Oracle Database 11*g* Background Processes

A comprehensive list that categorizes the database background processes

Advanced Queueing Processes

Acronym	Process Name	Description	Required for basic DB operation	Started by default	New in 11*g*
Q000*..9*	AQ Slave Processes (10 possible)	Processes messages in the Streams AQ queue. Spawned by QMNC.	No	Yes	No
QMNC	AQ Coordinator	Monitors message queues. Spawns Q00n slave processes.	No	Yes	No

Automatic Storage Management Processes

Acronym	Process Name	Description	Required for basic DB operation	Started by default	New in 11*g*
ARB0*..A*	ASM Rebalance Slaves (11 possible)	Rebalances data extents across the ASM file systems.	No	No	No
ASMB	ASM Background	Communicates with the Automatic Storage Management instance.	No	No	No
DSKM	slave DiSKMon process	Acts as conduit between RDBMS and ASM instances and the Master Diskmon daemon to communicate I/O Fencing information, I/O Resource Manager Plans, and Transaction Commit Cache information to SAGE storage. If no SAGE storage is used, the slave diskmon process will exit silently after startup of the instance.	No	No	Yes
GMON	Diskgroup Monitor	Maintains disk membership in ASM disk groups.	No	No	No
KATE	Konductor of ASM Temporary Errands	Performs proxy I/O to an ASM metafile when a disk becomes offline.	No	No	Yes
MARK	Mark AU for Resync Koordinator	Marks ASM Allocation Units as stale following a missed write to an offline disk	No	No	Yes
RBAL	ASM Rebalancer (11 possible)	Coordinates rebalance activity for disk groups in an Automatic Storage Management instance. Performs global opens on Automatic Storage Management disks.	No	No	No
S000*0..4*	ASM Sync Slave Process (5 possible)	Performs ASM disk resynchronization.	No	No	Yes

Data Guard Processes

Acronym	Process Name	Description	Required for basic DB operation	Started by default	New in 11*g*
DMON	Data Guard Broker Monitor Process	Starts when Data Guard Broker is started. DMON is the server-side component that interacts with the local database and the DMON processes of the other databases to perform the requested function. Also responsible for monitoring the health of the broker configuration and for ensuring that every database has a consistent description of the configuration.	No	No	No
FSFP	Data Guard Broker Fast Start FailOver (FSFO) Pinger	Observer process integrated in the DGMGRL client-side component. It monitors the DG Broker environment and initiates the failover on detecting a problem with Primary.	No	No	No
INSV	Data Guard Broker Instance Server Process	Performs Data Guard Broker communication between instances of a RAC database.	No	No	No
LNS0*..j*	LGWR Network Server (20 possible)	During asynchronous redo transmission, transmits redo data out of the online redo log files on the primary database.	No	No	No
LSP0	Logical Standby	Assigns transactions to different Data Guard appliers and coordinates among them to ensure that dependencies between transactions are honored.	No	No	No
LSP1	Dictionary build process for Logical Standby	Builds the data dictionary for the Logical Standby.	No	No	No
LSP2	Set Guard Standby Information for Logical Standby	Maintains Guard Standby information for the Logical Standby.	No	No	No
MRP0	Managed Standby Recovery	Provides transparent support for XA global transactions in RAC	No	No	No
NSV0..9	Data Guard Broker Network Server Process (10 possible)	Performs broker network communications between databases in a Data Guard configuration.	No	No	No
RSM0	Data Guard Broker Database Server Process 0	Used by the DMON process to manage and monitor the database.	No	No	No
RSM1	Data Guard Broker Database Server Process 1	Used by the DMON process to manage and monitor the database.	No	No	No

