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DBMS_TSDP_MANAGE

The `DBMS_TSDP_MANAGE` package provides an interface to import and manage sensitive columns and sensitive column types in the database, and is used in conjunction with the DBMS_TSDP_PROTECT package with regard to transparent sensitive data protection (TSDP) policies.

`DBMS_TSDP_MANAGE` is available with the Enterprise Edition only.

This chapter contains the following topics:

- Overview
- Security Model
- Summary of DBMS_TSDP_MANAGE Subprograms

Related Topics

- DBMS_TSDP_PROTECT
  The `DBMS_TSDP_PROTECT` package provides an interface to configure transparent sensitive data protection (TSDP) policies in conjunction with the DBMS_TSDP_MANAGE package.

> ✎ **See Also:**
>
> *Oracle Database Security Guide*

DBMS_TSDP_MANAGE Overview

The `DBMS_TSDP_MANAGE` package lets you manage sensitive columns and sensitive types in the Oracle database.

The identified sensitive columns are classified based on the sensitive types. By Using the DBMS_TSDP_PROTECT package to create a policy that protects data for a given class based on a column type rather than the data itself, you can then manage security for these types in a uniform fashion and modify the settings to accommodate changing compliance regulations.

You also can export the policies to other databases, when you perform a full export using Data Pump. You cannot export the policy itself, but an export of the database will include the TSDP policies.

DBMS_TSDP_MANAGE Security Model

All procedures are executed with invoker's rights. The `DBMS_TSDP_MANAGE` package is owned by `SYS`.

The `EXECUTE` privilege on this package should be granted as appropriate. Typically, an application database administrator should be granted the `EXECUTE` privilege for this package, while the DBMS_TSDP_PROTECT package would be governed by a security administrator.

Summary of DBMS_TSDP_MANAGE Subprograms

This table lists the `DBMS_TSDP_MANAGE` subprograms and briefly describes them.

Table 207-1   DBMS_TSDP_MANAGE Package Subprograms

Subprogram	Description
ADD_SENSITIVE_COLUMN Procedure	Adds a column to the sensitive column list
ADD_SENSITIVE_TYPE Procedure	Creates and adds a sensitive column type to the list of sensitive column types in the database
ALTER_SENSITIVE_COLUMN Procedure	Alters the sensitive type and/or the comment of a column in the sensitive column list.
DROP_SENSITIVE_COLUMN Procedure	Removes columns from the sensitive column list
DROP_SENSITIVE_TYPE Procedure	Drops a sensitive column type from the list sensitive column types in the database
DROP_SENSITIVE_TYPE_SOURCE Procedure	Drops sensitive column types corresponding to a source from the list sensitive column types in the database
IMPORT_DISCOVERY_RESULT Procedure	Imports sensitive columns from an external source. This can be an Application Data Model (ADM) from an Oracle Enterprise Manager Cloud Control instance
IMPORT_SENSITIVE_TYPES Procedure	Imports a list of sensitive column types from a source
REMOVE_DISCOVERY_RESULT Procedure	Removes sensitive columns corresponding to an Application Data Model (ADM) from an Oracle Enterprise Manager Cloud Control instance.

ADD_SENSITIVE_COLUMN Procedure

This procedure adds a column to the sensitive column list.

Syntax

```
DBMS_TSDP_MANAGE.ADD_SENSITIVE_COLUMN (
    schema_name        IN VARCHAR2,
    table_name         IN VARCHAR2,
    column_name        IN VARCHAR2,
    sensitive_type     IN VARCHAR2,
    user_comment       IN VARCHAR2 DEFAULT NULL);
```

Parameters

Table 207-2   *ADD_SENSITIVE_COLUMN Procedure Parameters*

Parameter	Description
schema_name	Schema to which the column belongs
table_name	Table containing the column
column_name	Sensitive column name
sensitive_type	Identifier of the sensitive column type

Table 207-2   (Cont.) *ADD_SENSITIVE_COLUMN Procedure Parameters*

Parameter	Description
user_comment	User comment regarding the sensitive column

Examples

Add a column SAL in SCOTT.EMP:

```
DBMS_TSDP_MANAGE.ADD_SENSITIVE_COLUMN (
  schema_name      => 'SCOTT',
  table_name       => 'EMP',
  column_name      => 'SAL',
  sensitive_type   => 'SALARY_TYPE',
  user_comment     => 'Salary column');
```

ALTER_SENSITIVE_COLUMN Procedure

This procedure alters the Sensitive Type and/or the Comment of a Column in the sensitive column list.

