\_ID, DATAENTITY\_VER, enter ALIAS, MAP\_RELATION as TARGET and operation\_type as '\$OPER\$MODIFY'.

3. Removing a column, both source and target entities are required in MAP\_ENTITY\_COLL collection. For both source and target entity, enter COMPANY\_ID, MAP\_ENTITY\_ID, MAP\_ENTITY\_VER, DATAENTITY\_ID, DATAENTITY\_VER, MAP\_RELATION as SOURCE or TARGET and OPERATION\_TYPE as '\$OPER\$REMOVE'.
- **JOIN\_COLL.** Leave blank, if you do not want to update anything. Required only for Validation Checks using multiple source tables. This is a collection of type CDR\_DM\_JOIN\_OBJ\_COLL. Set only in table level mapping. CDR\_DM\_JOIN\_OBJ\_COLL is table of type CDR\_DM\_JOIN\_OBJ\_TYPE.  
 CDR\_DM\_JOIN\_OBJ\_TYPE is for Table Joins and set the source and target table ids. This object type has an attribute of collection type DM\_JOIN\_COL\_OBJ\_COLL for column joins.  
 DM\_JOIN\_COL\_OBJ\_COLL is table of type CDR\_DM\_JOIN\_COL\_OBJ\_TYPE. Table and Column related fields are required along with JOIN\_OPERATOR\_RC. For POSITION enter 1.
  - **VC\_DETAILS.** Table of DME\_VAL\_CHECK\_DETAILS\_OBJ\_TYPE. Set only in table level mapping. COMPANY\_ID, DISC\_OPEN\_STATE, DISCREPANCY\_TEXT, PRIMARY\_SOURCE\_COLUMN\_ID are mandatory. AUTO\_CLOSE\_FLAG, CATEGORY\_ID and INITIAL\_DISC\_ACTION\_ID are optional. OBJ\_ID and OBJ\_VER are required only in case of Validation Checks update.
    - \* DISC\_OPEN\_STATE: Possible values are '\$DISC\_STATES\$OPEN' and '\$DISC\_STATES\$CANDIDATE'.
    - \* DISCREPANCY\_TEXT: Enter a text as comment for created discrepancies from Validation Checks.
    - \* PRIMARY\_SOURCE\_COLUMN\_ID: Source Column OBJ\_ID on which discrepancy is created.
    - \* AUTO\_CLOSE\_FLAG: Possible values are '\$YESNO\$YES' and '\$YESNO\$NO'. Enter '\$YESNO\$YES', if Validation Checks can auto close the discrepancy.
    - \* CATEGORY\_ID: Enter a valid Validation Checks category ID from DME\_CATEGORIES.
    - \* INITIAL\_DISC\_ACTION\_ID : If discrepancies need DM review, enter 31 when DISC\_OPEN\_STATE='\$DISC\_STATES\$CANDIDATE' or enter 32 when DISC\_OPEN\_STATE='\$DISC\_STATES\$OPEN'.
  - **PI\_VCSECONDARYVARCOLL** (Optional). This is a parameter of collection type DME\_VC\_SECONDARY\_VAR\_SECONDARY\_VAR\_OBJ and DME\_VC\_SECONDARY\_VAR\_OBJ\_COLL is a table type of DME\_VC\_SECONDARY\_VAR\_OBJ\_TYPE. Enter the validation check column details where you want to set the secondary flag variable as Yes. Mandatory attribute types are:
    - DM\_COL\_OBJ\_ID - Add the source column object ID that mapped to the validation check column.
    - VC\_COLUMN\_NAME - Enter the validation check display column name.

 **Note:**

This only applies to validation checks created without a custom program. For custom validation checks, define the secondary columns in Oracle LSH by adding **\$DMWVCSECONDARYVAR\$** at the end of any text in the **Description** field of the target table column. (Or, just add it to the **Description** field without any other text.)

## Install a Validation Check Batch

Use this API to install a validation check batch.

