

DBMS_GOLDENGATE_AUTH

The `DBMS_GOLDENGATE_AUTH` package provides subprograms for granting privileges to and revoking privileges from GoldenGate administrators.

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DBMS_GOLDENGATE_AUTH Overview

This package provides subprograms for granting privileges to GoldenGate administrators and revoking privileges from GoldenGate administrators. A GoldenGate administrator manages an integrated GoldenGate and XStream Out configuration.

GoldenGate administrators can be used in a multitenant container database (CDB). A CDB is an Oracle database that includes zero, one, or many user-created pluggable databases (PDBs).



See Also:

- *Oracle Database XStream Guide*
- *Oracle Database Concepts* for more information about CDBs and PDBs

DBMS_GOLDENGATE_AUTH Security Model

Security on this package can be controlled by granting `EXECUTE` on this package to selected users or roles, or by granting `EXECUTE_CATALOG_ROLE` to selected users or roles.

The user executing the subprograms in the `DBMS_GOLDENGATE_AUTH` package must have `SYSDBA` administrative privilege, and the user must exercise the privilege using `AS SYSDBA` at connect time.

If subprograms in the package are run from within a stored procedure, then the user who runs the subprograms must be granted `EXECUTE` privilege on the package directly. It cannot be granted through a role.

To ensure that the user who runs the subprograms in this package has the necessary privileges, connect as an administrative user who can create users, grant privileges, and create tablespaces when using this package.

Summary of DBMS_GOLDENGATE_AUTH Subprograms

The `DBMS_XSTREAM_AUTH` package includes the `GRANT_ADMIN_PRIVILEGE` procedure and `REVOKE_ADMIN_PRIVILEGE` procedure subprograms.

Table 94-1 DBMS_GOLDENGATE_AUTH Package Subprograms

Subprogram	Description
GRANT_ADMIN_PRIVILEGE Procedure	Either grants the privileges needed by a user to be a GoldenGate administrator directly, or generates a script that grants these privileges
REVOKE_ADMIN_PRIVILEGE Procedure	Either revokes GoldenGate administrator privileges from a user directly, or generates a script that revokes these privileges



Note:

All subprograms commit unless specified otherwise.

GRANT_ADMIN_PRIVILEGE Procedure

This procedure grants the privileges needed by a user to be a GoldenGate administrator.

Syntax

```
DBMS_GOLDENGATE_AUTH.GRANT_ADMIN_PRIVILEGE (
  grantee           IN  VARCHAR2,
  privilege_type    IN  VARCHAR2  DEFAULT '*',
  grant_select_privileges IN  BOOLEAN  DEFAULT TRUE,
  do_grants         IN  BOOLEAN  DEFAULT TRUE,
  file_name         IN  VARCHAR2  DEFAULT NULL,
  directory_name    IN  VARCHAR2  DEFAULT NULL,
  grant_optional_privileges IN  VARCHAR2  DEFAULT NULL,
  container         IN  VARCHAR2  DEFAULT 'CURRENT');
```

Parameters

Table 94-2 GRANT_ADMIN_PRIVILEGE Procedure Parameters

Parameter	Description
grantee	The user to whom privileges are granted
privilege_type	Specify one of the following values: <ul style="list-style-type: none"> CAPTURE Specifying CAPTURE grants the minimum privileges required by the user to administer Oracle GoldenGate integrated extract. APPLY Specifying APPLY grants the minimum privileges required by the user to administer Oracle GoldenGate integrated replicat. * Specifying * grants the minimum privileges required by the user to administer Oracle GoldenGate integrated extract and Oracle GoldenGate integrated replicat.

