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DBMS_OPTIM_BUNDLE

The `DBMS_OPTIM_BUNDLE` package is used to manage the installed but disabled module bug fixes which cause an execution plan change.

This chapter contains the following topics:

- DBMS_OPTIM_BUNDLE Security Model
- Summary of DBMS_OPTIM_BUNDLE Subprograms

DBMS_OPTIM_BUNDLE Security Model

The `DBMS_OPTIM_BUNDLE` package runs with the privileges of the user starting the package. DBA role is required to run this package.

Summary of DBMS_OPTIM_BUNDLE Subprograms

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

Table 140-1   DBMS_OPTIM_BUNDLE Package Subprograms

Subprogram	Description
ENABLE_OPTIM_FIXES Procedure	This procedure enables or disables fixes with plan changes up to the latest installed release update.
GETBUGSFORBUNDLE Procedure	This procedure displays execution plan bug fixes applied as part of release updates.
LISTBUNDLESWITHFCFIXES Procedure	This procedure lists the release update names and release update IDs of release updates with fix control fixes.
SET_FIX_CONTROLS Procedure	This procedure enables or disables a list of fixes with `_fix_controls`.

ENABLE_OPTIM_FIXES Procedure

The `DBMS_OPTIM_BUNDLE` subprogram, `ENABLE_OPTIM_FIXES` procedure enables or disables fixes with plan changes up to the latest installed release update.

Syntax

```
DBMS_OPTIM_BUNDLE.ENABLE_OPTIM_FIXES (
   action                       IN  VARCHAR2  DEFAULT 'OFF',
   scope                        IN  VARCHAR2  DEFAULT 'MEMORY',
   current_setting_precedence   IN  VARCHAR2  DEFAULT 'YES');
```

Parameters

Table 140-2   ENABLE_OPTIM_FIXES Procedure Parameters

Parameter	Description
`action`	Enables or disables all of the installed but disabled execution plan bug fixes up to and including the current release update.
	The possible values are:
	• `ON`-enables the bundle fixes.
	• `OFF`-disables bundle fixes by setting the `_fix_controls` to the value `0`. It will not remove `_fix_control` entries from `SPFILE`.
	The default value is `OFF`.
`scope`	The scope of enabling or disabling the installed but disabled execution plan bug fixes.
	The possible values are:
	• `MEMORY`
	• `SPFILE`
	• `BOTH`
	• `INITORA`
	`MEMORY`/`SPFILE`/`BOTH`: These three input values enables or disables the fixes in a given scope.
	`INITORA`: This input value will just display manual command syntax that the user needs to manually enter into the database's `init.ora` file in order to enable or disable execution plan bug fixes. When using `SCOPE=INITORA` in this way, the `current_setting_precedence` field has no significance.
`current_setting_prec edence`	Sets the precedence of environment settings or release update settings, where these settings are in conflict.
	The possible values are:
	• `YES`-the current environment settings take precedence in case of conflict
	• `NO`-release update settings take precedence in case of conflict
	The default value is `YES`.

Examples

To enable all of the installed but disabled execution plan bug fixes up to and including those from the current release update:

```
SQL> execute dbms_optim_bundle.enable_optim_fixes('ON','BOTH', 'YES');
```

This instruction would enable all fixes, in both `MEMORY` and in the persistant `SPFILE`, with a precedence of current setting.

Exceptions

The following exceptions are raised by the `ENABLE_OPTIM_FIXES Procedure`:

• `ORA-20001`: Bad input value

• `ORA-20002`: Internal or other errors

GETBUGSFORBUNDLE Procedure

The `DBMS_OPTIM_BUNDLE` subprogram, `GETBUGSFORBUNDLE` procedure displays execution plan bug fixes applied as part of release updates.

Syntax

```
DBMS_OPTIM_BUNDLE.GETBUGSFORBUNDLE (
   bundleid            IN   NUMBER   DEFAULT NULL);
```

Parameters

Table 140-3   GETBUGSFORBUNDLE Procedure Parameters

Parameter	Description
bundleid	The release update ID.
	If NULL, the execution plan bug fixes from the latest bundle is displayed. If a bundle ID is specified, then the execution plan bug fixes up to the specified bundle is displayed.
	The default value is NULL.

