NCR Experience a new world of interaction

ImageMark ECPIX 4.5
Alternate Clearing House Gateway Operations

B004-0000-0741
September 3, 2013

To maintain the quality of our publications, we need your comments on the accuracy, clarity, organization, and value of this book.

Address correspondence to:

NCR Waterloo
Attention: Information Engineering
50 Northland Road
Unit 100
Waterloo, Ontario, Canada
N2V 1N3

Contents

Preface

About This Book

This book is intended to provide an in-depth, system-level knowledge of setting up an alternate CHG server (A-CHG) in case of a failed CHG.

Note: This book describes features and functions, including reports, supported by the ImageMark ECPIX system. Some of these features or functions may not be implemented in or applicable to your environment.

This document is provided for informational purposes and is subject to change without notice.

Audience

This book is intended for the following ImageMark ECPIX personnel:

- Member Bank Operations Staff responsible to set up the A-CHG
- Member Bank Operations Staff of the failed CHG (F-CHG)
- Operations Staff at the Clearing House
- NCR Professional Services Personnel

Prerequisites

- Knowledge about Database Backup and Recovery procedures and ImageMark ECPIX application
- Basic understanding of Clearing House rules, and cheque clearing environment and related procedures

Related Information

It is important that you are well aware of the ImageMark ECPIX application to restore F-CHG operations on A-CHG.

If you are a CHG user, refer to the following books:

- **B004-0000-0415: Clearing House Gateway Operations**
- **B004-0000-0416: Clearing House Gateway Administration**

If you are Clearing House user, refer to the following books:

- **B004-0000-0417: Clearing House Operations**
- **B004-0000-0418: Clearing House Administration**

You must also be well aware of the PKI infrastructure set up for your environment. Refer to **B004-0000-0767: PKI Security Installation and Configuration** guide.

Conventions

Within the procedures described in this book, conventions help you to identify different types of information.

Bold

Bold identifies anything you must select, choose, run, press, or type. For example:

Type **XYZ**, and press **Enter**.

Chevrons

Chevrons (>) indicate a series of menu selections. For example:

Choose **File > Import > Formats**.

Italics

Italics identify a placeholder that must be replaced with your own specific information. For example:

device=c:*path*\7780mint.sys type=H.

Italics are also used for emphasis.

Notes, Tips, Important, Cautions, Warnings

Notes, cautions, and warnings alert you to important or critical information. Each is displayed in a different way:

Note: Notes contain information that has special importance.

Tip: Tips contains useful advice for the user on tasks or procedures.

Important: Important text contains information to which the reader should pay close attention.

Caution: Cautions alert you to procedures or conditions that could damage equipment or data.

Warning: Warnings alert you to procedures or conditions that could cause personal injury.

Revision Record

September 2013

Section	Revision
Installing Alternate CHG	New section
Planned Switch-Over from P-CHG to A-CHG	New section

August 2013

Section	Revision
Restore F-CHG Operations on A-CHG	Added section “Scenarios for Starting Alternate CHG”

September 2011

Section	Revision
Restore F-CHG Operations on A-CHG	Updated Scenarios 1,2,3,4
Scripts	Deleted the “Script to Update Session Instance for Non-Creation of Session Output Files” section

January 2011

Section	Revision
Restore F-CHG Operations on A-CHG	Updated Scenario 2

October 2010

Section	Revision
Restore F-CHG Operations on A-CHG	Updated the Scenario 2 and 4.

April 2010

Section	Revision
Restore F-CHG Operations on A-CHG	Updated the entire chapter.

July 2008

Section	Revision
Scripts	The extension for the following scripts is changed from .pl to .bat ■ Extract_Items_from_CH.pl ■ Modify_CHI_Operation_Mode_to_Recovery.pl ■ Modify_CHI_details_in_CHT.pl ■ Modify_F-CHI_details_in_CHG.pl ■ Retry_Failed_Files_Transmission.pl ■ Update_Session_instance_no_output_file_creation.pl ■ Modify_CHI_Operation_Mode_to_Normal.pl

May 2008

Section	Revision
All	Reorganized the information in this book. Created three new chapters: ■ Overview ■ Restore F-CHG Operations on A-CHG ■ Restore A-CHG Operations on F-CHG

November 2007

Section	Revision
All	New publication

1

Overview

An alternate CHG server (A-CHG) is a hardware and software setup used by banks when their CHG is unable to perform clearing operations due to any hardware and/or software failure. Banks, during this period, use A-CHG to route data files and perform clearing operations.

All the data from the failed CHG (F-CHG) is recovered on A-CHG. After it is successfully recovered, the data sent to the F-CHG by the presenting and drawee banks is requested again.

The Clearing House also conveys to the A-CHG the list of items it received from the F-CHG before failure. Certain scripts are used to recover the data to/from the A-CHG. These are available on a media labeled ‘Alternate CHG’.

The transfer of the files between the capture system and the A-CHG can be done using any of the following data synchronization procedures:

- Manual data synchronization
- Automatic data synchronization

Manual data synchronization is done using storage media like CDROM. Both the A-CHG and the capture system must support reading and writing of the chosen media format.

This media contains the following files:

- Previous day's database backup
- Cryptographic data backup
- Application backup (files and folders)

Automatic data synchronization is done using the Oracle Dataguard tool. In automatic data synchronization, Oracle Dataguard tool automatically synchronizes the data in A-CHG and the capture system.

Pre-requisites for Setting Up A-CHG

Before you set up the A-CHG, ensure that it is equipped with the following hardware and software:

- Media Reader and Media Writer to receive and dispatch data between the member bank and the Clearing House
- Correct version of third-party and ImageMark ECPIX software
- Hardware components (if any) to support security requirements
- F-CHG delivers media containing the following data:
    - Previous day's RMAN backup of database (LEVEL0)
    - Cryptographic data backup
    - ImageMark ECPIX files backup like C:\ServerDir, D:\Oracle\admin\ECPIX\Pfile\Init.ora

Tip: It is advisable to back up these files and folders periodically, say once a week.

Important: The location of RMAN backup of F-CHG database should be the same at both, A-CHG and F-CHG servers.

For example, if location of RMAN backup of F-CHG database is at C:\RMAN, then the location at A-CHG should also be C:\RMAN.

Important: If the A-CHG was used earlier, it is mandatory to carry out the file and database cleanup process prior to setup. Refer the “Perform Database Cleanup” ,“Perform File Cleanup For Macromedia JRun Users” and the “Perform File Cleanup For IBM WebSphere Users” sections to perform the cleanup activity.

Note: Refer the “Scripts” section to view the details about the scripts used at various instances.

Perform File Cleanup For Macromedia JRun Users

To perform file cleanup:

1 Stop **ECPIX Base Service** (EBS).

2 Stop **Macromedia JRun Admin Server** and the **Macromedia JRun Default Server** services.

3 Delete all **ImageMark ECPIX logs** from ***<Path>\Program Files\NCR\ECPIX\DIAG***.

<Path>—default drive where ImageMark ECPIX is installed.

4 Delete all **JRUN logs** from ***<Path>\JRun\logs***.

<Path>—default drive where JRun is installed.

5 Delete the routing number folder from ***<Path>\Program Files\NCR\ECPIX\DATA\<NNNNNN>***.

<Path>—default drive name where ImageMark ECPIX is installed

<NNNNNN>—folder name based on the routing number of the CHG

Perform File Cleanup For IBM WebSphere Users

To perform file cleanup:

1 Stop **ECPIX Base Service** (EBS).

2 Stop **IBM WebSphere Application Server** services.

3 Delete all **ImageMark ECPIX logs** from ***<Path>\Program Files\NCR\ECPIX\DIAG***.

<Path>—default drive where ImageMark ECPIX is installed.

4 Delete all **WebSphere logs** from ***<Path>\JRun\logs***.

<Path>—default drive where IBM WebSphere is installed.

5 Delete the routing number folder from ***<Path>\Program Files\NCR\ECPIX\DATA\<NNNNNN>***

<Path>—default drive name where ImageMark ECPIX is installed

<NNNNNN>—folder name based on the routing number of the CHG

Perform Database Cleanup

Carry out the steps listed below to perform database cleanup.

1 Copy **listener.ora**, **sqlnet.ora**, and **tnsnames.ora** from ***<Path>\Oracle\Ora10g\NETWORK\ADMIN*** to a new drive.

2 Drop the database as follows:

   a Go to **Start > Programs > Oracle-OraHome10g > Configuration and Migration Tools > Database Configuration Assistant**.

   The system displays the Welcome screen.

   b On the Welcome screen, click **Next**.

   The system displays the list of operations that can be executed.

   c Select the **Delete a Database** option.

   d Click **Next**.

   The system displays the list of databases that can be deleted.

   e Select the **ImageMark ECPIX** database.

   f Click **Finish**.

3 Copy **initECPIX.ora** file from Level 0 media to ***D:\Oracle\Ora10g\database***.

4 Create a new folder named **ECPIX** in ***D:\Oracle\admin*** and ***D:\Oracle\oradata***.

5 Copy **pfile** folder from Level 0 media to ***D:\Oracle\admin\ECPIX***.

6 Create the following folders in ***D:\Oracle\admin\ECPIX***:

- arch
- bdump
- cdump
- udump

7 Create a password file by running the following command:

```
C:\>orapwd file=D:\oracle\ora10g\database\pwdECPIX.ora password=ecpix
entries=10
```

8 Copy **listener.ora**, **sqlnet.ora**, and **tnsnames.ora** to ***D:\Oracle\Ora10g\NETWORK\ADMIN*** from the drive you had copied the data.

9 Start **OracleOraHome10gTNSListener** service.

10 Create Oracle instance by running the following command:

```
C:\> oradim -new -sid ECPIX -startmode manual -pfile
D:\oracle\admin\ECPIX\pfile\init.ora
```

2

Installing Alternate CHG

You can install Alternate CHG by executing the DR-Operation script. The DR-Operations script is used to execute the sql commands used in the switchover and failover operations from the PCHG to the SCHG and vice versa. You must install the script on the all the instances of the database server of both the PCHG and the SCHG.

Note: After executing any of the following batch script files,

- Extract_Items_from_CH.bat
- Modify_CHI_details_in_CHT.bat
- Retry_Failed_Files_Transmission.bat

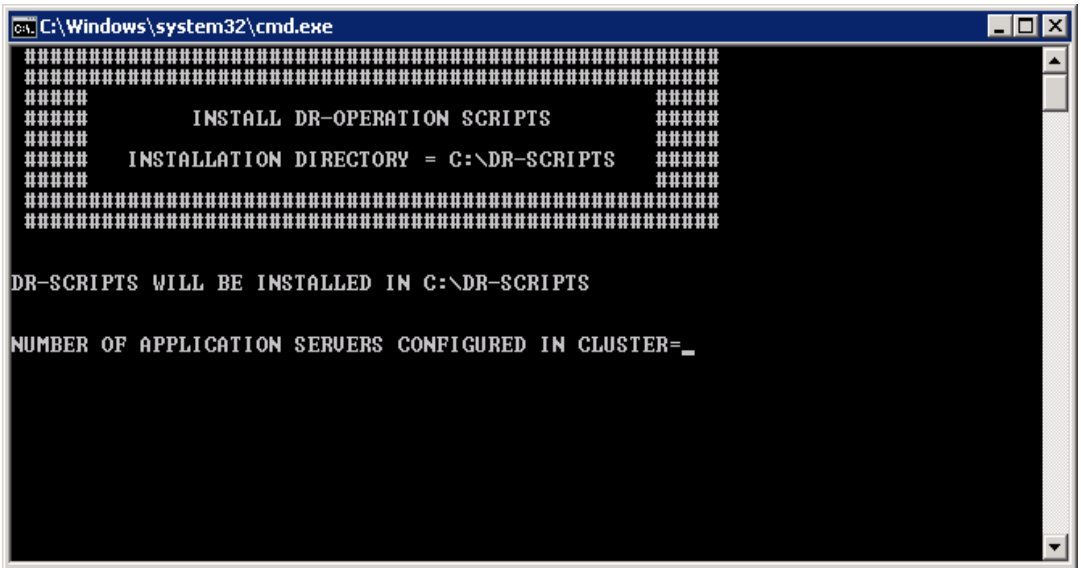
you need to enter the database password and then press *Enter* to proceed with the execution of the specified file.

Installing the DR-Operation Script

To install the DR-Operation script:

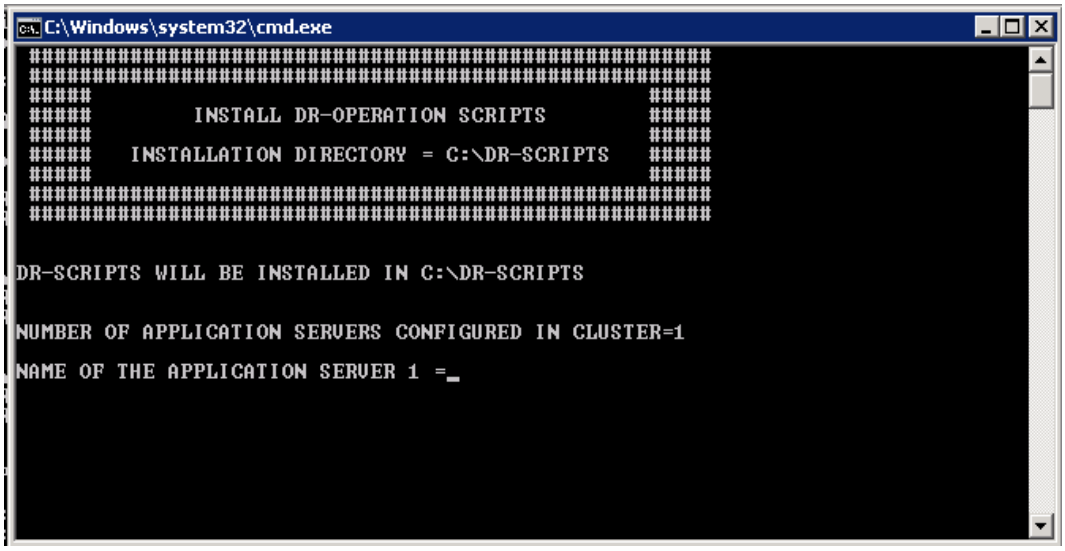
1. Log on to your database server as a user having administrative rights.
2. Copy the *DR_Scripts* folder to any location on the database server.
3. From the *DR_Scripts*/*DR-Operation* folder, run the **install.bat** file.

   The system prompts you to enter the number of application servers that have been configured.



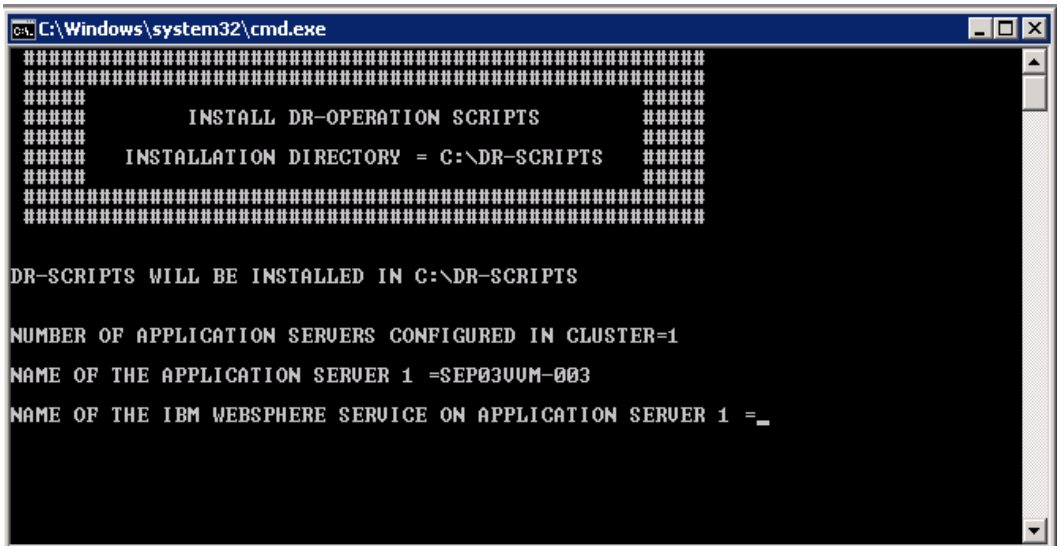
4. Type the number of application servers that have configured and press **Enter**. For example, if you have three application servers, type 3 and press Enter.

The system prompts you for the name of the application server..



5 Type the name of the application server and press **Enter**. For example, if the name of your application server is SEP03VVM-003, type SEP03VVM-003 and press Enter.

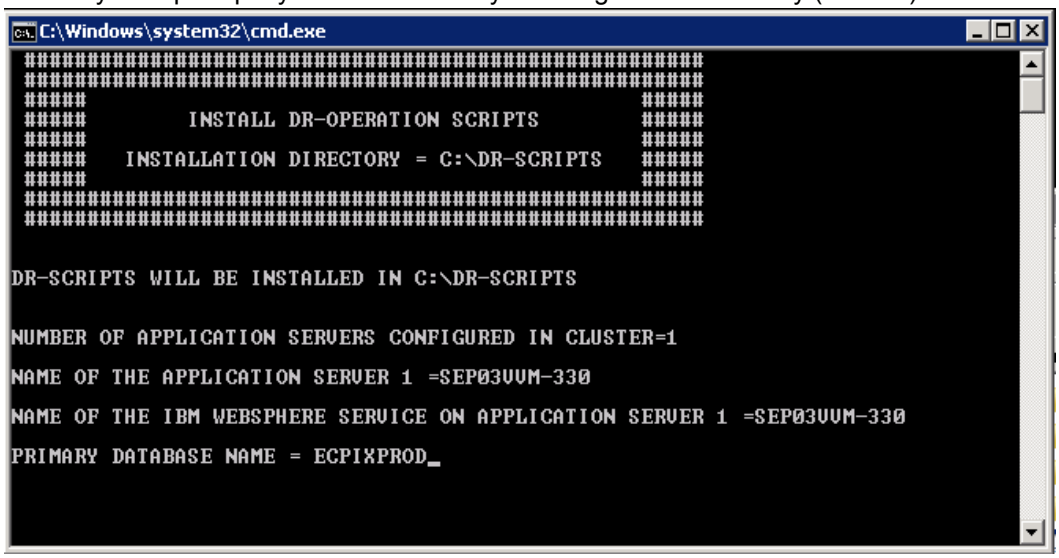
The system prompts you for the name of the IBM Websphere service on the application server..



6 Type the name of the IBM Websphere service and press **Enter**. For example, if the name of your IBM Websphere service is IBMWAS61Service - SEP03VVM-003Node01, type IBMWAS61Service - SEP03VVM-003Node01 and press Enter.

7 Repeat steps 5 and 6 for all your application servers.

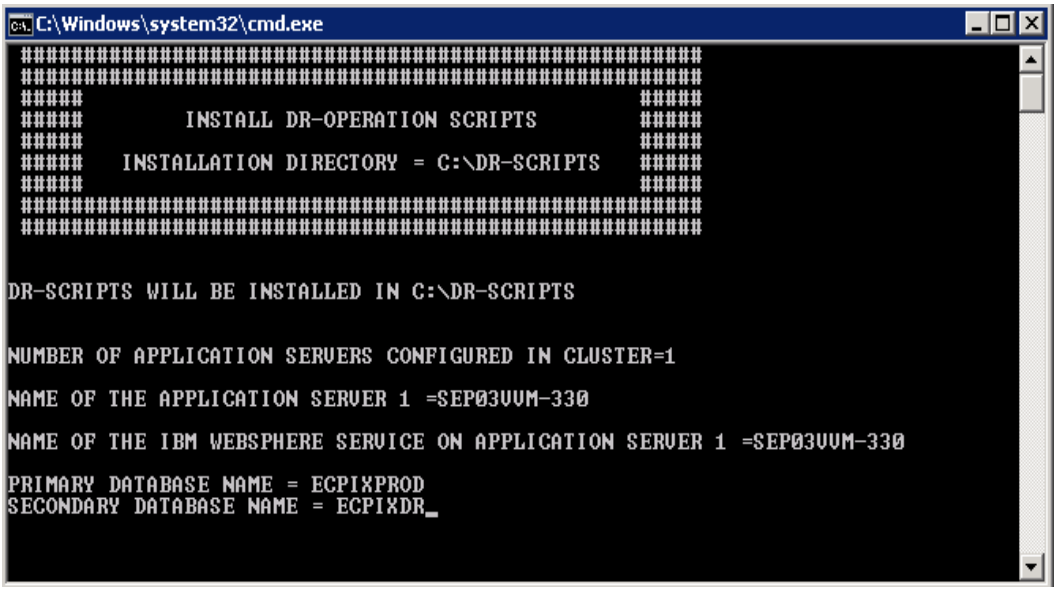
The system prompts you for the Primary Clearing House Gateway (P-CHG) database name..



8 Type the Primary Clearing House Gateway database name and press **Enter**.

Note: Primary Clearing House Gateway (P-CHG) database name is the name of the TNS of the P-CHG database. For example, ECPIXPROD. Note that, ECPIX TNS is configured for both P-CHG and A-CHG. Therefore, you should not use '*ECPIX*' TNS as the primary database name.

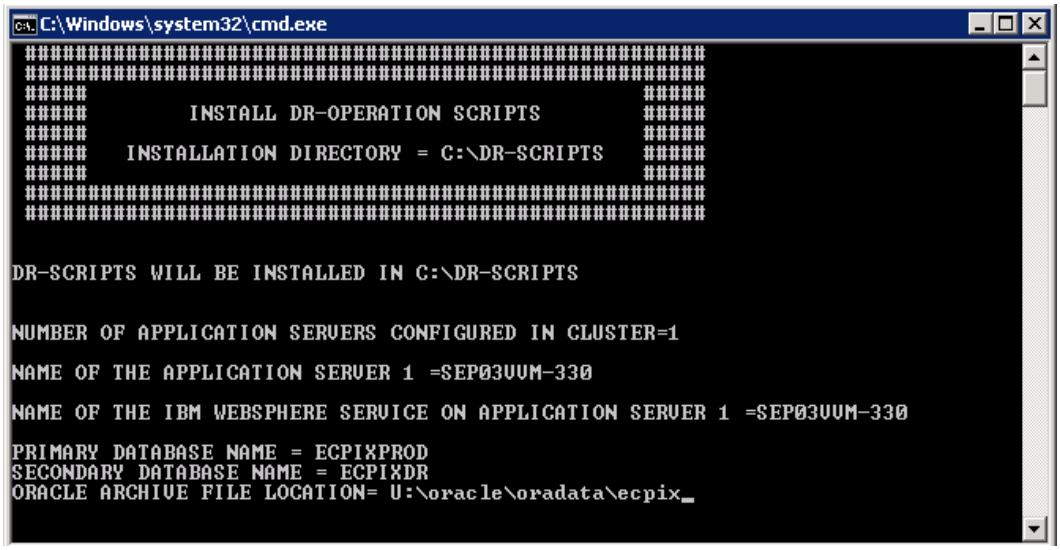
The system prompts you for the Secondary Clearing House Gateway database name.



9 Type the Secondary Clearing House Gateway database name and press **Enter**..

Note: Alternate Clearing House Gateway database name is the name of the TNS of the A-CHG database. For example, ECPIXDR. Note that, ECPIX TNS is configured for both P-CHG and A-CHG. Therefore, you should not use '*ECPIX*' TNS as the secondary database name.

The system prompts you for the location of the Oracle archive file.

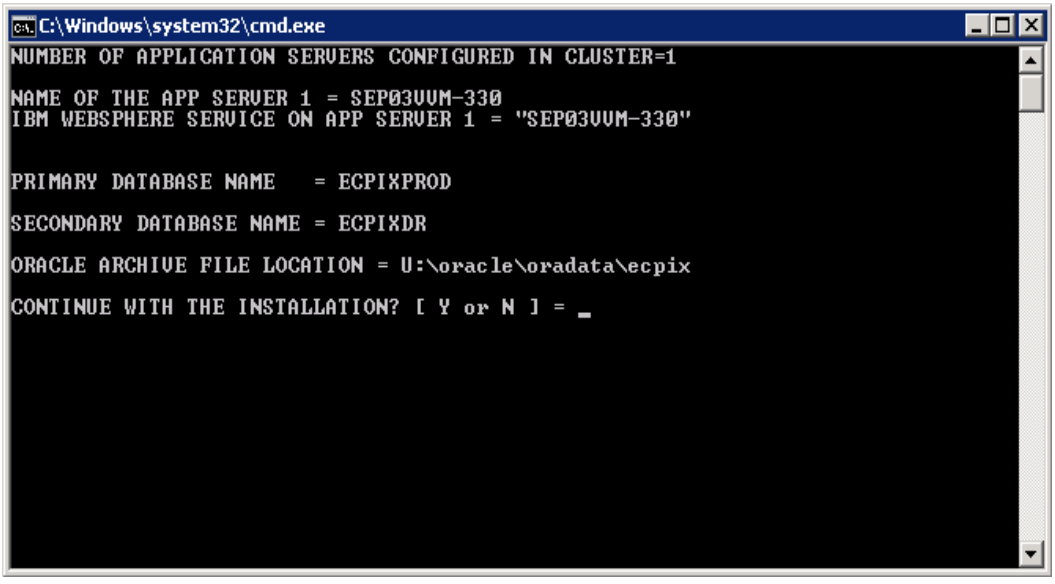


10 Type the location of the Oracle archive file. For example, U:\ArchRedo_Ecpix where U: indicates the drive where the archive logs are created. For more information on determining the location of the archive logs see the Determining the Location of the Archive Logs section.

The system prompts you to press any key to continue.

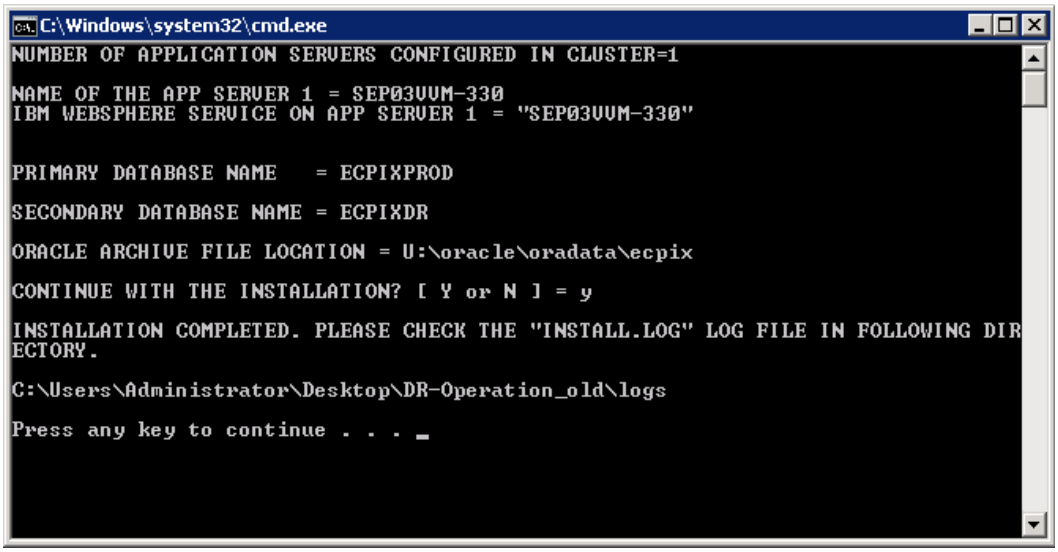
11 Press any key to continue.

The system displays the above entered information and prompts you to confirm whether you would like to continue with the installation.



12 Type Y and press **Enter**.

The system completes the installation process and asks you to check the install.log file present in the location that has been displayed.



13 Press any key to continue.

The system creates the following shortcut icon on the desktop and closes the installer.

14 Now assign permissions to the SCRIPTS directory.

Assigning Permissions to the Scripts Directory

After installing the DR-Operation script, you must assign permissions for users accessing the C:\DR-SCRIPTS\SCRIPTS folder.

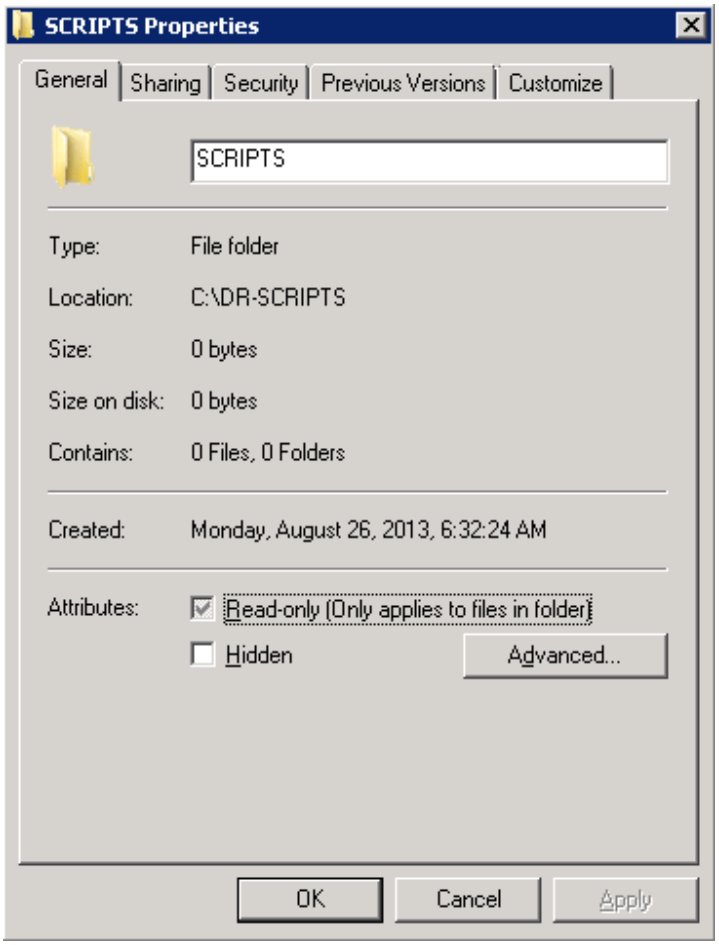
To do this:

1 Log on to your database server as a user having administrative rights.

2 Navigate to the *C:\DR-SCRIPTS* folder.

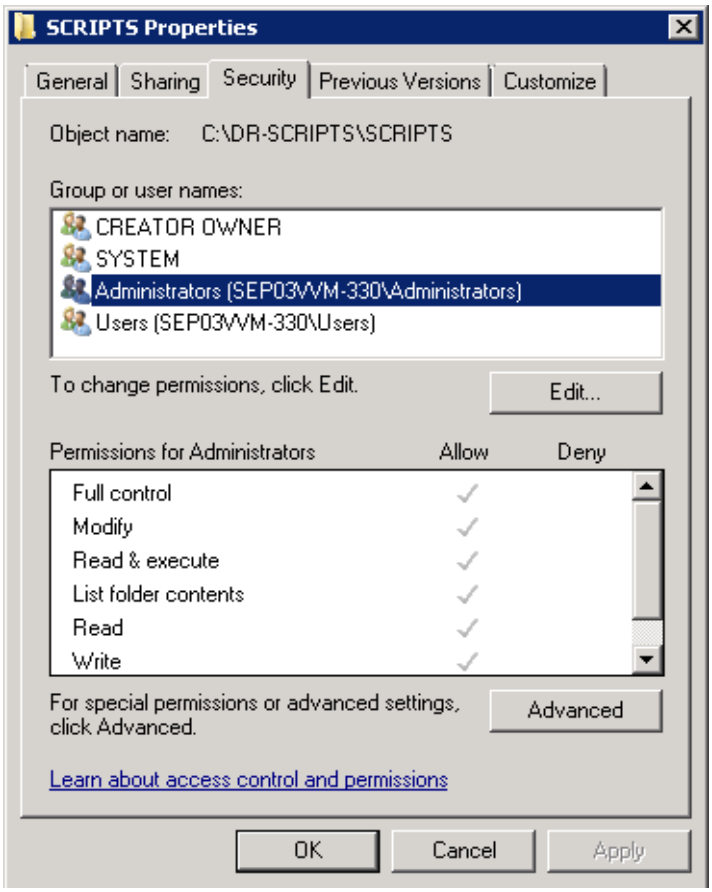
3 Right-click the **SCRIPTS** folder and then click **Properties**.

The system displays the SCRIPTS Properties dialog.



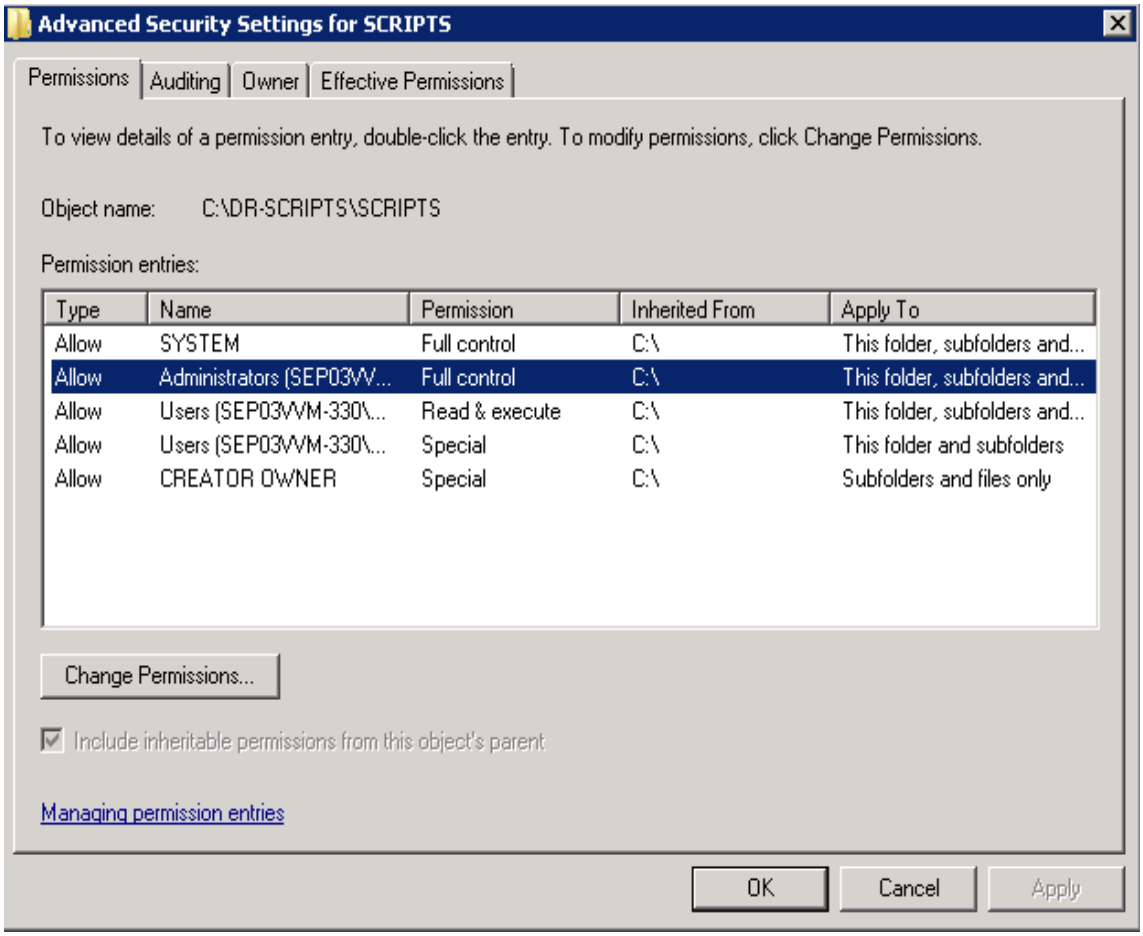
4 Click the **Security** tab.