### Name

DME\_PUB\_VALIDATION\_CHECK.InstallValidationCheckBatch

### Signature

```
PROCEDURE INSTALLVALIDATIONCHECKBATCH
(P_API_VERSION IN VARCHAR2,
 P_INIT_MSG_LIST IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,
 P_COMMIT IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE,
 P_VALIDATION_LEVEL IN NUMBER DEFAULT CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
 X_RETURN_STATUS OUT NOCOPY VARCHAR2,
 X_MSG_COUNT OUT NOCOPY NUMBER,
 X_MSG_DATA OUT NOCOPY VARCHAR2,
 PI_BATCHMAPCOMPID IN CDR_NAMINGS.COMPANY_ID%TYPE,
 PI_BATCHMAPOBJID IN CDR_NAMINGS.OBJ_ID%TYPE,
 PI_BATCHMAPOBJVER IN CDR_NAMING_VERSIONS.OBJ_VER%TYPE,
 PI_CONTEXT IN VARCHAR2 DEFAULT NULL,
 PI_TESTMODE IN VARCHAR2 DEFAULT NULL,
 PO_JOBID OUT NOCOPY VARCHAR2
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_BATCHMAPCOMPID** (Mandatory). Enter COMPANY\_ID of Validation Checks Batch Map.
- **PI\_BATCHMAPOBJID** (Mandatory). Enter OBJ\_ID of Validation Checks Batch Map.
- **PI\_BATCHMAPOBJVER** (Mandatory). Enter OBJ\_VER of Validation Checks Batch Map.
- **PI\_CONTEXT** (Optional). Enter values as \$LIFECYCLE\$DEV, \$LIFECYCLE\$QC or \$LIFECYCLE\$PROD. If entered as null, system tries to find out the SYTEM\_CONTEXT. If SYTEM\_CONTEXT is not set, it defaults to \$LIFECYCLE\$DEV.
- **PI\_TESTMODE** (Optional). Leave blank
- **PO\_JOBID** (Optional). Installation of Validation Checks Batch submits a job. So this output parameter returns a JOB\_ID for Validation Checks Batch installation.

## Submit a Validation Check Batch

Use this API to submit a validation check batch.

### Name

DME\_PUB\_VALIDATION\_CHECK.submitValidationCheckBatch

### Signature

```
FUNCTION SUBMITVALIDATIONCHECKBATCH
(P_API_VERSION IN VARCHAR2,
 P_INIT_MSG_LIST IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE, P_COMMIT
IN VARCHAR2 DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE, P_VALIDATION_LEVEL IN NUMBER
DEFAULT CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL, X_RETURN_STATUS OUT NOCOPY
VARCHAR2, X_MSG_COUNT OUT NOCOPY NUMBER, X_MSG_DATA OUT NOCOPY VARCHAR2,
PI_VCBATCHMODELCOMPANYID IN CDR_NAMINGS.COMPANY_ID%TYPE
PI_VCBATCHMODELOBJID IN CDR_NAMINGS.OBJ_ID%TYPE,
PI_VCBATCHMODELOBJVER IN CDR_NAMING_VERSIONS.OBJ_VER%TYPE,
PI_SUBMISSION_TYPE IN VARCHAR2 DEFAULT '$SUBMISSTYPES$IMMEDIATE',
PI_CONTEXT IN VARCHAR2 DEFAULT '$LIFECYCLE$DEV',
PI_SCHED_START_TS IN DATE DEFAULT NULL,
PI_SCHED_END_TS IN DATE DEFAULT NULL,
PI_SCHED_REPEAT_INTERVAL IN VARCHAR2 DEFAULT NULL,
PI_SCHED_REPEAT_LIST IN VARCHAR2 DEFAULT NULL,
PI_FORCE_EXECUTION_FLAG_RC IN VARCHAR2 DEFAULT '$YESNO$NO',
PI_RUN_MODE_RC IN VARCHAR2
) RETURN CDR_JOBS.JOB_ID%TYPE;
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_VCBATCHMODELCOMPANYID** (Mandatory). Company ID of Validation Checks Batch Model.
- **PI\_VCBATCHMODELOBJID** (Mandatory). OBJ\_ID of Validation Checks Batch Model.
- **PI\_VCBATCHMODELOBJVER** (Mandatory). OBJ\_VER of Validation Checks Batch Model.
- **PI\_RUN\_MODE\_RC** (Mandatory). Enter '\$RUNMODES\$FULL' or '\$RUNMODES\$INCREMENT'.
- **PI\_SUBMISSION\_TYPE**. Enter '\$SUBMISSTYPES\$IMMEDIATE' or '\$SUBMISSTYPES\$SCHEDULED' or '\$SUBMISSTYPES\$DEFERRED'.
- **PI\_CONTEXT**. Lifecycle context values like \$LIFECYCLE\$DEV, \$LIFECYCLE\$QC or \$LIFECYCLE\$PROD.
- **PI\_SCHED\_START\_TS**. Enter start time if submission is scheduled/deferred.
- **PI\_SCHED\_END\_TS**. Enter end time if submission is scheduled.
- **PI\_SCHED\_REPEAT\_INTERVAL**. Enter interval time if submission is scheduled.
- **PI\_SCHED\_REPEAT\_LIST**. Enter if submission is scheduled. Accepted values are \$SUBMISSTYPES\$HOURLY, \$SUBMISSTYPES\$DAILY, \$SUBMISSTYPES\$WEEKLY, \$SUBMISSTYPES\$MONTHLY.