Syntax

```
DBMS_TSDP_MANAGE.ALTER_SENSITIVE_COLUMN (
  schema_name      IN VARCHAR2,
  table_name       IN VARCAHR2,
  column_name      IN VARCAHR2,
  sensitive_type   IN VARCAHR2,
  user_comment     IN VARCAHR2 DEFAULT NULL);
```

Parameters

Table 207-3   *ALTER_SENSITIVE_COLUMN Procedure Parameters*

Parameter	Description
schema_name	Schema to which the column belongs
table_name	Table containing the column
column_name	Sensitive column name
sensitive_type	Identifier of the sensitive column type
user_comment	User comment regarding the sensitive column

Examples

Alter the column SAL in SCOTT.EMP that is listed in the sensitive column list:

```
DBMS_TSDP_MANAGE.ALTER_SENSITIVE_COLUMN (
  schema_name      => 'SCOTT',
  table_name       => 'EMP',
  column_name      => 'SAL',
  sensitive_type   => 'FINANCE_Type',
  user_comment     => 'Finance Type. Earlier categorized as Salary Type');
```

ADD_SENSITIVE_TYPE Procedure

This procedure creates and adds a sensitive column type to the list sensitive column types in the database.

Syntax

```
DBMS_TSDP_MANAGE.ADD_SENSITIVE_TYPE (
   sensitive_type     IN  VARCHAR2,
   user_comment       IN  VARCAHR2 DEFAULT NULL);
```

Parameters

Table 207-4   ADD_SENSITIVE_TYPE Procedure Parameters

Parameter	Description
sensitive_type	Name of the sensitive column type
user_comment	User comment regarding the sensitive column

Examples

Add a sensitive column type called SALARY_TYPE that is intended to be associated with columns containing salary data:

```
DBMS_TSDP_MANAGE.ADD_SENSITIVE_TYPE (
   sensitive_type     => 'SALARY_TYPE',
   user_comment       => 'Salary data');
```

DROP_SENSITIVE_COLUMN Procedure

This procedure removes columns from the sensitive column list.

Syntax

```
DBMS_TSDP_MANAGE.DROP_SENSITIVE_COLUMN (
   schema_name        IN VARCHAR2 DEFAULT '%',
   table_name         IN VARCAHR2 DEFAULT '%',
   column_name        IN VARCAHR2 DEFAULT '%');
```

Parameters

Table 207-5   DROP_SENSITIVE_COLUMN Procedure Parameters

Parameter	Description
schema_name	Schema to which the column belongs
table_name	Table containing the column
column_name	Sensitive column name

Examples

Remove column SAL in SCOTT.EMP from the sensitive column list:

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```
DBMS_TSDP_MANAGE.DROP_SENSITIVE_COLUMN (
   schema_name         => 'SCOTT',
   table_name          => 'EMP',
   column_name         => 'SAL');
```

DROP_SENSITIVE_TYPE Procedure

This procedure drops a sensitive column type from the list sensitive column types in the database.

Syntax

```
DBMS_TSDP_MANAGE.DROP_SENSITIVE_TYPE (
   sensitive_type    IN VARCHAR2);
```

Parameters

Table 207-6   *DROP_SENSITIVE_TYPE Procedure Parameters*

Parameter	Description
sensitive_type	Name of the sensitive column type to be dropped

Examples

To drop SALARY_TYPE:

```
DBMS_TSDP_MANAGE.DROP_SENSITIVE_TYPE (
   sensitive_type    => 'SALARY_TYPE');
```

DROP_SENSITIVE_TYPE_SOURCE Procedure

This procedure drops sensitive column types corresponding to a source from the list sensitive column types in the database.

Syntax