The system displays the Security details in the SCRIPTS Properties dialog.



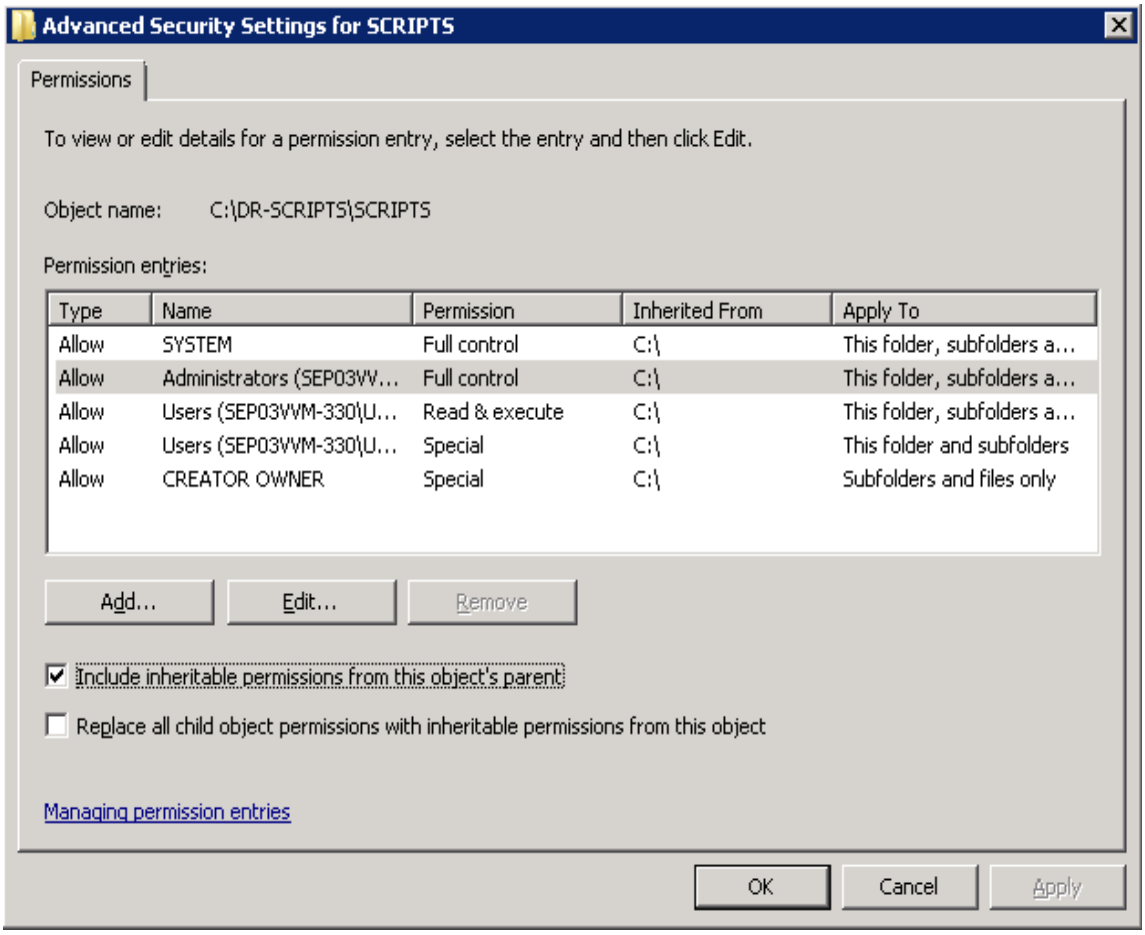
5 Click **Advanced**.

The system displays the Advanced Security Settings for SCRIPTS dialog.



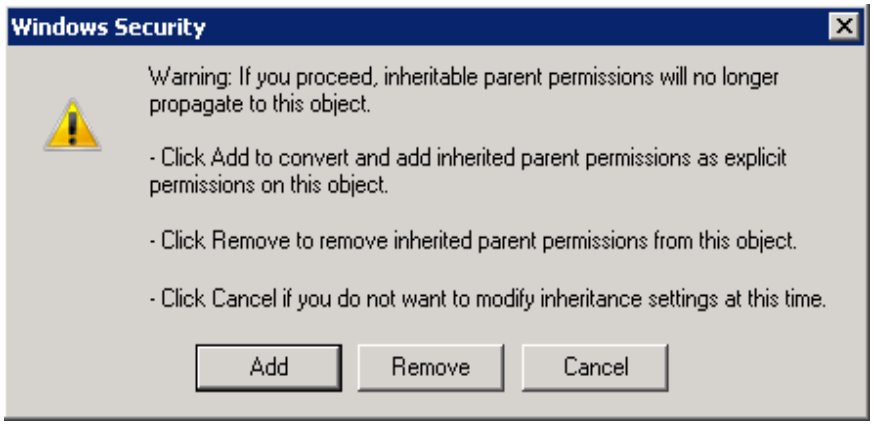
6 Select the Administrators user and click **Change Permissions**.

The system displays the *Advanced Security Settings for SCRIPTS* dialog.



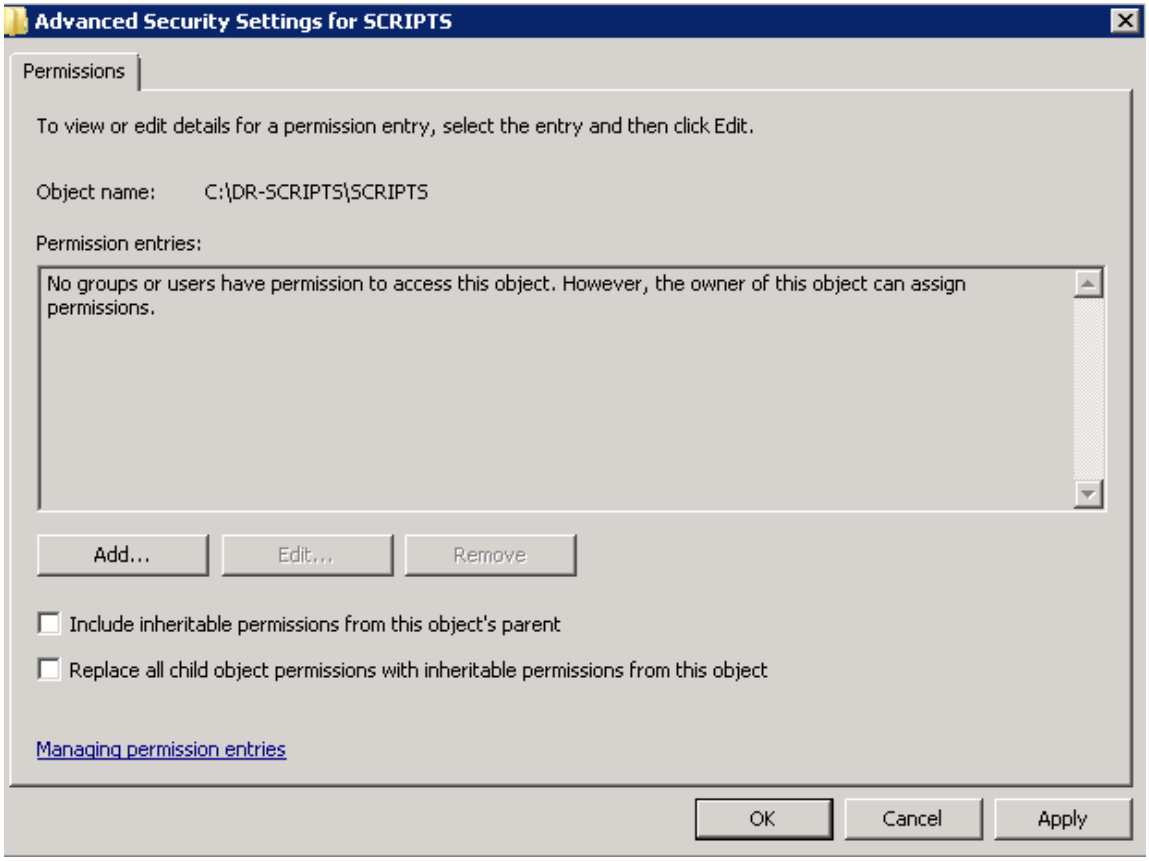
7 Clear the **Include inheritable permissions from the object's parent** check box.

The system displays the Security dialog.



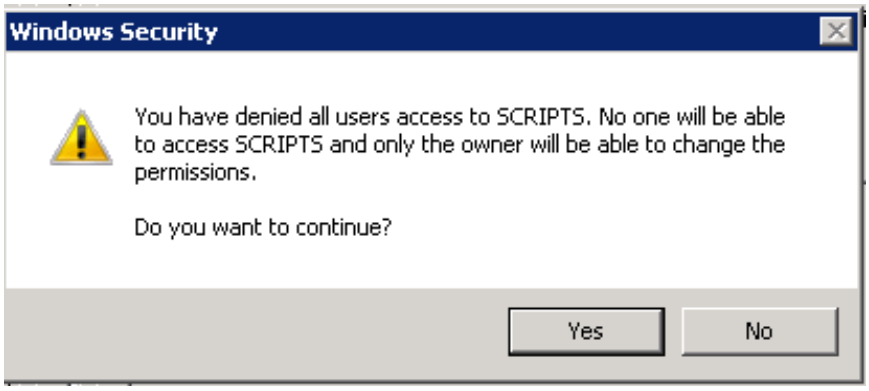
8 Click **Remove**.

The system displays the Advanced Security Settings for SCRIPTS dialog.



9 Click **OK**.

The system displays the user access denial confirmation dialog.

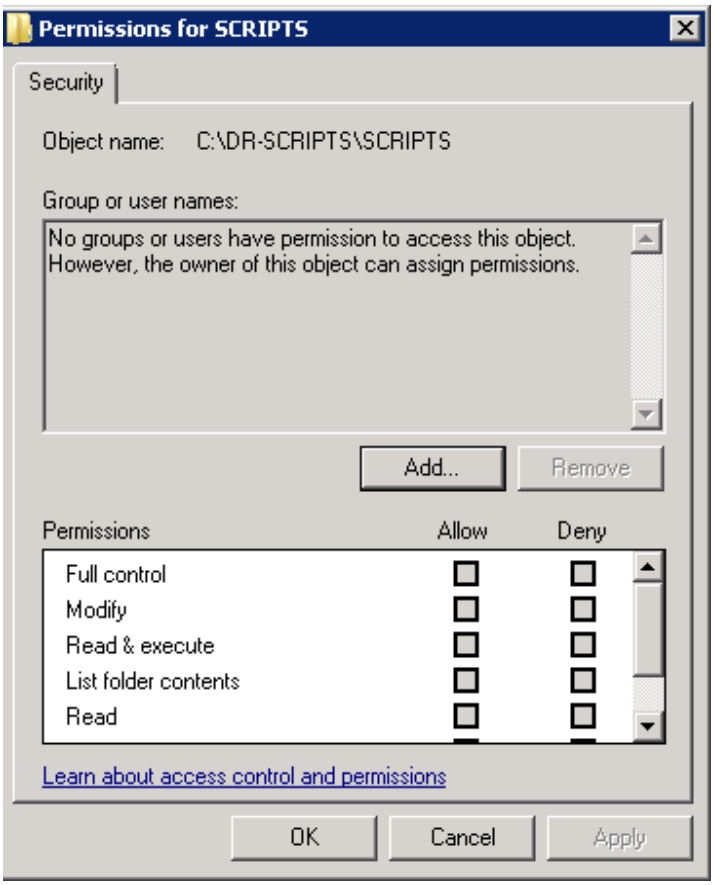


10 Click **Yes**.

11 On the **Advanced Security Settings for SCRIPTS** dialog, click **OK**.

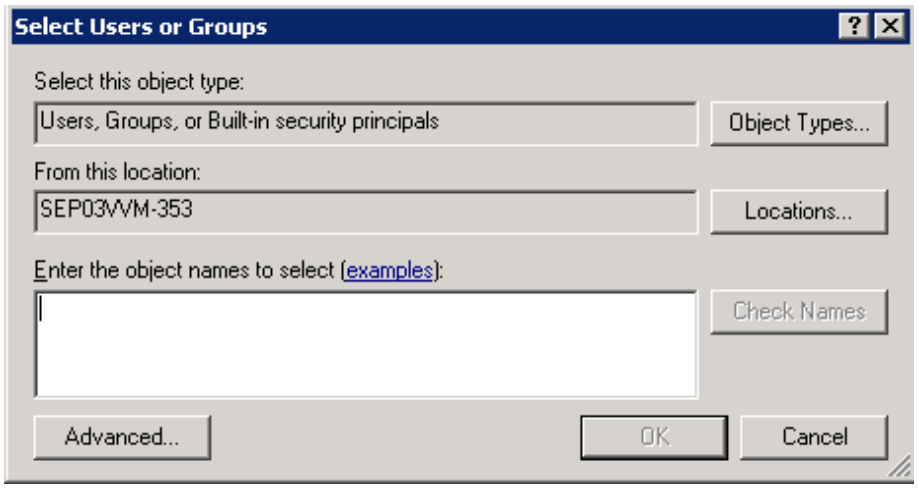
12 On the **Security** tab of the **SCRIPTS Properties** dialog, click **Edit**.

The system displays the **Permissions for SCRIPTS** dialog.



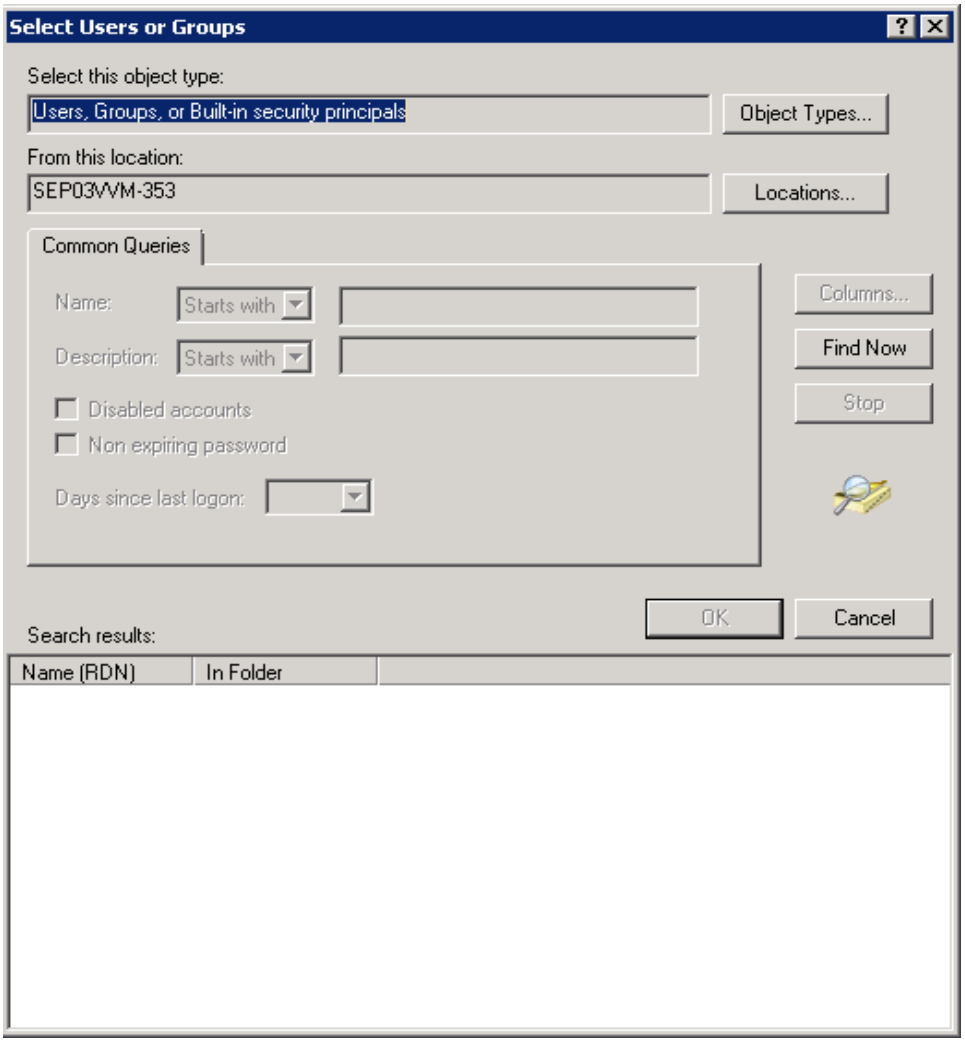
13 Click **Add**.

The system displays the Select Users or Groups dialog.



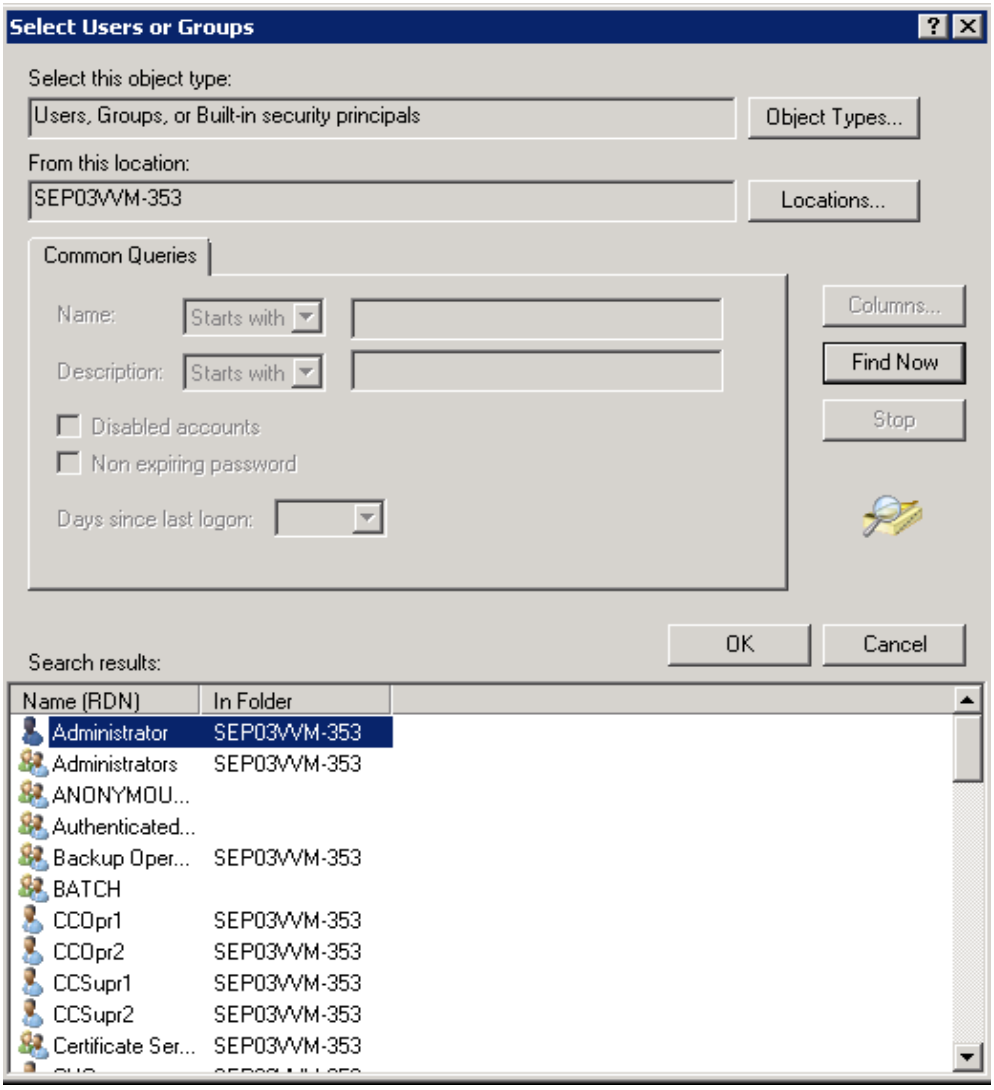
14 Click **Advanced**.

The system displays the Select Users or Groups dialog.



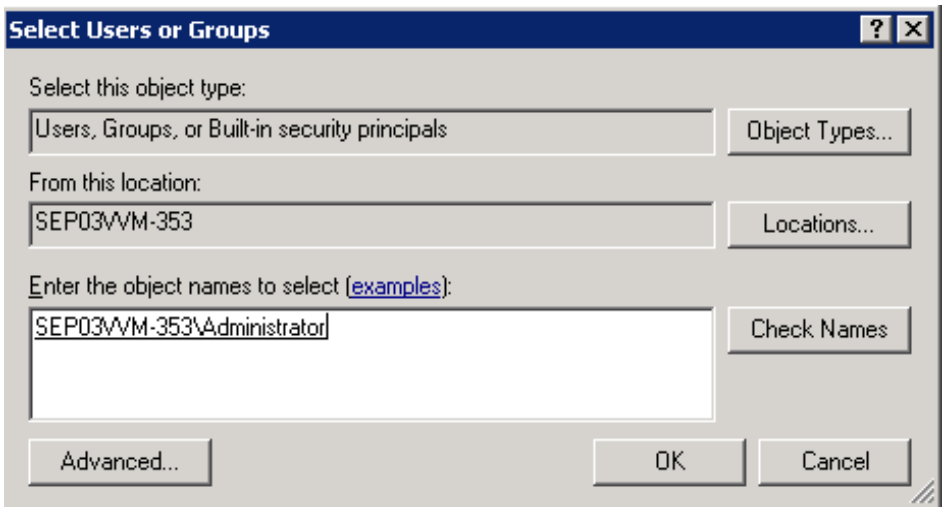
15 Click **Find Now**.

The system displays the list of users in the Search results panel.



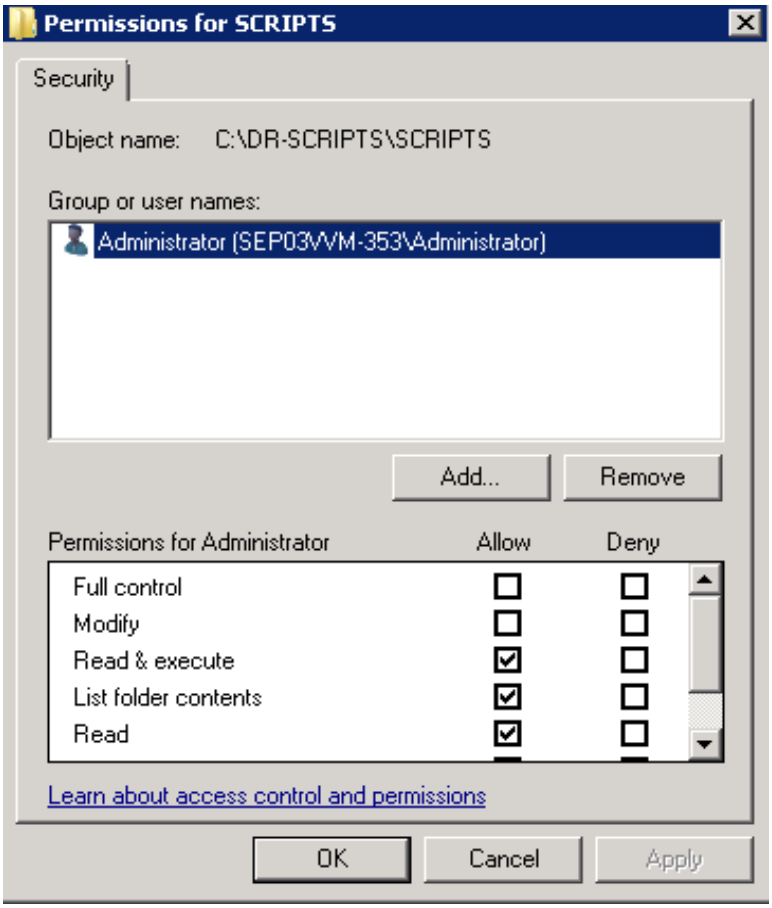
16 Select the Administrators user and then click **OK**.

The system displays the username in the *Enter the object names to select box*.



17 Click **OK** on the Select Users or Groups dialog.

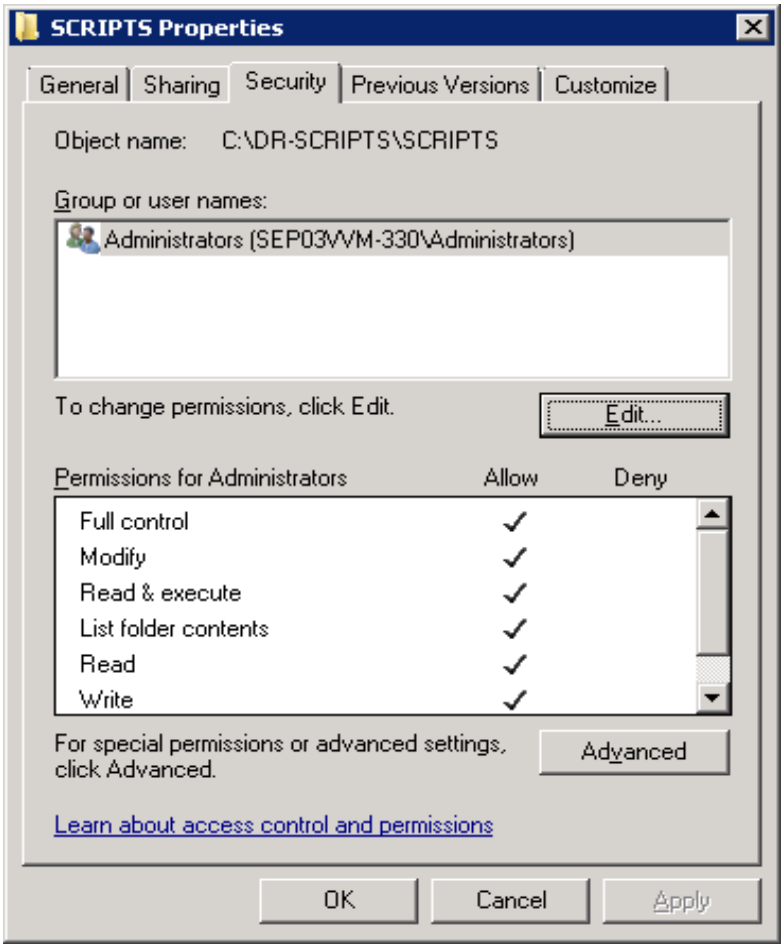
The system displays the *Permissions for SCRIPTS* dialog.



18 Click the check box in the Allow column for the **Full Control** option in the Permissions for Administrators list.

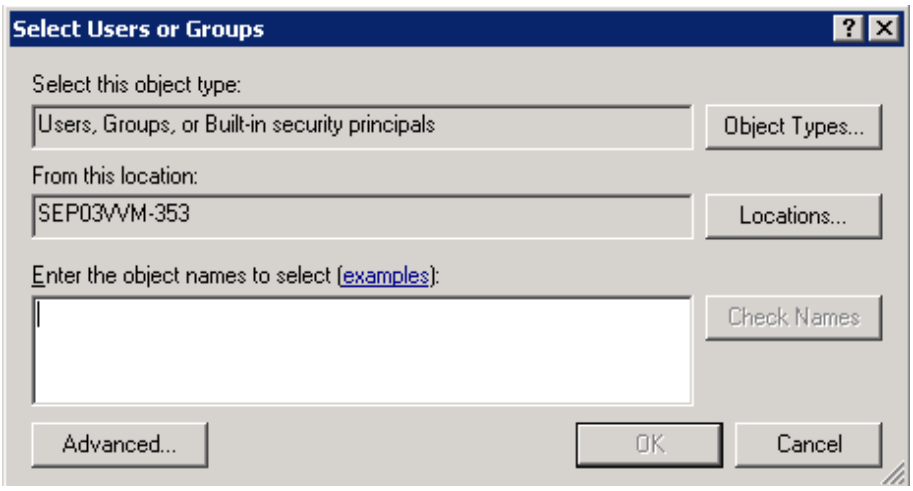
19 Click **OK**.

The system displays the SCRIPTS Properties dialog with the specified permissions.



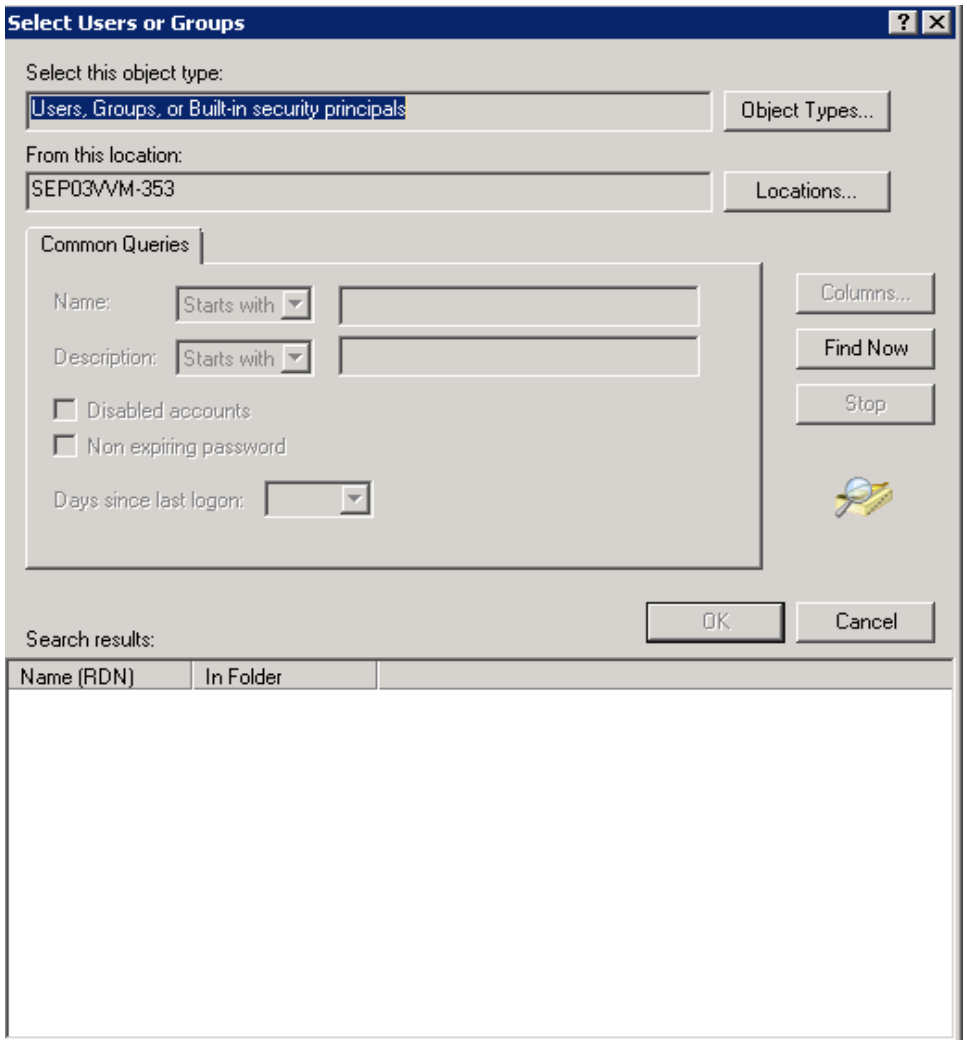
20 Click **Edit**.

The system displays the Select Users or Groups dialog.



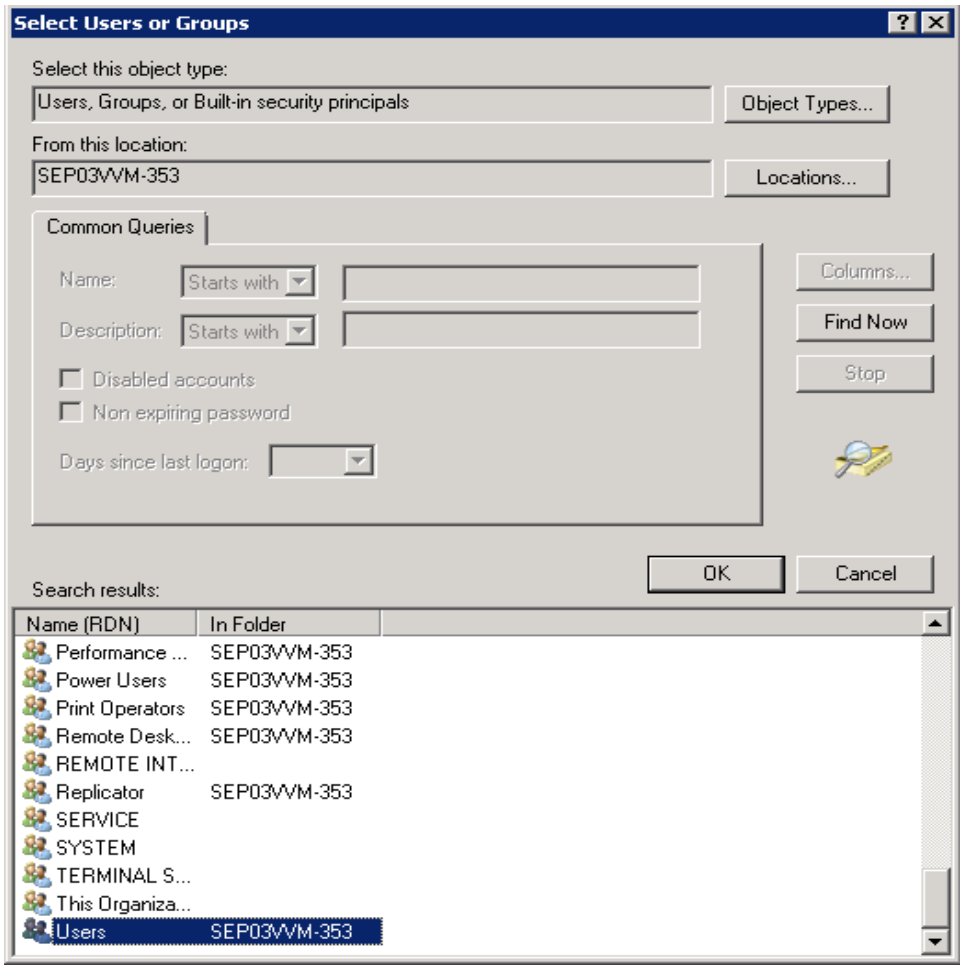
21 Click **Advanced**.

The system displays the Select Users or Groups dialog.