- **PI\_FORCE\_EXECUTION\_FLAG\_RC.** Enter '\$YESNO\$NO ' or '\$YESNO\$YES'.

This API returns the Job Id.

## Check In a Validation Check Batch

Use this API to check in a validation check batch.

### Name

DME\_PUB\_VALIDATION\_CHECK.CheckinValidationCheckBatch

### Signature

```
PROCEDURE CHECKINVALIDATIONCHECKBATCH
(P_API_VERSION IN NUMBER, P_INIT_MSG_LIST IN VARCHAR2 DEFAULT
CDR_PUB_DEF_CONSTANTS.G_FALSE, P_COMMIT IN VARCHAR2 DEFAULT
CDR_PUB_DEF_CONSTANTS.G_FALSE,
P_VALIDATION_LEVEL IN NUMBER DEFAULT CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL,
X_RETURN_STATUS OUT NOCOPY VARCHAR2, X_MSG_COUNT OUT NOCOPY NUMBER, X_MSG_DATA
OUT NOCOPY VARCHAR2, PIO_NAMING IN OUT NOCOPY CDR_NAMING_VERSION_OBJ_TYPE,
PI_COMMENT IN VARCHAR2,
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_NAMING** (Mandatory). This is a parameter of table type `CDR_NAMING_VERSION_OBJ_TYPE`. Enter values to identify the Validation Checks Batch that you want to check in. The following attributes are required:
  - COMPANY\_ID
  - OBJ\_ID
  - OBJ\_VER
- **PI\_COMMENT** (Optional). Enter the reason you are checking in the Validation Checks Batch.

## Check Out a Validation Check Batch

Use this API to check out a validation check batch.

### Name

DME\_PUB\_VALIDATION\_CHECK.CheckoutValidationCheckBatch

### Signature

```
PROCEDURE checkoutValidationCheckBatch
(P_API_VERSION IN NUMBER, P_INIT_MSG_LIST IN VARCHAR2 DEFAULT
CDR_PUB_DEF_CONSTANTS.G_FALSE, P_COMMIT IN VARCHAR2 DEFAULT
CDR_PUB_DEF_CONSTANTS.G_FALSE, P_VALIDATION_LEVEL IN NUMBER DEFAULT
CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL, X_RETURN_STATUS OUT NOCOPY VARCHAR2,
X_MSG_COUNT OUT NOCOPY NUMBER, X_MSG_DATA OUT NOCOPY VARCHAR2, PIO_NAMING IN
```

