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DBMS_PROCESS

The `DBMS_PROCESS` package provides an interface to manage the prespawned servers.

This chapter contains the following topics:

- DBMS_PROCESS Overview
- DBMS_PROCESS Security Model
- Summary of DBMS_PROCESS Subprograms

DBMS_PROCESS Overview

By default, Oracle Database can prespawn foreground processes to improve the performance of client connections.

A prespawned process refers to a process that has been spawned but does not have a session yet. When a user connects to the database or a service process is needed, the process performs further initialization as needed.

To manage foreground processes, use the `DBMS_PROCESS` package. The procedures in this package configure the number of foreground processes for a connection pool, start a connection pool, and stop a connection pool.

> ✎ **See Also:**
>
> - *Oracle Database Administrator's Guide* for a detailed description of managing a pre-created processes
> - *Oracle Database Reference* for information about the `USE_DEDICATED_BROKER` parameter, which determines how dedicated servers are spawned. `TRUE` enables the listener to send the connection to a dedicated connection broker that spawns the dedicated server. `FALSE` sets the listener to spawn a dedicated server directly.

DBMS_PROCESS Security Model

You must be granted the `SYSDBA` administrative privilege to use the `DBMS_PROCESS` package.

Summary of DBMS_PROCESS Subprograms

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

Table 154-1   DBMS_PROCESS Package Subprograms

Subprogram	Description
CONFIGURE_POOL Procedure	Configures the minimum number of prespawned processes, the number of prespawned processes in a batch, and the initial number of pre-spawned processes for a foreground connection pool
START_POOL Procedure	Starts a prespawned foreground process pool.
STOP_POOL Procediure	Stops a prespawned foreground process pool.

CONFIGURE_POOL Procedure

This procedure configures the minimum number of prespawned processes, the number of prespawned processes in a batch, and the initial number of pre-spawned processes for a foreground connection pool.

Syntax

```
DBMS_PROCESS.CONFIGURE_POOL(
    pool_name       IN   VARCHAR2 DEFAULT "SYS_DEFAULT_FOREGROUND_POOL",
    min_count       IN   NUMBER DEFAULT 10,
    batch_count     IN   NUMBER DEFAULT 20,
    init_count      IN   NUMBER DEFAULT 0);
```

Parameters

Table 154-2   CONFIGURE_POOL Procedure Parameters

Parameter	Description
pool_name	Name of the foreground pool
min_count	Count after which a batch of prespawned processes will be spawned in the pool (default 10; maximum number of processes 64,000)
batch_count	Batch of prespawned servers to be spawned in the pool (default 20). The total value of the `min_count` and `batch_count` values cannot exceed the `PROCESSES` parameter value.
init_count	Set of prespawned servers to be spawned in startup, or before a storm of connections, spawned in batches (default 0). Do not exceed the `PROCESSES` parameter value.

Exceptions

Table 154-3   CONFIGURE_POOL Procedure Exceptions

Error	Description
ORA-456	Prespawn not enabled
ORA-457	Prespawn pool not found
ORA-458	Prespawn pool already started
ORA-459	Prespawn pool not started
ORA-460	Process pool invalid configuration value(s)

Usage Notes

- To find information about foreground processes, query the `V$PROCESS_POOL` dynamic view.

Example

```
BEGIN
  DBMS_PROCESS.CONFIGURE_POOL (
   pool_name   => 'hrdb_pool',
   min_count   => 40,
   batch_count => 20,
   init_count  => 10);
END;
/
```

START_POOL Procedure

This procedure starts a prespawned foreground process pool.

Syntax

```
DBMS_PROCESS.START_POOL(
   pool_name      IN  VARCHAR2 DEFAULT "SYS_DEFAULT_FOREGROUND_POOL");
```

Parameters

Table 154-4   START_POOL Procedure Parameters

Parameter	Description
pool_name	Name of prespawned foreground process pool. To find existing pools, query the `V$PROCESS_POOL` dynamic view.

Exceptions

Table 154-5   START_POOL Procedure Exceptions

Error	Description
ORA-457	Prespawn pool not found
ORA-458	Prespawn pool already started

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Table 154-5   (Cont.) START_POOL Procedure Exceptions

Error	Description
ORA-459	Prespawn pool not started

Example

```
BEGIN
  DBMS_PROCESS.START_POOL (
   pool_name   => 'hrdb_pool',
END;
```

STOP_POOL Procedure

This procedure stops a prespawned foreground process pool.

Syntax

```
DBMS_PROCESS.STOP_POOL(
    pool_name      IN  VARCHAR2 DEFAULT "SYS_DEFAULT_FOREGROUND_POOL");
```

Parameters

Table 154-6   STOP_POOL Procedure Parameters

Parameter	Description
pool_name	Name of the prespawned foreground process pool. To find existing pools, query the V$PROCESS_POOL dynamic view.

Exceptions

Table 154-7   STOP_POOL Procedure Exceptions

Error	Description
ORA-457	Prespawn pool not found
ORA-458	Prespawn pool already started
ORA-459	Prespawn pool not started

Example

```
BEGIN
  DBMS_PROCESS.STOP_POOL (
   pool_name   => 'hrdb_pool',
END;
```