

You can alter the availability of a database. You may want to do this in order to restrict access for maintenance reasons or to make the database read only. The following sections explain how to alter the availability of a database:

- [Mounting a Database to an Instance](#)
- [Opening a Closed Database](#)
- [Opening a Database in Read-Only Mode](#)
- [Restricting Access to an Open Database](#)

Mounting a Database to an Instance

When you need to perform specific administrative operations, the database must be started and mounted to an instance, but closed. You can achieve this scenario by starting the instance and mounting the database.

To mount a database to a previously started, but not opened instance, use the SQL statement `ALTER DATABASE` with the `MOUNT` clause as follows:

```
ALTER DATABASE MOUNT;
```

Opening a Closed Database

You can make a mounted but closed database available for general use by opening the database. To open a mounted database, use the `ALTER DATABASE` statement with the `OPEN` clause:

```
ALTER DATABASE OPEN;
```

After executing this statement, any valid Oracle Database user with the `CREATE SESSION` system privilege can connect to the database.

Opening a Database in Read-Only Mode

Opening a database in read-only mode enables you to query an open database while eliminating any potential for online data content changes. While opening a database in read-only mode guarantees that datafile and redo log files are not written to, it does not restrict database recovery or operations that change the state of the database without generating redo. For example, you can take datafiles offline or bring them online since these operations do not affect data content.

If a query against a database in read-only mode uses temporary tablespace, for example to do disk sorts, then the issuer of the query must have a locally managed tablespace assigned as the default temporary tablespace. Otherwise, the query will fail.

The following statement opens a database in read-only mode:

```
ALTER DATABASE OPEN READ ONLY;
```

You can also open a database in read/write mode as follows:

```
ALTER DATABASE OPEN READ WRITE;
```

However, read/write is the default mode.

Restricting Access to an Open Database

To place an instance in restricted mode, where only users with administrative privileges can access it, use the SQL statement `ALTER SYSTEM` with the `ENABLE RESTRICTED SESSION` clause. After placing an instance in restricted mode, you should consider killing all current user sessions before performing any administrative tasks.

To lift an instance from restricted mode, use `ALTER SYSTEM` with the `DISABLE RESTRICTED SESSION` clause.