

```
RMAN> BACKUP DATABASE;
```

The following variation of the command creates image copy backups of all data files in the database:

```
RMAN> BACKUP AS COPY DATABASE;
```

4. Open the database and resume normal operations.

The following command opens the database:

```
RMAN> ALTER DATABASE OPEN;
```

2.4.4 Making Incremental Backups: Quick Start

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Incremental backups capture block-level changes to a database made after a previous incremental backup.

If you specify `BACKUP INCREMENTAL`, then RMAN creates an [incremental backup](#) of a database. Incremental backups are generally smaller and faster to make than full database backups. Recovery with incremental backups is faster than using redo logs alone.

The starting point for an incremental backup strategy is a [level 0 incremental backup](#), which backs up all blocks in the database. An incremental backup at level 0 is identical in content to a [full backup](#), however, unlike a full backup the level 0 backup is considered a part of the incremental backup strategy.

A level 1 incremental backup contains only blocks changed after a previous incremental backup. If no level 0 backup exists in either the current or parent database [incarnation](#) when you run a level 1 backup, then RMAN makes a level 0 backup automatically.



Note:

You cannot make incremental backups when a `NOARCHIVELOG` database is open, although you can make incremental backups when the database is mounted after a consistent shutdown.

A level 1 backup can be a [cumulative incremental backup](#), which includes all blocks changed since the most recent level 0 backup, or a [differential incremental backup](#), which includes only blocks changed since the most recent incremental backup. Incremental backups are differential by default.

During a restore operation, RMAN will first restore a level 0 backup, then automatically apply incremental backups and redo logs as needed. This will re-apply the changes that were made to the database since the start of the backup.

To make incremental backups of the database:

1. Start RMAN and connect to a target database as described in "[Starting RMAN and Connecting to a Database](#)".
2. Run the `BACKUP INCREMENTAL` command.

The following example creates a level 0 incremental backup to serve as a base for an incremental backup strategy:

```
BACKUP INCREMENTAL LEVEL 0 DATABASE;
```