Table 94-2 (Cont.) GRANT_ADMIN_PRIVILEGE Procedure Parameters

Parameter	Description
grant_select_privileges	<p>If TRUE, then the procedure grants a set of privileges, including SELECT_CATALOG_ROLE, to the user. This setting is recommended for GoldenGate administrators.</p> <p>If FALSE, then the procedure does not grant the set of privileges to the user.</p> <p>SELECT_CATALOG_ROLE enables the user to select from the data dictionary.</p>
do_grants	<p>If TRUE, then the procedure grants the privileges to the specified grantee directly, and adds the grantee to the DBA_GOLDENGATE_PRIVILEGES data dictionary view. If the user already has an entry in this data dictionary view, then the procedure does not make another entry, and no error is raised. If TRUE and any of the grant statements fails, then the procedure raises an error.</p> <p>If FALSE, then the procedure does not grant the privileges to the specified grantee directly, and does not add the grantee to the DBA_GOLDENGATE_PRIVILEGES data dictionary view. You specify FALSE when the procedure is generating a file that you will run later. If you specify FALSE and either the file_name or directory_name parameter is NULL, then the procedure raises an error.</p> <p>Note: It is recommended that do_grants be set to TRUE because many APIs check for the presence of a user in the DBA_GOLDENGATE_PRIVILEGES view, which will not be populated if do_grants is set to FALSE.</p>
file_name	<p>The name of the file generated by the procedure. The file contains all of the statements that grant the privileges. If a file with the specified file name exists in the specified directory name, then the grant statements are appended to the existing file.</p> <p>If NULL, then the procedure does not generate a file.</p>
directory_name	<p>The directory into which the generated file is placed. The specified directory must be a directory object created using the SQL statement CREATE DIRECTORY. If you specify a directory, then the user who invokes the procedure must have the WRITE privilege on the directory object.</p> <p>If the file_name parameter is NULL, then this parameter is ignored, and the procedure does not generate a file.</p> <p>If NULL and the file_name parameter is non-NULL, then the procedure raises an error.</p>
grant_optional_privileges	<p>A comma-separated list of optional privileges to grant to the grantee. You can specify the following roles and privileges:</p> <ul style="list-style-type: none"> • XDBADMIN • DV_XSTREAM_ADMIN • DV_GOLDENGATE_ADMIN • EXEMPT_ACCESS_POLICY • EXEMPT_REDACTION_POLICY

Table 94-2 (Cont.) GRANT_ADMIN_PRIVILEGE Procedure Parameters

Parameter	Description
container	<p>If CURRENT, then grants privileges to the grantee only in the container where the procedure is invoked. CURRENT can be specified while connected to the root or to a PDB.</p> <p>If ALL, then grants privileges to the grantee in all containers in the CDB and all PDBs created after the procedure is invoked. To specify ALL, the procedure must be invoked in the root by a common user.</p> <p>If a container name, then grants privileges to the grantee only in the specified container. To specify root, use CDB\$ROOT while connected to the root. To specify a PDB, the procedure must be invoked in the root.</p> <p>Note: This parameter only applies to CDBs.</p>

Usage Notes

The user who runs the procedure must be an administrative user who can grant privileges to other users.

Specifically, the procedure grants the following privileges to the specified user:

- The **RESTRICTED SESSION** system privilege
- **EXECUTE** on the following packages:
 - **DBMS_APPLY_ADM**
 - **DBMS_AQ**
 - **DBMS_AQADM**
 - **DBMS_AQIN**
 - **DBMS_AQELM**
 - **DBMS_CAPTURE_ADM**
 - **DBMS_FLASHBACK**
 - **DBMS_LOCK**
 - **DBMS_PROPAGATION_ADM**
 - **DBMS_RULE_ADM**
 - **DBMS_TRANSFORM**
 - **DBMS_XSTREAM_ADM**
- Privileges to enqueue messages into and dequeue messages from any queue
- Privileges to manage any queue
- Privileges to create, alter, and execute any of the following types of objects in the user's own schema and in other schemas:
 - Evaluation contexts
 - Rule sets
 - Rules

In addition, the grantee can grant these privileges to other users.

- `SELECT_CATALOG_ROLE`
- `SELECT` or `READ` privilege on data dictionary views related to GoldenGate and Oracle Replication
- The ability to allow a remote GoldenGate administrator to perform administrative actions through a database link by connecting to the grantee

This ability is enabled by running the `GRANT_REMOTE_ADMIN_ACCESS` procedure in this package.



Note:

This procedure grants only the privileges necessary to configure and administer a GoldenGate environment. You can grant additional privileges to the grantee if necessary.

REVOKE_ADMIN_PRIVILEGE Procedure

This procedure revokes GoldenGate administrator privileges from a user.

