19

Database Backups

Objectives

After completing this lesson you should be able to do the following:

- **Create consistent database backups**
- **Back up your database without shutting it down**
- **Create incremental backups**
- **Automate database backups**
- **Monitor the flash recovery area**

Terminology

- **Backup strategy may include:**
  - **The entire database (whole)**
  - **A portion of the database (partial)**
- **Backup type may be:**
  - **All information from all data files (full)**
  - **Only information that has changed since some previous backup (incremental)**
- **Backups mode may be:**
  - **Offline (consistent, cold)**
  - **Online (inconsistent, hot)**

Terminology

- **Backups may be stored as:**
  - **Image copies**
  - **Backup sets**

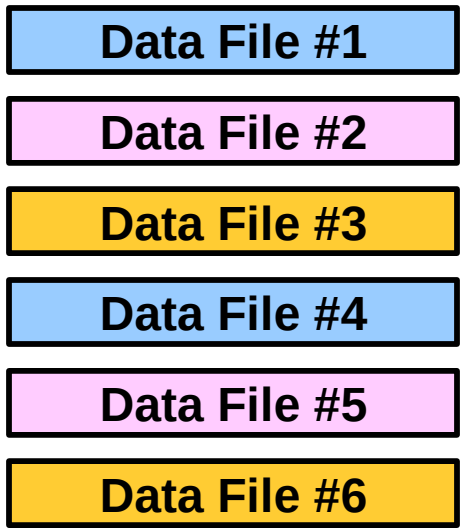
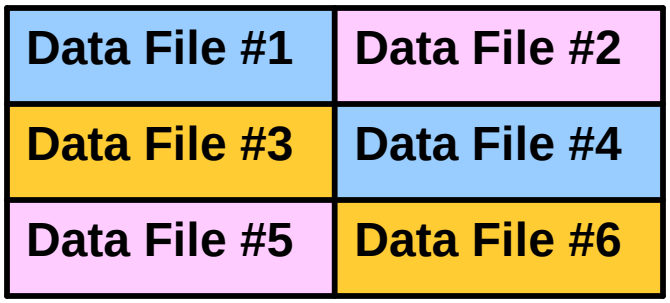