Examples

To view a listing of the installed but disabled execution plan bug fixes from the most recent release update applied:

```
SQL> set serveroutput on;
SQL> execute dbms_optim_bundle.getbugsforbundle;

19.8.0.0.200714DBRU:
   Bug: 29304314, fix_controls: 29304314
   Bug: 29930457, fix_controls: 29930457
```

The above example lists the installed but disabled execution plan bug fixes from the `19.8.0.0.200714DBRU` release.

To view a listing of the installed but disabled execution plan bug fixes from release updates up to and including release update 171017:

```
SQL> execute dbms_optim_bundle.getbugsforbundle(171017);
```

Exceptions

The following exceptions are raised by the `GETBUGSFORBUNDLE Procedure`:

• `ORA-20001`: Bad input value

• `ORA-20002`: Internal or other errors

LISTBUNDLESWITHFCFIXES Procedure

The `DBMS_OPTIM_BUNDLE` subprogram, `LISTBUNDLESWITHFCFIXES` procedure lists the release update names and release update IDs of release updates with fix control fixes.

Syntax

```
DBMS_OPTIM_BUNDLE.LISTBUNDLESWITHFCFIXES ( );
```

Examples

To view the release update names and release update IDs:

```
SQL> set serveroutput on
SQL> exec dbms_optim_bundle.listBundlesWithFCFixes;
   bundleId: 190719, bundleName: 19.4.0.0.190719DBRU
   bundleId: 191015, bundleName: 19.5.0.0.191015DBRU
   bundleId: 200414, bundleName: 19.7.0.0.200414DBRU
   bundleId: 200714, bundleName: 19.8.0.0.200714DBRU
   bundleId: 201020, bundleName: 19.9.0.0.201020DBRU
   bundleId: 210119, bundleName: 19.10.0.0.210119DBRU
   bundleId: 210420, bundleName: 19.11.0.0.210420DBRU
   bundleId: 210720, bundleName: 19.12.0.0.210720DBRU


   PL/SQL procedure successfully completed.
```

Exceptions

The following exception is raised by the LISTBUNDLESWITHFCFIXES Procedure:

ORA-20002: Internal or other errors

SET_FIX_CONTROLS Procedure

The DBMS_OPTIM_BUNDLE subprogram, SET_FIX_CONTROLS procedure enables or disables a list of fixes with _fix_controls. The fixes can be present in a base version, in a release update, or in a one-off release. This procedure appends the new fix control settings to the existing ones.

Syntax

```
DBMS_OPTIM_BUNDLE.SET_FIX_CONTROLS (
   fix_control_string            IN  VARCHAR2,
   sid                           IN  VARCHAR2  DEFAULT '*',
   scope                         IN  VARCHAR2  DEFAULT 'MEMORY',
   current_setting_precedence    IN  VARCHAR2  DEFAULT 'YES');
```

Parameters

Table 140-4   SET_FIX_CONTROLS Procedure Parameters

Parameter	Description
fix_control_string	Comma separated list of fix_control:value pair. For example: '13329748:0,20355502:4, 27060221:1'
sid	The name of the instance on which fix_control setting need to be made.
	Acceptable values are * or valid instance_name from sys.gv$instance. The default value is *.
scope	The scope of enabling or disabling the installed but disabled execution plan bug fixes.
	The possible values are:
	• MEMORY
	• SPFILE
	• BOTH
	The default value is MEMORY.

Table 140-4   (Cont.) SET_FIX_CONTROLS Procedure Parameters

Parameter	Description
`current_setting_prec edence`	Precedence of current setting over user supplied setting.
	The possible values are:
	• `YES`–the current environment settings take precedence in case of conflict
	• `NO`–input settings take precedence in case of conflict
	The default value is `YES`.

Exceptions

The following exceptions are raised by the `SET_FIX_CONTROLS Procedure`:

• `ORA-20001`: Bad input value

• `ORA-20002`: Internal or other errors