```
OUT NOCOPY CDR_NAMING_VERSION_OBJ_TYPE, PI_COMMENT IN VARCHAR2
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_NAMING** (Mandatory). This is a parameter of table type CDR\_NAMING\_VERSION\_OBJ\_TYPE. Enter values to identify the Validation Checks Batch that you want to check in. The following attributes are required:
  - COMPANY\_ID
  - OBJ\_ID
  - OBJ\_VER
- **PI\_COMMENT** (Optional). Enter the reason you are checking out the Validation Check Batch.

## Undo Checkout For a Validation Check Batch

Use this API to undo check out for a Validation Check Batch.

### Name

DME\_PUB\_VALIDATION\_CHECK.UncheckValidationCheckBatch

### Signature

```
PROCEDURE DELETEFLAG
(P_API_VERSION IN NUMBER, P_INIT_MSG_LIST IN VARCHAR2 DEFAULT
CDR_PUB_DEF_CONSTANTS.G_FALSE, P_COMMIT IN VARCHAR2 DEFAULT
CDR_PUB_DEF_CONSTANTS.G_FALSE, P_VALIDATION_LEVEL IN NUMBER DEFAULT
CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL, X_RETURN_STATUS OUT NOCOPY VARCHAR2,
X_MSG_COUNT OUT NOCOPY NUMBER, X_MSG_DATA OUT NOCOPY VARCHAR2, PIO_NAMING IN
OUT NOCOPY CDR_NAMING_VERSION_OBJ_TYPE, PI_COMMENT IN VARCHAR2
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_NAMING** (Mandatory). This is a parameter of table type CDR\_NAMING\_VERSION\_OBJ\_TYPE. Enter values to identify the Validation Check Batch that you want to check in. The following attributes are required:
  - COMPANY\_ID
  - OBJ\_ID
  - OBJ\_VER
- **PI\_COMMENT** (Optional). Enter the reason you are checking in the Validation Checks Batch.

## Update Validation Status of a Validation Check Batch

Use this API to update validation status of a Validation Check Batch.

### Name

DME\_PUB\_VALIDATION\_CHECK.UpdateValStatus

### Signature

```
PROCEDURE UPDATEVALSTATUS
( P_API_VERSION IN NUMBER, P_INIT_MSG_LIST IN VARCHAR2 DEFAULT
  CDR_PUB_DEF_CONSTANTS.G_FALSE, P_COMMIT IN VARCHAR2 DEFAULT
  CDR_PUB_DEF_CONSTANTS.G_FALSE, P_VALIDATION_LEVEL IN NUMBER DEFAULT
  CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL, X_RETURN_STATUS OUT NOCOPY
  VARCHAR2, X_MSG_COUNT OUT NOCOPY NUMBER, X_MSG_DATA OUT NOCOPY VARCHAR2,
  PIO_NAMING IN OUT NOCOPY CDR_NAMING_VERSION_OBJ_TYPE, PI_TESTMODE IN
  VARCHAR2 DEFAULT NULL
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_NAMING** (Mandatory). This is a parameter of table type `CDR_NAMING_VERSION_OBJ_TYPE`. Enter values to identify the Validation Checks Batch that you want to update validation status. All the attributes are required.
- **PI\_TESTMODE** (Optional). Leave blank.

## Upgrade a Validation Check Batch

Use this API to upgrade a validation check batch.