```
DBMS_TSDP_MANAGE.DROP_SENSITIVE_TYPE_SOURCE (
   source      IN VARCHAR2);
```

Parameters

Table 207-7   *DROP_SENSITIVE_TYPE_SOURCE Procedure Parameters*

Parameter	Description
source	Name of the source

Examples

To drop all sensitive column types corresponding to an Application Data Model (ADM) from an Oracle Enterprise Manager Cloud Control instance, ADM_DEMO:

```
DBMS_TSDP_MANAGE.DROP_SENSITIVE_TYPE_SOURCE (
   source      =>  'ADM_DEMO');
```

IMPORT_DISCOVERY_RESULT Procedure

This procedure can be used to import sensitive columns, along with the associated sensitive types, from an external source. The external source can be an Application Data Model (ADM) instance from Oracle Enterprise Manager Cloud Control.

Syntax

```
DBMS_TSDP_MANAGE.IMPORT_DISCOVERY_RESULT (
  discovery_result        IN  CLOB,
  discovery_source        IN  VARCHAR2,
  force                   IN  FORCE DEFAULT FALSE);

DBMS_TSDP_MANAGE.IMPORT_DISCOVERY_RESULT (
  discovery_result        IN  XMLTYPE,
  discovery_source        IN  VARCHAR2,
  force                   IN  FORCE DEFAULT FALSE);
```

Parameters

Table 207-8   *IMPORT_DISCOVERY_RESULT Procedure Parameters*

Parameter	Description
discovery_result	List of sensitive columns, along with the optional list of (the definitions of) the sensitive column types in XML format (possibly as a CLOB).
discovery_source	Source of the import. The discovery_sourcename identifies the list of imported sensitive columns. In case of ADM, this should be the ADM name.
force	Specifies if the discovery result should be imported or not when the discovery result contains columns sensitive columns that are already identified as sensitive by another source. • FALSE (default) - the discovery result will not be imported in case of conflicting columns. None of the columns and the sensitive types are imported. • TRUE - the discovery result is imported and the attributes of the conflicting columns is set based on the incoming discovery result

Examples

Import the list of sensitive columns of ADM instance, ADM_Demo:

```
DBMS_TSDP_MANAGE.IMPORT_DISCOVERY_RESULT (
  discovery_results        =>  xml_adm_result,
  discovery_source         => 'ADM_Demo');
```

IMPORT_SENSITIVE_TYPES Procedure

This procedure imports a list of sensitive column types from a source.

Syntax

```
DBMS_TSDP_MANAGE.IMPORT_SENSITIVE_TYPES (
  sensitive_types       IN CLOB,
  source                IN VARCHAR2);
```

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```
DBMS_TSDP_MANAGE.IMPORT_SENSITIVE_TYPES (
  sensitive_types        IN XMLTYPE,
  source                 IN VARCHAR2);
```

Parameters

Table 207-9   *IMPORT_SENSITIVE_TYPES Procedure Parameters*

Parameter	Description
sensitive_types	List of sensitive column types in XML Format (possibly as a CLOB)
source	Source of the import. The source identifies the list of imported sensitive column types. In case of Application Data Model (ADM) from an Oracle Enterprise Manager Cloud Control instance, this should be the ADM name.

Examples

Import the list of sensitive column types of ADM instance, ADM_Demo:

```
DBMS_TSDP_MANAGE.IMPORT_SENSITIVE_TYPES (
  sensitive_types        =>  xml_adm_result,
  source                 => 'ADM_Demo');
```

REMOVE_DISCOVERY_RESULT Procedure

This procedure removes sensitive columns corresponding to an Application Data Model (ADM) from an Oracle Enterprise Manager Cloud Control instance.

Syntax

```
DBMS_TSDP_MANAGE.REMOVE_DISCOVERY_RESULT (
  discovery_source     IN  VARCHAR2);
```

Parameters

Table 207-10   *REMOVE_DISCOVERY_RESULT Procedure Parameters*

Parameter	Description
discovery_source	Source of the import. In case of ADM, this should be the ADM name, the results of which is to be removed.

Examples

Remove the sensitive columns corresponding to ADM instance, ADM_Demo:

```
DBMS_TSDP_MANAGE.REMOVE_DISCOVERY_RESULT (
  discovery_source    => 'ADM_Demo');
```