Syntax

```
DBMS_GOLDENGATE_AUTH.REVOKE_ADMIN_PRIVILEGE(  
  grantee                IN  VARCHAR2,  
  privilege_type          IN  VARCHAR2  DEFAULT '*',  
  revoke_select_privileges IN  BOOLEAN   DEFAULT FALSE,  
  do_revokes              IN  BOOLEAN   DEFAULT TRUE,  
  file_name               IN  VARCHAR2  DEFAULT NULL,  
  directory_name          IN  VARCHAR2  DEFAULT NULL,  
  revoke_optional_privileges IN VARCHAR2  DEFAULT NULL,  
  container               IN  VARCHAR2  DEFAULT 'CURRENT');
```

Parameters

Table 94-3 *REVOKE_ADMIN_PRIVILEGE Procedure Parameters*

Parameter	Description
grantee	The user from whom privileges are revoked
privilege_type	Specify one of the following values: <ul style="list-style-type: none">• <code>CAPTURE</code> Specifying <code>CAPTURE</code> revokes the minimum privileges required by the user to administer Oracle GoldenGate integrated extract.• <code>APPLY</code> Specifying <code>APPLY</code> revokes the minimum privileges required by the user to administer Oracle GoldenGate integrated replicat.• <code>*</code> Specifying <code>*</code> revokes the minimum privileges required by the user to administer Oracle GoldenGate integrated extract and Oracle GoldenGate integrated replicat.

Table 94-3 (Cont.) REVOKE_ADMIN_PRIVILEGE Procedure Parameters

Parameter	Description
revoke_select_privileges	<p>If TRUE, then the procedure revokes SELECT_CATALOG_ROLE from the user.</p> <p>If FALSE, then the procedure does not revoke SELECT_CATALOG_ROLE to the user.</p> <p>SELECT_CATALOG_ROLE enables the user to select from the data dictionary.</p>
do_revokes	<p>If TRUE, then the procedure revokes the privileges from the specified user directly, and removes the user from the DBA_XSTREAM_ADMINISTRATOR data dictionary view. If the user does not have a record in this data dictionary view, then the procedure does not remove a record from the view, and no error is raised. If TRUE and any of the revoke statements fails, then the procedure raises an error. A revoke statement fails if the user is not granted the privilege that is being revoked.</p> <p>If FALSE, then the procedure does not revoke the privileges from the specified user directly, and does not remove the user from the DBA_XSTREAM_ADMINISTRATOR data dictionary view.</p> <p>You specify FALSE when the procedure is generating a file that you will run later. If you specify FALSE and either the file_name or directory_name parameter is NULL, then the procedure does not raise an error.</p>
file_name	<p>The name of the file generated by this procedure. The file contains all of the statements that revoke the privileges. If a file with the specified file name exists in the specified directory name, then the revoke statements are appended to the existing file.</p> <p>If NULL, then the procedure does not generate a file.</p>
directory_name	<p>The directory into which the generated file is placed. The specified directory must be a directory object created using the SQL statement CREATE DIRECTORY. If you specify a directory, then the user who invokes the procedure must have the WRITE privilege on the directory object.</p> <p>If the file_name parameter is NULL, then this parameter is ignored, and the procedure does not generate a file.</p> <p>If NULL and the file_name parameter is non-NULL, then the procedure raises an error.</p>
revoke_optional_privileges	<p>A comma-separated list of optional privileges to revoke from the grantee, such as the DV_XSTREAM_ADMIN and DV_GOLDENGATE_ADMIN privileges</p>
container	<p>If CURRENT, then revokes privileges from the grantee only in the container where the procedure is invoked. CURRENT can be specified while connected to the root or to a PDB.</p> <p>If ALL, then revokes privileges from the grantee in all containers in the CDB. To specify ALL, the procedure must be invoked in the root.</p> <p>If a container name, then revokes privileges from the grantee only in the specified container. To specify root, use CDB\$ROOT while connected to the root. To specify a PDB, the procedure must be invoked in the root.</p> <p>Note: This parameter only applies to CDBs.</p>

Usage Notes

The user who runs this procedure must be an administrative user who can revoke privileges from other users. Specifically, this procedure revokes the privileges granted by running the GRANT_ADMIN_PRIVILEGE procedure in this package.