### Name

DME\_PUB\_VALIDATION\_CHECK.UpgradeValidationCheckBatch

### Signature

```
PROCEDURE UPGRADEVALIDATIONCHECKBATCH
(P_API_VERSION IN VARCHAR2, P_INIT_MSG_LIST IN VARCHAR2
DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE, P_COMMIT IN VARCHAR2 DEFAULT
  CDR_PUB_DEF_CONSTANTS.G_FALSE, P_VALIDATION_LEVEL IN NUMBER DEFAULT
  CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL, X_RETURN_STATUS OUT NOCOPY VARCHAR2,
  X_MSG_COUNT OUT NOCOPY NUMBER, X_MSG_DATA OUT NOCOPY VARCHAR2,
  PI_BATCHMAPCOMPID IN CDR_NAMINGS.COMPANY_ID%TYPE, PI_BATCHMAPOBJID IN
  CDR_NAMINGS.OBJ_ID%TYPE, PI_BATCHMAPOBJVER IN CDR_NAMING_VERSIONS.OBJ_VER%TYPE
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_BATCHMAPCOMPID** (Mandatory). Enter COMPANY\_ID of Validation Checks Batch Map.
- **PI\_BATCHMAPOBJID** (Mandatory). Enter OBJ\_ID of Validation Checks Batch Map.
- **PI\_BATCHMAPOBJVER** (Mandatory). Enter OBJ\_VER of Validation Checks Batch Map.

## Remove Validation Check(s)

Use this API to remove validation check(s).

### Name

DME\_PUB\_VALIDATION\_CHECK.RemoveValidationChecks

### Signature

```
PROCEDURE REMOVEVALIDATIONCHECKS  
(P_API_VERSION IN VARCHAR2, P_INIT_MSG_LIST IN VARCHAR2  
DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE, P_COMMIT IN VARCHAR2 DEFAULT  
CDR_PUB_DEF_CONSTANTS.G_FALSE, P_VALIDATION_LEVEL IN NUMBER DEFAULT  
CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL, X_RETURN_STATUS OUT NOCOPY VARCHAR2,  
X_MSG_COUNT OUT NOCOPY NUMBER, X_MSG_DATA OUT NOCOPY VARCHAR2, PIO_VC_COLL IN  
OUT NOCOPY CDR_NAMING_LIST_COLL  
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PIO\_VC\_COLL** (Mandatory). This is a parameter of collection type CDR\_NAMING\_LIST\_COLL that contains CDR Naming Version attributes. The attributes required for this API are:
  - COMPANY\_ID
  - OBJ\_ID
  - OBJ\_VER

## Enable or Disable Validation Checks

Use this API to enable or disable Validation Checks.

### Name

DME\_PUB\_VALIDATION\_CHECK.EnableDisableValidationChecks

### Signature

```
PROCEDURE ENABLEDISABLEVALIDATIONCHECKS  
(P_API_VERSION IN VARCHAR2, P_INIT_MSG_LIST IN VARCHAR2  
DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE, P_COMMIT IN VARCHAR2 DEFAULT  
CDR_PUB_DEF_CONSTANTS.G_FALSE, P_VALIDATION_LEVEL IN NUMBER DEFAULT  
CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL, X_RETURN_STATUS OUT NOCOPY VARCHAR2,  
X_MSG_COUNT OUT NOCOPY NUMBER, X_MSG_DATA OUT NOCOPY VARCHAR2, PI_VC_MAP_COLL
```



```
IN CDR_BASE_OBJ_COLL, PI_ENABLE_FLAG IN VARCHAR2,
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_VC\_MAP\_COLL** (Mandatory). This is a parameter of collection type `CDR_BASE_OBJ_COLL` that contains CDR base object attributes. The following attributes are required: `COMPANY_ID`, `OBJ_ID`, `OBJ_VER` for Validation Checks maps.
- **PI\_ENABLE\_FLAG** (Mandatory). Enter '\$YESNO\$YES' for enabling and '\$YESNO\$NO' for disabling.

## Reorder Validation Checks

Use this API to re-order validation checks.

### Name

DME\_PUB\_VALIDATION\_CHECK.ReorderValidationChecks

### Signature