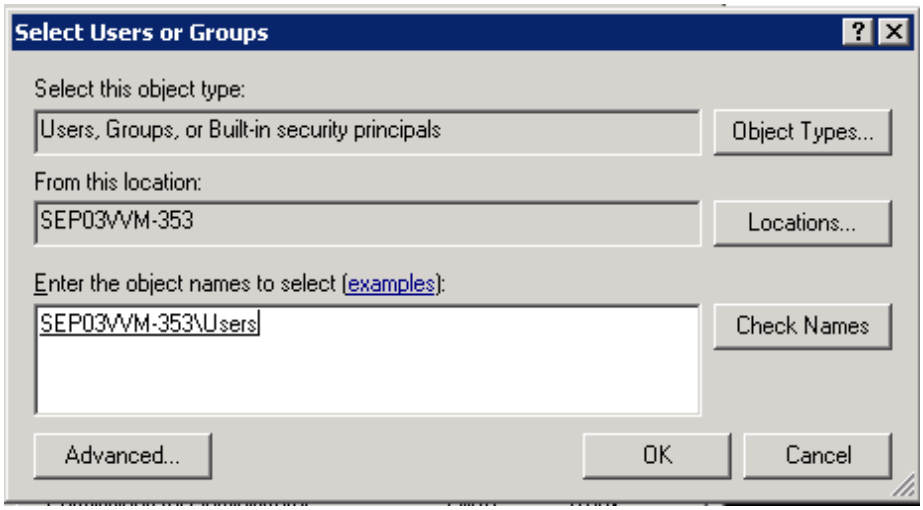
22 Click **Find Now**.

The system displays the list of users in the Search results panel.



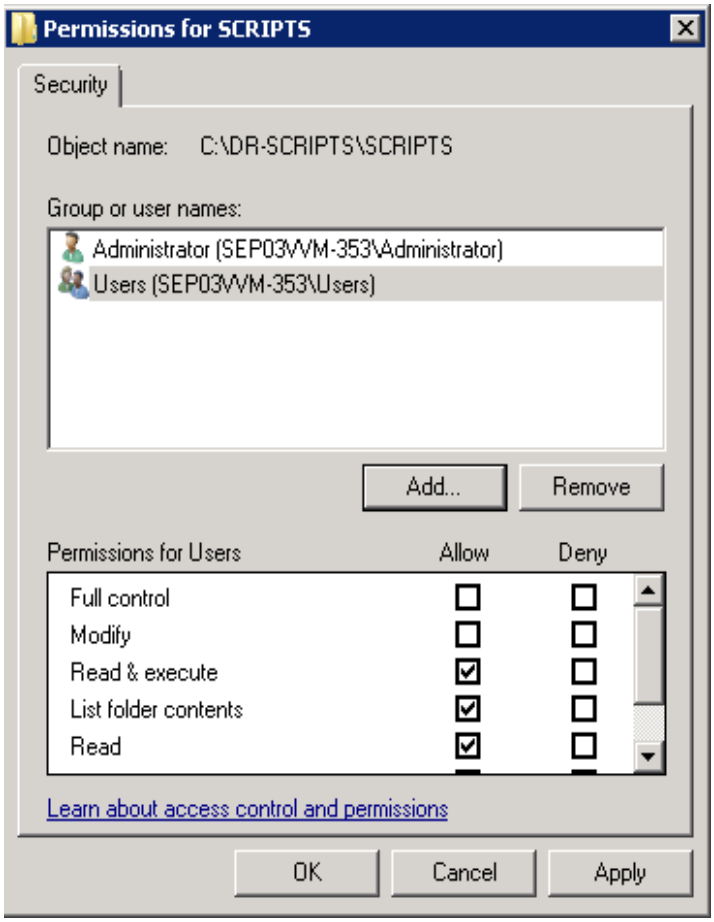
23 Select the Users group and then click **OK**.

The system displays the username in the Enter the object names to select box.



24 Click **OK** on the Select Users or Groups dialog.

The system displays the *Permissions for SCRIPTS* dialog.



25 In the *Permissions for SCRIPTS* dialog for the Users group, select the following options *Permissions for Users* list.

- Read & Execute
- List Folder Contents
- Read

26 Click **OK**. to close the *Permissions for SCRIPTS* dialog.

27 Click **OK** to close the *SCRIPTS Properties* dialog.

Determining the Name of the IBM Websphere Service

To locate the name of the IBM Websphere service:

1. Log on to your database server as a user having administrative rights
2. To locate the IBM Websphere service for the ImageMark ECPIX application server, go to the Control Panel and open Administrative Tools.

   The system displays the Administrative tools window
3. Double-click **Services**.

   The system displays the Services window.
4. Locate the IBM Websphere service that is used for the ImageMark ECPIX application and right-click it.

   The system displays the IBM WebSphere Application Server XXXXXXXX Properties dialog. The Service Name label on this dialog displays the service name.

Determining the Location of the Archive Logs

To determine the location where the archive logs for the ImageMark ECPIX application are created:

1. On the database server, open and command prompt.
2. Type `sqlplus/nolog` and press **Enter**.

   This logs you on to sql plus.
3. Type `conn sys/<password>@<database instance name>` as sysdba.

   This logs you on to the ImageMark ECPIX database instance as sysdba.
4. Type `select replace(replace(value,'LOCATION='),'Location=') ARCH_FILE_LOC from v$parameter where upper(name)=UPPER('log_archive_dest_1');` and press **Enter**.

   The system displays the location of the archive logs.

```
ARCH_FILE_LOC
------------------------------------------------------------
D:\Oracle\Oradata\ECPIX
```

Uninstalling the DR-Operation Script

To uninstall the DR-Operation script:

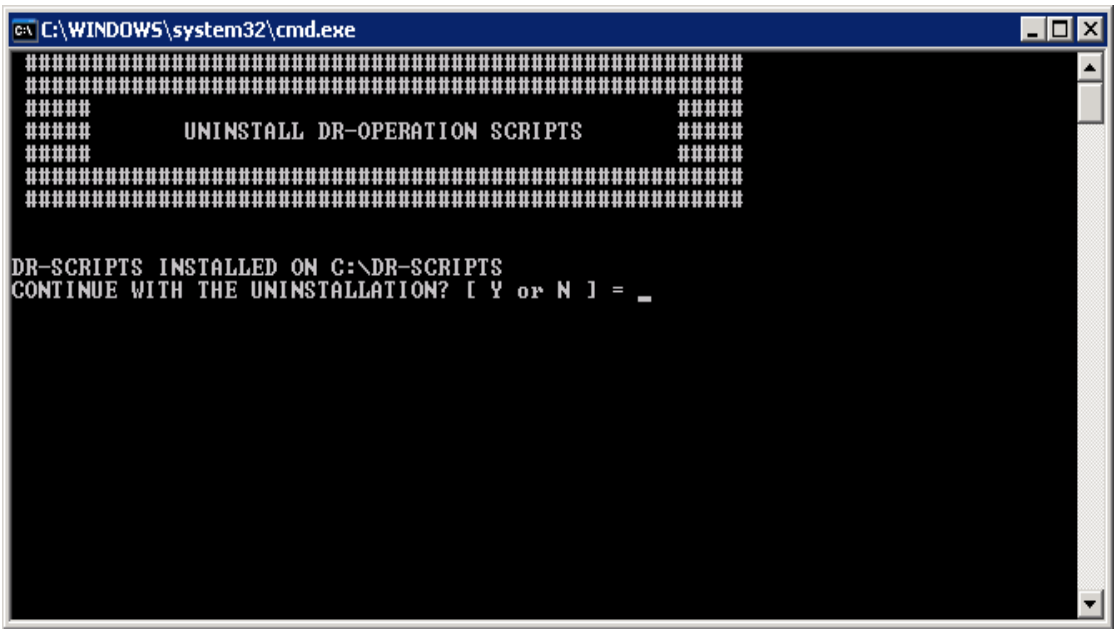
1 Log on to your database server as a user having administrative rights.

2 Navigate to the location where the DR-Scripts directory has been created. This is defined in the install.log file described in Step 12 of the above section.

3 Open the DR-Scripts\Scripts folder.

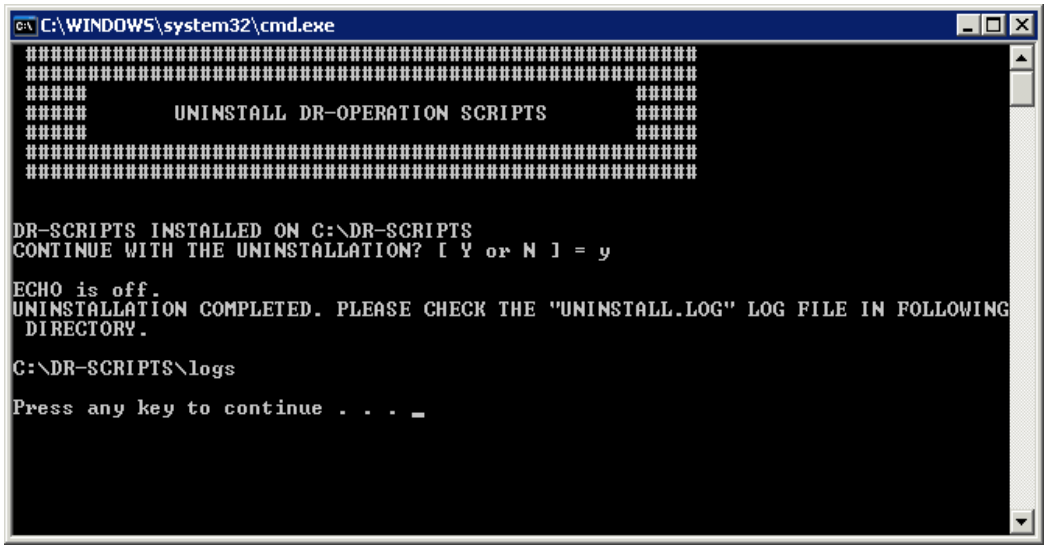
4 Double-click the **uninstall.bat** file.

The system prompts you to confirm the uninstall process.



5 Type Y and press **Enter**.

The system displays the uninstall successful message and asks you to check the uninstall.log file present in the location that has been displayed.



6 Press any key to continue. The system closes the installer.

3

Restore F-CHG Operations on A-CHG

A CHG server may fail at any point in time during the clearing process. This chapter describes the process to restore F-CHG operations failed during any of the scenarios which include, but not limiting to:

- Prior to Session Begin (Session Commit)
- While Presentment Session was in Progress
- After Session was Closed (End Session)
- During Return Session

Important: After the A-CHG starts operating in Normal mode, you have to configure its database backup in order to restore it on F-CHG.

Refer to the chapter **Backup and Restore** in your ImageMark ECPIX Administration book to know more about configuring ImageMark ECPIX database and its restoration process.

Note: After executing any of the following batch script files,

- Extract_Items_from_CH.bat
- Modify_CHI_details_in_CHT.bat
- Retry_Failed_Files_Transmission.bat

you need to enter the database password and then press *Enter* to proceed with the execution of the specified file.

Performing File Cleanup For Macromedia JRun Users

To perform file cleanup on the A-CHG:

1. Stop ECPIX Base Service (EBS).
2. Stop the Macromedia JRun Admin Server and the Macromedia JRun Default Server services.
3. Delete all the ImageMark ECPIX logs from <Path>\Program Files\NCR\ECPIX\DIAG, where <Path> indicates the location where ImageMark ECPIX is installed.
4. Delete all the JRUN logs from <Path>\JRun\logs where <Path> indicates the location where JRun is installed.
5. Delete the routing number folder from <Path>\Program Files\NCR\ECPIX\DATA\<NNNNNN> and <Path>\Program Files\NCR\ECPIX\DATA\FTPRoot\<NNNNNN> default drive name where ImageMark ECPIX is installed. The <NNNNNN>-folder name is based on the routing number of the CHG.

Performing File Cleanup For IBM Websphere Users

To perform file cleanup on the A-CHG:

1. Stop **ECPIX Base Service** (EBS).
2. Stop the **IBM WebSphere Application Server** services.
3. Delete all the ImageMark ECPIX logs from <Path>\Program Files\NCR\ECPIX\DIAG, where <Path> indicates the location where ImageMark ECPIX is installed.
4. Delete all the Websphere logs from <Path>\IBM Websphere\logs where <Path> indicates the location where JRun is installed.
5. Delete the routing number folder from <Path>\Program Files\NCR\ECPIX\DATA\<NNNNNN> and <Path>\Program Files\NCR\ECPIX\DATA\FTPRoot\<NNNNNN> default drive name where ImageMark ECPIX is installed. The <NNNNNN>-folder name is based on the routing number of the CHG.

Performing Database Cleanup

Important: The procedure to perform database cleanup is applicable only in case of manual restore and recovery at A-CHG.

To perform database cleanup on the A-CHG:

1 Drop the ImageMark ECPIX database.

   a Stop Listener

   b Stop OracleEcpixService

   c On the command prompt, type DBCA and press **Enter**.

      The system displays the Database Configuration Assistant dialog.

   d Click **Next**.

      The system displays a list of operations that can be performed on the database.

   e Select the **Delete Database** option and click **Next**.

   f Select the ImageMark ECPIX database and click **Next**.

   g Click **Finish**.

      The system displays the message “The Database Configuration Assistant will delete the Oracle instance and datafiles for your database. All information in the database will be destroyed. Do you want to proceed?”.

   h Click **Yes**.

      The system displays that the database deletion is complete.

   i Click **No** when the system prompts for another operation.

   j Close the Command prompt.

2 Create the following folders in the D:\Oracle\admin\ECPIX directory.

   - arch
   - bdump
   - cdump
   - udump
   - pfile

3 Copy the init.ora file to the D:\Oracle\admin\ECPIX\pfile location from the media provided by F-CHG.

4 Create a password file by running the following command:

```
C:\>orapwd file=D:\oracle\ora10g\database\pwdECPIX.ora
password=ecpix entries=10
```

5 Start the **OracleOraHome10gTNSListener** service.

6 Create the Oracle instance by running the following command:

```
C:\> oradim -new -sid ECPIX -startmode manual -pfile
D:\oracle\admin\ECPIX\pfile\init.ora
```

Scenarios for Starting Alternate CHG

When the P-CHG fails, you need to start the A-CHG using the DR application. P-CHG can fail in following situations:

- Failure Prior to Session Begin
- Failure While Presentment Session was in Progress
- Failure After Session was Closed
- Failure During Return Session

Scenario 1: Failure Prior to Session Begin

Scenario: The CHG has failed before a session starts at the Clearing House. There were no files transmitted from the member bank's capture system to the F-CHG.

The restoration steps are:

1 Deliver media containing the following data:

- Previous day's database backup.
- Cryptographic data backup
- Application backup (files and folders)

Note: Application backup involves the back up of all files and folders in the D:\Program Files\NCR\ECPIX\Data directory. D:\ represents the drive where the ImageMark ECPIX application has been installed.

Note: This backup is copied to the E:\bk01\<F-CHG HOSTNAME>\ECPIX\LEVEL0 location on the A-CHG, where E:\ is the drive where the LEVEL0 backup is restored.

2 Shut down the following ImageMark ECPIX application services running on A-CHG:

- EBS
- IBM WebSphere or JRun

Shut down the following application services only in case of manual data synchronization:

- Oracle_EcpixDR
- Oracle Listener

3 Restore and recover database backup.

- To restore and recover database backup automatically using the Oracle Dataguard tool:

  See “Restore and Recover Backup Using Oracle Dataguard” on page 51 to know the procedure to restore and recover backup automatically using Oracle Dataguard.

- To restore and recover data backup manually:

  See “Restore and Recover Backup Manually” on page 50 to know the procedure to restore and recover backup manually.

4 Restore cryptographic information on to A-CHG.

Tip: Refer to the book **B0004-0000-0767: PKI Security Installation and Configuration.** Follow the instructions in this book, as applicable to your environment, to restore cryptographic information.

5 Restore the member bank's F-CHG in a working state by performing the following steps:

6 Update the IP address and server name of the F-CHG on CH and A-CHG servers.

a To change the IP address and server address on the CH:

i Login to the ImageMark ECPIX application.

ii Navigate to **Clearing Table.**

iii Select the **View/Edit Working** link of the Bank Table component.

iv Click on the number specified under the CHGs option (this number denotes the number of CHGs under the CH).

v Click on the name of the F-CHG under the CHG option.

vi Update the server addresses in the **HTTP** and **FTP** fields with the server addresses of A-CHG.

vii Click **Save**.

b At CH, execute the **Modify_CHI_details_in_CHT.bat** script located at D:\Program Files\NCR\ECPIX\Bin\AdminUtilities\AlternateCHI to update the Web server and FTP server host name/IP addresses of the F-CHG with the values of server host name/IP addresses of A-CHG in the CH master tables. After the successful execution of this script, the files for member bank(s) belonging to F-CHG are sent and received by the A-CHG.

Note: When you execute the **Modify_CHI_details_in_CHT.bat** script, the system displays a blank command prompt screen. You need to press *Enter* to proceed with the further steps.

c At A-CHG, to change the IP address and server name, execute the **Modify_F-CHI_details_in_CHG.bat** script located at D:\Program Files\NCR\ECPIX\Bin\AdminUtilities\AlternateCHG to update the Web server and FTP server name in the A-CHG database. The successful execution of this script updates the values in the SYSPARM and CLEARING_CENTRE tables.

Note: At A-CHG, the Web server and FTP server names needs to be updated in the working copy of CLEARING_CENTRE table using the ECPIX application.

7 At the A-CHG, start the following application services:

- EBS
- IBM WebSphere or JRun

8 Commit and transfer the latest version of CHT and WCS files from CH and import into A-CHG. This is done using the Media Manager application.

9 Verify that the session instances for current business day have been created at A-CHG using Session Monitor screen.

Restore and Recover Backup Manually

To restore and recover backup manually:

1 Shut down the ImageMark ECPIX database. To shut down the database:

a At the SQL prompt, type **connect sys/<password> as sysdba**.

b Press **Enter**.

c Type **Shutdown Immediate** and press **Enter**.

This shuts down the ImageMark ECPIX database.

2 At the A-CHG, delete all the DBF files, control files, and redo logs from their respective path/folders.

Note: The user can locate all of these files at <*drive*>:\Oracle\Oradata\ECPIX.

where,

<*drive*> - location where Oracle is installed

It is advisable to check all of the drives for the specified path.

3 Start the Oracle_ECPIX and Listener services.

4 Restore and recover database from the backup.

a Connect to RMAN from the C:\ prompt.

```
rman nocatalog target 'sys/<password> as sysdba'.
```

b Start the database.

```
Startup nomount;
```

c Restore the control files.

```
restore controlfile from '<backup path>';
alter database mount;
restore database;
```

<backup path> indicates the location of the backup on the ACHG.

d Recover database from the backup, on to A-CHG.

To recover the database type the following commands at the prompt.

```
Recover database;
Alter the database open resetlogs;
```

Restore and Recover Backup Using Oracle Dataguard

On completion of these steps, the A-CHG is restored to the last functioning state of the F-CHG, and can be used to carry of the day's clearing operations.

1 On the database server of the A-CHG, double-click the **DR-Operation** shortcut on your desktop.

The system displays the DR-Scripts dialog and prompts you to choose one of the following options displayed on the screen.

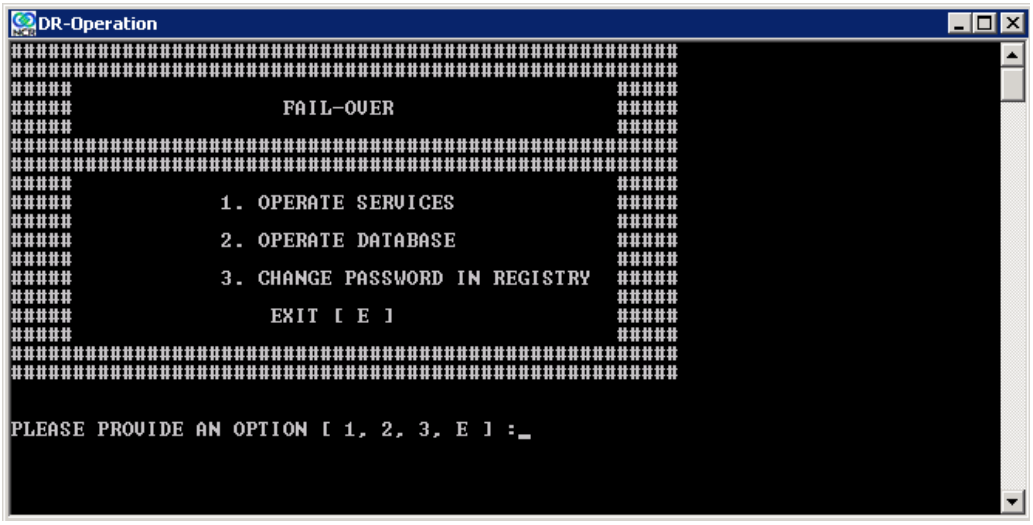
Note: If you enter an option that is not available on the displayed screen, the system displays a "WRONG INPUT" message.

- 1. SWITCH-OVER/SWITCH-BACK
- 2. FAILOVER
- EXIT [E]

2 At the PLEASE PROVIDE AN OPTION [1, 2, E]: prompt, type 2 and press **Enter**.

The system displays the FAIL-OVER screen with the following options.

- 1. OPERATE SERVICES
- 2. OPERATE DATABASE
- 3. CHANGE PASSWORD IN REGISTRY
- EXIT [E]



3 At the PLEASE PROVIDE AN OPTION [1, 2, 3, E] : prompt, type 2 and press **Enter**.

The system displays the DB Names screen and prompts you for the name of the current database.

4 Type the name of the current database and press **Enter**. This refers to the primary database which has suffered a failure because of disaster.

The system prompts you for the name of the destination database.

5 Type the name of the destination database and press **Enter**. This refers to the standby database.

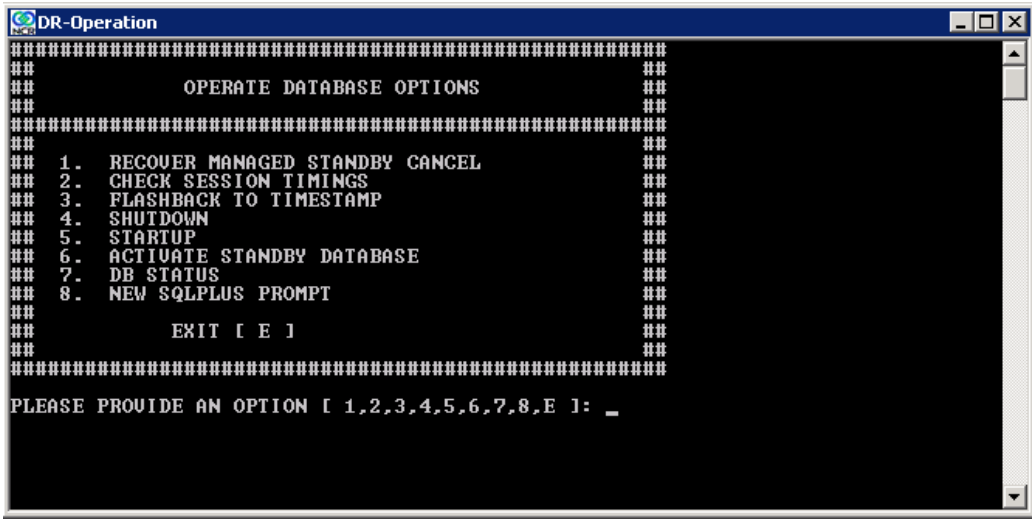
The system prompts you to confirm the database instance names of the current and destination database instances and then press Y to continue with the operation.

6 Type Y and press **Enter**.

Note: If you enter any other input other than "Y", the system displays the DB Names screen and prompts you for the current and destination database names.

The system displays the OPERATE DATABASE OPTIONS screen with the following options:

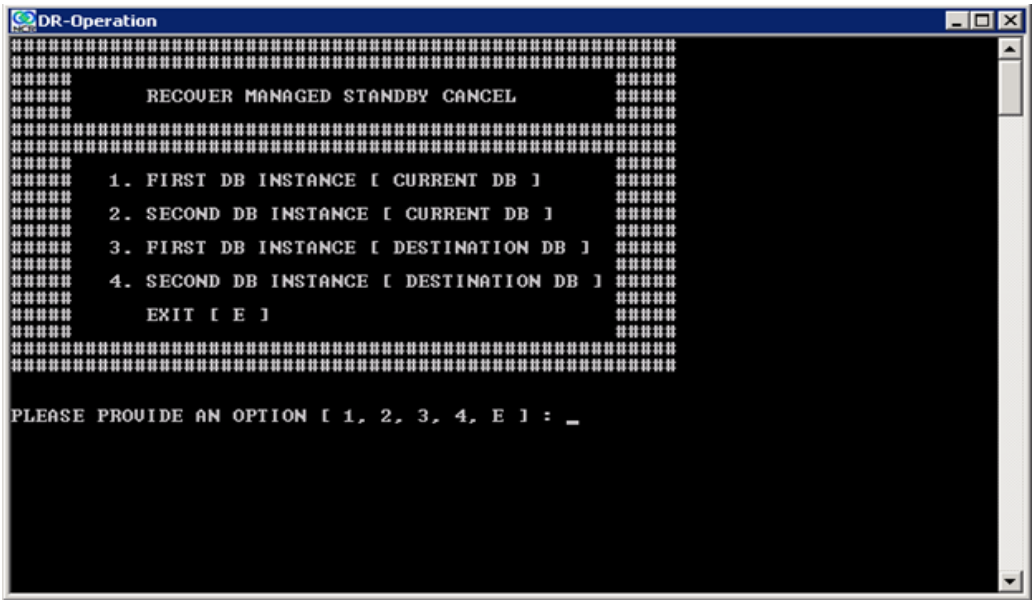
- 1. RECOVER MANAGED STANDBY CANCEL
- 2. CHECK SESSION TIMINGS
- 3. FLASHBACK TO TIMESTAMP
- 4. SHUTDOWN
- 5. STARTUP
- 6. ACTIVATE STANDBY DATABASE
- 7. DB STATUS
- 8. NEW SQLPLUS PROMPT



7 You must now cancel the recovery of the standby database. To do this:

a At the PLEASE PROVIDE AN OPTION [1,2,3,4,5,6,7,8,E]: prompt, type 1 and press **Enter**.

The system displays the RECOVER MANAGED STANDBY CANCEL screen and prompts you for the database instance.



b At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type 3 and press **Enter**.

The system prompts you for the ImageMark ECPIX database password.:

Note: On the *RECOVER MANAGED STANDBY CANCEL* screen, options *2* and *4* are applicable if you are using multiple instance database. For single instance database, you can select option *1* or *3*.

c Enter the password of the SYS user to connect to the ImageMark ECPIX database and press **Enter**.

The system displays “RECOVER MANAGED STANDBY DATABASE CANCEL. PRESS ENTER TO CONTINUE OR 'CTRL C' TO CANCEL AND THEN TYPE 'N' WHEN PROMPTED” message.

d Press **Enter** to recover the managed standby database.

Note: If you want to cancel the process, press **Ctrl+C** and then type N when prompted.

The system displays the “COMMAND COMPLETED, PRESS ENTER TO EXIT” message.

e Press **Enter** to exit the command.

The system prompts you to press any key to continue.

f Press any key to continue.

The system displays the RECOVER MANAGED STANDBY CANCEL screen and prompts you for the database instance.

Note: Steps 7-g to 7-k are applicable if you are using multiple instance database. For single instance database, proceed the operation from step 7-l.

g At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type 4 and press **Enter**.

The system prompts you for the ImageMark ECPIX database password.

h Enter the password of the SYS user to connect to the ImageMark ECPIX database and press **Enter**.

The system displays “RECOVER MANAGED STANDBY DATABASE CANCEL. PRESS ENTER TO CONTINUE OR 'CTRL C' TO CANCEL AND THEN TYPE 'N' WHEN PROMPTED” message.

i Press **Enter** to recover the managed standby database..

Note: If you want to cancel the process, press **Ctrl+C** and then type N when prompted.

The system displays the “COMMAND COMPLETED, PRESS ENTER TO EXIT” message.

j Press **Enter** to exit the command.

The system prompts you to press any key to continue.

k Press any key to continue.

The system displays the RECOVER MANAGED STANDBY CANCEL screen and prompts you for the database instance.

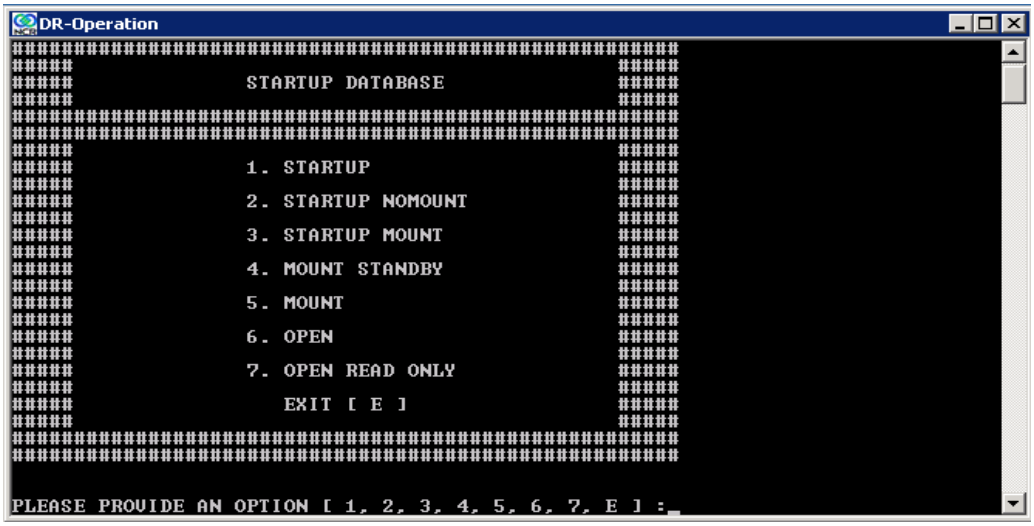
l At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type E and press **Enter**.

The system displays the OPERATE DATABASE OPTIONS screen.

8 You must now open the standby database in read only mode. To do this:

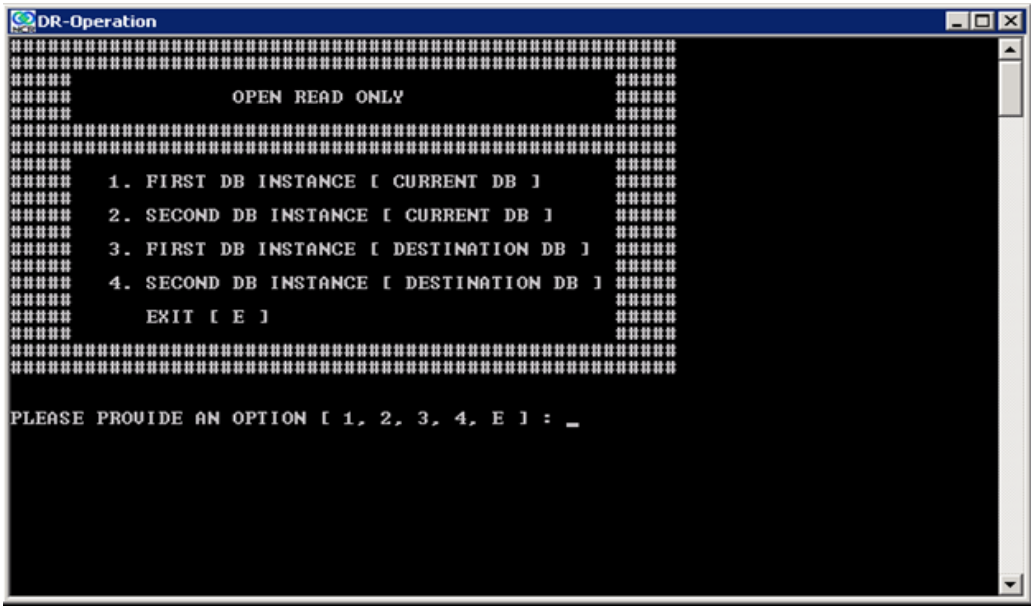
a At the PLEASE PROVIDE AN OPTION [1,2,3,4,5,6,7,8,E]: prompt, type 5 and press **Enter**.

The system displays the STARTUP DATABASE screen.



b At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, 5, 6, 7, E] : prompt, type 7 and press **Enter**.

The system displays the OPEN READ ONLY screen and prompts for the database instance.



c At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type 3 and press **Enter**.

The system prompts you for the ImageMark ECPIX database password.

Note: On the *OPEN READ ONLY* screen, options *2* and *4* are applicable if you are using multiple instance database. For single instance database, you can select either *1* or *3*.

d Enter the password of the SYS user to connect to the ImageMark ECPIX database and press **Enter**.

The system displays the “OPEN THE MOUNTED INSTANCE. PRESS ENTER TO CONTINUE OR 'CTRL C' TO CANCEL AND THEN TYPE 'N' WHEN PROMPTED. “ message.

e Press **Enter** to open the mounted database instance..

Note: If you want to cancel the process, press **Ctrl+C** and then type N when prompted.

The system displays the “COMMAND COMPLETED, PRESS ENTER TO EXIT” message.

f Press **Enter** to exit the command.

The system prompts you to press any key to continue.

g Press any key to continue.

The system displays the OPEN READ ONLY screen and prompts for the database instance.

h At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type E and press **Enter**.

The system displays the STARTUP DATABASE screen.

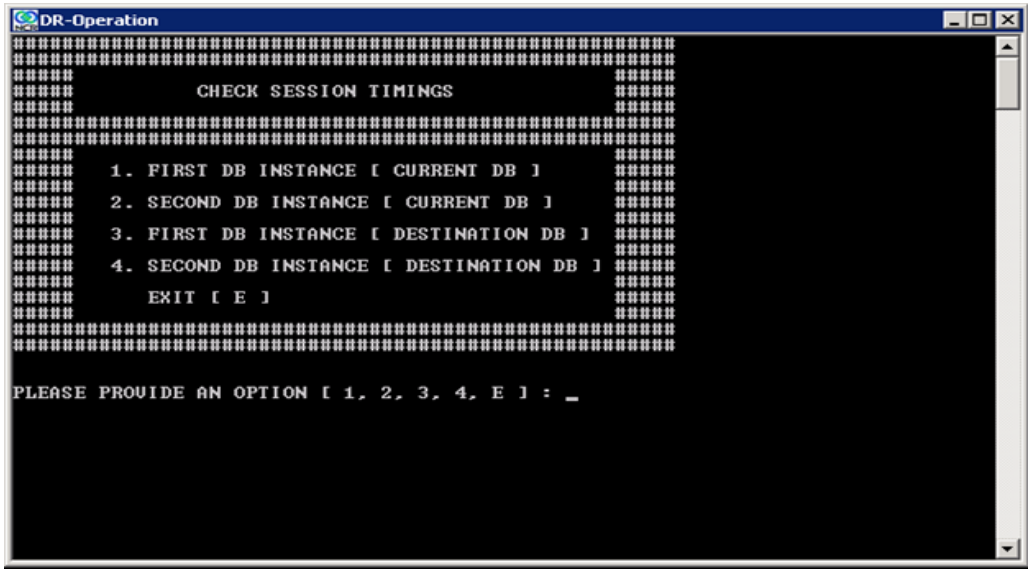
i At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, 5, 6, 7, E] : prompt, type E and press **Enter**.

The system displays the OPERATE DATABASE OPTIONS screen.

9 You must now check the session timings. To do this:

a At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, 5, 6, 7, 8, E] : prompt, type 2 and press **Enter**.