Image copies



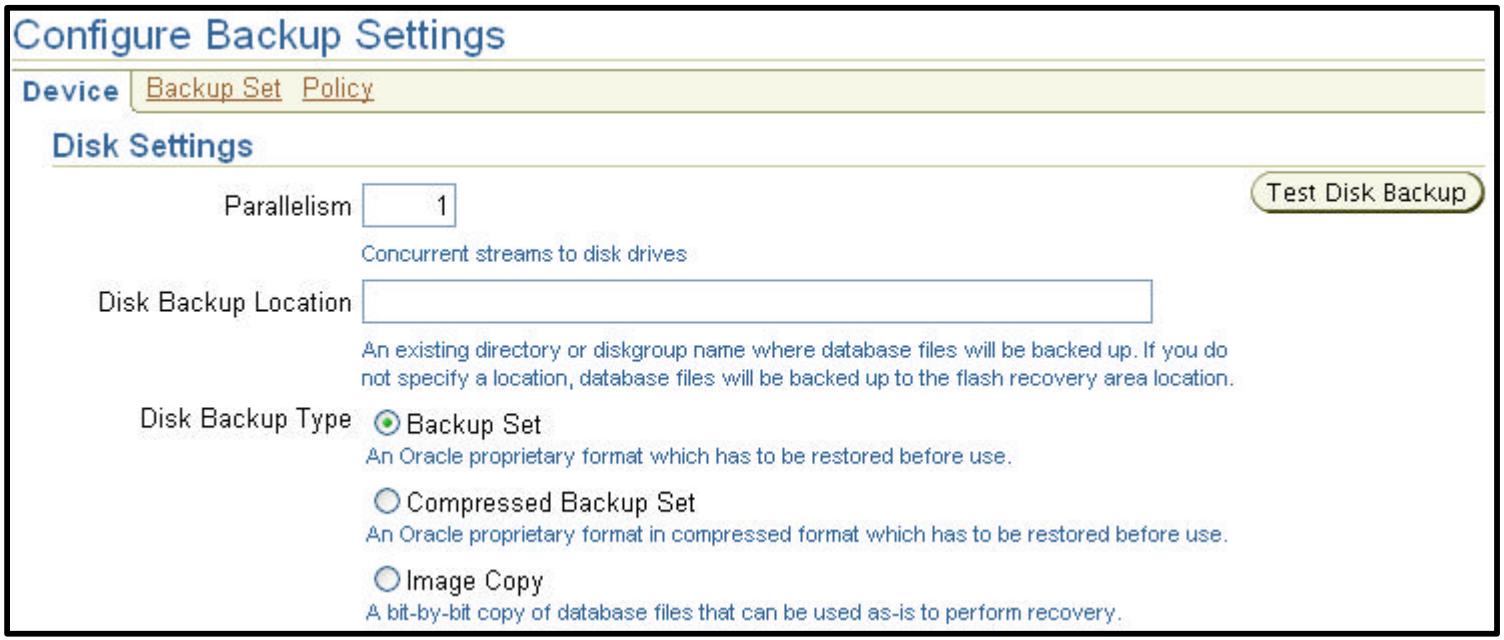
Backup set

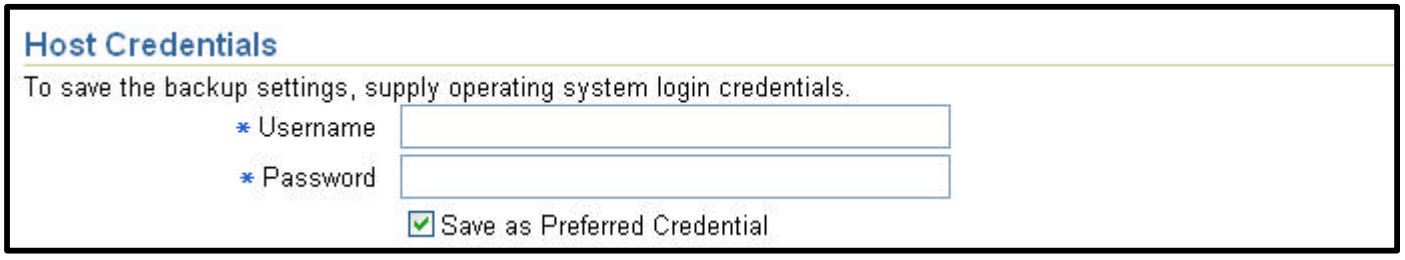
Recovery Manager (RMAN)

Enterprise Manager uses Recovery Manager (RMAN) to perform backup and recovery operations.

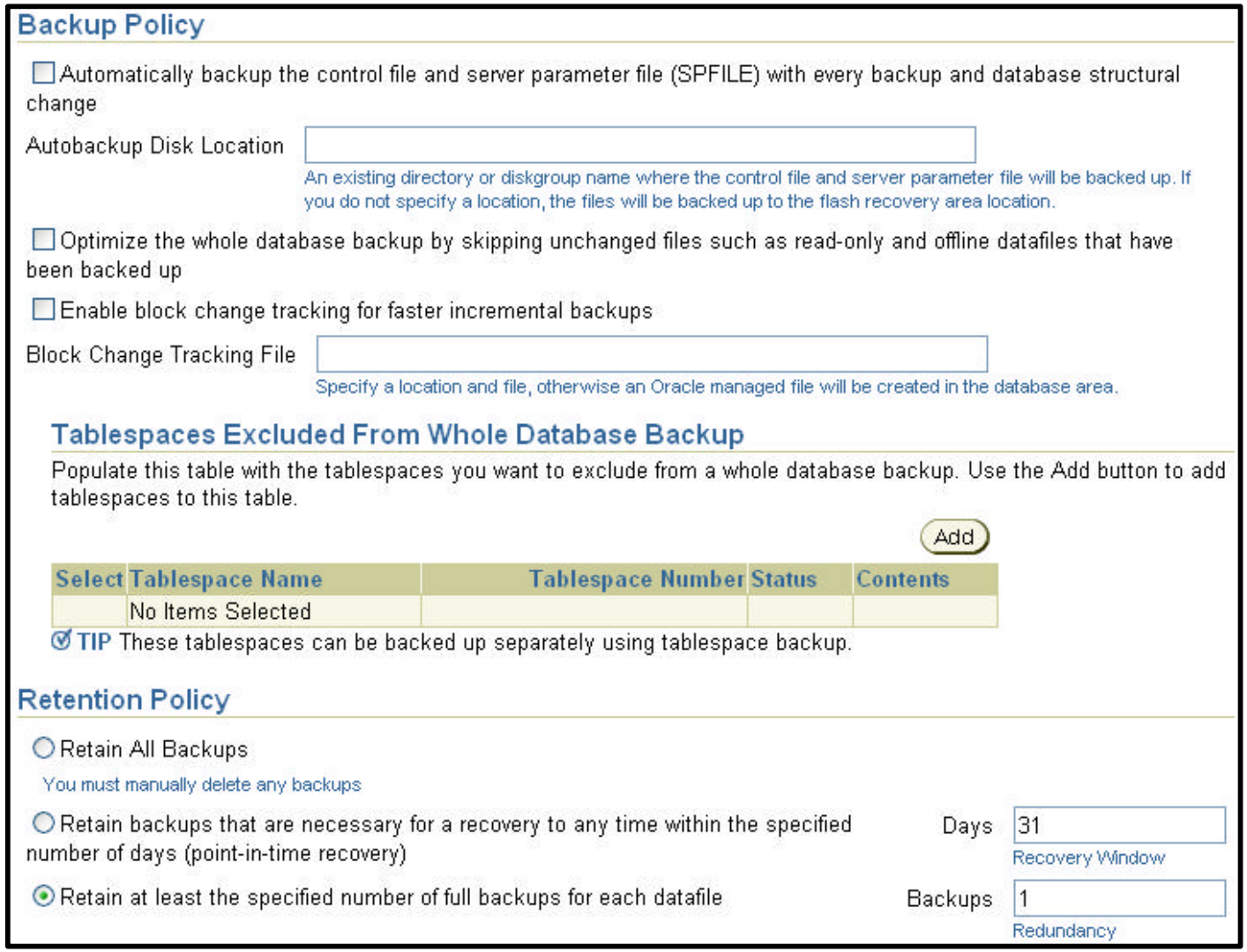
- **Command-line client for advanced functions**
- **Powerful control and scripting language**
- **Published API that allows interface with most popular backup software**
- **Backs up data, control, archived log, and server parameter files**
- **Backs up files to disk or tape**