```
PROCEDURE REORDERVALIDATIONCHECKS
(P_API_VERSION IN VARCHAR2, P_INIT_MSG_LIST IN VARCHAR2
DEFAULT CDR_PUB_DEF_CONSTANTS.G_FALSE, P_COMMIT IN VARCHAR2 DEFAULT
CDR_PUB_DEF_CONSTANTS.G_FALSE, P_VALIDATION_LEVEL IN NUMBER DEFAULT
CDR_PUB_DEF_CONSTANTS.G_VALID_LEVEL_FULL, X_RETURN_STATUS OUT NOCOPY VARCHAR2,
X_MSG_COUNT OUT NOCOPY NUMBER, X_MSG_DATA OUT NOCOPY VARCHAR2, PI_VC_MAP_COLL
IN OUT NOCOPY DME_XFORM_MAP_COLL
);
```

### Parameters

This API has standard parameters (see [Standard Parameters](#)) and the following parameters:

- **PI\_VC\_MAP\_COLL** (Mandatory). This is a parameter of collection type `DME_XFORM_MAP_COLL` which is a table of `DME_XFORM_MAP_OBJ_TYPE` type. The attributes required for this API from `DME_XFORM_MAP_OBJ_TYPE` are:
  - `COMPANY_ID`
  - `OBJ_ID`
  - `OBJ_VER`
  - `EXECUTION_ORDER_NUMBER`

# Part V

## Public Views

Part V contains the following chapter:

- [Public Views](#)

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## Public Views

Public views fetch data only if the `sys_context` setting is enabled by an Oracle DMW login through the API. Public views do not have explicit object-level security checking.

This section includes the public views for the following APIs:

- [Clinical Data Model Views](#)
- [Codelist Views](#)
- [Discrepancy Views](#)
- [Validation Checks Views](#)
- [Transformation Views](#)
- [Thesaurus Management System-Related Views](#)
- [Generic Business Area Views](#)
- [Security-Related Views](#)
- [Snapshot Label View](#)

## Clinical Data Model Views

This section contains public views related to clinical data models.

- [DME\\_DATAMODEL\\_V](#)
- [DME\\_TABLES\\_V](#)
- [DME\\_COLUMNS\\_V](#)
- [DME\\_CONSTRAINT\\_V](#)
- [DME\\_CONSTRAINT\\_COLS\\_V](#)
- [DME\\_LOV\\_VALUES\\_V](#)
- [DME\\_PUB\\_COL\\_DISP\\_CHARS\\_V](#)
- [DME\\_SDTM\\_COL\\_IDENTIFIERS\\_V](#)
- [DME\\_SDTM\\_TAB\\_IDENTIFIERS\\_V](#)

### DME\_DATAMODEL\_V

Use this view to see study and library clinical data model definitional details.

### DME\_TABLES\_V

Use this view to see clinical data model table definitional details.

## DME\_COLUMNS\_V

Use this view to see clinical data model table column definitional details.

## DME\_CONSTRAINT\_V

Use this view to see clinical data model table constraint definitional details.

## DME\_CONSTRAINT\_COLS\_V

Use this view to see clinical data model table constraint column definitional details.

## DME\_LOV\_VALUES\_V

Use this view to see clinical data model table check constraint lists of values.

## DME\_PUB\_COL\_DISP\_CHARS\_V

Public view with details needed to invoke the Modify Column Display Characters API.

## DME\_SDTM\_COL\_IDENTIFIERS\_V

Use this view to see SDTM column identifier definitional details.

## DME\_SDTM\_TAB\_IDENTIFIERS\_V

Use this view to see SDTM table identifier definitional details.

## Codelist Views

This section contains public views related to codelists.

- [DME\\_PUB\\_CODELIST\\_V](#)
- [DME\\_PUB\\_CODELIST\\_VALUES\\_V](#)
- [DME\\_PUB\\_XFM\\_FILTER\\_VALUES\\_V](#)

## DME\_PUB\_CODELIST\_V

Use this view to see codelist definitional details.

## DME\_PUB\_CODELIST\_VALUES\_V

Use this view to see codelists with their values.

## DME\_PUB\_XFM\_FILTER\_VALUES\_V

Use this view to see the codelist codes and values associated with a column in a DMW table that is used as a pivot column in a transformation.

## Discrepancy Views

This section contains public views related to discrepancies.

- [DME\\_PUB\\_DISCREPANCIES\\_V](#)
- [DME\\_PUB\\_DISC\\_SEND\\_ERRORS\\_V](#)

### DME\_PUB\_DISCREPANCIES\_V

Use this view to see discrepancy details, including the study, clinical data model, table, and column against whose data the discrepancy was raised.

### DME\_PUB\_DISC\_SEND\_ERRORS\_V

Use this view to help figure out why new or updated discrepancies created by validation checks or TMS that should be sent to InForm (or another integrated EDC system) failed to be sent. It contains a row for each Send failure.

## Validation Checks Views

This section contains public views related to validation checks.

- [DME\\_PUB\\_VC\\_BATCHES\\_V](#)
- [DME\\_PUB\\_VC\\_DETAILS\\_V](#)

### DME\_PUB\_VC\_BATCHES\_V

Use this view to see validation check batch definitional details. The following query returns the validation check batches that read from a given clinical data model:

