Oracle RMAN
Plugin Configuration Guide

Contents

Introduction to the Bocada Plugin for Oracle Recovery Manager (RMAN)

This configuration guide shows you how to add Oracle RMAN servers to Bocada for data collection and reporting.

Oracle RMAN Configuration Checklist

While detailed steps are included below, this overview lists items to complete before configuring Oracle RMAN collections on your Bocada Data Collection Server:

- ☐ Verify the name of the server that hosts the Oracle RMAN Recovery Catalog
- ☐ Verify the name of the Oracle RMAN Recovery Catalog
- ☐ Verify RMAN backups are configured to write to the Recovery Catalog, not to the control file.
- ☐ Verify any Pluggable Databases (PDB) backed up directly as targets has manual (or scripted) RSYNC CATALOG to make the backup data available to Bocada through the Recovery Catalog.
- ☐ Obtain the credentials for the Oracle RMAN Recovery Catalog owner
- ☐ Verify required TCP ports have been opened

Supported Collection Types

The plugin currently supports the following collection types to gather data from Oracle servers running RMAN backups:

Collection Type	Supported	Description
Backup*	✓	Collects transactional details about backup, duplication and restore jobs. Example metrics include, start times, durations, bytes, files, errors etc. This includes In Progress jobs.
In Progress	✓	Collects basic information on backups that are running or have completed since the previous full Backup jobs data collection. These updates are included in the Backup updates, but are lightweight and can be scheduled more often than backup updates if needed.

* *Important Note*: The Bocada plugin currently reports on RMAN backups that store their metadata in a recovery catalog. RMAN Backups that store metadata in control files are unsupported.

Data Sources

The Oracle RMAN plug-in relies on the following Oracle RMAN data sources:

- Oracle RMAN Recovery Catalog (RC Database)

Data Source Note

The RC_RMAN_OUTPUT table has an option for retention. The default is seven days. If the Bocada plugin attempts to collecting data older than this setting, the data will not be available for assets and errors, so all jobs will appear as successful with "?" as the asset name.

If desired, you can change the expiration time frame with an RMAN command such as:

RMAN> CONFIGURE RMAN OUTPUT TO KEEP FOR **X** DAYS;

Where **X** is a configurable number of days. Always refer to your Oracle documentation for confirmation of any Oracle RMAN commands.

Requirements

This section lists requirements that must be met prior to collecting data with the Bocada plug-in for Oracle RMAN.

Oracle RMAN Ports

Service	Default Port	Direction
Oracle SQL NetListener	1521/TCP	Both

The Bocada plug-in uses the Oracle SQL Net Listener to communicate with the Recovery Catalog. Bocada must have bidirectional access over this TCP port. If the port has been changed from the default it can be entered in the advanced properties under Server Properties.

Oracle RMAN Recovery Catalog user access

The Oracle RMAN Recovery Catalog user will need either RECOVERY_CATALOG_OWNER ROLE, or to be configured with more limited permissions defined below.

This configuration would be used in place of granting the RECOVERY_CATALOG_OWNER ROLE. Let me know if you have any questions on this.

Here is the code that can be used to set up the required user and minimum permissions. Be sure to replace the password field with the password that you would like to use.

```
--Create a ROLE with the required SELECT permissions on the rman catalog objects.
CREATE ROLE BOCADA_RO NOT IDENTIFIED;
GRANT CREATE SESSION TO BOCADA_RO;
GRANT SELECT ON RMAN.RC_RMAN_STATUS TO  BOCADA_RO;
GRANT SELECT ON RMAN.RC_RMAN_BACKUP_JOB_DETAILS TO  BOCADA_RO;
GRANT SELECT ON RMAN.RC_DATABASE TO  BOCADA_RO;
GRANT SELECT ON RMAN.RC_RMAN_OUTPUT TO  BOCADA_RO;
GRANT SELECT ON RMAN.RC_BACKUP_SET_DETAILS TO  BOCADA_RO;
GRANT SELECT ON RMAN.RC_BACKUP_SET TO  BOCADA_RO;
GRANT SELECT ON RMAN.RC_PDBS TO  BOCADA_RO;
--Grant system privilege to the ROLE to bypass  Oracle VPD enforcements and negates
the effect of fine-grained access control enforcement.
GRANT EXEMPT ACCESS POLICY TO BOCADA_RO;

--Create a USER to be used by the application with the read only ROLE
CREATE USER BOCADA_REPORT IDENTIFIED BY "password"
DEFAULT TABLESPACE USERS
TEMPORARY TABLESPACE TEMP;
GRANT BOCADA_RO TO BOCADA_REPORT;
ALTER USER BOCADA_REPORT DEFAULT ROLE ALL;

--Create a private SYNONYM for each of the rman catalog objects.
CREATE OR REPLACE SYNONYM  BOCADA_REPORT.RC_RMAN_STATUS             FOR
RMAN.RC_RMAN_STATUS;
CREATE OR REPLACE SYNONYM  BOCADA_REPORT.RC_RMAN_BACKUP_JOB_DETAILS FOR
RMAN.RC_RMAN_BACKUP_JOB_DETAILS;
```

```
CREATE OR REPLACE SYNONYM  BOCADA_REPORT.RC_DATABASE               FOR
RMAN.RC_DATABASE;
CREATE OR REPLACE SYNONYM  BOCADA_REPORT.RC_RMAN_OUTPUT            FOR
RMAN.RC_RMAN_OUTPUT;
CREATE OR REPLACE SYNONYM  BOCADA_REPORT.RC_BACKUP_SET_DETAILS     FOR
RMAN.RC_BACKUP_SET_DETAILS;
CREATE OR REPLACE SYNONYM  BOCADA_REPORT.RC_BACKUP_SET             FOR
RMAN.RC_BACKUP_SET;
CREATE OR REPLACE SYNONYM  BOCADA_REPORT.RC_PDBS                   FOR RMAN.RC_PDBS;
```

Recovery Catalog

The Bocada plug-in pulls data from the Recovery Catalog. RMAN backups need to be configured to write to the Recovery Catalog, rather than the control file, on each target database for the data to be collected by Bocada and appear in the Bocada reports.