Configuring Backup Settings



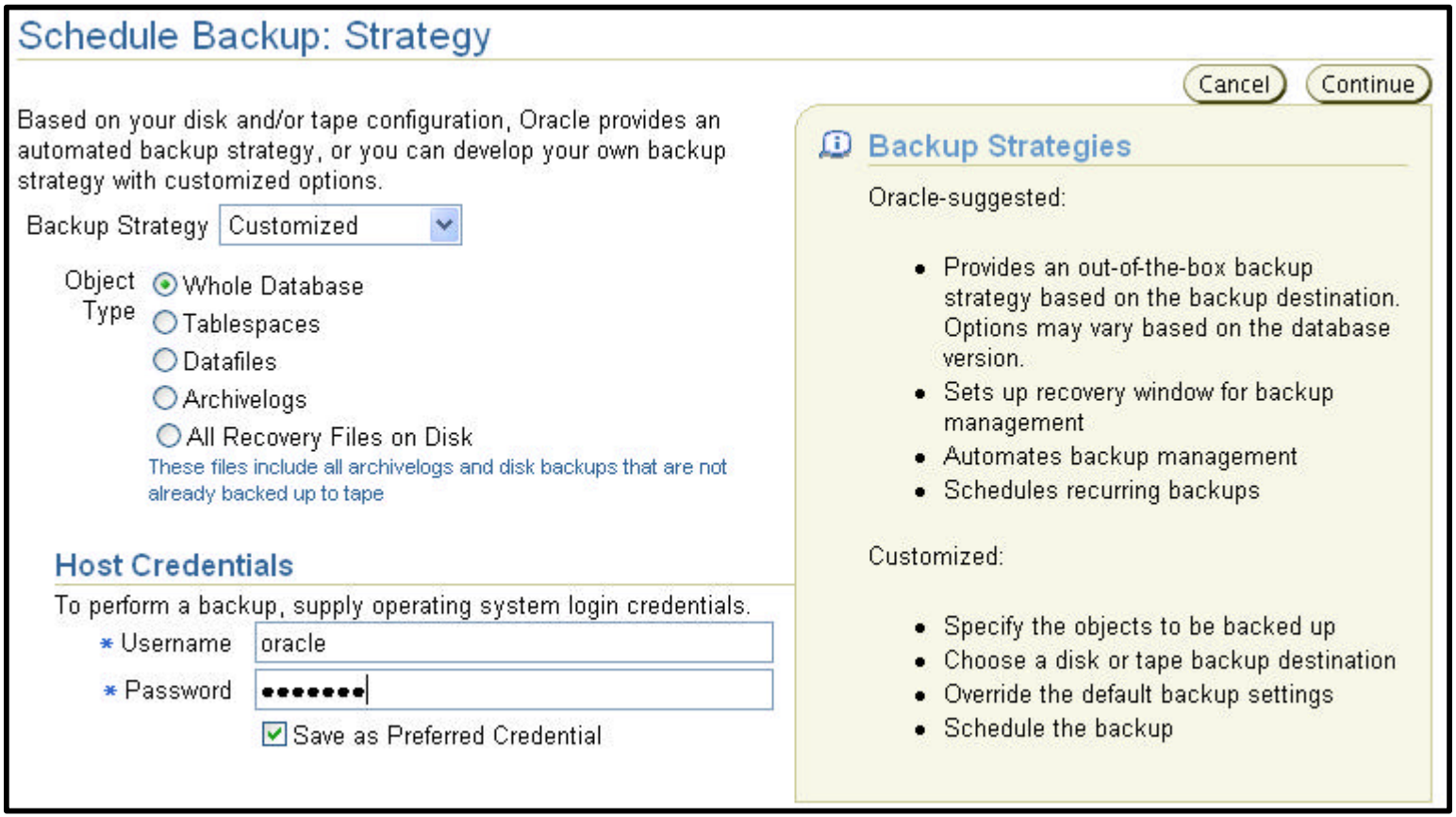


Configuring Backup Settings

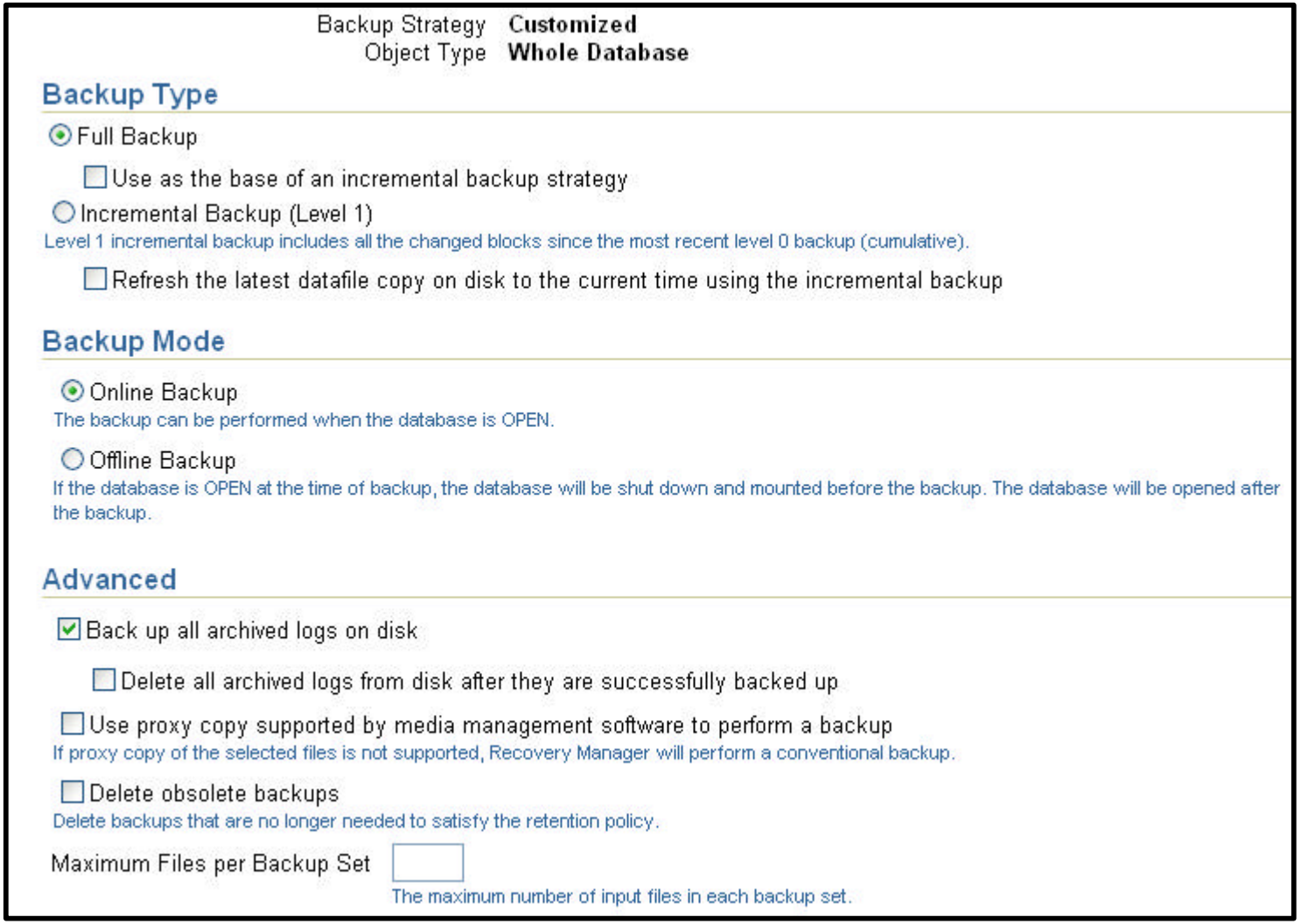