The system displays the CHECK SESSION TIMINGS screen and prompts you for the database instance.



b At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] :prompt, enter 3 and press **Enter**.

The system prompts you for the ImageMark ECPIX database password.

Note: On the *CHECK SESSION TIMINGS* screen, options *2* and *4* are applicable if you are using multiple instance database. For single instance database, you can select *1* or *3*.

c Enter the password of the ECPIXDBA user to connect to the ImageMark ECPIX database and press **Enter**.

The system prompts you to enter the session date in [DD-MM-YYYY] format.

d At the PLEASE ENTER THE DATE IN [DD-MM-YYYY] FORMAT To SELECT THE SESSION INFORMATION: prompt, enter the session date in the [DD-MM-YYYY] format. For example, enter date as 11-09-2011.

The system displays an output that resembles the following..

```
SESSION_NBR    SESSION_STATE_CODE  RECORD_CHANGE_DATE
-------------------------------------------------------------------------
         11                INITIALIZED              10-09-2011 00:00:51
          2                INITIALIZED              10-09-2011 00:00:51
          3                INITIALIZED              10-09-2011 00:00:51
          1                INITIALIZED              10-09-2011 00:00:51
          4                INITIALIZED              10-09-2011 00:00:51
```

Note: Note down the state of your sessions.

It also displays the “COMMAND COMPLETED, PRESS ENTER TO EXIT” message.

e Press **Enter** to exit the command.

The system prompts you to press any key to continue.

f Press any key to continue.

The system displays the CHECK SESSION TIMINGS screen and prompts you for the database instance.

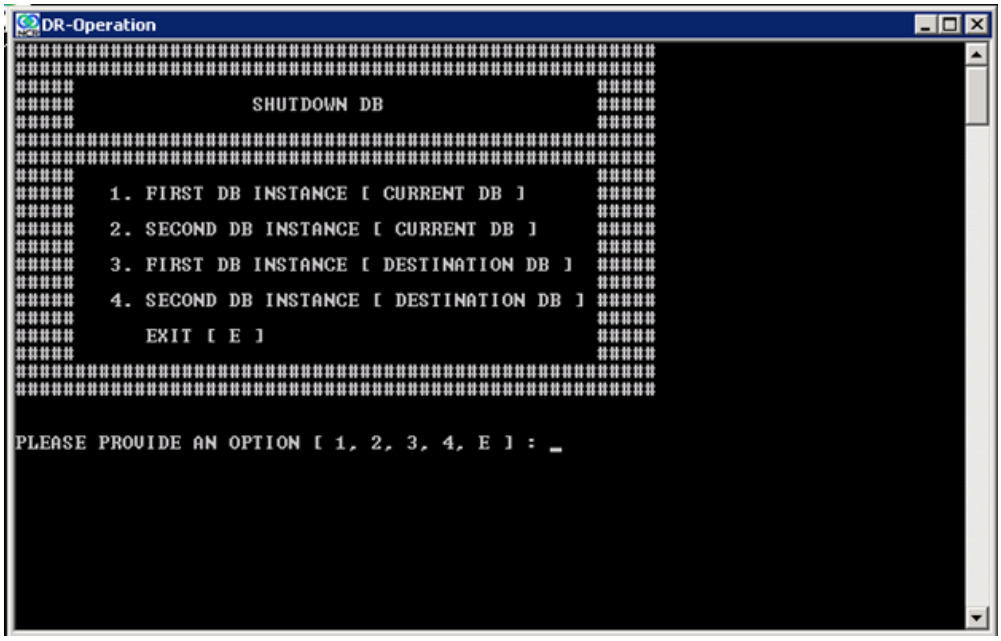
g At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] :prompt, enter E and press **Enter**.

The system displays the OPERATE DATABASE OPTIONS screen.

10 You must now shut down both the instances of the standby database. To do this:

a At the PLEASE PROVIDE AN OPTION [1,2,3,4,5,6,7,8,E]: prompt on the OPERATE DATABASE OPTIONS screen, type 4 and press **Enter**.

The system displays the SHUTDOWN DB screen and prompts you for the database instance.



b At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type 3 and press **Enter**.

The system prompts you for the ImageMark ECPIX database password.

Note: On the *SHUTDOWN DB* screen, options *2* and *4* are applicable if you are using multiple instance database. For single instance database, you can select either *1* or *3*.

c Enter the password of the SYS user to connect to the ImageMark ECPIX database and press **Enter**.

The system displays the “SHUTDOWN INSTANCE. PRESS ENTER TO CONTINUE OR 'CTRL C' TO CANCEL AND THEN TYPE 'N' WHEN PROMPTED.” message.

Note: If you want to cancel the shutdown process, press **Ctrl+C** and then type N when prompted.

d Press **Enter**.

The system displays the “COMMAND COMPLETED, PRESS ENTER TO EXIT.” message.

e Press **Enter** to exit the command.

The system prompts you to press any key to continue.

f Press any key to continue.

The system displays the SHUTDOWN DB screen.

Note: Steps 10-g to 10-k are applicable if you are using multiple instance database. For single instance database, proceed the operation from step 10-l.

g At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type 4 and press **Enter**.

The system prompts you for the ImageMark ECPIX database password.

h Enter the password of the SYS user to connect to the ImageMark ECPIX database and press **Enter**.

The system displays the “SHUTDOWN INSTANCE. PRESS ENTER TO CONTINUE OR 'CTRL C' TO CANCEL AND THEN TYPE 'N' WHEN PROMPTED.” message.

Note: If you want to cancel the shutdown process, press **Ctrl+C** and then type N when prompted.

i Press **Enter**.

The system displays the “COMMAND COMPLETED, PRESS ENTER TO EXIT.” message.

j Press **Enter** to exit the command.

The system prompts you to press any key to continue.

k Press any key to continue.

The system displays the SHUTDOWN DB screen.

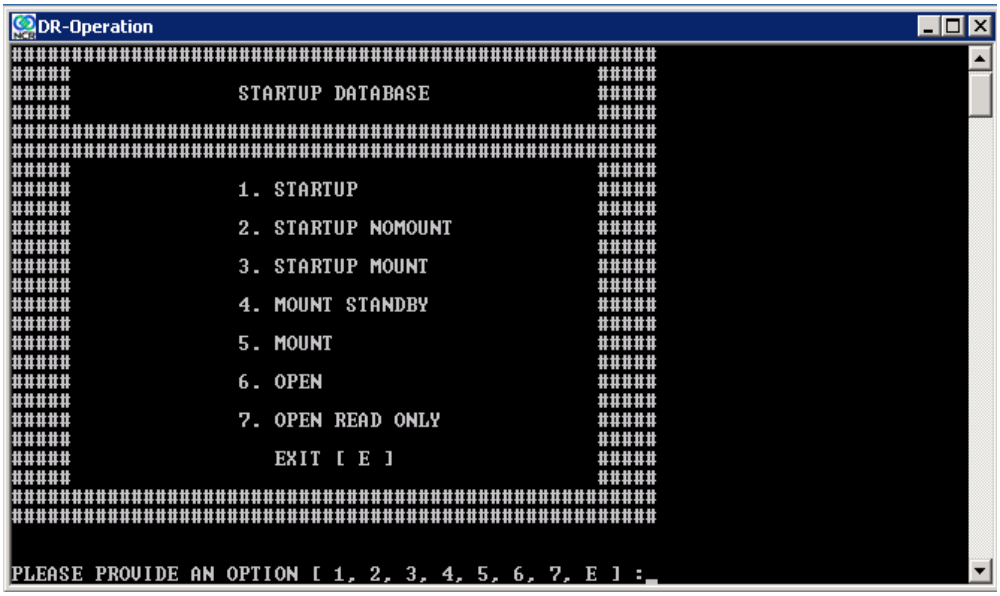
l At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type E and press **Enter**.

The system displays the OPERATE DATABASE OPTIONS screen.

11 You must now start up the first database instance of the A-CHG. To do this:

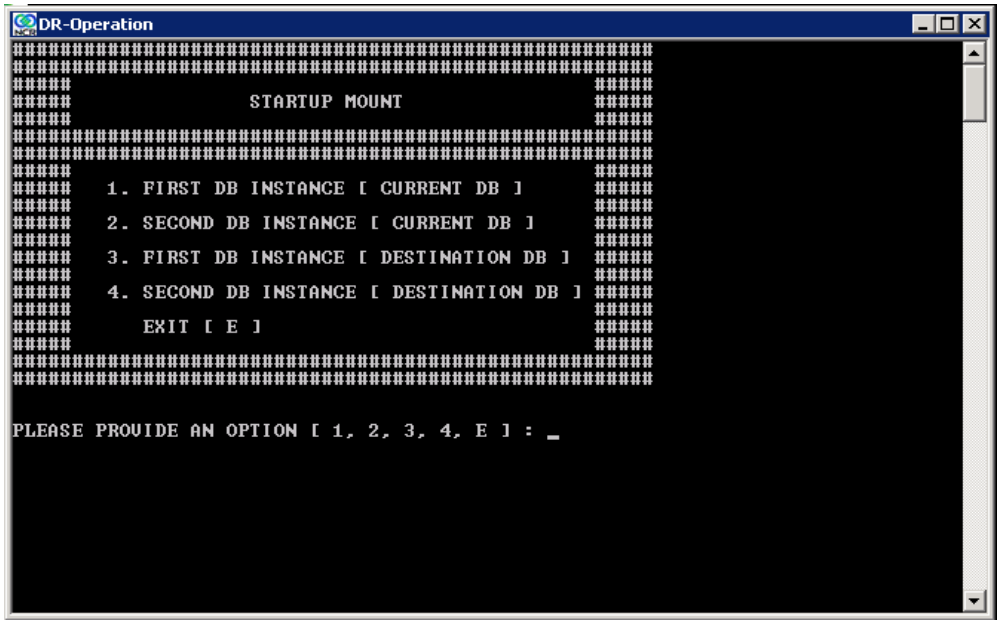
a At the PLEASE PROVIDE AN OPTION [1,2,3,4,5,6,7,8,E]: prompt, type 5 and press **Enter**.

The system displays the STARTUP DATABASE screen.



b At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, 5, 6, 7, E] : prompt, type 3 and press **Enter**.

The system displays the STARTUP MOUNT screen and prompts you for the database instance.



c At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type 3 and press **Enter**.

The system prompts you for the ImageMark ECPIX database password.

Note: On the *STARTUP MOUNT* screen, options *2* and *4* are applicable if you are using multiple instance database. For single instance database, you can select option *1* or *3*.

d Enter the password of the SYS user to connect to the ImageMark ECPIX database and press **Enter**.

The system displays the “STARTUP MOUNT INSTANCE. PRESS ENTER TO CONTINUE OR 'CTRL C' TO CANCEL AND THEN TYPE 'N' WHEN PROMPTED.” message.

e Press **Enter** to start the mount instance.

Note: If you want to cancel the start up process, press **Ctrl+C** and then type N when prompted.

The system displays the “COMMAND COMPLETED, PRESS ENTER TO EXIT.” message.

f Press **Enter** to exit the command.

The system prompts you to press any key to continue.

g Press any key to continue.

The system displays the STARTUP MOUNT screen and prompts you to select a database instance.

h At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type E and press **Enter**.

The system displays the STARTUP DATABASE screen and prompts you to select an option.

i At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, 5, 6, 7, E] : prompt, type E and press **Enter**.

j The system displays the OPERATE DATABASE OPTIONS screen..

Note: You must perform the flashback operation only if you have sessions in an open state. If you do not have open sessions, skip step 12 and proceed with the next step.

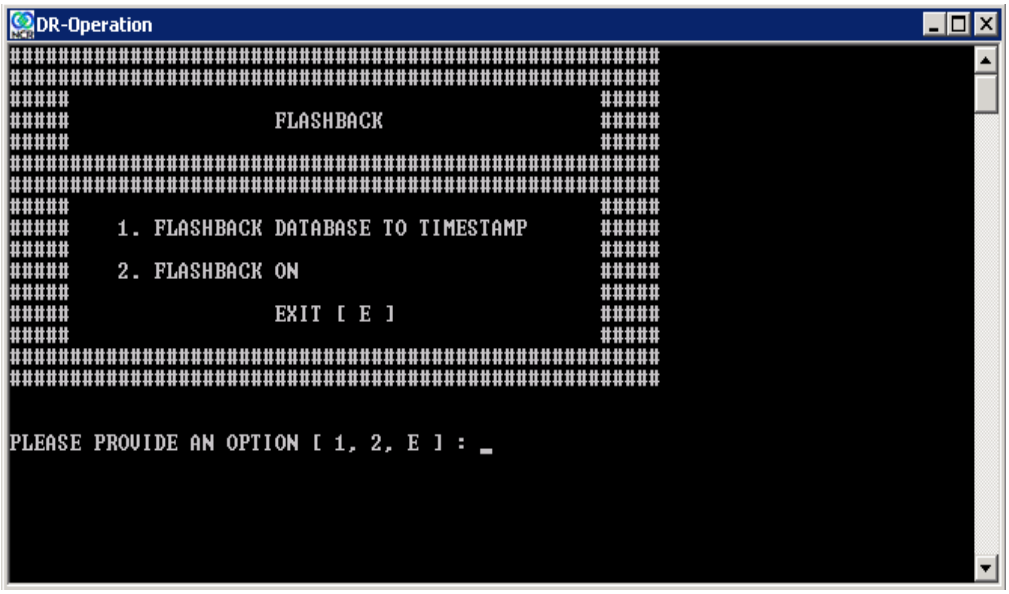
12 You must now flashback the database. To do this:

a At the PLEASE PROVIDE AN OPTION [1,2,3,4,5,6,7,8,E]: prompt, type 3 and press **Enter**.

The system displays the FLASHBACK screen with the following options:

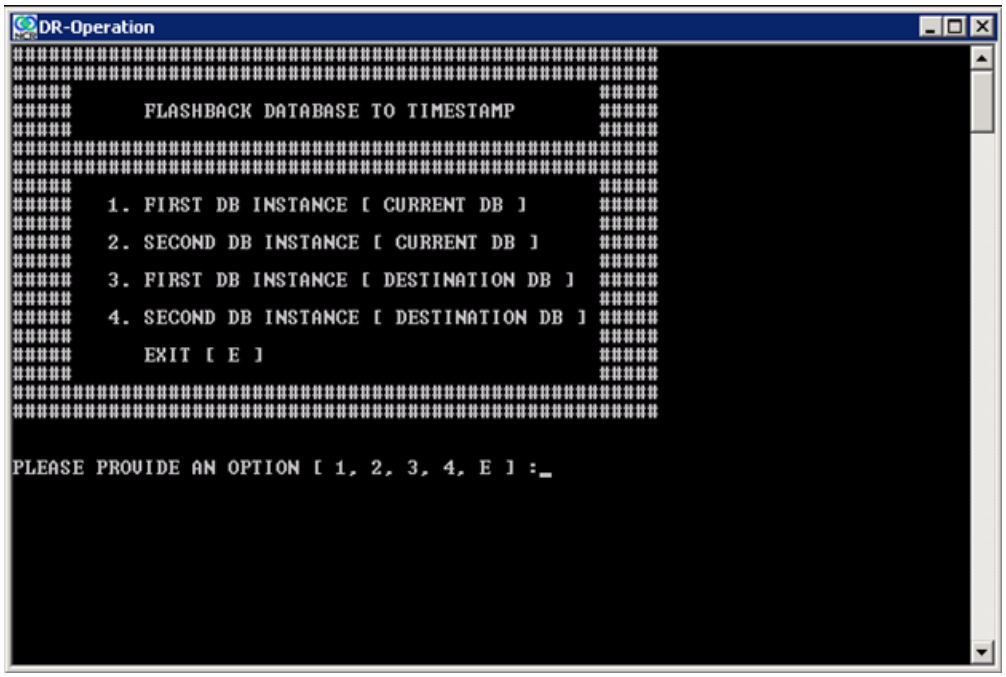
- 1. FLASHBACK DATABASE TO TIMESTAMP
- 2. FLASHBACK ON

- EXIT [E].



b At the PLEASE PROVIDE AN OPTION [1, 2, E] : prompt, type 1 and press **Enter**.

The system displays the FLASHBACK DATABASE TO TIMESTAMP screen and prompts for the database instance..



c At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type 3 and press **Enter**.

The system prompts you for the ImageMark ECPIX database password.

Note: On the *FLASHBACK DATABASE TO TIMESTAMP* screen, options *2* and *4* are applicable if you are using multiple instance database. For single instance database, you can select option *1* or *3*.

d Enter the password of the SYS user to connect to the ImageMark ECPIX database and press **Enter**.

The system displays the “FLASHBACK DATABASE TO TIMESTAMP (DD-MM-YYYY HH24:MI:SS) PRESS ENTER. TO CONTINUE OR 'CTRL C' TO STOP AND THEN PRESS 'NO' WHEN ASKED.” message.

e Press **Enter**.

Note: If you want to cancel the recovery process, press **Ctrl+C** and then type N when prompted.

f At the session_start_time prompt, enter the flashback time in the DD-MM-YYYY HH24:MI:SS format. This time should be 08:00 am of the session start date.

g Press **Enter**.

The system displays the “COMMAND COMPLETED, PRESS ENTER TO EXIT.” message.

h Press **Enter**.

The system prompts you to press any key to continue.

i Press any key to continue.

The system displays the FLASHBACK DATABASE TO TIMESTAMP screen and prompts for the database instance.

j At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type E and press **Enter**.

The system displays the FLASHBACK screen.

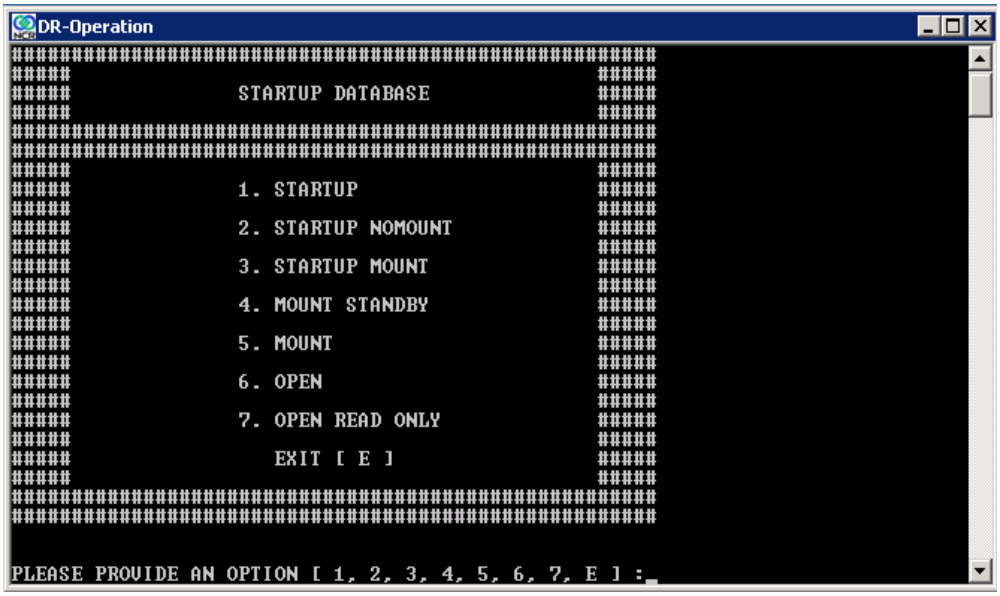
k At the PLEASE PROVIDE AN OPTION [1, 2, E] : prompt, type E and press **Enter**.

The system displays the OPERATE DATABASE OPTIONS screen.

13 You must now open the standby database in read only mode. To do this:

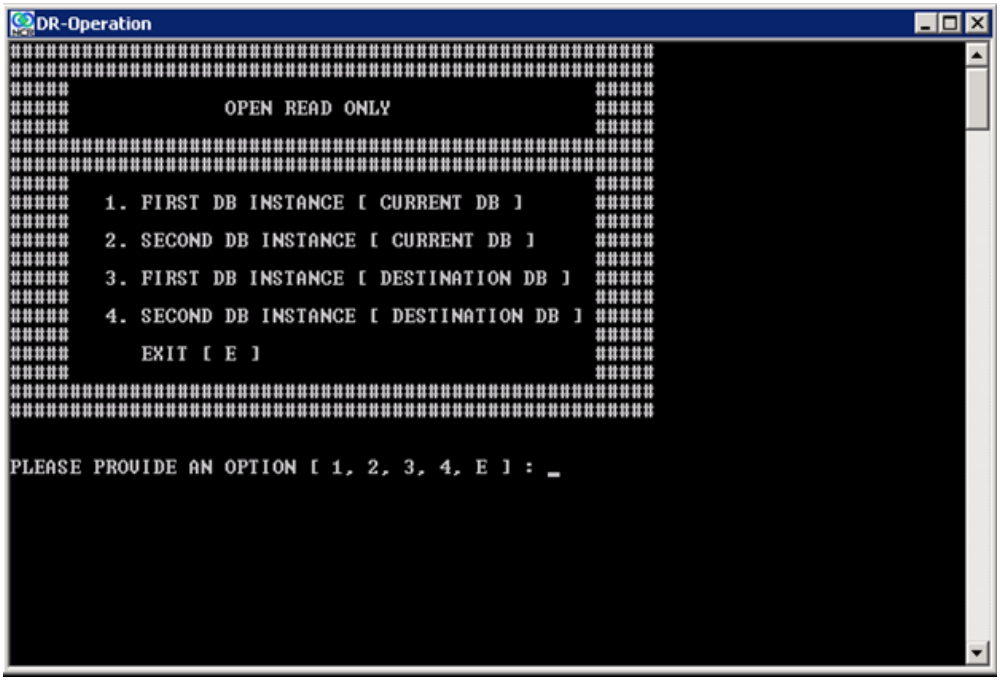
a At the PLEASE PROVIDE AN OPTION [1,2,3,4,5,6,7,8,E]: prompt, type 5 and press **Enter**.

The system displays the STARTUP DATABASE screen..



b At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, 5, 6, 7, E] : prompt, type 7 and press **Enter**.

The system displays the OPEN READ ONLY screen and prompts for the database instance..



c At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type 3 and press **Enter**.

The system prompts you for the ImageMark ECPIX database password..

Note: On the *OPEN READ ONLY* screen, options *2* and *4* are applicable if you are using multiple instance database. For single instance database, you can select option *1* or *3*.

d Enter the password of the SYS user to connect to the ImageMark ECPIX database and press **Enter**.

The system displays the “OPEN THE MOUNTED INSTANCE. PRESS ENTER TO CONTINUE OR 'CTRL C' TO CANCEL AND THEN TYPE 'N' WHEN PROMPTED.” message.

e Press **Enter**.

Note: If you want to cancel the startup process, press **Ctrl+C** and then type N when prompted.

The system displays the “COMMAND COMPLETED, PRESS ENTER TO EXIT” message.

f Press **Enter** to exit the command.

The system prompts you to press any key to continue.

g Press any key to continue.

The system displays the OPEN READ ONLY screen and prompts for the database instance.

h At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type E and press **Enter**.

The system displays the STARTUP DATABASE screen.

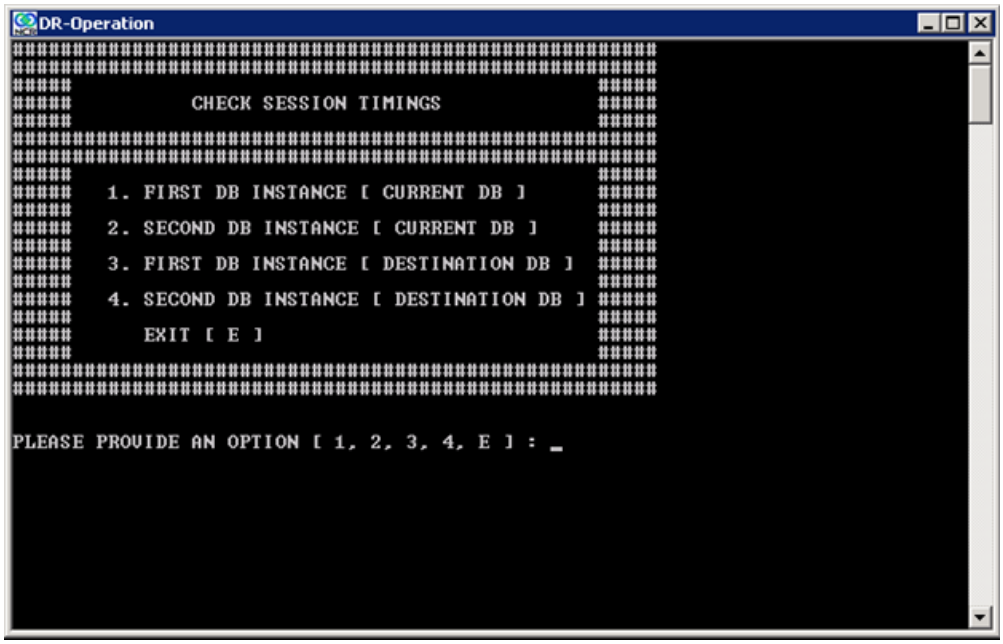
i At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, 5, 6, 7, E] : prompt, type E and press **Enter**.

The system displays the OPERATE DATABASE OPTIONS screen.

14 You must now verify the session state. To do this:

a At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, 5, 6, 7, 8, E] : prompt, type 2 and press **Enter**.

The system displays the CHECK SESSION TIMINGS screen and prompts you for the database instance..



b At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] :prompt, enter 3 and press **Enter**.

The system prompts you for the ImageMark ECPIX database password..

Note: On the *CHECK SESSION TIMINGS* screen, options *2* and *4* are applicable if you are using multiple instance database. For single instance database, you can select option *1* or *3*.

c Enter the password of the ECPIXDBA user to connect to the ImageMark ECPIX database and press **Enter**.

The system prompts you to enter the session date in [DD-MM-YYYY] format.

d At the PLEASE ENTER THE DATE IN [DD-MM-YYYY] FORMAT To SELECT THE SESSION INFORMATION: prompt, enter the business date in the [DD-MM-YYYY] format. For example, enter date as 11-09-2011.

It also displays the “COMMAND COMPLETED, PRESS ENTER TO EXIT” message.

e Press **Enter** to exit the command.

The system prompts you to press any key to continue.

f Press any key to continue.

The system displays the CHECK SESSION TIMINGS screen and prompts you for the database instance.

g At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] :prompt, enter E and press **Enter**.

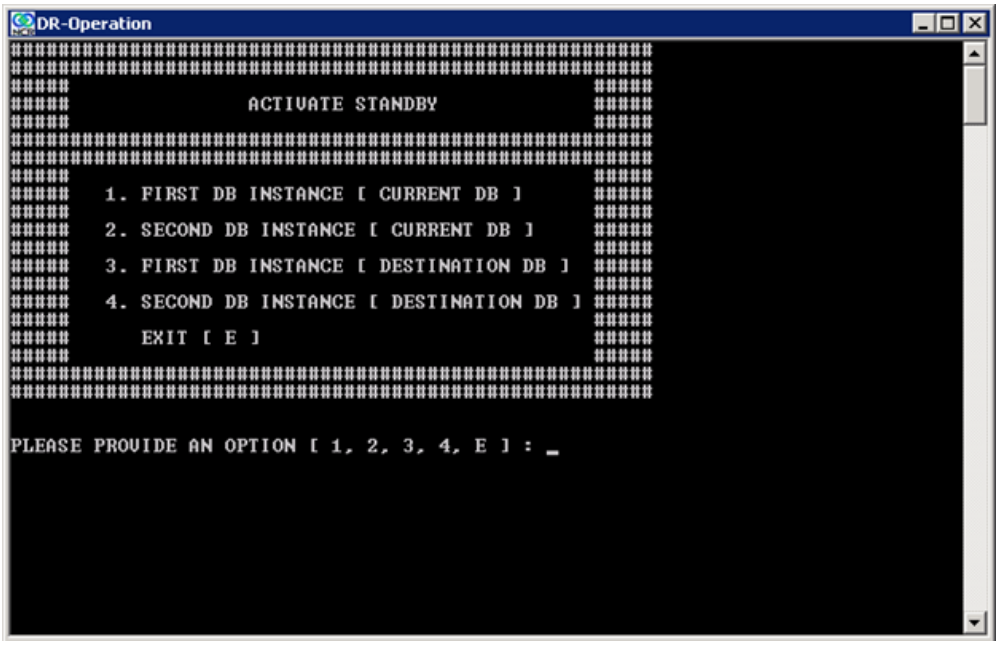
The system displays the OPERATE DATABASE OPTIONS screen.

Note: Ensure that all the sessions on the standby database are in proper state. If no, repeat steps 9-14.

15 You must now activate the standby database. To do this:

a At the PLEASE PROVIDE AN OPTION [1,2,3,4,5,6,7,8,E]: prompt, type 6 and press **Enter**.

The system displays the ACTIVATE STANDBY screen.



b At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type 3 and press **Enter**.

The system prompts you for the ImageMark ECPIX database password.

Note: On the *ACTIVATE STANDBY* screen, options *2* and *4* are applicable if you are using multiple instance database. For single instance database, you can select option *1* or *3*.

c Enter the password of the SYS user to connect to the ImageMark ECPIX database and press **Enter**.

The system displays the “ACTIVATE STANDBY. PRESS ENTER TO CONTINUE OR 'CTRL C' TO CANCEL AND THEN TYPE 'N' WHEN PROMPTED.” message.

d Press **Enter** to activate the standby.

Note: If you want to cancel the recovery process, press **Ctrl+C** and then type N when prompted.

The system displays the “SHUTDOWN INSTANCE. PRESS ENTER TO CONTINUE OR 'CTRL C' TO CANCEL AND THEN TYPE 'N' WHEN PROMPTED.” message.

e Press **Enter** to shutdown the instance.

Note: If you want to cancel the shutdown process, press **Ctrl+C** and then type N when prompted.

The system displays the “STARTUP INSTANCE. PRESS ENTER TO CONTINUE OR 'CTRL C' TO CANCEL AND THEN TYPE 'N' WHEN PROMPTED.” message.

f Press **Enter** to start the instance.

Note: If you want to cancel the startup process, press **Ctrl+C** and then type N when prompted.

The system displays the “COMMAND COMPLETED, PRESS ENTER TO EXIT” message.

g Press **Enter** to exit the command.

The system prompts you to press any key to continue.

h Press any key to continue.

The system displays the ACTIVATE STANDBY screen.

i At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type E and press **Enter**.

The system displays the OPERATE DATABASE OPTIONS screen.

Note: Step 16 is applicable in case of multiple instance database. For single instance database, ignore step 16.

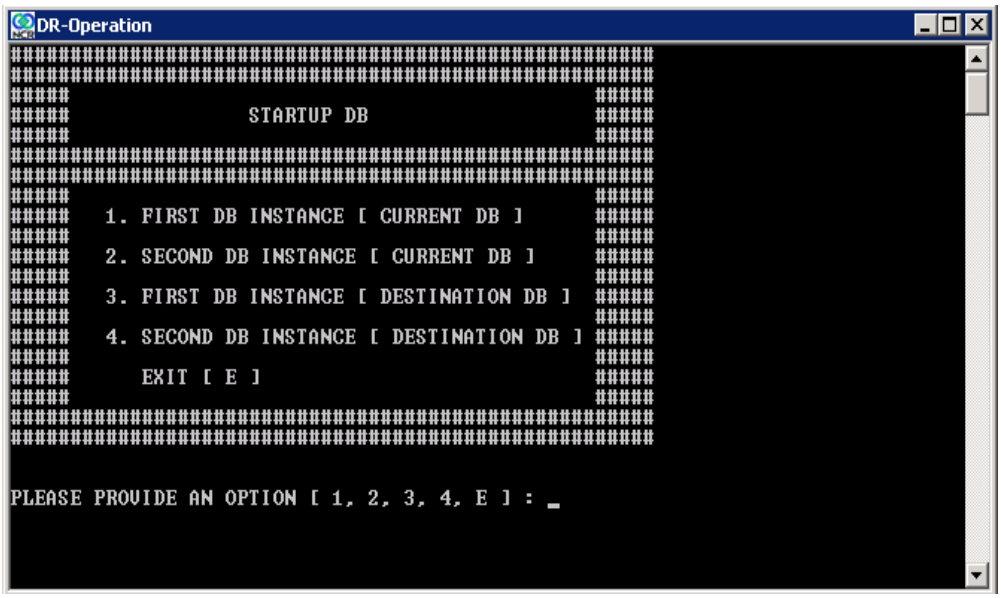
16 You must now start the second instance of the standby database. To do this:

a At the PLEASE PROVIDE AN OPTION [1,2,3,4,5,6,7,8,E]: prompt, type 5 and press **Enter**.

b The system displays the STARTUP DATABASE screen.

c At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, 5, 6, 7, E] : prompt, type 1 and press **Enter**.

The system displays the STARTUP DB screen and prompts you for the database instance.



d At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type 4 and press **Enter**.

The system prompts you for the ImageMark ECPIX database password.

e Enter the password of the SYS user to connect to the ImageMark ECPIX database and press **Enter**.

The system displays the “STARTUP INSTANCE. PRESS ENTER TO CONTINUE OR 'CTRL C' TO CANCEL AND THEN TYPE 'N' WHEN PROMPTED.” message.

f Press **Enter** to start the database instance.

Note: If you want to cancel the start up process, press **Ctrl+C** and then type N when prompted.

The system displays the “COMMAND COMPLETED, PRESS ENTER TO EXIT” message.

g Press **Enter** to exit the command.

The system prompts you to press any key to continue.

h Press any key to continue.

The system displays the STARTUP DB screen and prompts you to select a database instance.

i At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type E and press **Enter**.

The system displays the STARTUP screen and prompts you to select an option.

j At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, 5, 6, 7, E] : prompt, type E and press **Enter**.

The system displays the OPERATE DATABASE OPTIONS screen.

17 At the PLEASE PROVIDE AN OPTION [1,2,3,4,5,6,7,8,9,10,11,12,13,E]: prompt, type E and press **Enter**.

The system displays the SWITCH-OVER/SWITCH-BACK screen and prompts you to select an option.

18 At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type E and press **Enter**.

The system displays the DR SCRIPTS screen and prompts you to select an option.

19 At the PLEASE PROVIDE AN OPTION [1, 2, E] : prompt, type E and press **Enter** to close the DR SCRIPTS screen.

Scenario 2: Failure While Presentment Session was in Progress

Scenario: The CHG has failed during a session's processing time window. The MBOS has to recover all data exchanged between the capture system and F-CHG, and also between F-CHG and Clearing House.

The restoration steps are:

1 F-CHG delivers media containing the following data:

- Previous day's database backup.
- Cryptographic data backup
- Application backup (files and folders such as C:\ServerDir, D:\Oracle\admin\ECPIX\Pfile\Init.ora)

Note: It is recommended that the CHGs take a backup of the application files and folders periodically.

MBOS also delivers the media containing CXF, CIBF, RRF and ERF files that have already been sent to the F-CHG for the current day.

Note: [1] Steps 2 and 3 are applicable in case of manual data synchronization for restore and recovery.

[2] For automatic data synchronization, perform the steps mentioned in "Restore and Recover Backup Using Oracle Dataguard" on page 51. After performing the automatic data synchronization procedure, proceed with the restoration operation from step 4 in the current section.

