

## Practice

# Configuring RMAN Persistent Settings

### Practice Target

In this practice you will set and test some RMAN persistent settings.

### Practice Overview

In high level, in this practice, you will perform the following tasks:

- Set RMAN retention policy
- Modify the default `FORMAT` of RMAN backups

### Assumptions

- This practice assumes that you have `srv1` up and running from the **non-CDB** snapshot.



## A. Configuring Backup Retention Policy

In the following steps you will configure the retention policy in RMAN and test it.

1. Open Putty and login to `srv1` as `oracle`

2. Invoke RMAN and connect to the local database as target.

```
rman target ''/ as SYSBACKUP''
```

3. Display the current retention policy.

The default retention policy is set to redundancy 1. Based on this policy, RMAN must keep one backup of the database. Any further backups are considered redundant and marked for deletion.

```
SHOW RETENTION POLICY;
```

4. Set the retention policy to redundancy 2.

**Note:** the other possible retention policy is the "RECOVERY WINDOW OF *n* DAYS". In real life scenario, set the policy according to the backup and recovery business requirements.

```
CONFIGURE RETENTION POLICY TO REDUNDANCY 2;
```

5. Take backup of `users` tablespace **three** times.

```
BACKUP TABLESPACE USERS TAG 'USERS_TBS' ;
```

6. List the backupsets produced by the pervious step. Take note of their key numbers.

```
LIST BACKUP OF TABLESPACE users SUMMARY;
```

7. Display report of obsolete backup files.

It should report that the first backup set key taken above is now obsolete. But the most recent two backupsets are not.

```
REPORT OBSOLETE ;
```

8. Delete obsolete backup files.

Usually, it is part of the frequent backup script to delete obsolete backup files.

```
DELETE OBSOLETE;
```

9. Verify that the backupset is deleted.

```
LIST BACKUP OF TABLESPACE users SUMMARY;
```

## Clean Up

10. Delete the remaining backupset files.

```
DELETE BACKUPSET;
```

## B. Configuring the Default Backup Format

In the following steps you will configure the default format of Disk channels and test the effect of this the setting.

11. Change the default backup location of backups produced by `DISK` channels to the shared folder.

Bear in mind that changing the `FORMAT` for the channels of `DISK` devices does not affect the `FORMAT` for the channels of `SBT` devices.

```
CONFIGURE CHANNEL DEVICE TYPE DISK FORMAT '/media/sf_staging/%U.bkp';  
  
# verify  
SHOW CHANNEL FOR DEVICE TYPE DISK ;
```

12. Take backup of `users` tablespace twice. Once as backupset and once as image copy.

```
BACKUP TABLESPACE users TAG 'USERS_TBS';  
BACKUP AS COPY TABLESPACE users TAG 'USERS_TBS';
```

13. List the files that exist in the shared folder.

```
host 'ls -al /media/sf_staging/*.bkp';
```

14. Clear the `FORMAT` setting of the default disk channel.

From the output message, we can tell that the `CLEAR` option deletes the persistent setting value.

```
CONFIGURE CHANNEL DEVICE TYPE DISK CLEAR;
```

15. Take backup of `users` tablespace. Observe the location of the produced backup files.

After clearing the persistent setting, the backup files are now saved in the FRA.

```
BACKUP TABLESPACE users TAG 'USERS_TBS';
```

16. Run the backup run block as shown in the screen. The `RUN` block allocates a channel and set its format to the shared folder.

```
RUN  
{  
  ALLOCATE CHANNEL c1 DEVICE TYPE disk FORMAT '/media/sf_staging/oradb_%t_s%s_p%p';  
  BACKUP TABLESPACE users TAG 'USERS_TBS';  
  BACKUP ARCHIVELOG ALL DELETE INPUT TAG 'ARC';  
}
```

17. Verify that the backup pieces saved in the provided location.

```
host 'ls -al /media/sf_staging/oradb*';
```

## Clean Up

18. Delete the produced backupset files.

```
DELETE NOPROMPT BACKUPSET TAG 'USERS_TBS';  
DELETE NOPROMPT BACKUPSET TAG 'ARC';  
DELETE NOPROMPT COPY TAG 'USERS_TBS';
```



## Summary

In this practice, you performed the following tasks:

- Set RMAN retention policy
- Modify the default `FORMAT` of RMAN backups