RMAN Processes

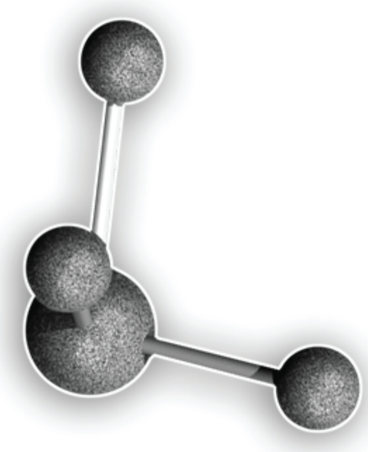
Acronym	Process Name	Description	Required for basic DB operation	Started by default	New in 11*g*
CTWR	Change Tracking Writer	Writes to the RMAN Change Tracking Log, a bitmap representing the entire database. The bitmap has an associated SCN, which is the SCN as at the last backup.	No	No	No

General Processes

Acronym	Process Name	Description	Required for basic DB operation	Started by default	New in 11*g*
ARC0*..t*	Archiver Process (30 possible)	Writes filled redo logs to the archive log location(s).	No	No	No
CJQ0	Job Queue Coordinator	Spawns slave processes (Jnnn) to execute jobs in the queue	No	Yes	No
CKPT	Checkpoint Process	Writes checkpoint information to control files and data file headers.	Yes	Yes	No
DBRM	Resource Manager process	Sets resource plans and performs other Resource Manager tasks.	No	Yes	Yes
DBW0*..j*	Database Writer (20 possible)	Writes dirty buffers from the buffer cache to the data files.	Yes	Yes	Yes
DIA0*..9*	Diagnosibility Process 0 (although 10 possible, only one is currently used)	Responsible for hang detection and deadlock resolution. Triggers DIAG to perform diagnostic tasks.	Yes	Yes	Yes
DIAG	Diagnosability Process	Performs diagnostic dumps and executes global oradebug commands.	Yes	Yes	No
D*nnn*	Dispatchers	In a Shared Server configuration, dispatchers place connection requests in a connection request queue.	No	Yes	No
EMNC	Event Monitor Coordinator	Coordinates the event management and notification activity in the database, including Streams Event Notifications, Continuous query Notifications, and Fast Application Notifications.	No	No	Yes
FBDA	Flashback Data Archiver Process	Archives historical rows for tracked tables into flashback data archives and manages the flashback archives.	No	Yes	Yes
FMON	File Mapping Monitor Process	Spawns FMPUTL, an external non-Oracle Database process that communicates with the mapping libraries provided by storage vendors. Responsible for managing the mapping information.	No	No	No
J*nnn*	Job Queue Slave Processes	Processes jobs in the queue. Spawned by CJQ0	No	Yes	No
LGWR	Redo Log Writer	Writes the log buffer out to the redo logs.	Yes	Yes	No
MMAN	Memory Manager	Serves as the SGA Memory Broker and coordinates the sizing of the memory components.	No	Yes	No
MMNL	Manageability Monitor Process 2	Performs frequent and lightweight manageability-related tasks, such as session history capture and metrics computation.	No	Yes	No
MMON	Manageability Monitor Process	Collects statistics for the Automatic Workload Repository.	No	Yes	No
PMON	Process Monitor	Recovers failed process resources. If Shared Server architecture is used, PMON monitors and restarts any failed dispatcher or server processes.	Yes	Yes	No
P*nnn*	Parallel Query Slaves	Started and stopped as needed to participate in parallel query operations.	No	No	No
PSP0	Process Spawner	Starts and stops Oracle processes, Reduces workload of RBAL by starting / stopping ASM rebalance slaves.	No	Yes	No
RCBG	Result Cache Background Process	Supports SQL query and PL/SQL function result caches.	No	No	Yes
RECO	Recoverer Process	Resolves failures involving distributed transactions.	No	Yes	No
RVWR	Recovery Writer	Writes flashback data to flashback database logs in the flash recovery area.	No	No	No
SMCO	Space Manager Process	Coordinates the execution of various space management related tasks, such as proactive space allocation and space reclamation.	No	Yes	Yes
SMON	System Monitor Process	Performs recovery after instance failure and monitors temporary segments and extents.	Yes	Yes	No
S*nnn*	Shared Servers	In a Shared Server configuration, shared servers check a connection request queue (populated by dispatchers) and services the connection requests.	No	Yes	No
VKTM	Virtual Keeper of TiMe Process	Responsible for providing a wall-clock time (updated every second) and reference-time counter (updated every 20ms and available only when running at elevated priority).	Yes	Yes	Yes
W*nnn*	Space Management Slaves	These are slave processes spawned by SMCO to execute space management tasks.	No	Yes	Yes