2 Restore and recover the database from the RMAN backup taken from the F-CHG to the A-CHG.

```
C:\rman nocatalog target 'sys/ecpix@ecpix as sysdba'
RMAN>startup nomount pfile='D:\Oracle\admin\ECPIX\pfile\init.ora';
RMAN>restore controlfile from
'G:\bk01\hostname\ECPIX\LEVEL0\CONTROL*.CTL.1.EW99';
```

Note: The command line steps assume that the backup path of the control file is `G:\bk01\hostname\ECPIX\LEVEL0\CONTROL_ECPIX_510498911_ECPIX_CTL.1.EW99'`

```
RMAN>alter database mount;
RMAN> restore database;
RMAN>recover database;
```

Note: Ignore the errors related to missing Arch logs sequences.

```
RMAN>alter database open resetlogs;
```

Note: Use the `alter database open` command if there are no logs to be reset.

3 Create an SP file using the following commands at the command prompt:

```
Sqlplus /nolog
connect sys/<password>@ecpix as sysdba
create spfile from pfile ='D:\oracle\admin\ECPIX\pfile\init.ora';
disconn
exit
exit
```

4 Restore the cryptographic (HSM/Certicom) information on the A-CHG.

Note: Refer the book **B0004-0000-0767: PKI Security Installation and Configuration**. Follow the instructions in this book, as applicable to your environment, to restore cryptographic information.

5 Restore the C:\ServerDir\Certs, C:\ServerDir\ECPIX\Config.xml from the media provided by F-CHG and edit the IP address in the config.xml to the IP address of the A-CHG.

6 Install the HTTPS Certificates at the A-CHG and log on to EBS using the same username as that of the F-CHG.

7 The system now resembles the member bank's F-CHG in a working state as that of the previous day.

8 On all instances of the database server of the CH and application and database servers of Alternate CHG, manually create a folder named AlternateCHI in the C:\ drive.

Run the following commands at the SQL prompt on any one instance of the CH database server and A-CHG database server.

```
Sqlplus /nolog
Connect sys/<password>@ecpix as sysdba.
Create or replace directory AlternateCHI as 'C:\AlternateCHI';
Grant read on directory AlternateCHI to ecpixdba;
Grant write on directory AlternateCHI to ecpixdba;
Select * from dba_directories;
```

The system displays the AlternateCHI directory.

9 At the A-CHG, execute the **Modify_F-CHI_details_in_CHG.bat** script from the D:\Program Files\NCR\ECPIX\Bin\AdminUtilities\AlternateCHI folder to update the Web server name and FTP server name in its database with the A-CHG server details.

10 At the A-CHG, start the following application services:

- EBS

- IBM WebSphere or JRun

11 Transfer the latest version of CHT and WCS files from the CH and import them into the A-CHG using the ImageMark ECPIX Media Manager application.

Tip: To understand the operations of the Media Manager application, see the *Media Manager Operations and Administration* (B004-0000-0729) guide.

12 Verify whether the session instances for the current day have been created at A-CHG using the **Session Monitor** screen.

13 At the A-CHG, run the **Modify_CHI_Operation_Mode_to_Recovery.bat** script from the D:\Program Files\NCR\ECPIX\Bin\AdminUtilities\AlternateCHI folder to put the A-CHG in recovery mode.

Note: After executing the **Modify_CHI_Operation_Mode_to_Recovery.bat** script, you need to restart the EBS.

14 At the CH, execute the script **Extract_Items_from_CH.bat** from the D:\Program Files\NCR\ECPIX\Bin\AdminUtilities\AlternateCHI folder to extract item data from the CH database for all items received in all sessions for the current business day at the Clearing House. This includes all presentments, returns and extensions.

Notes: [1] The item data in Step 14 is a selective extract of the items received at CH from the failed CHG for the day when disaster took place.

[2] When you execute the **Extract_Items_from_CH.bat** script, you need to enter the database password and then press *Enter* to proceed with the execution of the specified file.

[3] The **Extract_Items_from_CH.bat** script generates the extracted items data file in the C:\AlternateCHI directory. Copy this file and paste it on the A-CHG at the same location (C:\AlternateCHI).

[4] When the system prompts for the routing number and business date, enter the routing number and business date of the F-CHG.

[5] Before initiating the creation of the item data file, the CH confirms that all the files received from the F-CHG prior to the failure have completed detection, loading & validation. If any media is pending to be loaded into the CH for ongoing sessions that was received from F-CHG, this script is executed only after all files in the media have been processed at CH.

[6] If any files have failed loading or validation, their corresponding ERROR or NACK files are not sent to F-CHG.

[7] In case of multiple instance database (RAC), the Dat file is generated at any one instance of the database server (C:\AlternateCHI).

A Dat file is generated at CH DB server at C:\AlternateCHI folder. The Dat file should be copied to C:\AlternateCHI folder at A-CHG application server.

15 At A-CHG, import the data file obtained from Step 14 into the A-CHG database using the script ITEM_IMPORT_FOR_RECOVERY.bat from the D:\ProgramFiles\NCR\ECPIX\Bin\AdminUtilities\AlternateCHI location. This batch file calls the

ITEM_IMPORT_FOR_RECOVERY.ctl file kept at the same location. In this file, you must enter the complete path of the Dat file stored in the C:\AlternateCHI folder. For example; INFILE C:\AlternateCHI\CH_DataExtract_05_18022010_18022010_113047.DAT

16 At CH, execute the script Modify_CHI_details_in_CHT.bat from the D:\Program Files\NCR\ECPIX\Bin\AdminUtilities\AlternateCHI folder to update the Web server name and FTP server name of F-CHG with values of Web server name and FTP server name of A-CHG in CH Master tables. After the successful execution of this script, the files for member bank(s) belonging to F-CHG are sent and received by the A-CHG.

Note: When you execute the **Modify_CHI_details_in_CHT.bat** script, you need to enter the database password and then press *Enter* to proceed with the execution of the file.

17 At CH, execute the script Retry_Failed_Files_Transmission.bat from the D:\Program Files\NCR\ECPIX\Bin\AdminUtilities\AlternateCHI to retry the transmission of the failed files to the A-CHG.

Note: The other alternative is to use ImageMark ECPIX Media Manager to create media of files that have failed transmission to F-CHG and load it at A-CHG.

18 At CH, use the ImageMark ECPIX Media Manager to create media for the inward files (containing presentments, returns, extensions and settlement acknowledgement) that have been sent and acknowledged by F-CHG before it failed.

19 At A-CHG, import the files from media mentioned in Step 18 into the A-CHG.

20 At A-CHG, process the CXF, CIBF, RRF and ERF files to the FTPRoot from media mentioned in Step 1 within the A-CHG FTPRoot folder.

Note: This step is performed after the A-CHG confirms that all inward files from media have been loaded successfully at the CHG.

Note: There is no response file created for the CXF, CIBF, RRF and ERF Files processed in Step 20. The system displays the status of these files as “VALIDATING” on the Input File Monitor Screen. It will also not move to Bundle Monitor screen.

21 A-CHG loads the item and image data from files copied in Step 20 and mark corresponding items that fall within list imported in Step 15 as RECOVERED.

22 At A-CHG, create and review the report to reconcile whether data and images for all items sent to CH have been loaded and are available at A-CHG using the script Create_Reconciliation_Report.bat from the D:\ProgramFiles\NCR\ECPIX\Bin\AdminUtilities\AlternateCHI folder. A report is generated at the C:\AlternateCHI at the A-CHG. This report indicates any missing or free items to the A-CHG.

Note: As session opening messages might have already been received at F-CHG for sessions currently open at CH, the staff at the A-CHG must manually close bundles and attach them to the session. The staff must run A-CHG in manual mode for sessions currently open at CH.

23 At A-CHG, execute the script Modify_CHI_Operation_Mode_to_Normal.bat from the D:\Program Files\NCR\ECPIX\Bin\AdminUtilities\AlternateCHI folder to put the A-CHG in NORMAL mode from RECOVERY mode.

Note: After executing the *Modify_CHI_Operation_Mode_to_Normal.bat* file, you need to restart the EBS.

24 MBOS can hereafter deliver media containing new CXF, CIBF, RRF, and ERF files for current or future sessions to A-CHG.

Scenario 3: Failure After Session was Closed

Scenario: The CHG has failed post settlement and after the session has ended. The MBOS has to recover all files exchanged between the capture system and F-CHG, and also between F-CHG and Clearing House. It will also include SACK file.

The restoration steps are:

1 Deliver media containing the following data:

- Previous day's database backup
- Cryptographic data backup
- Application backup (files and folders)

Note: Application backup involves the back up of all files and folders in the D:\Program Files\NCR\ECPIX\Data directory. D:\ represents the drive where the ImageMark ECPIX application has been installed.

Note: This backup is copied to the E:\bk01\<F-CHG HOSTNAME>\ECPIX\LEVEL0 location on the A-CHG, where E:\ is the drive where the LEVEL0 backup is restored.

2 Shut down the following ImageMark ECPIX application services running on A-CHG.

- EBS
- IBM WebSphere or JRun

Shut down the following application services only in case of manual data synchronization:

- Oracle_Ecpix

- Oracle Listener.

Note: [1] Steps 3 to 7 are applicable in case of manual data synchronization for restore and recovery.

[2] For automatic data synchronization, perform the steps mentioned in “Restore and Recover Backup Using Oracle Dataguard” on page 51. After performing the automatic data synchronization procedure, proceed with the restoration operation from step 8 in the current section.

3 Shut down the ImageMark ECPIX database. To shut down the database:

a At the SQL prompt type **connect sys/<password> as sysdba**.

b Press **Enter**.

c Type **Shutdown Immediate** and press **Enter**.

This shuts down the ImageMark ECPIX database.

4 At the A-CHG, delete all the DBF files, control files, and redo logs from their respective path/folders.

Note: The user can locate all of these files at <drive>:\Oracle\Oradata\ECPIX.

where,

<drive> - location where Oracle is installed

It is advisable to check all of the drives for the specified path.

5 Start the Oracle_ECPIX and Listener services.

6 Restore and recover database from the backup present on media on to A-CHG.

To restore the backup:

a Connect to RMAN from the C:\ prompt.

```
rman nocatalog target 'sys/<password> as sysdba'
```

b Start the database

```
Startup nomount;
```

c Restore the controlfiles

```
restore controlfile from '<backup path>';
alter database mount;
restore database;
```

<backup path> indicates the location of the backup on the ACHG.

7 Recover database from the backup, on to A-CHG.

To recover the database type the following commands at the prompt.Recover the database

```
Recover database;
```

```
Alter the database open resetlogs;
```

8 Restore cryptographic information on to A-CHG.

Tip: Refer to the book **B0004-0000-0767: PKI Security Installation and Configuration.** Follow the instructions in this book, as applicable to your environment, to restore crytographic information.

9 Restore the member bank's F-CHG in a working state by following the instructions specified in the following steps (Step 10 onwards).

10 Update the IP address and server name of the F-CHG on CH and A-CHG servers.

a To change the IP address and server address on the CH:

i Login to the ImageMark ECPIX application.

ii Navigate to **Clearing Table**.

iii Select the **View/Edit Working** link of the Bank Table component.

iv Click on the number specified under the CHGs option (this number denotes the number of CHGs under the CH).

v Click on the name of the F-CHG under the CHG option.

vi Update the server addresses in the **HTTP** and **FTP** fields with the server addresses of A-CHG.

vii Click **Save**.

b At CH, execute the **Modify_CHI_details_in_CHT.bat** script located at D:\Program Files\NCR\ECPIX\Bin\AdminUtilities\AlternateCHI to update the Web server and FTP server names of the F-CHG with the values of server names of A-CHG in the CH master tables. After the successful execution of this script, the files for member bank(s) belonging to F-CHG are sent and received by the A-CHG.

c At A-CHG, to change the IP address and server name, execute the **Modify_F-CHI_details_in_CHG.bat** script located at D:\Program Files\NCR\ECPIX\Bin\AdminUtilities\AlternateCHG to update the Web server and FTP server name in the A-CHG database. The successful execution of this script updates the values in the SYSPARM and CLEARING_CENTRE tables.

Note: At A-CHG, the Web server and FTP server names needs to be updated in the working copy of CLEARING_CENTRE table using the ECPIX application.

11 At the A-CHG, start the following application services:

- EBS
- IBM WebSphere or JRun

12 Commit and transfer the latest version of CHT and WCS files from CH and import into A-CHG.. This is done using the Media Manager application.

13 Verify that the session instances for current business day have been created at A-CHG using Session Monitor screen.

On completion of these steps, the A-CHG is restored to the last functioning state of the F-CHG, and can be used to carry of the day's clearing operations.

Scenario 4: Failure During Return Session

Scenario: The CHG has failed while the return session was in progress. The MBOS has to recover all files exchanged between the capture system and F-CHG, and also between F-CHG and Clearing House.

The files transmitted include:

- CXF and CIBF
- OEFs and IEFs
- SACK (both during presentment and return sessions)
- PXF and PIBF

Before running the scripts, ensure that you do the following on the database server of the CH and the Alternate CHG:

1. On all instances of the database server of the CH and application and database servers of Alternate CHG, manually create a folder named AlternateCHI in the C:\ drive.
2. Run the following commands at the SQL prompt on any one instance of the CH database server and A-CHG database server.

   ```
   Sqlplus /nolog
   Connect sys/<password>@ecpix as sysdba.
   Create or replace directory AlternateCHI as C:\AlternateCHI;
   Grant read on directory AlternateCHI to ecpixdba;
   Grant write on directory AlternateCHI to ecpixdba;
   Select * from dba_directories;
   ```

   The system displays the Alternate CHG directory.

The restoration steps are:

1. Deliver media containing the following data:
   - Previous day's database backup.
   - Cryptographic data backup
   - Application backup (files and folders)

   MBOS also delivers the media containing CXF, CIBF, RRF and ERF files that have already been sent to the F-CHG for the current day.
2. Shut down the following ImageMark ECPIX application services running on A-CHG.
   - EBS service

- IBM WebSphere services or Jrun services

Note: [1] Steps 3 to 7 are applicable in case of manual data synchronization for restore and recovery.

[2] For automatic data synchronization, perform the steps mentioned in “Restore and Recover Backup Using Oracle Dataguard” on page 51. After performing the automatic data synchronization procedure, proceed with the restoration operation from step 8 in the current section.

3 At the A-CHG, shutdown the database and stop the Oracle_Ecpix and Listener services from the service console.

4 At the A-CHG, delete all the DBF files, control files and redo logs from there respective folders.

Note: The user can locate all of these files at <*drive*>:\Oracle\Oradata\ECPIX.

where,

<*drive*> - location where Oracle is installed

It is advisable to check all of the drives for the specified path.

5 At the A-CHG, start the database and the Oracle_Ecpix and Listener services from service console.

6 Restore and recover the database from the backup taken to the A-CHG.

To restore the backup:

a Connect to RMAN from the C:\ prompt.

```
rman nocatalog target 'sys/<password> as sysdba'.
```

b Start the database.

```
Startup nomount;
```

c Restore the control files.

```
restore controlfile from '<backup path>';
alter database mount;
restore database;
```

<backup path> indicates the location of the backup on the ACHG.

7 Recover database from the backup, on to A-CHG.

To recover the database, type the following commands at the prompt.

```
Recover database;
Alter the database open resetlogs;
```

8 Restore the cryptographic (HSM/Certicom) information on the A-CHG.

Note: Refer to the book **B0004-0000-0767: PKI Security Installation and Configuration.** Follow the instructions in this book, as applicable to your environment, to restore cryptographic information.

The system now resembles the member bank's F-CHG in a working state as that of the previous day.

9 At the A-CHG, execute the script Modify_F-CHI_details_in_CHG.bat from the D:\Program Files\NCR\ECPIX\Bin\AdminUtilities\AlternateCHI folder to update the Web server name and FTP server name in its database with the A-CHG server details.

Note: At A-CHG, the Web server and FTP server names needs to be updated in the working copy of CLEARING_CENTRE table using the ECPIX application.

10 At the A-CHG, start the following application services:

- EBS
- IBM WebSphere or JRun

11 Transfer the latest version of CHT and WCS files from the CH and import them into the A-CHG using the ImageMark ECPIX Media Manager application.

Tip: To understand the operations of the Media Manager application, see the *Media Manager Operations and Administration* (B004-0000-0729) guide.

12 Verify whether the session instances for the current day have been created at A-CHG using the **Session Monitor** screen.

13 Execute the **Modify_CHI_Operation_Mode_to_Recovery.bat** file from the D:\Program Files\NCR\ECPIX\Bin\AdminUtilities\AlternateCHI folder to put the A-CHG in recovery mode.

Note: After executing the Modify_CHI_Operation_Mode_to_Recovery.bat file, you need to restart the EBS.

14 At the CH, execute the script **Extract_Items_from_CH.bat** from the D:\Program Files\NCR\ECPIX\Bin\AdminUtilities\AlternateCHI folder to extract item data from the CH database for all items received in all sessions for the current business day at the Clearing House. This includes all presentments, returns and extensions.

Notes: [1] The item data in Step 14 is a selective extract of the items received at CH from the failed CHG for the day when the disaster took place.

[2] When you execute the **Extract_Items_from_CH.bat** script, you need to enter the database password and then press *Enter* to proceed with the execution of the file.

[3] The **Extract_Items_from_CH.bat** script generates the extracted items data file in the C:\AlternateCHI directory. Copy this file and paste it on the A-CHG at the same location (C:\AlternateCHI).

[4] Before initiating the creation of the item data file, the CH confirms that all the files received from the F-CHG prior to the failure have completed detection, loading & validation. If any media is pending to be loaded into the CH for ongoing sessions that was received from F-CHG, this script is executed only after all files in the media have been processed at CH.

[5] If any files have failed loading or validation, their corresponding ERROR or NACK files are not sent to F-CHG.

15 A-CHG imports the data file obtained from Step 14into the A-CHG database using the script ITEM_IMPORT_FOR_RECOVERY.bat from the D:\ProgramFiles\NCR\ECPIX\Bin\AdminUtilities\AlternateCHI location. This batch file calls the ITEM_IMPORT_FOR_RECOVERY.ctl file kept at the same location. In this file, you must enter the complete path of the Dat file stored in the C:\AlternateCHI folder. For example; INFILE C:\AlternateCHI\CH_DataExtract_05_18022010_18022010_113047.DAT

A Dat file is generated at CH DB server at C:\AlternateCHI folder. The Dat file should be copied to C:\AlternateCHI folder at A-CHG application server.

16 At CH, execute the script Modify_CHI_details_in_CHT.bat from the D:\Program Files\NCR\ECPIX\Bin\AdminUtilities\AlternateCHI folder to update the Web server name and FTP server name of F-CHG with values of Web server name and FTP server name of A-CHG in CH Master tables. After the successful execution of this script, the files for member bank(s) belonging to F-CHG are sent and received by the A-CHG.

17 At CH, execute the script Retry_Failed_Files_Transmission.bat from the D:\Program Files\NCR\ECPIX\Bin\AdminUtilities\AlternateCHI to retry the transmission of the failed files to the A-CHG.

Note: The other alternative is to use ImageMark ECPIX Media Manager to create media of files that have failed transmission to F-CHG and load it at A-CHG.

18 At CH, use the ImageMark ECPIX Media Manager to create media for the inward files (containing presentments, returns, extensions and settlement acknowledgement) that have been sent and acknowledged by F-CHG before it failed.

19 At A-CHG, import files from media mentioned in Step 18 into the A-CHG.

20 A-CHG processes the CXF, CIBF, RRF and ERF files to the FTPRoot from media mentioned in Step 1within the A-CHG FTPRoot folder.

Note: This step is performed after the A-CHG confirms that all inward files from media have been loaded successfully at the CHG.

Note: There is no response file created for the CXF, CIBF, RRF and ERF Files processed in Step 20. The system displays the status of these files as “VALIDATING” on the Input File Monitor Screen. It will also not move to Bundle Monitor screen.

21 A-CHG will load item and image data from files copied in step 20 and mark corresponding items that fall within list imported in Step 15 as RECOVERED.

22 At A-CHG, create and review the report to reconcile whether data and images for all items sent to CH have been loaded and are available at A-CHG using the script Create_Reconciliation_Report.bat from the D:\ProgramFiles\NCR\ECPIX\Bin\AdminUtilities\AlternateCHI folder. This report indicates to the A-CHG if there are any missing or free items.

Note: As session opening messages might have already been received at F-CHG for sessions currently open at CH, the staff at the A-CHG must manually close bundles and attach them to the session. The staff must run A-CHG in manual mode for sessions currently open at CH.

23 At A-CHG, execute the script Modify_CHI_Operation_Mode_to_Normal.bat from the D:\Program Files\NCR\ECPIX\Bin\AdminUtilities\AlternateCHI folder to put the A-CHG in NORMAL mode from RECOVERY mode.

Note: After executing the *Modify_CHI_Operation_Mode_to_Normal.bat* file, you need to restart the EBS.

24 MBOS can hereafter deliver media containing new CXF, CIBF, RRF, and ERF files for current or future sessions to A-CHG.

4

Restore A-CHG Operations on F-CHG

After the F-CHG is functional again, all the A-CHG operations are restored back on the F-CHG to continue clearing and processing.

The steps listed in the subsequent pages are performed after all sessions for a day have ended at the Clearing House. They are to be carried out by the users of A-CHG, F-CHG, and CH.

Note: After executing any of the following batch script files,

- Extract_Items_from_CH.bat
- Modify_CHI_details_in_CHT.bat
- Retry_Failed_Files_Transmission.bat

you need to enter the database password and then press *Enter* to proceed with the execution of the specified file.

Steps Performed at A-CHG

1. Stop the following ImageMark ECPIX application services running on A-CHG.
   - EBS
   - Macromedia JRun or IBM WebSphere
2. Extract database backup, application backup, and backup of your cryptographic information onto a media; and transfer it to the F-CHG.
3. Delete all cryptographic information belonging to the F-CHG from the A-CHG.

Steps Performed at F-CHG

1 Stop the following ImageMark ECPIX application services running on F-CHG.

- EBS
- Macromedia JRun or IBM WebSphere

2 Restore and recover database and application backup.

a To restore and recover the backup from media on F-CHG:

i Connect to RMAN from the C:\ prompt.

```
rman nocatalog target 'sys/<password> as sysdba'
```

ii Start the database.

```
Startup nomount;
```

iii Restore the control files.

```
restore controlfile from '<backup path>';
alter database mount;
restore database;
```

<backup path> indicates the location of the backup on the F-CHG.

iv To recover the database to F-CHG, type the following commands at the prompt.

```
Recover database;
Alter the database open resetlogs;
```

b To restore and recover the database and application backup using Oracle DataGuard:

See *ImageMark ECPIX 4.5 Oracle 11g Data Guard Setup and Configuration* guide to know the procedure to restore and recover the database and application backup using Oracle DataGuard

3 Restore cryptographic information from the media on F-CHG.

Note: Refer to the book **B0004-0000-0767: PKI Security Installation and Configuration**. Follow the instructions in this book, as applicable to your environment, to restore cryptographic information.

4 Update IP address and server name of the A-CHG on CH and F-CHG servers.

To change the IP address and server address on the CH:

a Login to the ImageMark ECPIX application.

b Navigate to **Clearing Table**.

c Select the **View/Edit Working** link of the Bank Table component.

d Click on the number specified under the CHGs option (this number denotes the number of CHGs under the CH).

e Click on the name of the A-CHG under the CHG option.

f Update the server addresses in the **HTTP** and **FTP** fields with the server addresses of F-CHG.

g Click **Save**.

5 At F-CHG, to change the IP address and server name, execute the **Modify_F-CHI_details_in_CHG.bat** script located at D:\Program Files\NCR\ECPIX\Bin\AdminUtilities\AlternateCHG to update the Web server and FTP server name in the A-CHG database. The successful execution of this script updates the values in the SYSPARM and CLEARING_CENTRE tables.

Note: At F-CHG, the Web server and FTP server names needs to be updated in the working copy of CLEARING_CENTRE table using the ECPIX application.

6 At the F-CHG, start the following services:

- EBS
- IBM WebSphere or JRun

Tip: Refer to the chapter **Backup and Restore** in your ImageMark ECPIX Administration book to know about the database backup and restoration process.

Refer to the book **B004-0000-0767: PKI Security Installation and Configuration** to know about the backup and restoration process of the PKI setup related to your environment.

Steps Performed at CH

1 At CH, execute the **Modify_CHI_details_in_CHT.ba**t script located at D:\Program Files\NCR\ECPIX\Bin\AdminUtilities\AlternateCHI to update the Web server and FTP server names of the A-CHG with the values of server names of F-CHG in the CH master tables.

The files for member banks belonging to F-CHG are sent and received to/from the F-CHG. The F-CHG is now considered recovered and can participate in the clearing as other CHGs.

Important: After the F-CHG starts operating in Normal mode, you have to configure its database backup. Refer to the section **Configure ImageMark ECPIX Database Backup** in the chapter Backup and Restore in your ImageMark ECPIX Administration book.

5

Planned Switch-Over from P-CHG to A-CHG

When the primary CHG (P-CHG) becomes unavailable due to planned operations such as maintenance on the primary server, it is advantageous to temporarily switch-over to the standby or alternate CHG in order to continue operations.

Planned switch-over is a non-destructive process and can be performed in reverse when the primary site becomes available and without rebuilding either database.

Follow the steps given below to switch-over operations from the P-CHG to the A-CHG:

Note: After executing any of the following batch script files,

- Extract_Items_from_CH.bat
- Modify_CHI_details_in_CHT.bat
- Retry_Failed_Files_Transmission.bat

you need to enter the database password and then press *Enter* to proceed with the execution of the specified file.

Prerequisites

The ARCH LOGS should be appropriately transferred between the P-CHG and the A-CHG i.e. there should be no gap between the P-CHG and the A-CHG sites. If there is a gap, it may cause the database to crash. Prior to start of this activity, you must ensure that the Level 0 (L0) backup is taken on the P-CHG.

Note: See “Monitor the Status of the Oracle Dataguard” in the *ImageMark ECPIX 4.5 Clearing House Gateway - Start and End of Day Operations* guide (B004-0000-0742) to know the procedure to check ARCH LOGS.

Switching From Primary Clearing House Gateway (P-CHG) to Alternate Clearing House Gateway (A-CHG)

To switch-over from the Primary Clearing House Gateway (P-CHG) to Alternate Clearing House Gateway (A-CHG):

Note: While executing the DR-Operation script, if an error occurs, the system displays an error message and then prompts you to press any key to continue. In such circumstances, you must stop the execution and contact your system administrator.

1 On the database server of the P-CHG, double-click the DR-Operation shortcut on your desktop.

The system displays the DR-Scripts dialog and prompts you to choose one of the following options displayed on the screen.

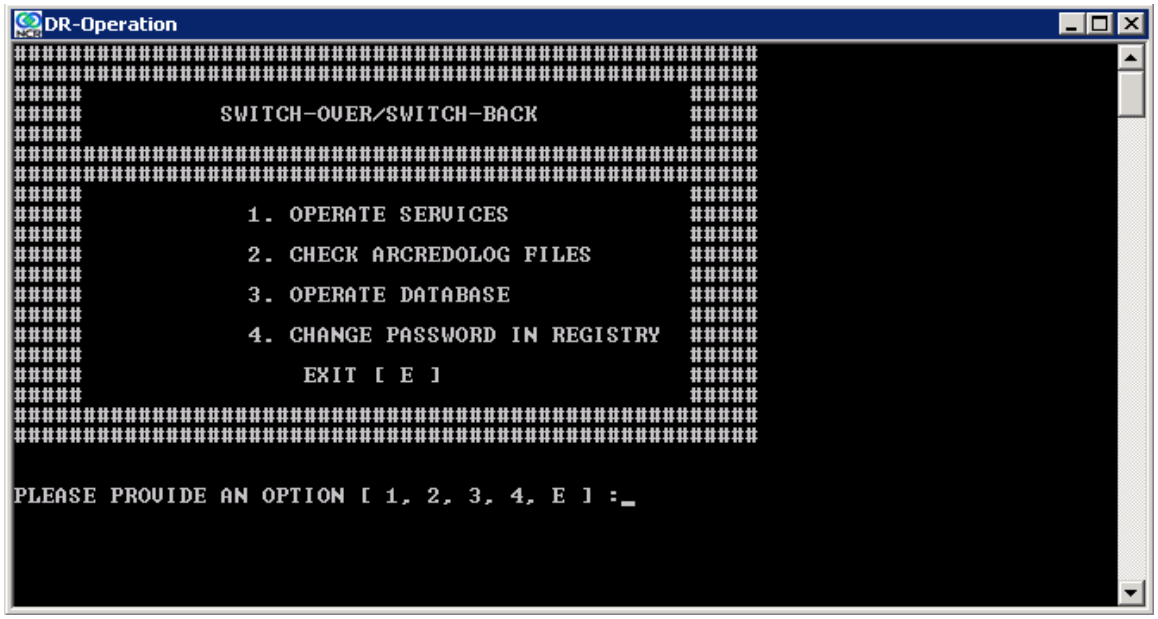
Note: If you enter an option that is not available on the displayed screen, the system displays a "WRONG INPUT" message.

- 1. SWITCH-OVER/SWITCH-BACK
- 2. FAILOVER
- EXIT [E]

2 At the PLEASE PROVIDE AN OPTION [1, 2, E]: prompt, type **1** and press **Enter**.

The system displays the SWITCHOVER screen with the following options.

- 1. OPERATE SERVICES
- 2. CHECK ARCREDOLOG FILES
- 3. OPERATE DATABASE
- 4. CHANGE PASSWORD IN REGISTRY
- EXIT [E]



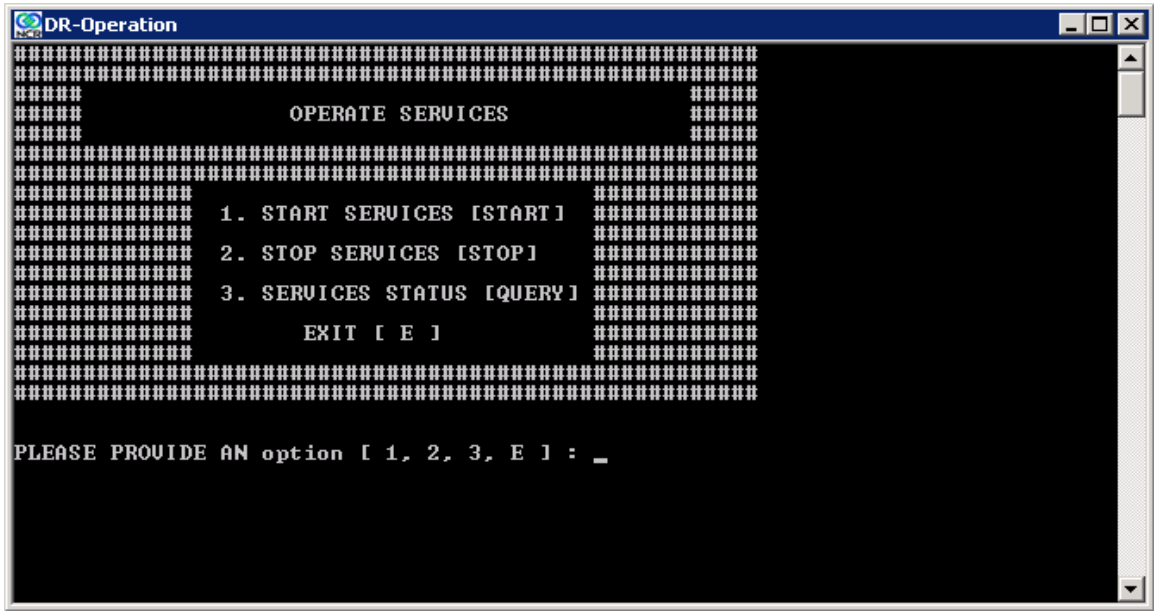
3 You must now stop the EBS and IBM services on the P-CHG. To do this:

a At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt on the SWITCHOVER screen, type 1 and press **Enter**.

The system displays the OPERATE SERVICES screen with the following options:

- 1. START SERVICES [START]
- 2. STOP SERVICES [STOP]
- 3. SERVICES STATUS [QUERY]

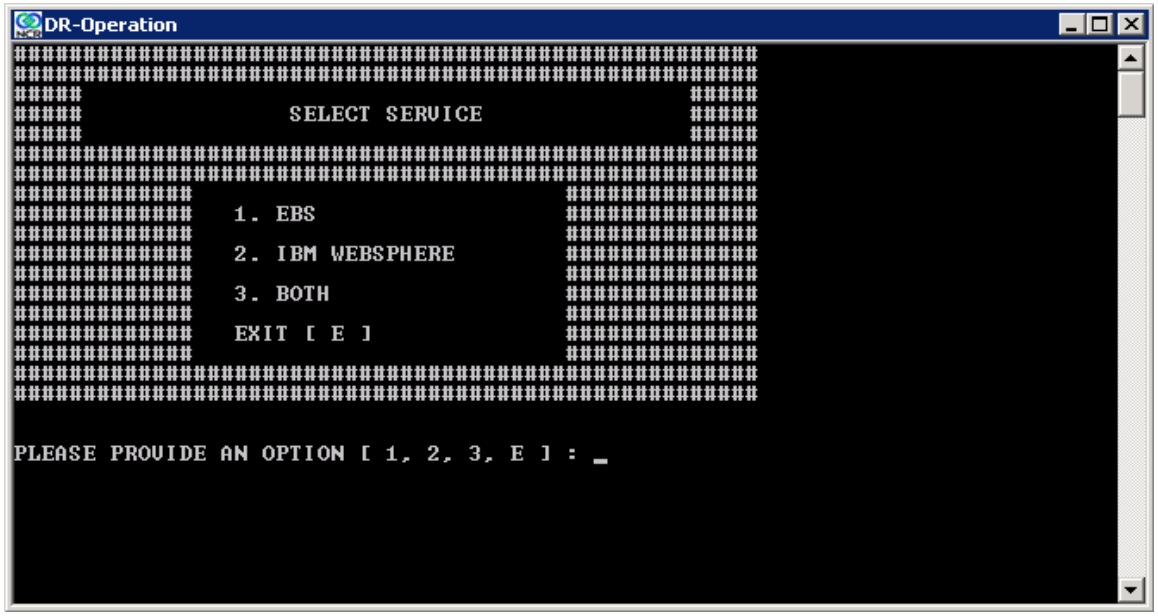
- EXIT [E]



b At the PLEASE PROVIDE AN OPTION [1, 2, 3, E] : prompt on the OPERATE SERVICES screen, type 2 and press **Enter**.

