If the database runs in `ARCHIVELOG` mode, RMAN makes control file autobackups when a structural change to the database affects the contents of the control file.

> **Note:**
>
> Beginning with Oracle Database Release 11*g* Release 2, RMAN takes only one control file autobackup when multiple structural changes contained in a script (for example, adding tablespaces, altering the state of a tablespace or data file, adding a new online redo log, renaming a file, and so on) have been applied.

8.8.2 How RMAN Performs Control File Autobackups

The first channel allocated during the backup job creates the autobackup and places it into its own backup set. For autobackups after database structural changes, the server process associated with the structural change makes the backup.

If a server parameter file is in use by the database, then RMAN backs it up in the same backup set as the control file autobackup. After the autobackup completes, the database writes a message containing the complete path of the backup piece and the device type to the alert log located in the Automatic Diagnostic Repository (ADR).

> **Note:**
>
> Control file autobackups are never duplexed.

The control file autobackup file name has a default format of `%F` for all device types, so that RMAN can determine the file location and restore it without a repository. You can specify a different format with the `CONFIGURE CONTROLFILE AUTOBACKUP FORMAT` command, but all autobackup formats must include the `%F` variable. If you do not use the default format, then during disaster recovery you must specify the format that was used to generate the autobackups. Otherwise, RMAN cannot restore the autobackup.

Related Topics

*   Configuring Control File and Server Parameter File Autobackups
    You can configure RMAN to automatically back up the control file and server parameter file. The autobackup occurs whenever a backup record is added.

8.9 About RMAN Incremental Backups

An incremental backup copies only those data blocks that have changed since a previous backup. You can use RMAN to create incremental backups of data files, tablespaces, or the whole database.

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By default, RMAN makes full backups. A full backup of a data file includes every allocated block in the file being backed up. A full backup of a data file can be an image copy, in which case every data block is backed up. It can also be stored in a backup set, in which case data file blocks not in use may be skipped.