Starting up and Shutting Down the System

Practice Overview

In this practice you will learn the proper way of shutting down an Oracle GoldenGate configuration. Then you will learn how to start it up.

When you want to shut down an Oracle GoldenGate configuration, it is recommended to follow a procedure where you make sure that all the transactions are applied to the target database before you shut down the databases.

In high level, the shutdown procedure is as follows:

- Wait till the Extract and Data Pump process all the transactions
- Shutdown the Extract, Data Pump
- Shutdown the source database
- Wait till the Replicat finishes applying all the pending transactions
- Shutdown the Replicat
- Shutdown the manager process in all the systems
- Shutdown the target database
- Shutdown the systems

Start up procedure is as follows:

- Start up the listeners
- Start up the databases and register them in the listeners
- Start up the Manager process
- Start up Extract processes
- Start up the Replicat process

Assumption

This practice is a continue to the previous practice. It assumes that you have already finished the pervious practice.

Note: you can write auto-start script to automatically start up the databases when the system reboots. Alternatively, you can configure Oracle Restart.

Shutting Down the System

A. Shut down the Oracle GoldenGate Extract then the source database

1. Issue the `lag` command against the Extract process in ggsci command prompt as shown in the following code example. Make sure you receive the message "`At EOF, no more records to process`". This message means that Extract has processed all the data from the redo log files.

```
ggsci> lag esrv1

Sending GETLAG request to EXTRACT ESRV1 ...
Last record lag 2 seconds.
At EOF, no more records to process.
```

2. Shutdown the Extract using the "`stop extract`" command.
The `info` command that follows the stop command is recommended. It verifies that the process has stopped cleanly (by displaying the status is STOPPED). In some troubleshooting scenarios, I have seen cases where the process failed to stop cleanly and further troubleshooting procedure was needed.

```
ggsci>  stop extract esrv1
ggsci>  info extract esrv1
```

3. Do the same for the Data Pump process. Issue the lag command, stop the process, and verify its status.

```
ggsci>  lag psrv1
ggsci>  stop extract psrv1
ggsci>  info extract psrv1
```

4. Shutdown the source database

```
-- in db1
sqlplus / as sysdba
shutdown immediate
```

B. Shut down the Oracle GoldenGate Replicat then the source database

5. In the target system, do the same procedure for the Replicat process.

```
ggsci>  lag rsrv2
ggsci>  stop replicat rsrv2
ggsci>  info replicat rsrv2
```

6. Shut down the target database

```
-- in db2
sqlplus / as sysdba
shutdown immediate
```

7. Stop the Manager processes in the source system and on the target system.

```
ggsci>  stop mgr
ggsci>  info mgr
```

C. Shut down the systems

8. As root, shutdown the systems.

```
shutdown -h now
```

Starting Up the Practice Environment

In this part of the practice you will learn the procedure to start up the practice environment systems.

D. Startup the databases

9. Start up the systems from the Oracle VirtualBox.

10. Start up all the databases. To manually start up the databases, perform the following steps.

You have not configured Oracle Restart for the databases that you created in the practice environment. Therefore, you need to either create a startup script or manually startup the databases after starting up the systems.

(a) Startup the listener

```
lsnrctl start
```

(b) Startup the database

```
sqlplus / as sysdba
SQL> startup
SQL> alter system register;
```

(c) Confirm the database has been registered in the listener.

```
lsnrctl services
```

E. Startup the Oracle GoldenGate processes

11. Start up the Manager processes in **all** the systems.

```
start mgr
info mgr
```

12. Start up the Extract processes in the source system.

```
start extract *
info ER *
```

13. Start up the Replicat processes in the target system.

```
start replicat rsrv2
info replicat rsrv2
```

Summary

In this practice you have learnt following:

- How to shutdown the practice environment after making sure all the redo data has been sent and applied in the Oracle GoldenGate configuration databases.

- How to start up the practice environment systems and databases.