Scheduling Backups: Strategy

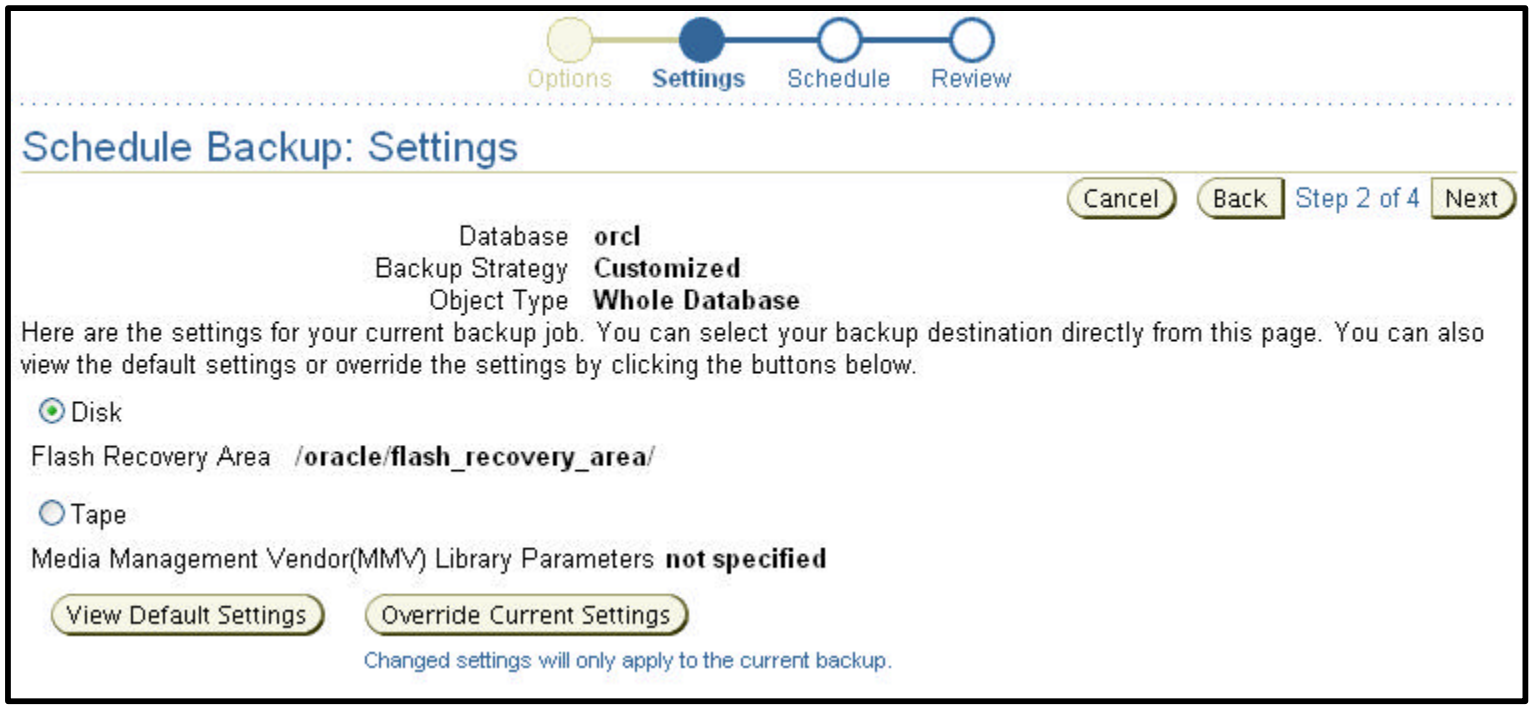
Choose whole or partial database backup.