The system displays the SELECT SERVICE screen with the following options:

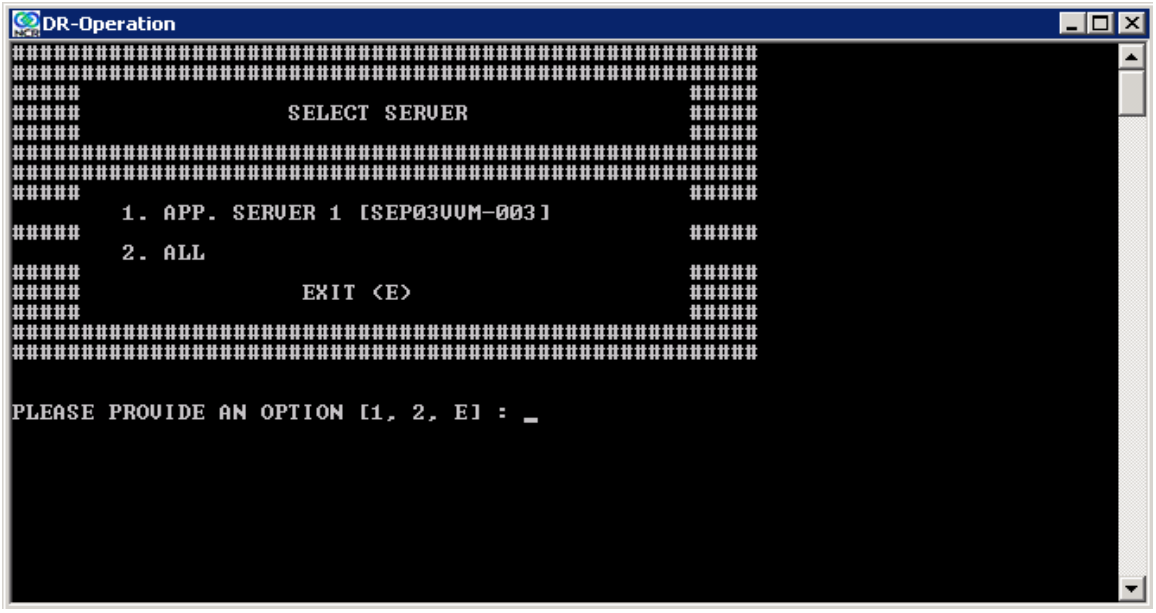
- 1. EBS
- 2. IBM WEBSPHERE
- 3. BOTH
- EXIT [E]



c At the PLEASE PROVIDE AN OPTION [1, 2, 3, E] : prompt on the SELECT SERVICE screen, type 3 and press **Enter**.

The system displays the SELECT SERVER screen with the following options:

- 1. APP. SERVER 1 [SEP03VVM-003]
- 2. APP. SERVER 2 [SEP03VVM-002]
- 3. APP. SERVER 3 [SEP03VVM-001]
- ….
- ….
- N. ALL
- EXIT (E)



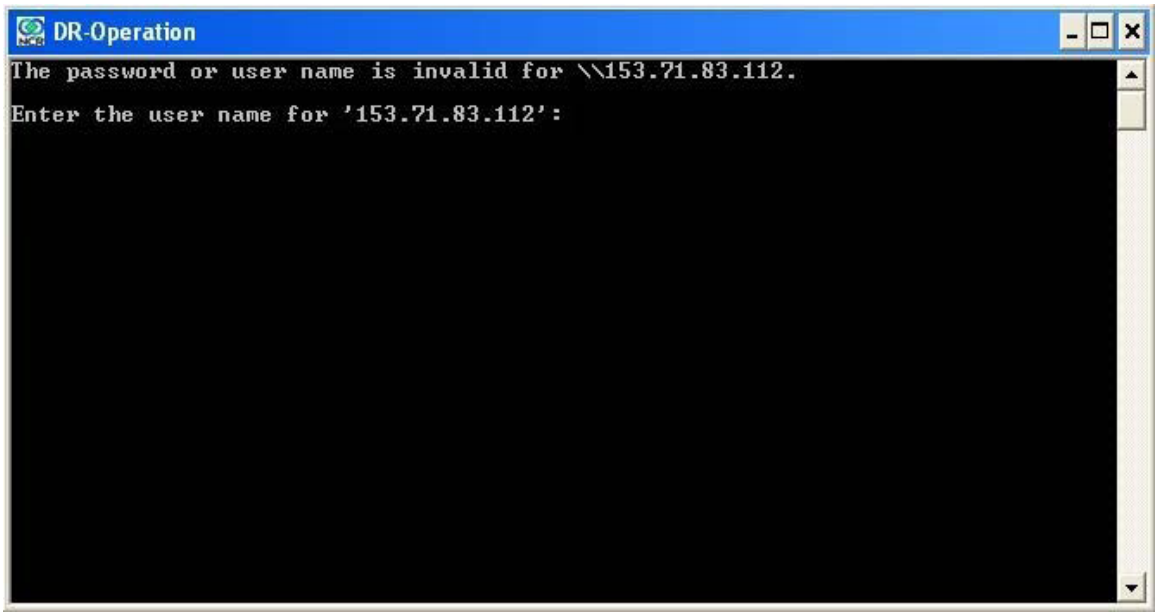
Note: The number of options on this screen depends on the number of application servers that are being used.

d At the PLEASE PROVIDE AN OPTION [1, 2, 3, … N, E] : prompt on the SELECT SERVER screen, enter the number that corresponds to the "ALL" option and press **Enter**. N represents the "ALL" option on the screen.

The system prompts you to enter a username to log on to the application server where the services are being stopped.

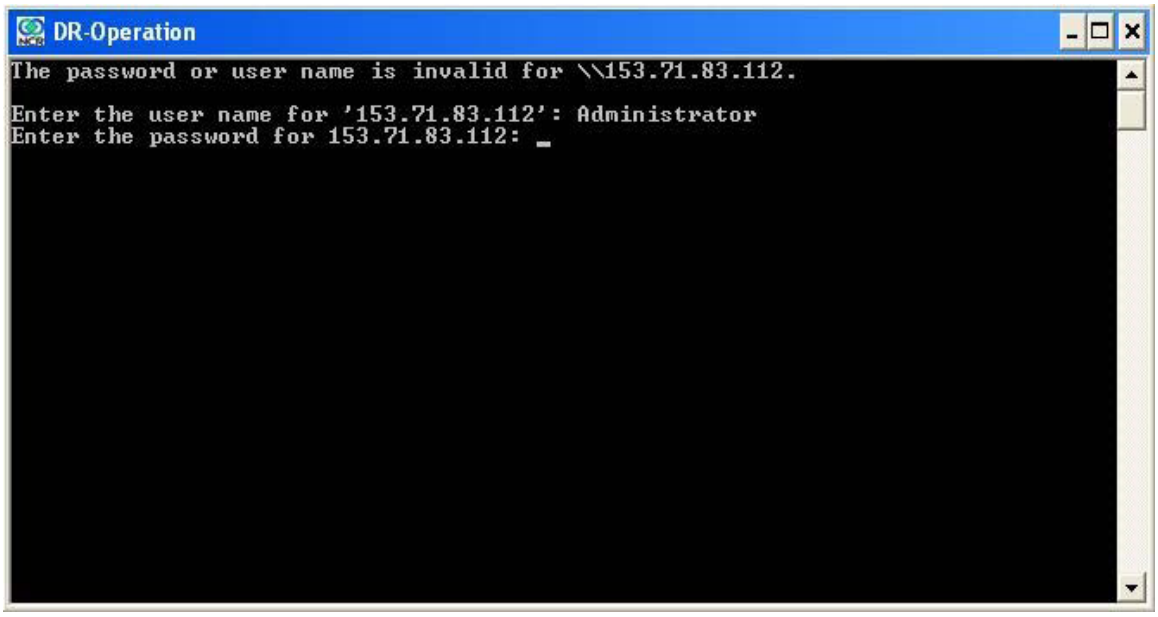
Note: The system may not prompt you for the username and password if you have previously connected to the application servers through the DR-Operation script.

Note: Ignore the "The password or username is invalid" message, if displayed on the screen.



e Enter the username of a user having administrative rights to the application server.

The system prompts you to enter the password for that user.

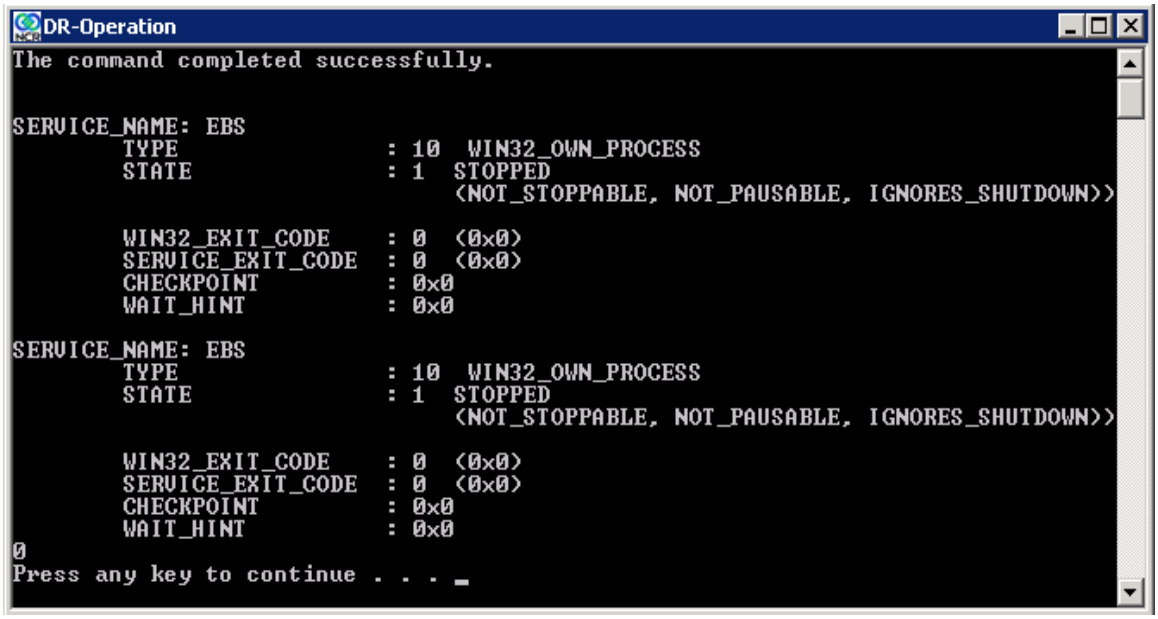


f Enter the password of the user with administrative rights and then press **Enter**.

The system prompts you to press any key to continue.

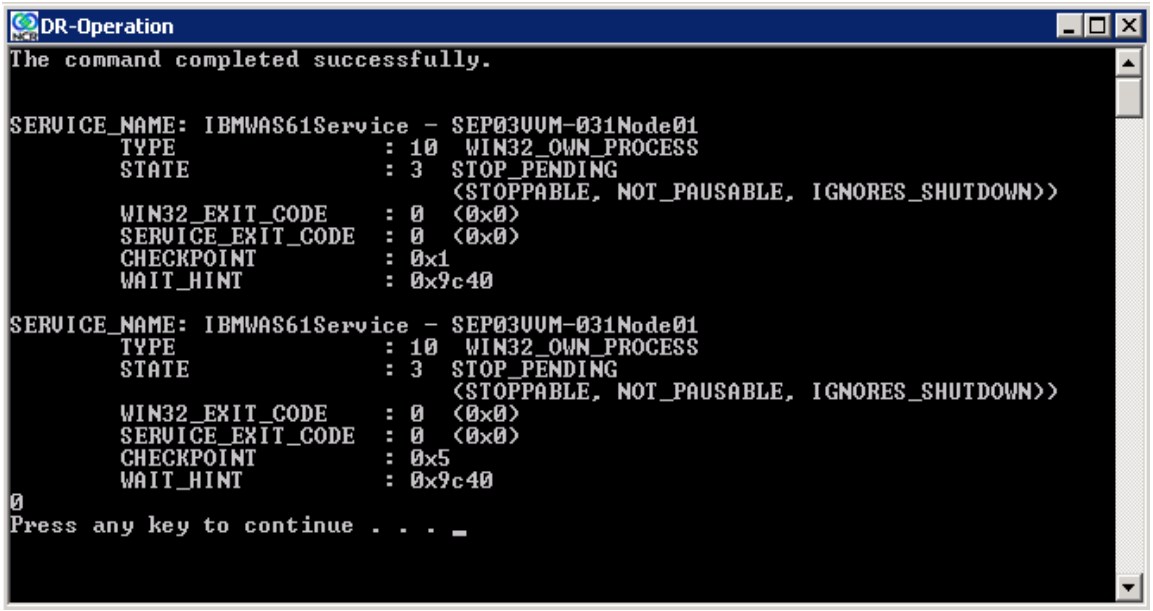
g Press any key to continue.

The system displays the following screen and stops the EBS services on the application server. It then prompts you to press any key to continue.



h Press any key to continue.

The system displays the following screen and stops the IBM Websphere services on the application server. It then prompts you to press any key to continue.



i Press any key to continue.

Note: Steps e - i are repeated "n" times, where n represents the number of application servers that you have configured.

The system displays the SELECT SERVER screen.

j Type E and press **Enter**.

The system displays the SELECT SERVICE SCREEN.

k Type E and press **Enter**.

The system displays the OPERATE SERVICES SCREEN.

l Type E and press **Enter**.

The system displays the SWITCH-OVER/SWITCH-BACK screen with the following options.

- 1. OPERATE SERVICES
- 2. CHECK ARCREDOLOG FILES
- 3. OPERATE DATABASE
- 4. CHANGE PASSWORD IN REGISTRY
- EXIT [E]

4 At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt on the SWITCH-OVER/SWITCH-BACK screen, type 3 and press Enter.

The system displays the DB Names screen and prompts you for the name of the current database. This indicates the currently active database that is present in the read-write mode.

Refer to the following table for the name of the current database for the switch-over and switch-back operations.

Operation	Current DB
Switch-over	P-CHG Database Name
Switch-back	A-CHG Database Name

5 Type the name of the current database and press **Enter**.

The system prompts you for the name of the destination database. Refer to the following table for the name of the destination database for the switch-over and switch-back operations.

Operation	Destination DB
Switch-over	A-CHG Database Name
Switch-back	P-CHG Database Name

6 Type the name of the destination database and press **Enter**.

The system prompts you to confirm the database instance names of the current and destination database instances and then press Y to continue with the operation.

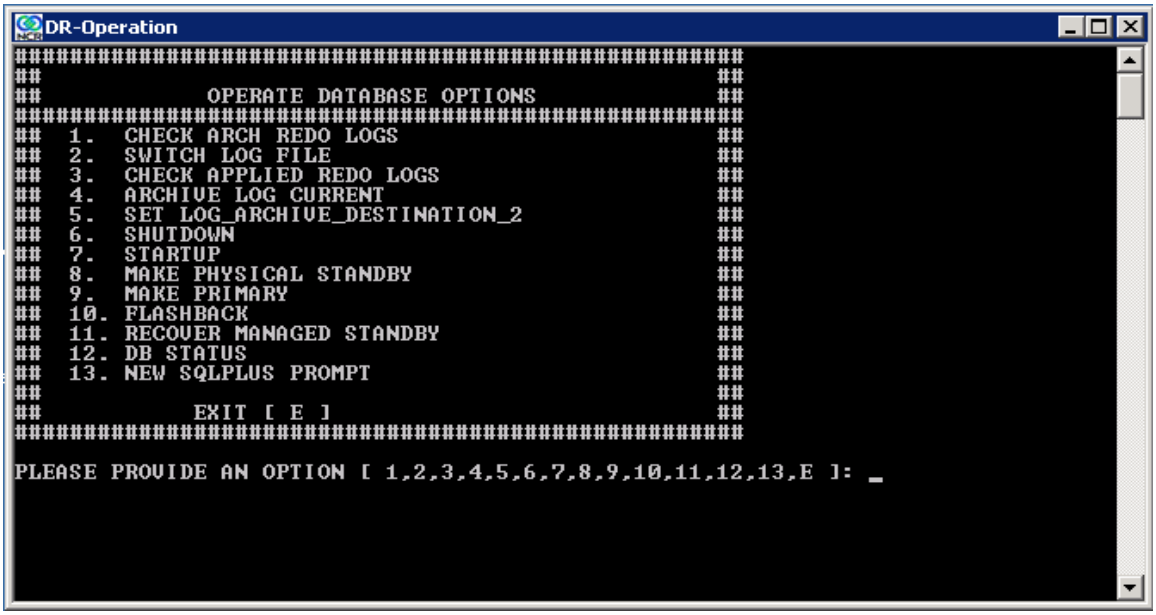
7 Type Y and press **Enter**.

Note: If you enter any other input other than "Y", the system displays the DB Names screen and prompts you for the current and destination database names.

The system displays the OPERATE DATABASE OPTIONS screen with the following options:

- 1. CHECK ARCH REDO LOGS
- 2. SWITCH LOG FILE
- 3. CHECK APPLIED REDO LOGS

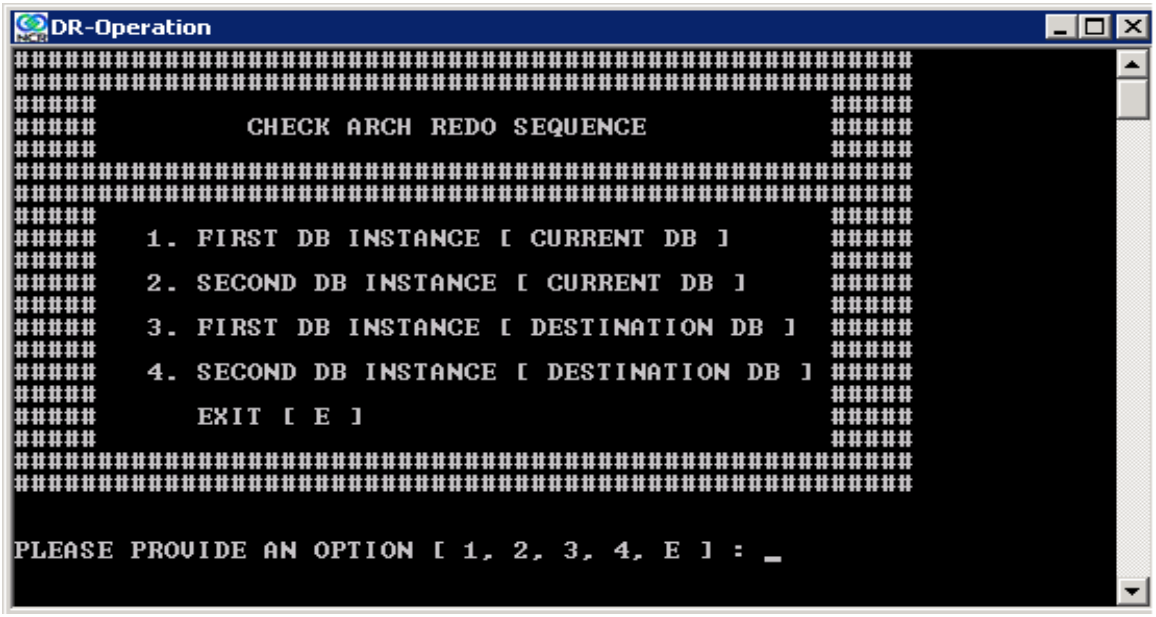
- 4. ARCHIVE LOG CURRENT
- 5. SET LOG_ARCHIVE_DESTINATION_2
- 6. SHUTDOWN
- 7. STARTUP
- 8. MAKE PHYSICAL STANDBY
- 9. MAKE PRIMARY
- 10. FLASHBACK
- 11. RECOVER MANAGED STANDBY
- 12. DB STATUS
- 13. NEW SQLPLUS PROMPT



8 You must now check the Arch Redo log sequence on the A-CHG. To do this:

a At the PLEASE PROVIDE AN OPTION [1,2,3,4,5,6,7,8,9,10,11,12,13,E]: prompt on the OPERATE DATABASE OPTIONS screen, type 1 and press **Enter**.

The system displays the CHECK ARCH REDO SEQUENCE screen and prompts you for the database instance.



b At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type 3 and press **Enter**.

The system prompts you for the ImageMark ECPIX database password.

Note: On the *CHECK ARCH REDO SEQUENCE* screen, options *2* and *4* are applicable if you are using multiple instance database. For single instance database, you can select option *1* or *3*.

c Enter the password of the SYS user to connect to the ImageMark ECPIX database and press **Enter**.

The system displays the following message "RETRIEVE ARCHIVE LOG DETAILS. PRESS ENTER TO CONTINUE OR 'CTRL C' TO CANCEL AND THEN TYPE 'N' WHEN PROMPTED.".

d Press **Enter** to retrieve the archive log details.

Note: If you want to cancel the retrieve process, press Ctrl+C and then type N when prompted.

The system displays an output that resembles the following. Note the last sequence number of the archive log.

```
SEQUENCE# FIRSTTIME            NEXTTIME
--------- -------------------- --------------------
      393 26-aug-2011 10:08:45 26-aug-2011 10:08:45
      394 26-aug-2011 10:08:45 27-aug-2011 05:14:13
      395 27-aug-2011 05:14:13 29-aug-2011 02:06:19
      396 29-aug-2011 02:06:19 29-aug-2011 04:51:39
      397 29-aug-2011 04:51:39 29-aug-2011 04:56:29
```

The system displays the "COMMAND COMPLETED, PRESS ENTER TO EXIT" message.

e Press **Enter** to exit the command.

The system prompts you to press any key to continue.

f Press any key to continue.

The system displays the CHECK ARCH REDO SEQUENCE screen.

g At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type E and press **Enter**.

The system displays the OPERATE DATABASE OPTIONS screen.

9 You must now switch the log file at the P-CHG. To do this:

a At the PLEASE PROVIDE AN OPTION [1,2,3,4,5,6,7,8,9,10,11,12,13,E]: prompt on the OPERATE DATABASE OPTIONS screen, type 2 and press **Enter**.

The system displays the SWITCH LOG FILE screen and prompts you for the database instance.

b At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type 1 and press **Enter**.

The system prompts you for the ImageMark ECPIX database password.

Note: On the *SWITCH LOG FILE* screen, options *2* and *4* are applicable if you are using multiple instance database. For single instance database, you can select option *1* or *3*.

c Enter the password of the SYS user to connect to the ImageMark ECPIX database and press **Enter**.

The system displays the following message "THIS WILL SWITCH THE LOG FILE FOR THIS INSTANCE. PRESS ENTER TO CONTINUE OR 'CTRL C' TO CANCEL AND THEN TYPE 'N' WHEN PROMPTED." message.

d Press **Enter** to switch the log file at the P-CHG.

Note: If you want to cancel the switch log file process, press Ctrl+C and then type N when prompted.

The system displays the "COMMAND COMPLETED, PRESS ENTER TO EXIT" message.

e Press **Enter** to exit the command.

The system prompts you to any key to continue.

f Press any key to continue.

The system displays the SWITCH LOG FILE screen and prompts you for the database instance.

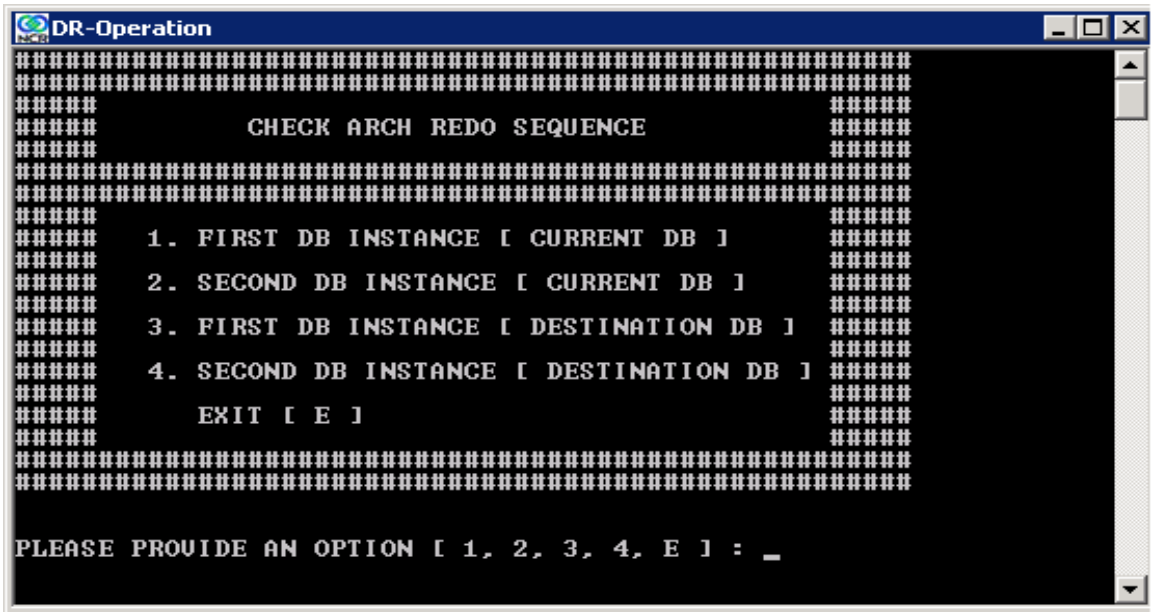
g At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type E and press **Enter**.

The system displays the OPERATE DATABASE OPTIONS screen. You must now check the Arch Redo logs on the A-CHG.

10 To check the Arch Redo Logs on the A-CHG:

a At the PLEASE PROVIDE AN OPTION [1,2,3,4,5,6,7,8,9,10,11,12,13,E]: prompt on the OPERATE DATABASE OPTIONS screen, type 1 and press **Enter**.

The system displays the CHECK ARCH REDO SEQUENCE screen and prompts you for the database instance.



b At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type 3 and press **Enter**.

The system prompts you for the ImageMark ECPIX database password.

Note: On the *CHECK ARCH REDO SEQUENCE* screen, options *2* and *4* are applicable if you are using multiple instance database. For single instance database, you can select option *1* or *3*.

c Enter the password of the SYS user to connect to the ImageMark ECPIX database and press Enter.

The system displays the "RETRIEVE ARCHIVE LOG DETAILS. PRESS ENTER TO CONTINUE OR 'CTRL C' TO CANCEL AND THEN TYPE 'N' WHEN PROMPTED." message.

d Press **Enter** to retrieve the archive log details.

Note: If you want to cancel the retrieve process, press Ctrl+C and then type N when prompted.

The system displays an output that resembles the following. Verify that the last sequence number of the archive log has incremented after the switching of the log file.

For example, if your last sequence number in Step 9 was 397, the system must display 398 or later as the last sequence number in this step.

```
SEQUENCE# FIRSTTIME           NEXTTIME
--------- ------------------- -------------------
      392 26-aug-2011 10:08:45 26-aug-2011 10:08:45
      393 26-aug-2011 10:08:45 26-aug-2011 10:08:45
      394 26-aug-2011 10:08:45 27-aug-2011 05:14:13
      395 27-aug-2011 05:14:13 29-aug-2011 02:06:19
      396 29-aug-2011 02:06:19 29-aug-2011 04:51:39
      397 29-aug-2011 04:51:39 29-aug-2011 04:56:29
      398 29-aug-2011 04:56:29 29-aug-2011 08:52:35
```

The system also displays the "COMMAND COMPLETED, PRESS ENTER TO EXIT" message.

e Press **Enter** to exit the command.

The system prompts you to press any key to continue.

f Press any key to continue.

The system displays the CHECK ARCH REDO SEQUENCE screen.

g At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type E and press **Enter**.

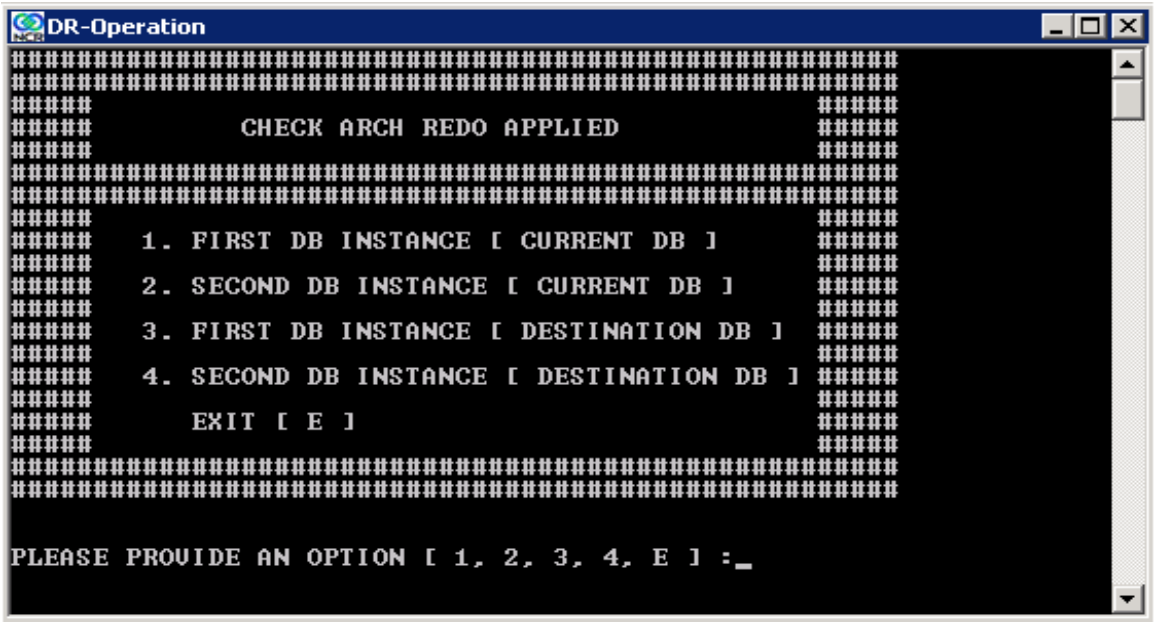
The system displays the OPERATE DATABASE OPTIONS screen. You must now check the applied redo logs at the A-CHG.

11 Verify that the physical logs from arc files folder mentioned in the Init.ora file of the P-CHG match the physical logs from the arc files folder of the A-CHG.

12 To check the applied redo logs at the A-CHG:

a At the PLEASE PROVIDE AN OPTION [1,2,3,4,5,6,7,8,9,10,11,12,13,E]: prompt on the OPERATE DATABASE OPTIONS screen, type 3 and press **Enter**.

The system displays the CHECK ARCH REDO APPLIED screen and prompts you for the database instance.



b At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type 3 and press **Enter**.

The system prompts you for the ImageMark ECPIX database password.

Note: On the *CHECK ARCH REDO APPLIED* screen, options *2* and *4* are applicable if you are using multiple instance database. For single instance database, you can select option *1* or *3*.

c Enter the password of the SYS user to connect to the ImageMark ECPIX database and press **Enter**.

The system displays the "RETRIEVE APPLIED ARCHIVE LOG SEQUENCE. PRESS ENTER TO CONTINUE OR 'CTRL C' TO CANCEL AND THEN TYPE 'N' WHEN PROMPTED." message.

d Press **Enter** to retrieve the applied archive sequence.

Note: If you want to cancel the retrieve process, press Ctrl+C and then type N when prompted.

The system displays the "COMMAND COMPLETED, PRESS ENTER TO EXIT" message.

e Press **Enter** to exit the command.

The system displays an output that resembles the following:

```
MAX(SEQUENCE#) APPLIED       THREAD#
-------------- --------- ----------
           398 NO                 1
           397 YES                1
```

It also displays that the command has completed and prompts you to press **Enter** to Exit the command.

Note: The system may display "No" in one of the records returned in the query. Ignore the record and proceed with the next step.

f Press **Enter**.

The system prompts you to press any key to continue.

g Press any key to continue.

The system displays the CHECK ARCH REDO APPLIED screen.

h At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type E and press **Enter**.

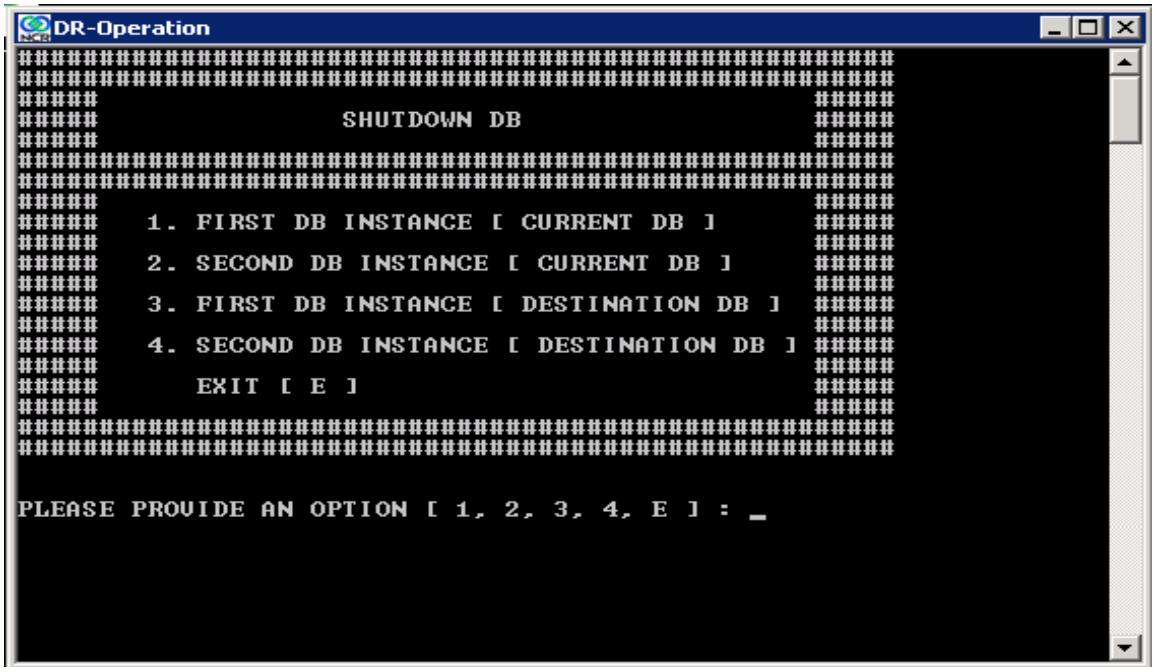
The system displays the OPERATE DATABASE OPTIONS screen.

Note: Step 13 is applicable if you are using multiple instance database. For single instance database, proceed the operation from step 14.

13 You must now shutdown all the database instances, except one database instance of the P-CHG. The database instances can be restarted after the switch-over process is complete. To do this:

a At the PLEASE PROVIDE AN OPTION [1,2,3,4,5,6,7,8,9,10,11,12,13,E]: prompt on the OPERATE DATABASE OPTIONS screen, type 6 and press **Enter**.

The system displays the SHUTDOWN DB screen and prompts you for the database instance.



b At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type 2 and press **Enter**.

The system prompts you for the ImageMark ECPIX database password.

Note: On the *SHUTDOWN DB* screen, options *2* and *4* are applicable if you are using multiple instance database. For single instance database, you can select option *1* or *3*.

c Enter the password of the SYS user to connect to the ImageMark ECPIX database and press **Enter**.

The system displays the “SHUTDOWN INSTANCE. PRESS ENTER TO CONTINUE OR 'CTRL C' TO CANCEL AND THEN TYPE 'N' WHEN PROMPTED.” message.

d Press **Enter** to shut down the database instance.

Note: If you want to cancel the shutdown process, press **Ctrl+C** and then type N when prompted.

The system displays the “COMMAND COMPLETED, PRESS ENTER TO EXIT” message.

e Press **Enter** to exit the command.

The system prompts you to press any key to continue.

f Press any key to continue.

The system displays the SHUTDOWN DB screen.