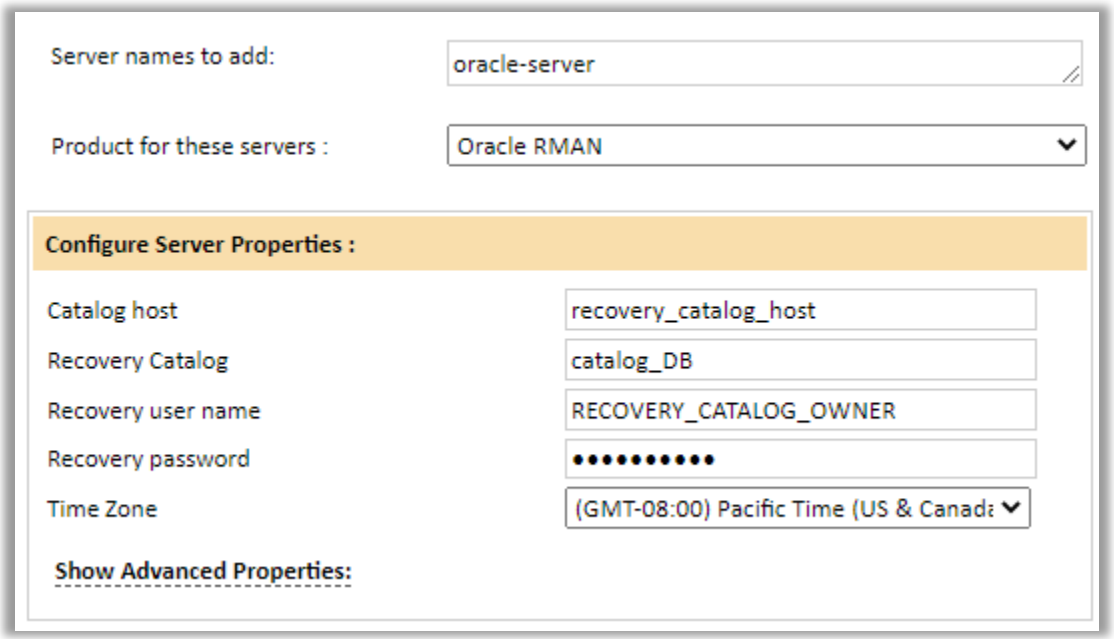
Pluggable Databases (PDB)

If you back up Pluggable Databases (PDB) directly as targets, instead via the Container Databases (CDB) then Bocada requires manual (or scripted) RSYNC CATALOG to make the backup data available to Bocada through the Recovery Catalog. PDB was introduced in Oracle 12c and backups of PDBs are not automatically synchronized by Oracle with the RMAN RECOVERY CATALOG when backup scripts connect directly to the PDB and backup as the target. See Oracle RMAN documentation for more information on the RSYNC CATALOG command

Bocada Setup

Server Properties

Backup Server Properties determine how the plug-in will interact with the Oracle RMAN server. Backup Server Properties are accessed from the *Backup Servers* view in the *Operations* section after clicking the Add Server action.



Field Definitions

Server names to add

Name of the Oracle server(s) being backed up using RMAN scripts or commands. This entry can be any label that is useful for reporting, and it will appear in Bocada reports as *Server*. For some Oracle RMAN deployments you will want to set this to the same value as the Catalog host described below.

Catalog host

The Oracle server where the Recovery Catalog is hosted. Note that in reporting this value will be displayed as the *Job Group*.

Recovery Catalog

Name of the Recovery Catalog database name. When specifying the Recovery Catalog (database SID), the database domain name may need to be appended to the SID name. This is can be verified by checking the status of the listener on the database server and matching the service name with the Recovery Catalog (sid) entry. The default domain is ".world".

Recovery user name / Recovery Password

User Name and password of the RECOVERY_CATALOG_OWNER

Time Zone

Time zone of the Oracle server

Reporting Notes

Each database and DBID will be reported on and licensed as a Bocada "Client"

To facilitate use of the Bocada Zone feature, each Oracle database and database identifier (DBID) will be shown as a separate in Bocada. Bocada RMAN license unit counts are per DB Name & DBID combination.

- The client names are shown in the format of DBNAME(DBID) for example:
  - dbname (3026357038)
  - cdb (2077154818)
  - cdb:pdb1 (859114170)
  - w2k1 (1312293510)

Troubleshooting

Connectivity Test

You can install the Oracle client and SQLPLUS utility on the Bocada Data Collection Server to test connectivity. Be sure to install Administrator version.

Run the following:

tnsping <*name of oracle Catalog database*>
sqlplus username@<*name of oracle Catalog database*>

ERROR ORA-12514

TNS:listener does not currently know of service requested in connect descriptor.

When specifying the Recovery Catalog (database SID), the database domain name may need to be appended to the SID name. This is can be verified by checking the status of the listener on the database server and matching the service name with the Recovery Catalog (sid) entry. The default domain is ".world". A mismatch may result in the error "ORA-12154: TNS:could not resolve the connect identifier specified"

Technical Support

For technical support or a copy of our standard support agreement, please contact us.

E-mail: support@bocada.com
Support Portal: https://bocada-support.force.com/
Phone: +1 425-898-2400