Scheduling Backups: Options

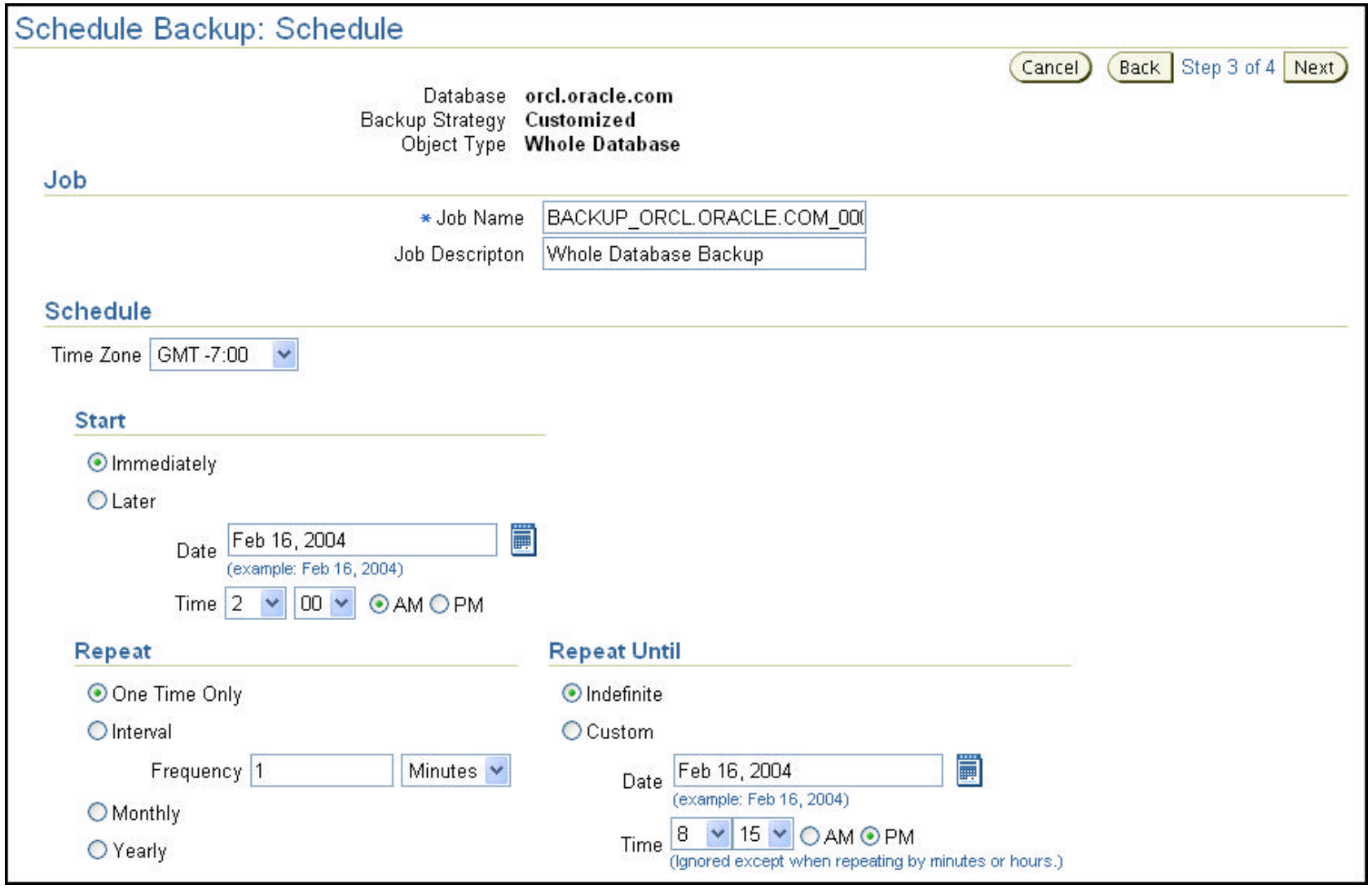


Scheduling Backups: Settings

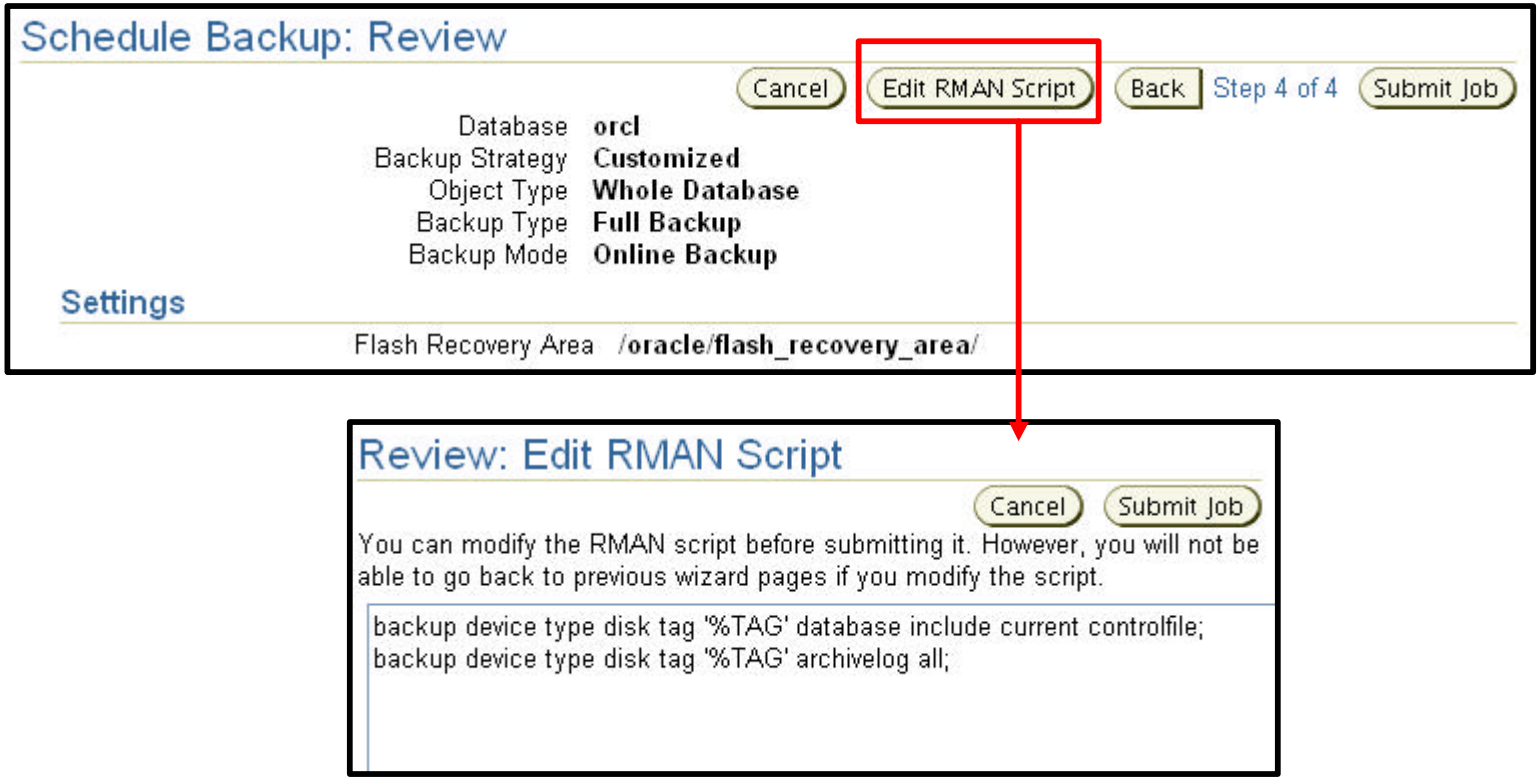


Persistent backup configuration settings can be overridden for this backup by clicking Override Current Settings.