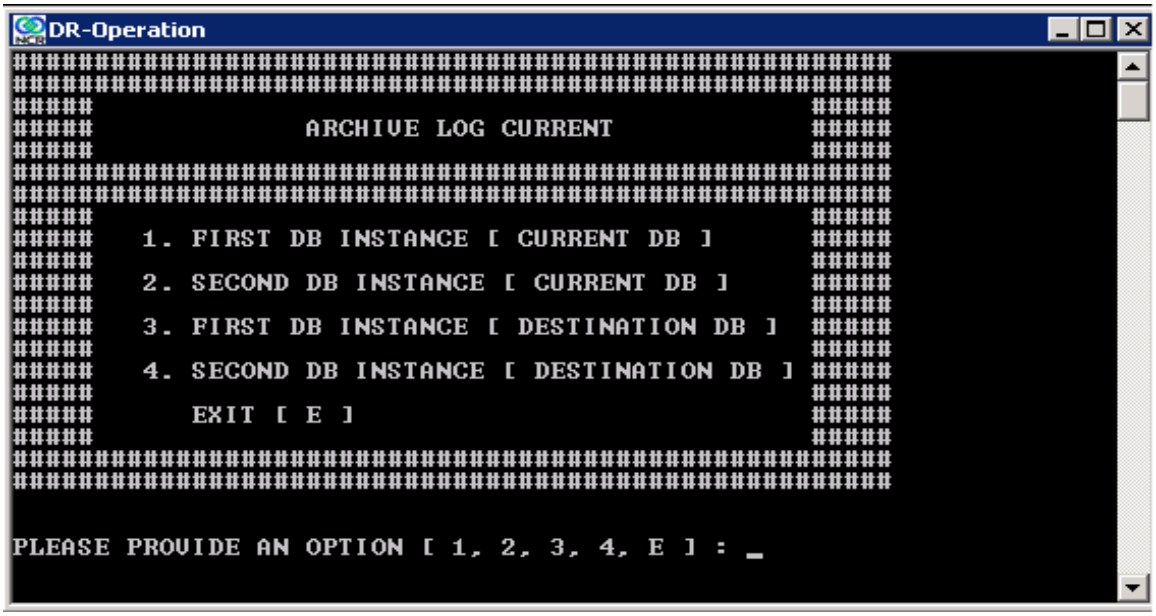
g At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type E and press **Enter**.

The system displays the OPERATE DATABASE OPTIONS screen.

14 You must now archive the current log on the P-CHG. To do this:

a At the PLEASE PROVIDE AN OPTION [1,2,3,4,5,6,7,8,9,10,11,12,13,E]: prompt on the OPERATE DATABASE OPTIONS screen, type 4 and press **Enter**.

The system displays the ARCHIVE LOG CURRENT screen and prompts you for the database instance.



b At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type 1 and press **Enter**.

The system prompts you for the ImageMark ECPIX database password.

Note: On the *ARCHIVE LOG CURRENT* screen, options *2* and *4* are applicable if you are using multiple instance database. For single instance database, you can select option *1* or *3*.

c Enter the password of the SYS user to connect to the ImageMark ECPIX database and press **Enter**.

The system displays the “ISSUE ARCHIVE LOG CURRENT FOR THIS INSTANCE. PRESS ENTER TO CONTINUE OR 'CTRL C' TO CANCEL AND THEN TYPE 'N' WHEN PROMPTED” message.

d Press **Enter** to issue the current archive log for this instance.

Note: If you want to cancel the process, press **Ctrl+C** and then type N when prompted.

The system displays the “COMMAND COMPLETED, PRESS ENTER TO EXIT” message.

e Press **Enter** to exit the command.

The system prompts you to press any key to continue.

f Press any key to continue.

The system displays the ARCHIVE LOG CURRENT screen and prompts you for the database instance.

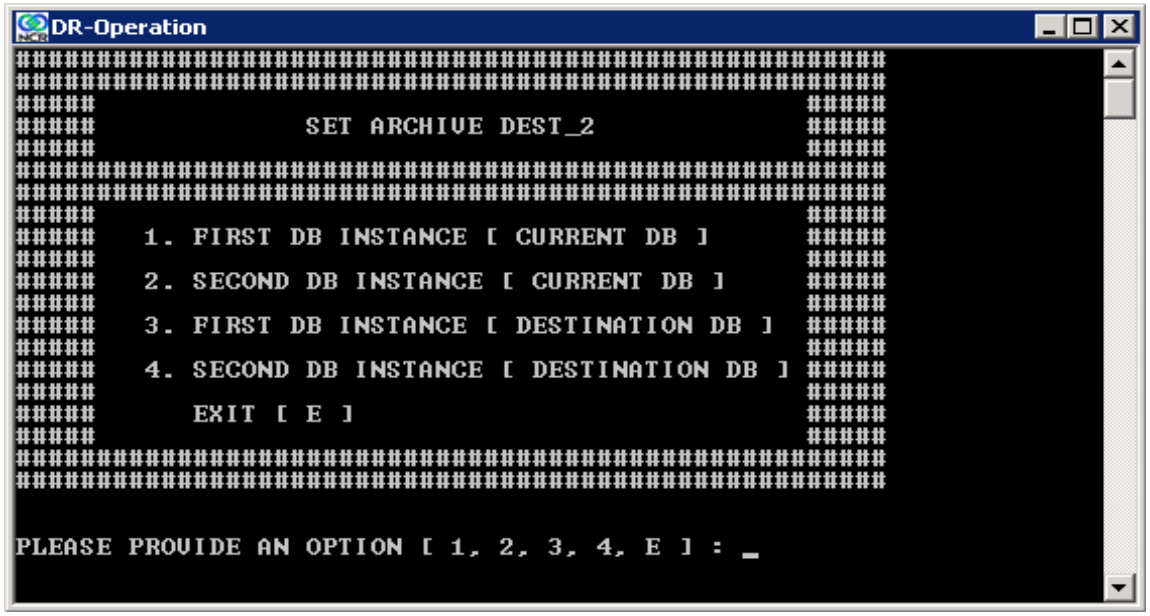
g At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type E and press **Enter**.

The system displays the OPERATE DATABASE OPTIONS screen.

15 To set a different service name for sending archive logs from P-CHG:

Note: This is an optional step. If you do not want to set a different service name for sending archive logs from the P-CHG, skip this step and proceed with step 16.

The system displays the SET ARCHIVE DEST_2 screen and prompts you for the database instance.



a At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type 1 and press **Enter**.

The system prompts you for the ImageMark ECPIX database password.

Note: On the *SET ARCHIVE DEST_2* screen, options *2* and *4* are applicable if you are using multiple instance database. For single instance database, you can select option *1* or *3*.

b Enter the password of the SYS user to connect to the ImageMark ECPIX database and press **Enter**.

The system displays the “CHANGE THE LOG_ARCHIVE_DEST_2. PRESS ENTER TO CONTINUE OR 'CTRL C' TO CANCEL AND THEN TYPE 'N' WHEN PROMPTED” message.

c Press **Enter** to set a different service name for sending archive logs from P-CHG.

Note: If you want to cancel the process of setting a different service name, press **Ctrl+C** and then type N when prompted.

The system displays the “COMMAND COMPLETED, PRESS ENTER TO EXIT” message.

d Press **Enter** to exit the command.

The system prompts you to press any key to continue.

e Press any key to continue.

The system displays the SET ARCHIVE DEST_2 screen and prompts you for the database instance.

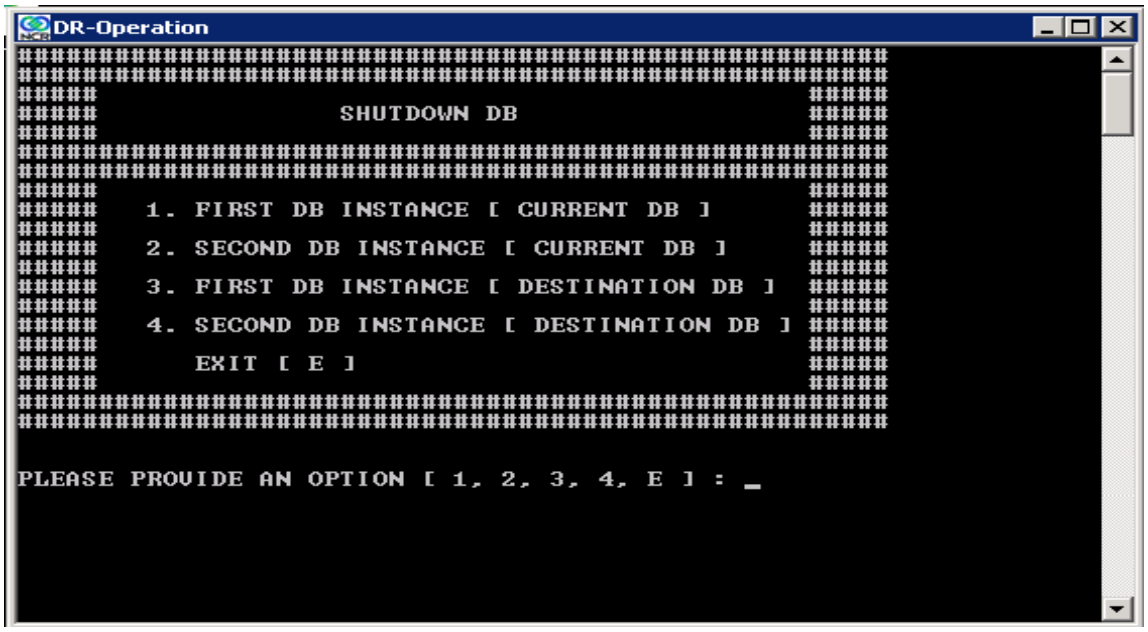
f At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E]: prompt, type E and press **Enter**.

g The system displays the OPERATE DATABASE OPTIONS screen. You must now shut down first database instance of the PCHG

16 You must now shut down the first instance of the P-CHG. To do this:

a At the PLEASE PROVIDE AN OPTION [1,2,3,4,5,6,7,8,9,10,11,12,13,E]: prompt on the OPERATE DATABASE OPTIONS screen, type 6 and press **Enter**.

The system displays the SHUTDOWN DB screen and prompts you for the database instance.



b At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type 1 and press **Enter**.

The system prompts you for the ImageMark ECPIX database password.

Note: On the *SHUTDOWN DB* screen, options *2* and *4* are applicable if you are using multiple instance database. For single instance database, you can select option *1* or *3*.

c Enter the password of the SYS user to connect to the ImageMark ECPIX database and press **Enter**.

The system displays the "SHUTDOWN INSTANCE. PRESS ENTER TO CONTINUE OR 'CTRL C' TO CANCEL AND THEN TYPE 'N' WHEN PROMPTED." message.

d Press Enter to shut down the database instance.

Note: If you want to cancel the shutdown process, press **Ctrl+C** and then type N when prompted.

The system displays the "COMMAND COMPLETED, PRESS ENTER TO EXIT" message.

e Press **Enter** to exit the command.

The system prompts you to press any key to continue.

f Press any key to continue.

The system displays the SHUTDOWN DB screen.

g At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type E and press **Enter**.

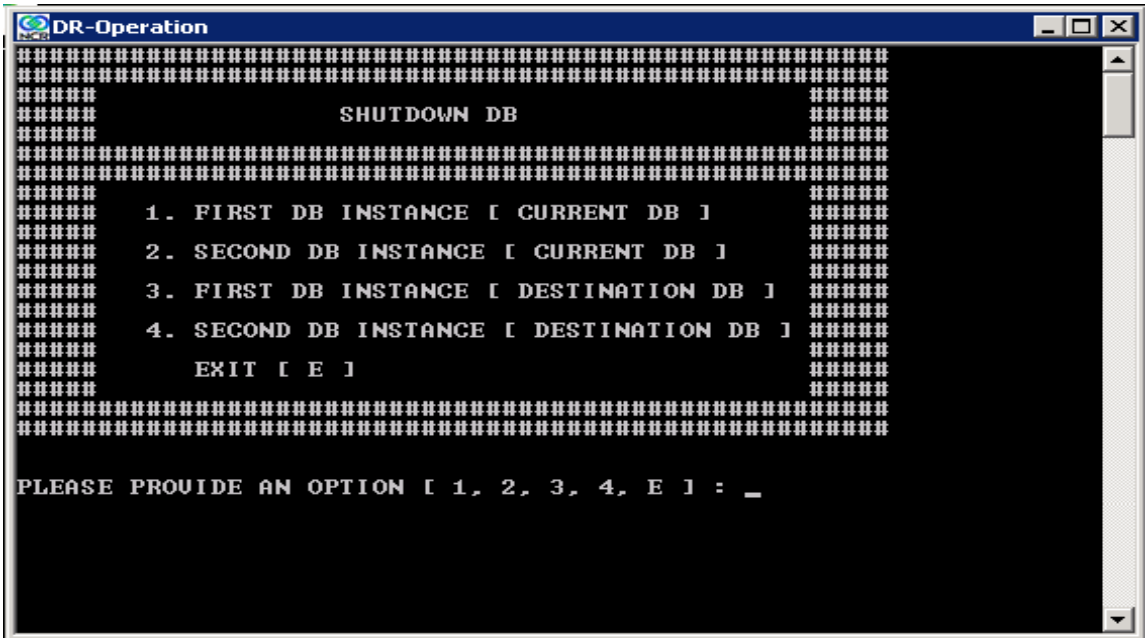
The system displays the OPERATE DATABASE OPTIONS screen.

Note: Step 17 is applicable if you are using multiple instance database. For single instance database, proceed the operation from step 18.

17 You must now shut down the second database instance of the A-CHG: To do this:

a At the PLEASE PROVIDE AN OPTION [1,2,3,4,5,6,7,8,9,10,11,12,13,E]: prompt on the OPERATE DATABASE OPTIONS screen, type 6 and press Enter.

The system displays the SHUTDOWN DB screen and prompts you for the database instance.



b At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type 4 and press **Enter**.

The system prompts you for the ImageMark ECPIX database password.

Note: On the *SHUTDOWN DB* screen, options *2* and *4* are applicable if you are using multiple instance database. For single instance database, you can select option *1* or *3*.

c Enter the password of the SYS user to connect to the ImageMark ECPIX database and press Enter.

The system displays the "SHUTDOWN INSTANCE. PRESS ENTER TO CONTINUE OR 'CTRL C' TO CANCEL AND THEN TYPE 'N' WHEN PROMPTED." message.

d Press **Enter** to shut down the database instance.

Note: If you want to cancel the shutdown process, press Ctrl+C and then type N when prompted.

The system displays the "COMMAND COMPLETED, PRESS ENTER TO EXIT" message.

e Press **Enter** to exit the command.

The system prompts you to press any key to continue.

f Press any key to continue.

The system displays the SHUTDOWN DB screen.

g At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type E and press **Enter**.

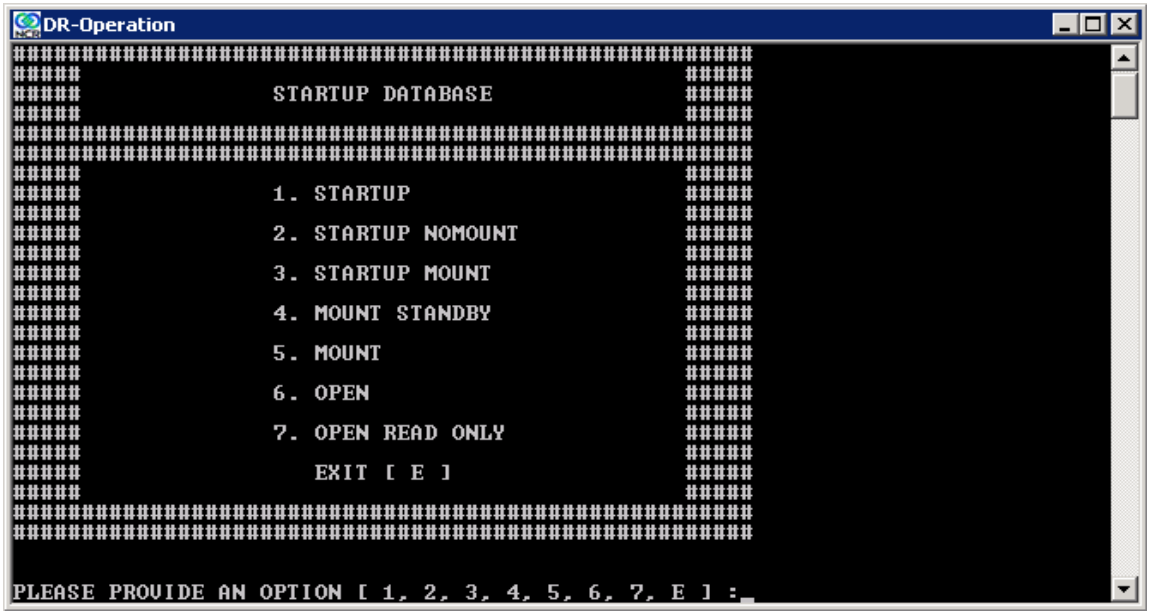
The system displays the OPERATE DATABASE OPTIONS screen.

18 You must now start up the first database instance of the P-CHG. To do this:

a At the PLEASE PROVIDE AN OPTION [1,2,3,4,5,6,7,8,9,10,11,12,13,E]: prompt on the OPERATE DATABASE OPTIONS screen, type 7 and press Enter.

The system displays the STARTUP DATABASE screen with the following options:

- 1. STARTUP
- 2. STARTUP NOMOUNT
- 3. STARTUP MOUNT
- 4. MOUNT STANDBY
- 5. MOUNT
- 6. OPEN
- 7. OPEN READ ONLY
- EXIT [E]



b At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, 5, 6, 7, E] : prompt, type 1 and press **Enter**.

The system displays the STARTUP DB screen and prompts you for the database instance.

c At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type 1 and press **Enter**.

The system prompts you for the ImageMark ECPIX database password.

d Enter the password of the SYS user to connect to the ImageMark ECPIX database and press **Enter**.

The system displays the “STARTUP INSTANCE. PRESS ENTER TO CONTINUE OR 'CTRL C' TO CANCEL AND THEN TYPE 'N' WHEN PROMPTED.” message.

e Press **Enter** to start the database instance.

Note: If you want to cancel the start up process, press **Ctrl+C** and then type N when prompted.

f Press **Enter** to exit the command.

The system prompts you to press any key to continue.

g Press any key to continue.

The system displays the STARTUP DB screen and prompts you to select a database instance.

h At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type E and press **Enter**.

The system displays the STARTUP screen and prompts you to select an option.

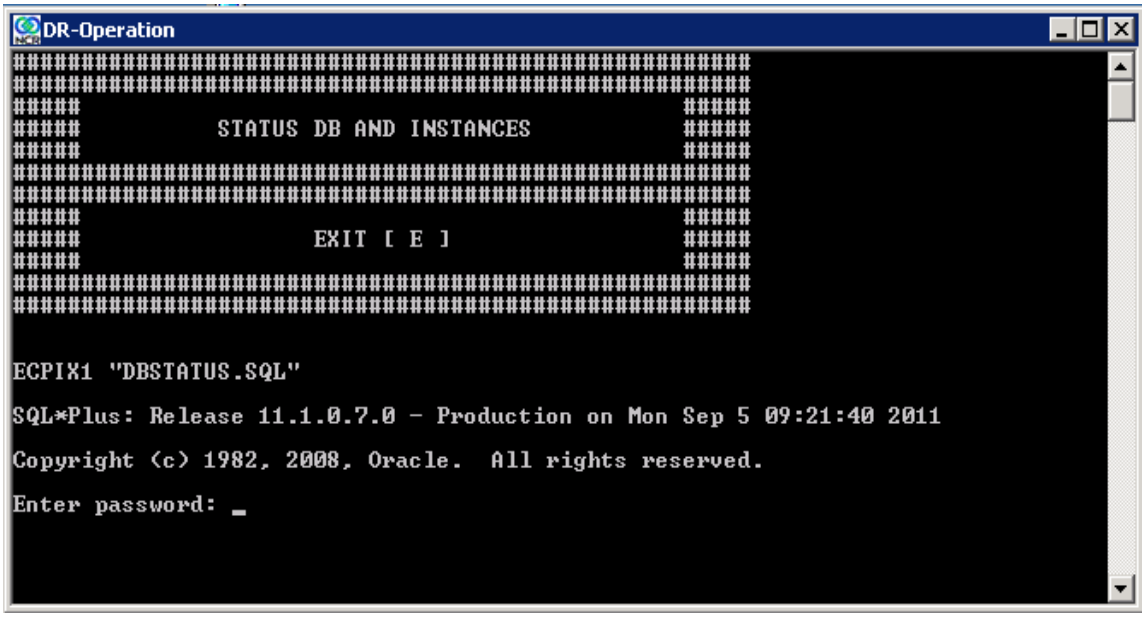
i At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, 5, 6, 7, E] : prompt, type E and press **Enter**.

The system displays the OPERATE DATABASE OPTIONS screen.

19 You must now check the status of the database on both the current and destination database servers. To do this:

a At the PLEASE PROVIDE AN OPTION [1,2,3,4,5,6,7,8,9,10,11,12,13,E]: prompt on the OPERATE DATABASE OPTIONS screen, type 12 and press **Enter**.

The system displays the STATUS DB and INSTANCES screen and prompts you for the ImageMark ECPIX database password.



b Enter the password of the SYS user to connect to the ImageMark ECPIX database and press Enter.

The system displays the database status of the current database that resembles the following:

```
DATABASE STATUS
===============
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

OPEN_MODE  DATABASE_ROLE    FLASH SWITCHOVER_STATUS
---------- ---------------- ----- --------------------
READ WRITE PRIMARY          YES   SESSIONS ACTIVE
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~


INSTANCE STATUS
===============
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

INSTANCE_NAME    STATUS       DATABASE_STATUS   HOST_NAME
---------------- ------------ ----------------- --------------------
ECPIX            OPEN         ACTIVE            SEP03VVM-001
```

Ensure that the values of the following are displayed as follows:

- OPEN_MODE: READ WRITE
- DATABASE ROLE: PRIMARY

- FLASH: YES

The system displays the "COMMAND COMPLETED, PRESS ENTER TO EXIT" message.

c Press **Enter** to exit the command.

The system prompts you to press any key to continue.

d Press any key to continue.

The system prompts you for the ImageMark ECPIX database password.

e Enter the password of the SYS user to connect to the ImageMark ECPIX database and press **Enter**.

The system displays the database status of the destination database that resembles the following:

```
DATABASE STATUS
===============

OPEN_MODE  DATABASE_ROLE     FLASH SWITCHOVER_STATUS
---------- ----------------- ----- --------------------
MOUNTED    PHYSICAL STANDBY YES    SESSIONS ACTIVE


INSTANCE STATUS
===============

INSTANCE_NAME    STATUS       DATABASE_STATUS   HOST_NAME
---------------- ------------ ----------------- --------------------
ECPIX            MOUNTED      ACTIVE            SEP03VVM-003
```

Ensure that the values of the following are displayed as follows:

- OPEN_MODE: MOUNTED
- DATABASE ROLE: PHYSICAL STANDBY
- FLASH: YES

The system displays the "COMMAND COMPLETED, PRESS ENTER TO EXIT" message.

f Press **Enter** to exit the command.

The system prompts you to press any key to continue.

g Press any key to continue.

The system displays the PLEASE PROVIDE AN OPTION [E] : prompt.

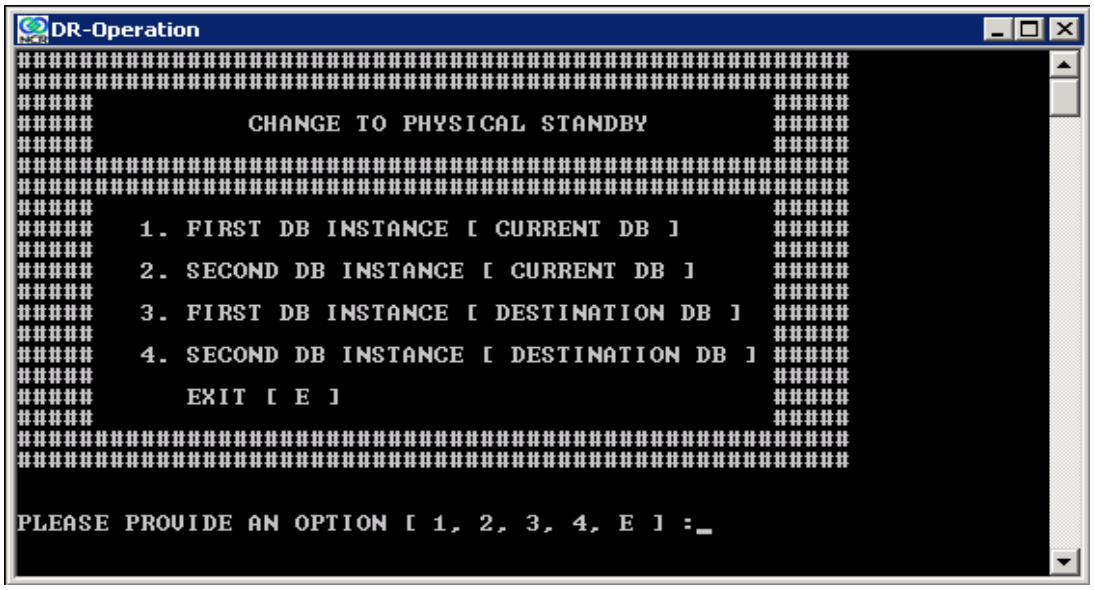
h Type E at the prompt and press **Enter**.

The system displays the OPERATE DATABASE OPTIONS screen.

20 You must now initiate the switch-over process. To do this:

a At the PLEASE PROVIDE AN OPTION [1,2,3,4,5,6,7,8,9,10,11,12,13,E]: prompt on the OPERATE DATABASE OPTIONS screen, type 8 and press **Enter**.

The system displays the CHANGE TO PHYSICAL STANDBY screen and prompts you for the database instance.



b At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type 1 and press **Enter**.

The system prompts you for the ImageMark ECPIX database password.

Note: On the *CHANGE TO PHYSICAL STANDBY* screen, options *2* and *4* are applicable if you are using multiple instance database. For single instance database, you can select option *1* or *3*.

c Enter the password of the SYS user to connect to the ImageMark ECPIX database and press **Enter**.

The system displays the "CHANGE DATABASE ROLE TO PHYSICAL STANDBY. PRESS ENTER TO CONTINUE OR 'CTRL C' TO CANCEL AND THEN TYPE 'N' WHEN PROMPTED." message.

d Press **Enter** to change the database role of the P-CHG to standby.

Note: If you want to cancel the role change process, press **Ctrl+C** and then type N when prompted.

The system displays the "SHUTDOWN INSTANCE. PRESS ENTER TO CONTINUE OR 'CTRL C' TO CANCEL AND THEN TYPE 'N' WHEN PROMPTED." message.

e Press **Enter** to shutdown the database instance.

Note: If you want to cancel the shut down process, press **Ctrl+C** and then type N when prompted.

The system displays the "STARTUP NOMOUNT INSTANCE. PRESS ENTER TO CONTINUE OR 'CTRL C' TO CANCEL AND THEN TYPE 'N' WHEN PROMPTED." message.

f Press any key to continue.

The system prompts you to enter the password.

g Enter the password of the SYS user and press **Enter**.

h Press **Enter** to start the database instance.

Note: If you want to cancel the start up process, press **Ctrl+C** and then type N when prompted.

The system displays the "STARTUP NOMOUNT INSTANCE. PRESS ENTER TO CONTINUE OR 'CTRL C' TO CANCEL AND THEN TYPE 'N' WHEN PROMPTED." message.

i Press **Enter** to start the database instance.

The system displays the "MOUNT THE NOMOUNT INSTANCE. PRESS ENTER TO CONTINUE OR 'CTRL C' TO CANCEL AND THEN TYPE 'N' WHEN PROMPTED." message.

j Press **Enter** to mount the database instance.

Note: If you want to cancel the mount database process, press **Ctrl+C** and then type N when prompted.

The system displays the "COMMAND COMPLETED, PRESS ENTER TO EXIT" message.

k Press **Enter** to exit the command.

The system prompts you to press any key to continue.

l Press any key to continue.

The system displays the CHANGE TO PHYSICAL STANDBY screen and prompts you for the database instance.

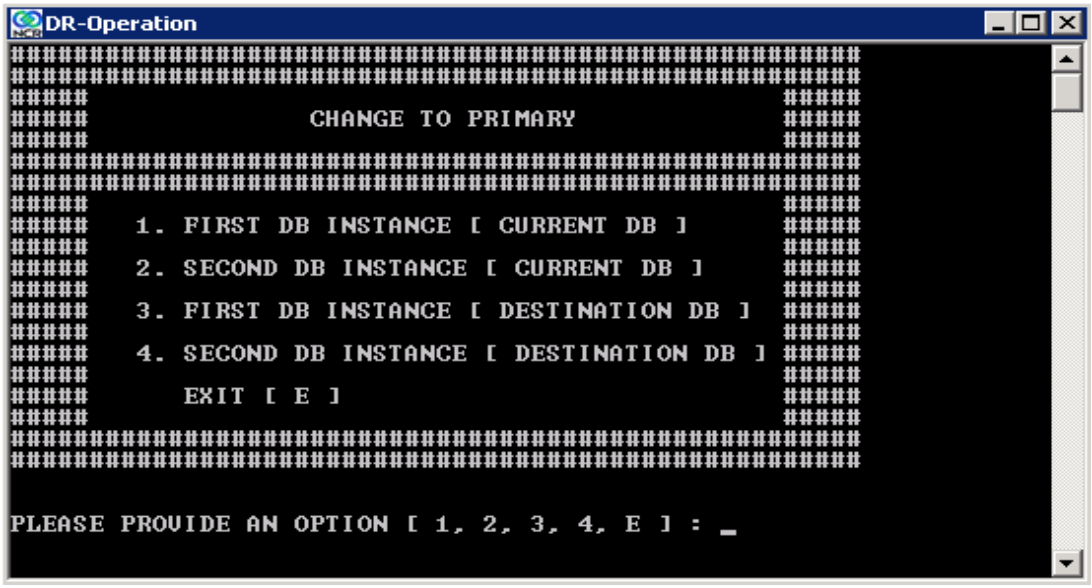
m At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E]: prompt, type E and press **Enter**.

The system displays the OPERATE DATABASE OPTIONS screen.

21 You must now switch to the new P-CHG. To do this:

a At the PLEASE PROVIDE AN OPTION [1,2,3,4,5,6,7,8,9,10,11,12,13,E]: prompt on the OPERATE DATABASE OPTIONS screen, type 9 and press **Enter**.

The system displays the CHANGE TO PRIMARY screen and prompts for the database instance.



b At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type 3 and press Enter.

The system prompts you for the ImageMark ECPIX database password.

Note: On the *CHANGE TO PRIMARY* screen, options *2* and *4* are applicable if you are using multiple instance database. For single instance database, you can select option *1* or *3*.

c Enter the password of the SYS user to connect to the ImageMark ECPIX database and press Enter.

The system displays the "CHANGE DATABASE ROLE TO PRIMARY. PRESS ENTER TO CONTINUE OR 'CTRL C' TO CANCEL AND THEN TYPE 'N' WHEN PROMPTED." message.

d Press Enter to change the database role of the A-CHG to primary.

Note: If you want to cancel the role change process, press **Ctrl+C** and then type N when prompted.

The system displays the "SHUTDOWN INSTANCE. PRESS ENTER TO CONTINUE OR 'CTRL C' TO CANCEL AND THEN TYPE 'N' WHEN PROMPTED." message.

e Press Enter to shut down the database instance.

Note: If you want to cancel the shut down process, press Ctrl+C and then type N when prompted.

The system displays the "STARTUP INSTANCE. PRESS ENTER TO CONTINUE OR 'CTRL C' TO CANCEL AND THEN TYPE 'N' WHEN PROMPTED." message.

f Press Enter to start the database instance.

Note: If you want to cancel the start up process, press **Ctrl+C** and then type N when prompted.

The system displays the "COMMAND COMPLETED, PRESS ENTER TO EXIT" message.

g Press Enter to exit the command.

The system prompts you to press any key to continue.

h Press any key to continue.

The system displays the CHANGE TO PRIMARY screen and prompts you for the database instance.

i At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E]: prompt, type E and press Enter.

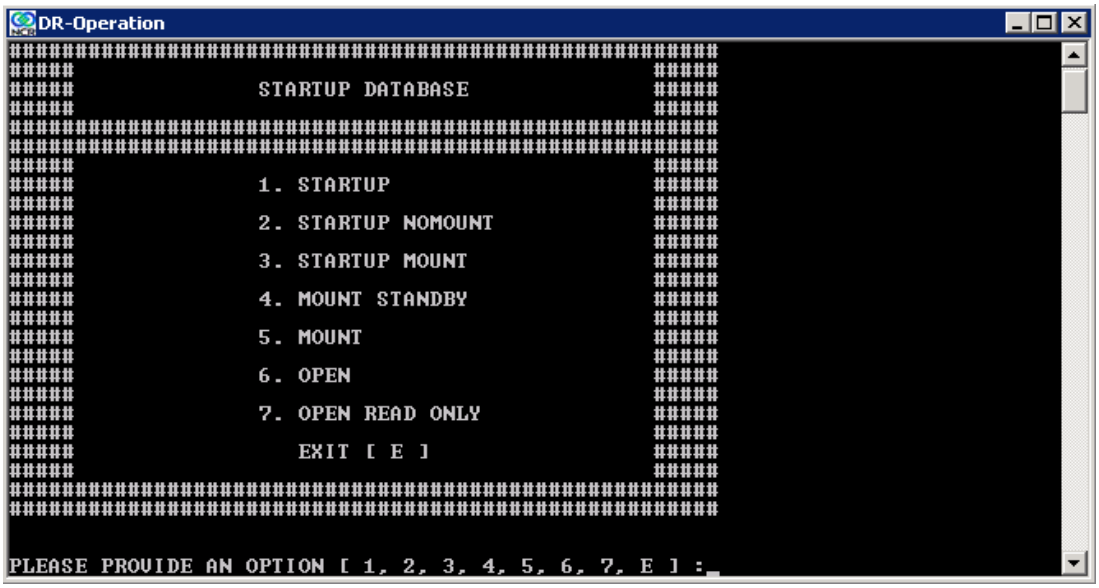
The system displays the OPERATE DATABASE OPTIONS screen.

Note: Step 22 is applicable if you are using multiple instance database. For single instance database, proceed the operation from step 23.