```
Select * from DME_PUB_VC_BATCHES_V
where SRC_MODEL_COMPANY_ID = <company_id> and
SRC_MODEL_OBJ_ID = <obj> and
SRC_MODEL_OBJ_VER = <ver>;
```

The following parameters are required for operations related to a batch; for example, update, check in, uncheck, check out, install, and so on.

```
BATCH_MAP_COMPANY_ID
BATCH_MAP_OBJ_ID
BATCH_MAP_OBJ_VER
BATCH_MAP_NS_OBJ_ID
BATCH_MAP_NS_OBJ_VER
BATCH_MAP_OBJECT_VER_NUM
```

### DME\_PUB\_VC\_DETAILS\_V

Use this view to see validation check details. The following query returns the validation checks available for a given validation check batch.

```
Select * from DME_PUB_VC_DETAILS_V
where vc_company_id= <vc_batch_map_company_id>
and VC_BATCH_MAP_OBJ_ID = <vc_batch_map_id>
```

```
and <vc_batch_map_version>  
between VC_MAP_NS_START_OBJ_VER and VC_MAP_NS_END_OBJ_VER;
```

## Transformation Views

This section contains public views related to transformations.

- [DME\\_PUB\\_DF\\_XFORM\\_MAP\\_V](#)
- [DME\\_PUB\\_DF\\_MAP\\_ENTITY\\_V](#)
- [DME\\_XFM\\_FILTER\\_VALUES\\_V](#)
- [DME\\_PUB\\_XFM\\_SOURCE\\_TABLES\\_V](#)
- [DME\\_PUB\\_XFM\\_SOURCE\\_COLUMNS\\_V](#)
- [DME\\_PUB\\_XFM\\_TARGET\\_TABLES\\_V](#)
- [DME\\_PUB\\_XFM\\_TARGET\\_COLUMNS\\_V](#)
- [DME\\_PUB\\_XFM\\_AUTOMAPS\\_V](#)
- [DME\\_PUB\\_XFM\\_COL\\_AUTOMAPS\\_V](#)
- [DME\\_PUB\\_XFM\\_CUSTOM\\_PROGRAMS\\_V](#)
- [DME\\_PUB\\_XFM\\_EXPR\\_STDFUNC\\_V](#)
- [DME\\_PUB\\_XFM\\_EXPR\\_STATIC\\_PKGS\\_V](#)

### DME\_PUB\_DF\_XFORM\_MAP\_V

Use this view to see transformation map details.

### DME\_PUB\_DF\_MAP\_ENTITY\_V

Use this view to see map entity details.

### DME\_XFM\_FILTER\_VALUES\_V

Use this view to see the codelist codes and values associated with a column in a DMW table that is used as a pivot column in a transformation.

### DME\_PUB\_XFM\_SOURCE\_TABLES\_V

Use this view to see source database tables involved in table mappings.

### DME\_PUB\_XFM\_SOURCE\_COLUMNS\_V

Use this view to see details of columns from the source database tables, which are mapped to columns in target database table.

### DME\_PUB\_XFM\_TARGET\_TABLES\_V

Use this view to see details for target database tables involved in table mappings.

## DME\_PUB\_XFM\_TARGET\_COLUMNS\_V

Use this view to see details of the columns from the target database tables, to which one or more source table are mapped.

## DME\_PUB\_XFM\_AUTOMAPS\_V

Use this view to see details of the available auto maps at table level.

## DME\_PUB\_XFM\_COL\_AUTOMAPS\_V

Use this view to see details of available auto maps at column level.