Scheduling Backups: Schedule



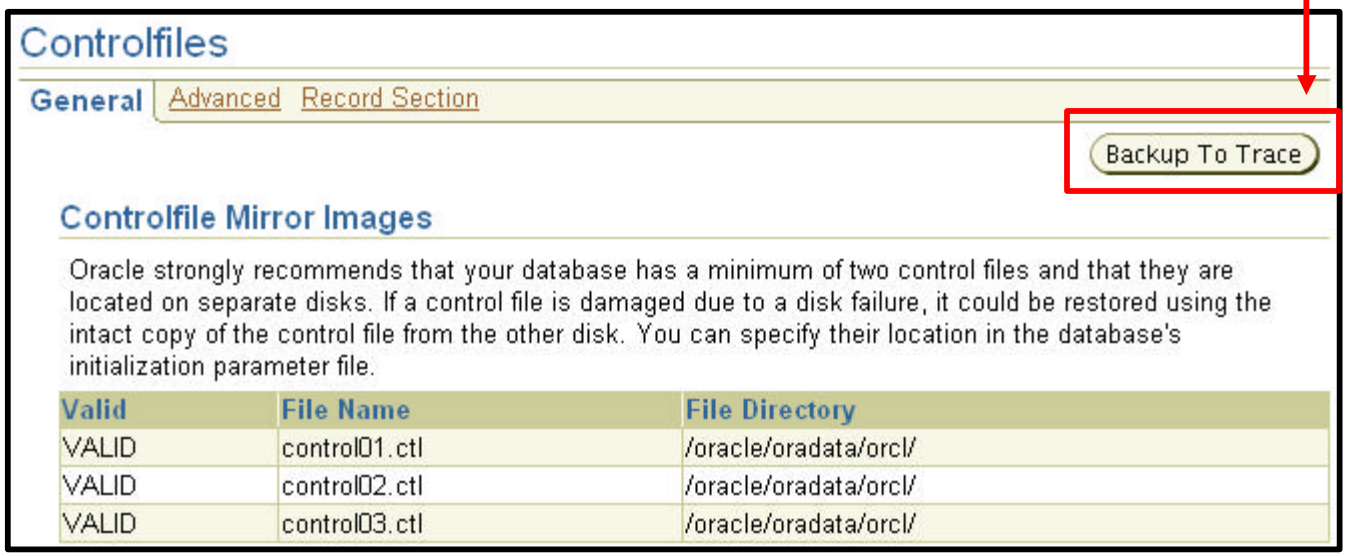
Scheduling Backups: Review



Click Edit RMAN Script to review RMAN commands.