Real Application Clusters Processes

Acronym	Process Name	Description	Required for basic DB operation	Started by default	New in 11*g*
ACMS	Atomic Controlfile to Memory Server	Contributes to ensuring a distributed SGA memory update is either globally committed on success or globally aborted in the event of a failure in an Oracle RAC environment.	No	No	Yes
GTX0*..19*	Global Txn process (20 possible)	Provides transparent support for XA global transactions in a RAC environment. The database autotunes the number of these processes based on the workload of XA global transactions.	No	No	Yes
LCK0	Instance Enqueue Background Process	Manages the global enqueue requests and the cross-instance broadcast. Handles all requests for resources other than data blocks.	No	No	No
LMD0	Global Enqueue Service Daemon 0	Manages enqueue manager service requests for Global Cache Service enqueues to control access to global enqueues and resources. The LMD process also handles deadlock detection and remote enqueue requests. Remote resource vrequests are the requests originating from another instance.	No	No	No
LMON	Global Enqueue Service Monitor	Monitors the entire cluster to manage the global enqueues and the resources. Manages instance and process failures and the associated recovery for the Global Cache Service (GCS) and Global Enqueue Service (GES). In particular, LMON handles the part of recovery associated with global resources. LMON-provided services are also known as cluster group services (CGS).	No	No	No
LMS0*..z*	Global Cache Service Process (36 possible)	Handles remote Global Cache Service (GCS) messages. The number of LMS processes varies depending on the amount of messaging traffic among nodes in the cluster.	No	No	No
PING	Interconnect Latency Measurement	Assesses the latencies associated with communications for each pair of instances.Every few seconds, the process in one instance (INSTANCE_NUMBER value) sends two messages to each instance (TARGET_INSTANCE value). One message has a size of 500 bytes and the other has a size of 8 KB. The message is received by the PING process on the target instance and is immediately acknowledged. The time for the round-trip is measured and collected.	No	No	Yes
RMS0	RAC Management Server	Performs manageability tasks for RAC, such as creation of RAC-related resources when new instances are added to the clusters.	No	No	Yes
RSMN	Remote Slave Monitor	Manages background slave process creation and communication on remote instances.	No	No	Yes



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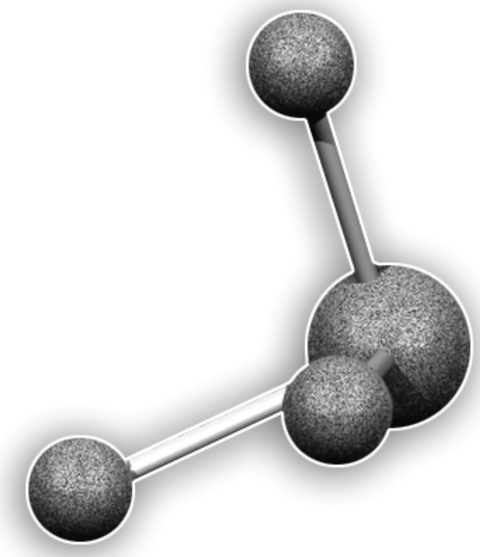

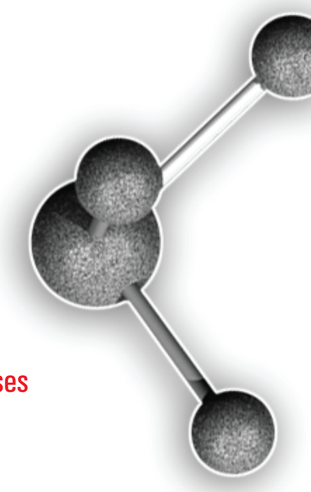

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Architecture and Background Processes

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