## DME\_PUB\_XFM\_CUSTOM\_PROGRAMS\_V

Use this view to see the details of the available custom programs.

## DME\_PUB\_XFM\_EXPR\_STDFUNC\_V

Use this view to see supported standard Oracle Scalar functions and their respective function return types. You can refer to these functions while creating the expressions.

## DME\_PUB\_XFM\_EXPR\_STATIC\_PKGS\_V

Use this view to see the user defined LSH stored functions Scalar functions and their respective details. You can check available user-defined functions from this view and can use these functions while dealing with expressions.

## Thesaurus Management System-Related Views

This section contains public views related to TMS integration with Oracle DMW.

- [DME\\_PUB\\_TMS\\_STUDY\\_DOM\\_ELEMS\\_V](#)
- [DME\\_PUB\\_TMS\\_SETS\\_V](#)
- [DME\\_PUB\\_TMS\\_SET\\_COLS\\_V](#)

## DME\_PUB\_TMS\_STUDY\_DOM\_ELEMS\_V

Use this view to see TMS domains and the studies they are assigned to in DMW.

## DME\_PUB\_TMS\_SETS\_V

Use this view to see TMS Sets created to derive data from TMS to DMW.

## DME\_PUB\_TMS\_SET\_COLS\_V

Use this view to see TMS Set columns and the information they derive from TMS to the DMW table columns they are mapped to.

## Generic Business Area Views

This section contains public views related to generic business areas (for data visualizations).

- [CDR\\_PUB\\_GENERIC\\_BA\\_V](#)
- [CDR\\_PUB\\_GENERIC\\_BA\\_TABLES\\_V](#)

### CDR\_PUB\_GENERIC\_BA\_V

Use this naming view to retrieve all the Generic Visualization Business Area Instances on which a user has privileges to read data.

### CDR\_PUB\_GENERIC\_BA\_TABLES\_V

Use this view to retrieve the Table instance details for a given GV BAI.

## Security-Related Views

This section contains public views related to security.

- [CDR\\_PUB\\_UG\\_ROLES\\_V](#)
- [CDR\\_PUB\\_USER\\_UG\\_ROLES\\_V](#)
- [CDR\\_PUB\\_SUBTYPE\\_OPR\\_ROLES\\_V](#)
- [CDR\\_PUB\\_OBJ\\_UG\\_V](#)

### CDR\_PUB\_UG\_ROLES\_V

Use this view to see roles assigned to user groups.

### CDR\_PUB\_USER\_UG\_ROLES\_V

Use this view to see users assigned to roles in user groups.

### CDR\_PUB\_SUBTYPE\_OPR\_ROLES\_V

Use this view to see operations on object subtypes assigned to roles.

### CDR\_PUB\_OBJ\_UG\_V

Use this view to see user group assignments to objects.

## Snapshot Label View

This section contains a public views related to snapshot labels.

- [CDR\\_PUB\\_SNAPSHOT\\_LABEL\\_V](#)



## CDR\_PUB\_SNAPSHOT\_LABEL\_V

Use this view to see snapshot labels and the tables they are assigned to.