Using LOGDUMP Utility

Practice Overview

As you learnt in the previous lecture, Logdump is a robust GoldenGate troubleshooting utility that allows you to look into the trail file contents.

In this practice you will get familiar with using the utility to perform the basic tasks in it.

Note: it might be easier to watch the companion video of this practice rather than follow this document straight away.

Assumption

This practice assumes that you have the two systems that you created in the previous practices, their databases, and their GoldenGate processes up and running.

Using Logdump Utility

A. Use Logdump Utility to navigate through its sections

1. In the source database, list the generated trail files in the system.

It is not necessary to run the utility from the source system. It can be equally used in the target system.

```
ls ./dirdat/es*
```

2. Open the Logdump utility

```
cd $GG_HOME
./logdump
```

3. In the Logdump command prompt, issue the help command to display a summary of the utility commands

```
Logdump> help
```

4. Open any of the trail files listed in step 1.

```
Logdump> open ./dirdat/es0000000**
```

5. Run the following commands, to enable all the view options.

```
GHDR ON
DETAIL ON
DETAIL DATA
USERTOKEN ON
FILEHEADER ON
```

6. Set the read position to the beginning of the file.

```
Logdump> pos 0
```

7. Display the next header information.

Observe the file header information on the right side which includes the hostname, GoldenGate home directory, trail file filename, the operating system, the database name and release information, and the version of the GoldenGate used.

```
Logdump> n
```

8. Keep running the same command for a few times. In each time, analyze the output. After displaying the file header information, you should see the record headers which included information about the metadata of a replicated object, and transactions data including the after and before images.

Observe the `IOType`, `TransInd`, `BeforeAfter`, and the column values.

You definitely should see the data of the transactions made on the HR.SAMPLE table, as it is being frequently updated by the scheduler job.

```
Logdump> n
```

9. Navigate to the end of the file.

```
Logdump> pos eof
```

10. Display the information of the last record in the file by scanning for the first record header in reverse direction.

```
Logdump> sfh prev
```

11. Go back to the beginning of the file and run the `COUNT` command to display statistics about the opened trail file.

COUNT command gathers the statistics starting from the current reading point. If you want stats about the whole file, you should make sure the reading pointer is on the beginning of the file.

```
Logdump> pos 0

Logdump> COUNT
```

B. Apply filters on Logdump Utility

Sometimes, when you use the Logdump utility to investigate a case, you want to filter out everything in the output except records containing a specific table. This is possible using the Filter option. In the following steps, you will learn on how to use this filter option.

12. In the source database (`db1`), execute the following transaction commands as HR.

```
conn hr/oracle@db1

INSERT INTO EMPLOYEES (EMPLOYEE_ID, FIRST_NAME, LAST_NAME, EMAIL, HIRE_DATE, SALARY, JOB_ID) VALUES (222, 'Rrd Name', 'Family Name', 'test@ahmedbaraka.com', TO_DATE('01-01-2000','DD-MM-YYYY'),10000, 'IT_PROG');

UPDATE EMPLOYEES SET SALARY=25000.1 WHERE EMPLOYEE_ID=222;

DELETE EMPLOYEES WHERE EMPLOYEE_ID=222;

COMMIT;
```

13. Identify the last generated local trail file.

```
ls ./dirdat/es*
```

14. Open the file in the Logdump utility command prompt.

```
Logdump> open ./dirdat/es0000000**
```

15. If you closed the previous Logdump utility terminal window, run the following commands, to enable all the view options.

```
GHDR ON
DETAIL ON
DETAIL DATA
USERTOKEN ON
FILEHEADER ON
```

16. Apply the following filter so that only transactions applied on EMPLOYEES table are displayed.

Note: The table name in the FITLER command is case-sensitive.

```
FILTER INCLUDE FILENAME HR.EMPLOYEES
```

17. Set the read position to the beginning of the file.

```
pos 0
```

18. Navigate to the next header. Execute the command multiple times and observe the output in each time.

You will notice that the values of the columns of NUMBER data type does not appear properly in the ASCII side of the display. You have to read its value from the Hexadecimal part. Use the Windows calculator to convert it to decimal.

```
Logdump> n
```

19. Set the reading point back to the beginning of the file and execute the COUNT command. You will notice that the filter applies on the count output.

```
pos 0

count
```

Summary

Logdump utility allows you to look into the trail files and obtain the following information:

- General information about the system which generated the file, like hostname, operating system, user name, database name and version .. etc.
- Metadata of the objects involved in the replication.
- The operations stored in the trial files like DML operations and DDL operations.

  Note: You will learn about configuring DDL operations in a different lecture.

- The data that has been processed, including the After and Before image.

  Note: If you encrypt the data in the trail files, Logdump utility does not decrypt it and thus you cannot see the data.