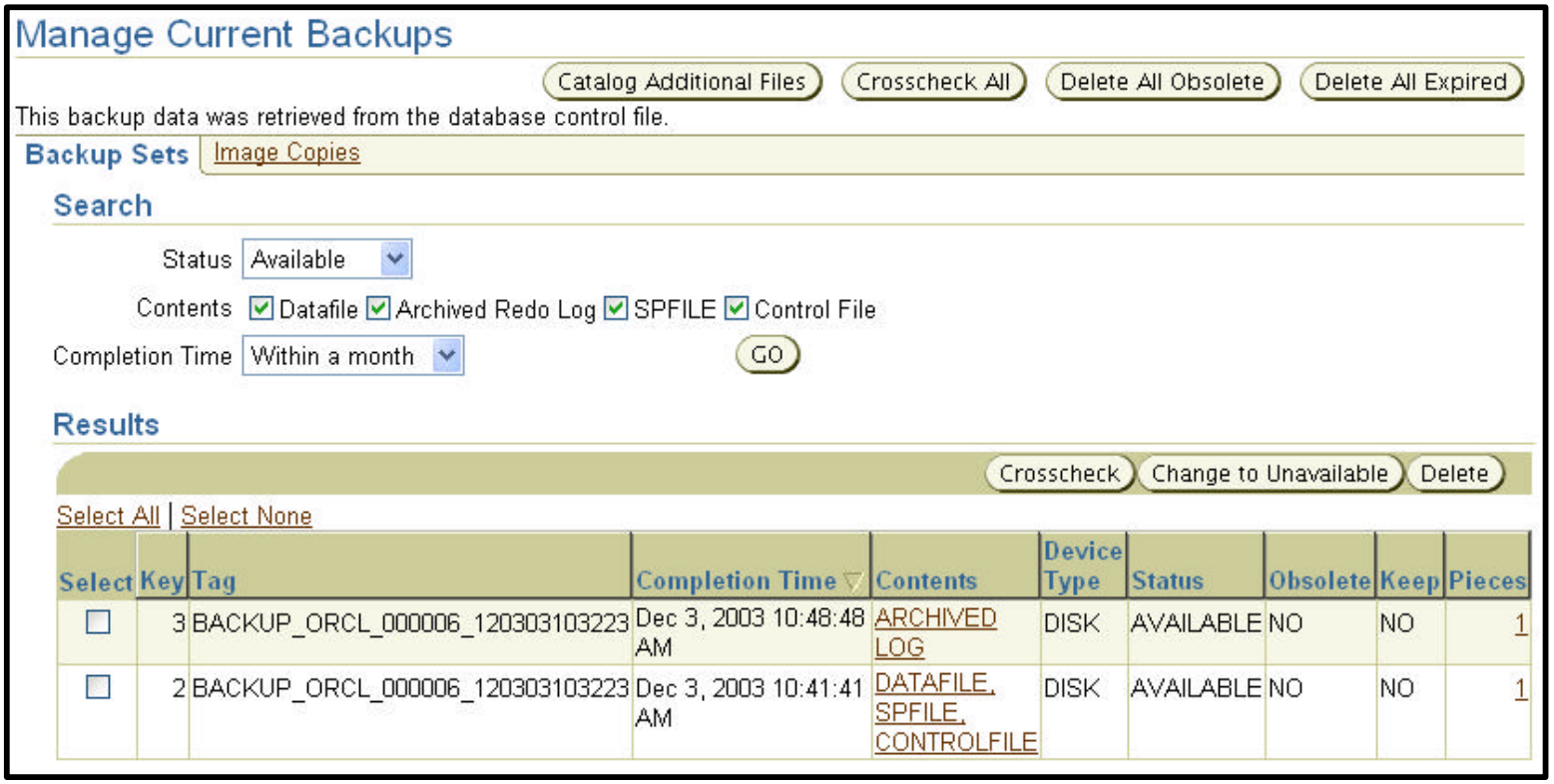
Backup Control File to Trace

Control files have an additional backup option.



Control file trace backups may be used to recover from loss of all control files.

Manage Backups

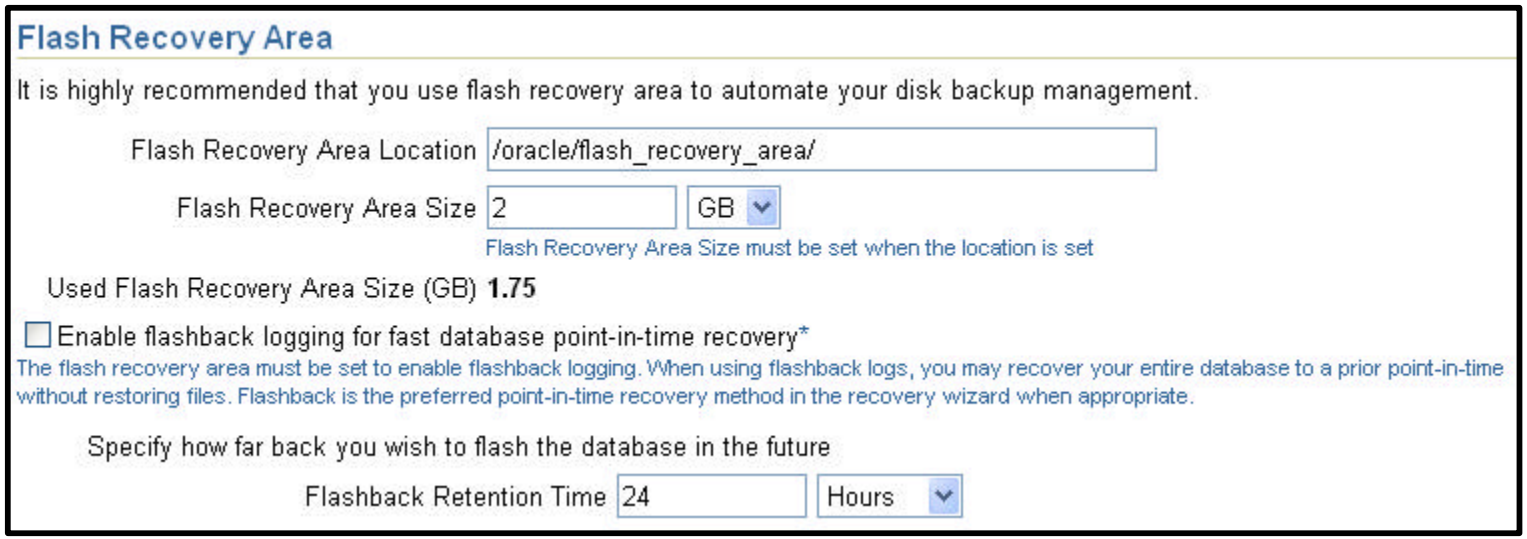


Click Edit RMAN Script to review RMAN commands.

Flash Recovery Area

Monitor the Flash Recovery Area

- Configure flashback logging
- Size the recovery area
- Monitor current space consumption



Summary

In this lesson you should have learned how to:

- **Create consistent database backups**
- **Back up your database without shutting it down**
- **Create incremental backups**
- **Automate database backups**
- **Monitor the flash recovery area**

Practice 19:
Database Backups

This practice covers the following:

- **Configuring your database for backups**
- **Backing up your database while the database is open for user activity**
- **Scheduling automatic nightly incremental backups for your database**