22 You must now startup the second database instance of the A-CHG. To do this:

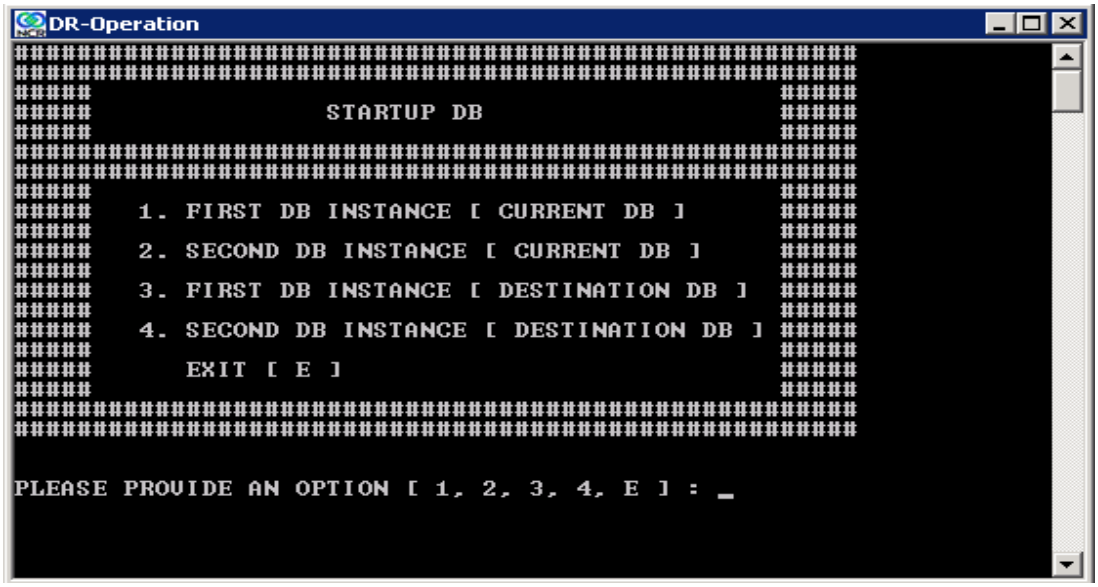
a At the PLEASE PROVIDE AN OPTION [1,2,3,4,5,6,7,8,9,10,11,12,13,E]: prompt on the OPERATE DATABASE OPTIONS screen, type 7 and press Enter.

The system displays the STARTUP DATABASE screen and prompts you to select an option.



b At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, 5, 6, 7, E] : prompt, type 1 and press **Enter**.

The system displays the STARTUP DB screen and prompts you for the database instance.



c At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type 4 and press **Enter**.

The system prompts you for the ImageMark ECPIX database password.

Note: On the *STARTUP DB* screen, options *2* and *4* are applicable if you are using multiple instance database. For single instance database, you can select option *1* or *3*.

d Enter the password of the SYS user to connect to the ImageMark ECPIX database and press **Enter**.

The system displays the "STARTUP INSTANCE. PRESS ENTER TO CONTINUE OR 'CTRL C' TO CANCEL AND THEN TYPE 'N' WHEN PROMPTED." message.

e Press **Enter** to start the database instance.

Note: If you want to cancel the start up process, press **Ctrl+C** and then type N when prompted.

The system displays the "COMMAND COMPLETED, PRESS ENTER TO EXIT" message.

f Press **Enter** to exit the command.

The system prompts you to press any key to continue.

g Press any key to continue.

The system displays the STARTUP DB screen and prompts you to select a database instance.

h At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type E and press **Enter**.

The system displays the STARTUP DATABASE screen and prompts you to select an option.

i At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, 5, 6, 7, E] : prompt, type E and press **Enter**.

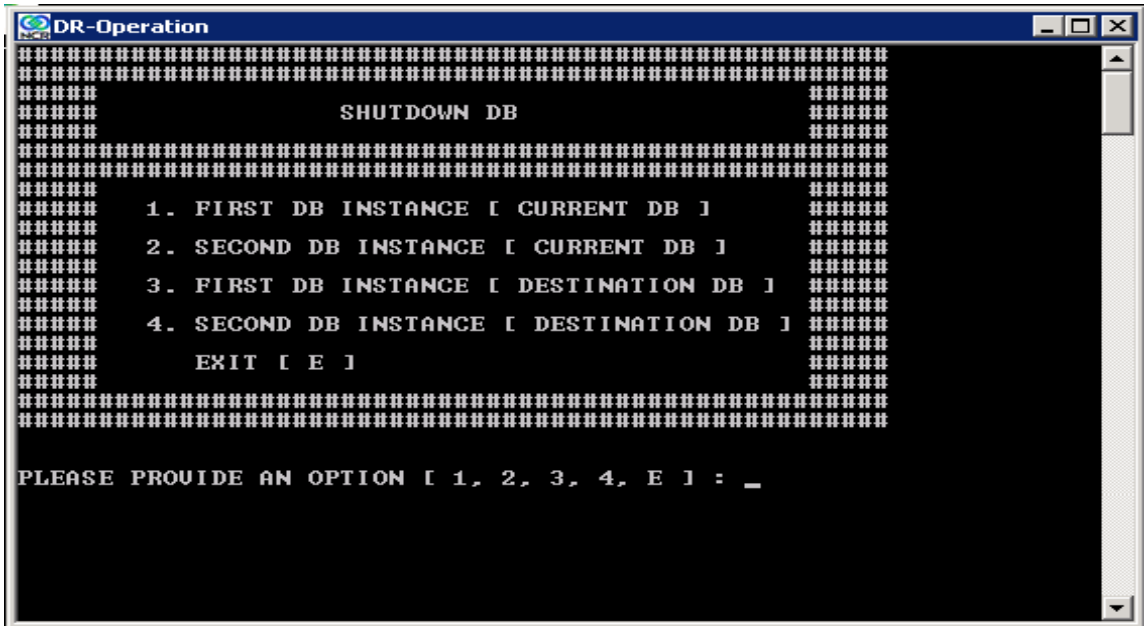
The system displays the OPERATE DATABASE OPTIONS screen.

Note: Step 23 is applicable if you are using multiple instance database. For single instance database, proceed the operation from step 24.

23 You must now shut down the second instance of the P-CHG. To do this:

a At the PLEASE PROVIDE AN OPTION [1,2,3,4,5,6,7,8,9,10,11,12,13,E]: prompt on the OPERATE DATABASE OPTIONS screen, type 6 and press **Enter**.

The system displays the SHUTDOWN DB screen and prompts you for the database instance.



b At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type 2 and press **Enter**.

The system prompts you for the ImageMark ECPIX database password.

Note: On the *SHUTDOWN DB* screen, options *2* and *4* are applicable if you are using multiple instance database. For single instance database, you can select option *1* or *3*.

c Enter the password of the SYS user to connect to the ImageMark ECPIX database and press **Enter**.

The system displays the "SHUTDOWN INSTANCE. PRESS ENTER TO CONTINUE OR 'CTRL C' TO CANCEL AND THEN TYPE 'N' WHEN PROMPTED." message.

d Press Enter to shut down the database instance.

Note: If you want to cancel the shutdown process, press **Ctrl+C** and then type N when prompted.

The system displays the "COMMAND COMPLETED, PRESS ENTER TO EXIT" message.

e Press **Enter** to exit the command.

The system prompts you to press any key to continue.

f Press any key to continue.

The system displays the SHUTDOWN DB screen.

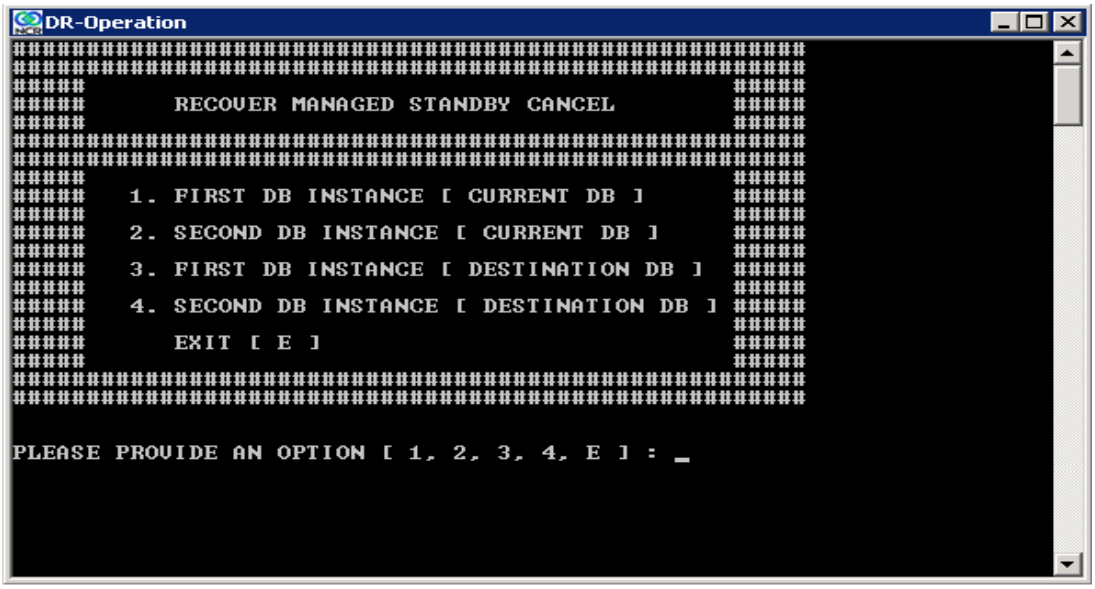
g At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type E and press **Enter**.

The system displays the OPERATE DATABASE OPTIONS screen.

24 You must now recover the managed standby database instances of the P-CHG. To do this:

a At the PLEASE PROVIDE AN OPTION [1,2,3,4,5,6,7,8,9,10,11,12,13,E]: prompt on the OPERATE DATABASE OPTIONS screen, type 11 and press **Enter**.

The system displays the RECOVER MANAGED STANDBY screen and prompts you for the database instance.



b At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type 1 and press **Enter**.

The system prompts you for the ImageMark ECPIX database password.

Note: On the *RECOVER MANAGED STANDBY CANCEL* screen, options *2* and *4* are applicable if you are using multiple instance database. For single instance database, you can select option *1* or *3*.

c Enter the password of the SYS user to connect to the ImageMark ECPIX database and press **Enter**.

The system displays the "RECOVER MANAGED STANDBY DATABASE. PRESS ENTER TO CONTINUE OR 'CTRL C' TO CANCEL AND THEN TYPE 'N' WHEN PROMPTED." message.

d Press **Enter** to recover the managed standby database.

Note: If you want to cancel the recovery of the managed standby, press Ctrl+C and then type N when prompted.

The system displays the "COMMAND COMPLETED, PRESS ENTER TO EXIT" message.

e Press **Enter** to exit the command.

The system prompts you to press any key to continue.

f Press any key to continue.

The system displays the RECOVER MANAGED STANDBY screen and prompts you for the database instance.

Note: Steps 24-g to 24-k are applicable if you are using multiple instance database. For single instance database, proceed the operation from step 24-l.

g At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type 2 and press **Enter**.

The system prompts you for the ImageMark ECPIX database password.

h Enter the password of the SYS user to connect to the ImageMark ECPIX database and press **Enter**.

The system displays the "RECOVER MANAGED STANDBY DATABASE. PRESS ENTER TO CONTINUE OR 'CTRL C' TO CANCEL AND THEN TYPE 'N' WHEN PROMPTED." message.

i Press **Enter** to recover the managed standby database.

Note: If you want to cancel the recovery of the managed standby, press Ctrl+C and then type N when prompted.

The system displays the "COMMAND COMPLETED, PRESS ENTER TO EXIT" message.

j Press **Enter** to exit the command.

The system prompts you to press any key to continue.

k Press any key to continue.

The system displays the RECOVER MANAGED STANDBY screen and prompts you for the database instance.

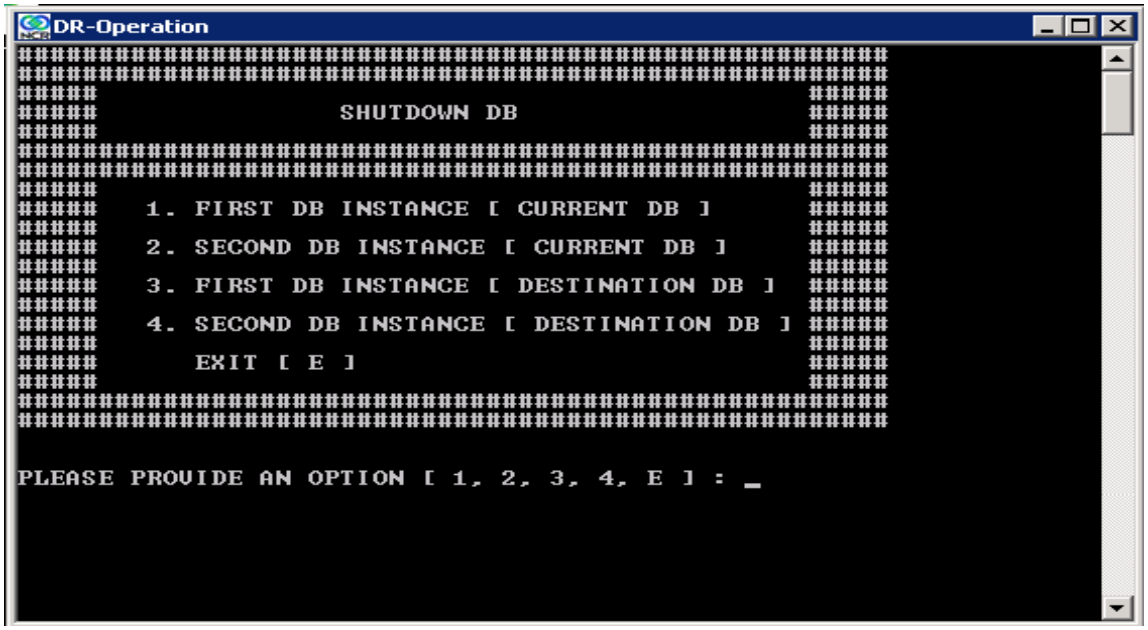
l At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type E and press **Enter**.

The system displays the OPERATE DATABASE OPTIONS screen. You must now close the DR-SCRIPTS.

25 You must now shut down the first instance of the P-CHG. To do this:

a At the PLEASE PROVIDE AN OPTION [1,2,3,4,5,6,7,8,9,10,11,12,13,E]: prompt on the OPERATE DATABASE OPTIONS screen, type 6 and press **Enter**.

The system displays the SHUTDOWN DB screen and prompts you for the database instance.



b At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type 1 and press **Enter**.

The system prompts you for the ImageMark ECPIX database password.

Note: On the *SHUTDOWN DB* screen, options *2* and *4* are applicable if you are using multiple instance database. For single instance database, you can select option *1* or *3*.

c Enter the password of the SYS user to connect to the ImageMark ECPIX database and press **Enter**.

The system displays the "SHUTDOWN INSTANCE. PRESS ENTER TO CONTINUE OR 'CTRL C' TO CANCEL AND THEN TYPE 'N' WHEN PROMPTED." message.

d Press Enter to shut down the database instance.

Note: If you want to cancel the shutdown process, press **Ctrl+C** and then type N when prompted.

The system displays the "COMMAND COMPLETED, PRESS ENTER TO EXIT" message.

e Press **Enter** to exit the command.

The system prompts you to press any key to continue.

f Press any key to continue.

The system displays the SHUTDOWN DB screen.

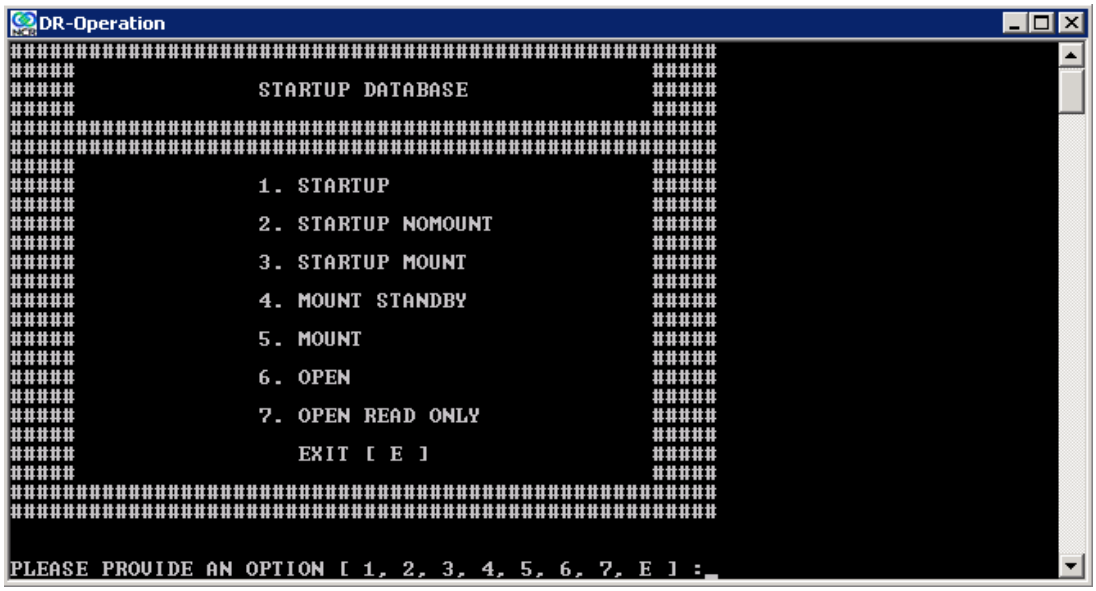
g At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type E and press **Enter**.

The system displays the OPERATE DATABASE OPTIONS screen.

26 You must now mount the first database instance of the standby P-CHG. To do this:

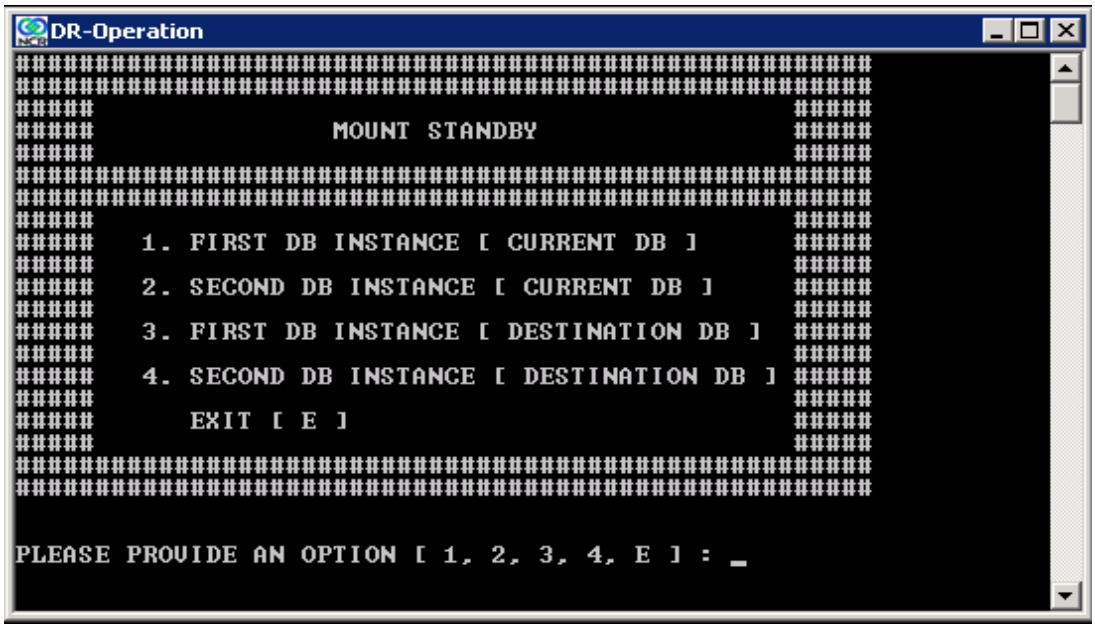
a At the PLEASE PROVIDE AN OPTION [1,2,3,4,5,6,7,8,9,10,11,12,13,E]: prompt on the OPERATE DATABASE OPTIONS screen, type 7 and press **Enter**.

The system displays the STARTUP DATABASE screen and prompts you to select an option.



b At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, 5, 6, 7, E] : prompt, type 4 and press **Enter**.

The system displays the MOUNT STANDBY screen and prompts you for the database instance.



c At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type 1 and press **Enter**.

The system prompts you for the ImageMark ECPIX database password.

Note: On the *MOUNT STANDBY* screen, options *2* and *4* are applicable if you are using multiple instance database. For single instance database, you can select option *1* or *3*.

d Enter the password of the SYS user to connect to the ImageMark ECPIX database and press **Enter**.

The system displays the "STARTUP NOMOUNT INSTANCE. PRESS ENTER TO CONTINUE OR 'CTRL C' TO CANCEL AND THEN TYPE 'N' WHEN PROMPTED." message.

e Press **Enter** to start the database instance.

Note: If you want to cancel the start up process, press **Ctrl+C** and then type N when prompted.

The system displays the "COMMAND COMPLETED, PRESS ENTER TO EXIT" message.

f Press **Enter** to exit the command.

The system displays the "MOUNT STANDBY DATABASE. PRESS ENTER TO CONTINUE OR 'CTRL C' TO CANCEL AND THEN TYPE 'N' WHEN PROMPTED." message.

g Press **Enter** to mount the database instance.

Note: If you want to cancel the database mount process, press **Ctrl+C** and then type N when prompted.

The system displays the "COMMAND COMPLETED, PRESS ENTER TO EXIT" message.

h Press **Enter** to exit the command.

The system prompts you to press any key to continue.

i Press any key to continue.

The system displays the MOUNT STANDBY screen and prompts you to select a database instance.

j At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type E and press **Enter**.

The system displays the STARTUP DATABASE screen and prompts you to select an option.

k At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, 5, 6, 7, E] : prompt, type E and press **Enter**.

The system displays the OPERATE DATABASE OPTIONS screen.

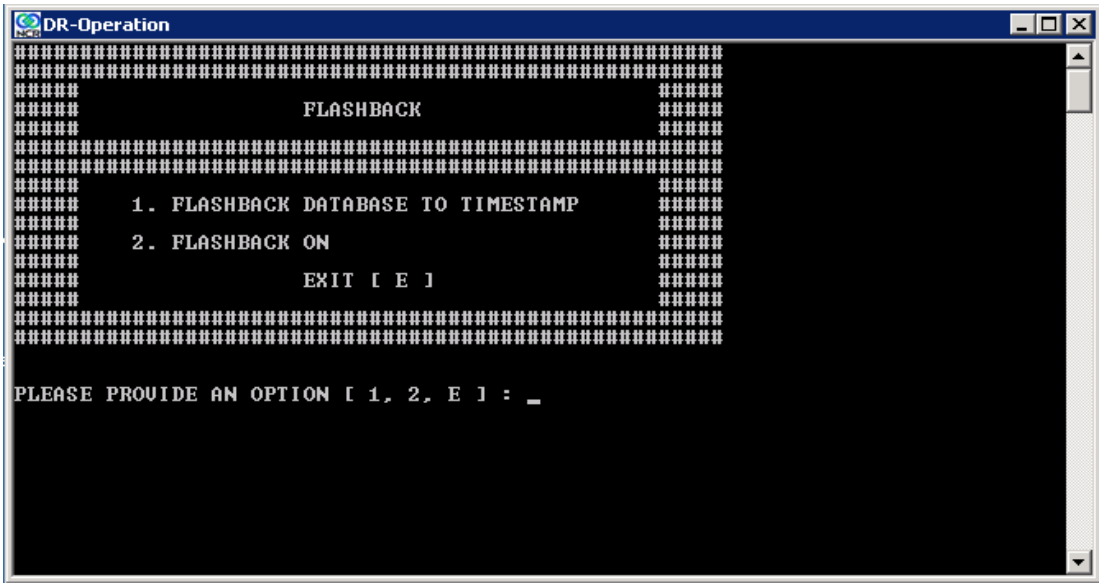
27 You must now enable flashback on the database server of the P-CHG. To do this:

a At the PLEASE PROVIDE AN OPTION [1,2,3,4,5,6,7,8,9,10,11,12,13,E]: prompt on the OPERATE DATABASE OPTIONS screen, type 10 and press **Enter**.

The system displays the FLASHBACK screen with the following options:

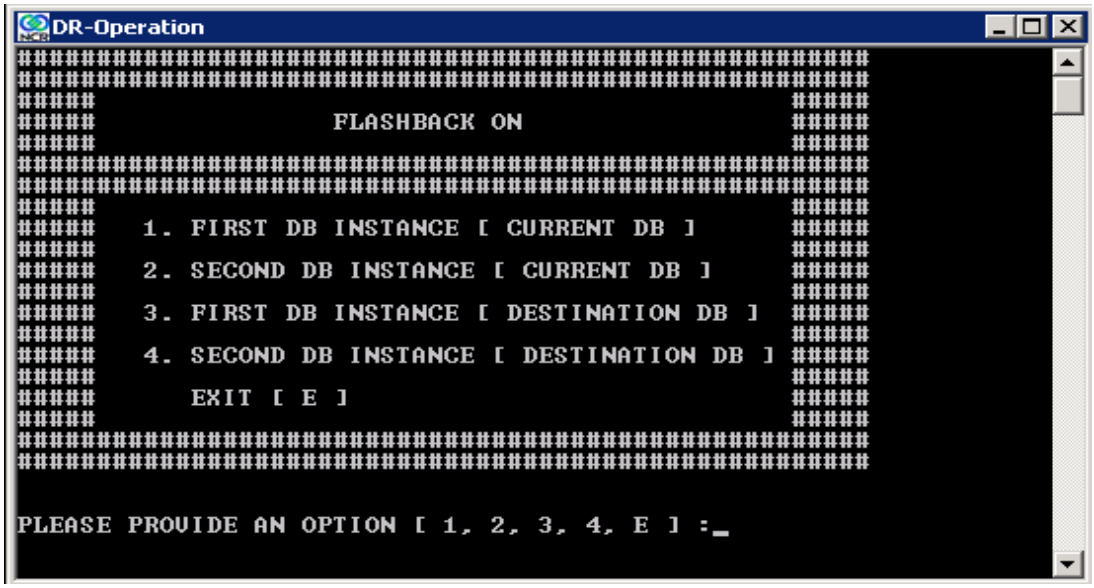
- 1. FLASHBACK DATABASE TO TIMESTAMP
- 2. FLASHBACK ON

- EXIT [E]



b At the PLEASE PROVIDE AN OPTION [1, 2, E] : prompt, type 2 and press **Enter**.

The system displays the FLASHBACK ON screen and prompts you for the database instance.



c At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type 1 and press **Enter**.

The system prompts you for the ImageMark ECPIX database password.

Note: On the *FLASHBACK ON* screen, options *2* and *4* are applicable if you are using multiple instance database. For single instance database, you can select option *1* or *3*.

d Enter the password of the SYS user to connect to the ImageMark ECPIX database and press **Enter**.

The system displays the "TURN ON FLASHBACK. PRESS ENTER TO CONTINUE OR 'CTRL C' TO CANCEL AND THEN TYPE 'N' WHEN PROMPTED." message.

e Press **Enter** to switch on the flashback.

Note: If you want to cancel the start up process, press **Ctrl+C** and then type N when prompted.

The system displays the "COMMAND COMPLETED, PRESS ENTER TO EXIT" message.

f Press **Enter** to exit the command.

The system prompts you to press any key to continue.

g Press any key to continue.

The system displays the FLASHBACK ON screen and prompts you for the database instance.

h At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type E and press **Enter**.

The system displays the FLASHBACK screen.

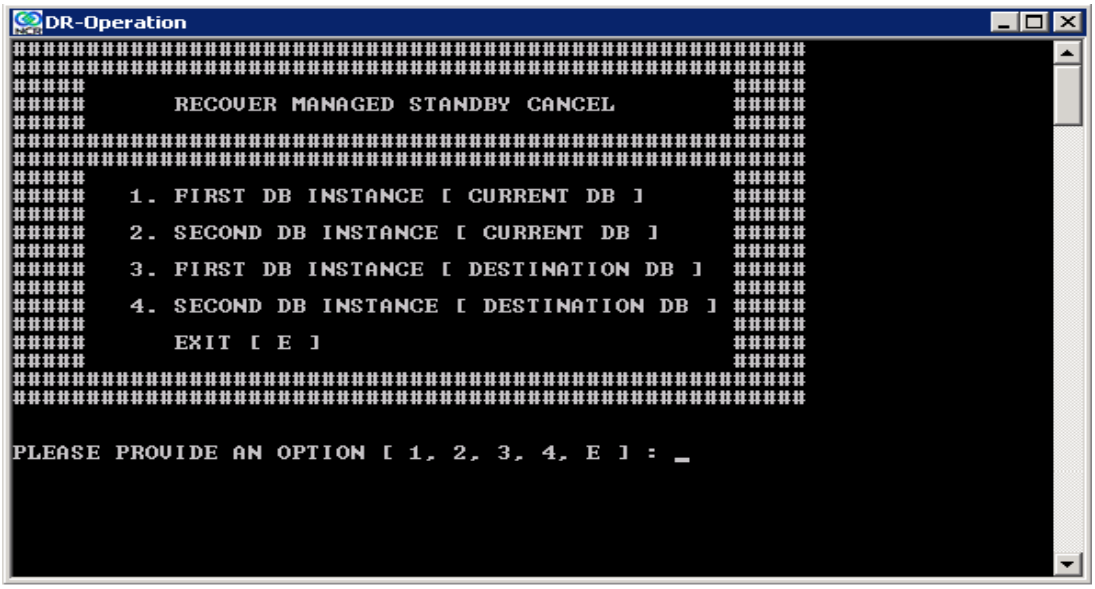
i At the PLEASE PROVIDE AN OPTION [1, 2, E] : prompt, type E and press **Enter**

The system displays the OPERATE DATABASE OPTIONS screen.

28 You must now recover the managed standby database instances of the P-CHG. To do this:

a At the PLEASE PROVIDE AN OPTION [1,2,3,4,5,6,7,8,9,10,11,12,13,E]: prompt on the OPERATE DATABASE OPTIONS screen, type 11 and press **Enter**.

The system displays the RECOVER MANAGED STANDBY screen and prompts you for the database instance.



b At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type 1 and press **Enter**.

The system prompts you for the ImageMark ECPIX database password.

Note: On the *RECOVER MANAGED STANDBY CANCEL* screen, options *2* and *4* are applicable if you are using multiple instance database. For single instance database, you can select option *1* or *3*.

c Enter the password of the SYS user to connect to the ImageMark ECPIX database and press **Enter**.

The system displays the "RECOVER MANAGED STANDBY DATABASE. PRESS ENTER TO CONTINUE OR 'CTRL C' TO CANCEL AND THEN TYPE 'N' WHEN PROMPTED." message.

d Press **Enter** to recover the managed standby database.

Note: If you want to cancel the recovery of the managed standby, press Ctrl+C and then type N when prompted.

The system displays the "COMMAND COMPLETED, PRESS ENTER TO EXIT" message.

e Press **Enter** to exit the command.

The system prompts you to press any key to continue.

f Press any key to continue.

The system displays the RECOVER MANAGED STANDBY screen and prompts you for the database instance.

g At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type 2 and press **Enter**.

The system prompts you for the ImageMark ECPIX database password.

h Enter the password of the SYS user to connect to the ImageMark ECPIX database and press **Enter**.

The system displays the "RECOVER MANAGED STANDBY DATABASE. PRESS ENTER TO CONTINUE OR 'CTRL C' TO CANCEL AND THEN TYPE 'N' WHEN PROMPTED." message.

i Press **Enter** to recover the managed standby database.

Note: If you want to cancel the recovery of the managed standby, press Ctrl+C and then type N when prompted.

The system displays the "COMMAND COMPLETED, PRESS ENTER TO EXIT" message.

j Press **Enter** to exit the command.

The system prompts you to press any key to continue.

k Press any key to continue.

The system displays the RECOVER MANAGED STANDBY screen and prompts you for the database instance.

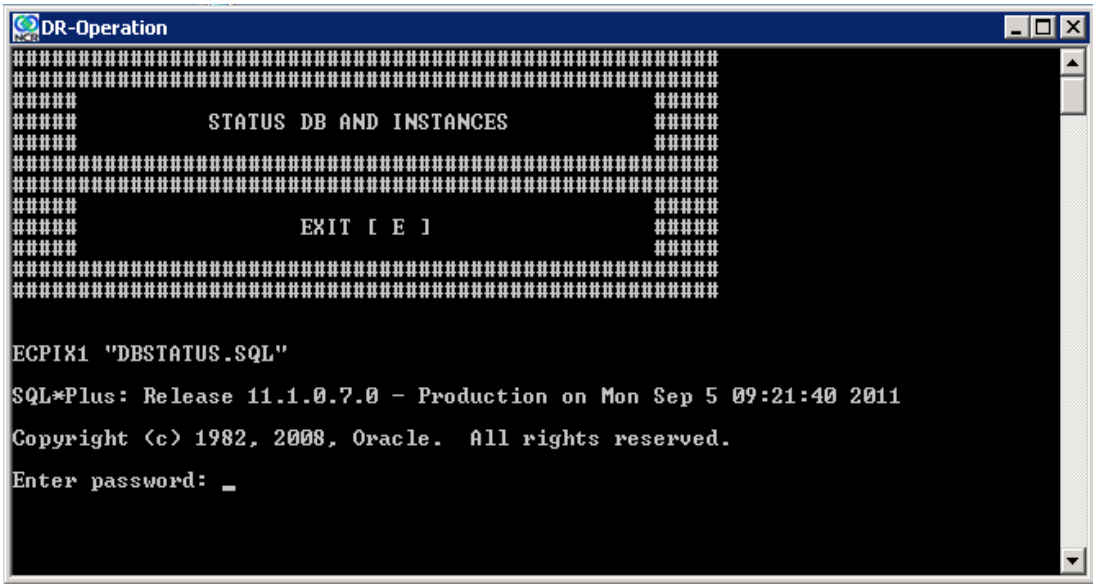
l At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt, type E and press **Enter**.

The system displays the OPERATE DATABASE OPTIONS screen. You must now close the DR-SCRIPTS.

29 You must now check the status of the database on both the current and destination database servers. To do this:

a At the PLEASE PROVIDE AN OPTION [1,2,3,4,5,6,7,8,9,10,11,12,13,E]: prompt on the OPERATE DATABASE OPTIONS screen, type 12 and press **Enter**.

The system displays the STATUS DB and INSTANCES screen and prompts you for the ImageMark ECPIX database password.



b Enter the password of the SYS user to connect to the ImageMark ECPIX database and press **Enter**.

The system displays the database status of the current database that resembles the following:

```
DATABASE STATUS
===============
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
OPEN_MODE  DATABASE_ROLE    FLASH SWITCHOVER_STATUS
---------- ---------------- ----- --------------------
MOUNTED    PHYSICAL STANDBY YES   SESSIONS ACTIVE
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

INSTANCE STATUS
===============
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
INSTANCE_NAME    STATUS       DATABASE_STATUS   HOST_NAME
---------------- ------------ ----------------- --------------------
ECPIX            MOUNTED      ACTIVE            SEP03VVM-003
```

Ensure that the values of the following are displayed as follows:

- OPEN_MODE: MOUNTED
- DATABASE ROLE: PHYSICAL STANDBY
- FLASH: YES

The system displays the "COMMAND COMPLETED, PRESS ENTER TO EXIT" message.

c Press **Enter** to exit the command.

The system prompts you to press any key to continue.

d Press any key to continue.

The system prompts you for the ImageMark ECPIX database password.

e Enter the password of the SYS user to connect to the ImageMark ECPIX database and press **Enter**.

The system displays the database status of the destination database that resembles the following:

```
DATABASE STATUS
===============
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
OPEN_MODE  DATABASE_ROLE    FLASH SWITCHOVER_STATUS
---------- ---------------- ----- --------------------
READ WRITE PRIMARY          YES   SESSIONS ACTIVE
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

INSTANCE STATUS
===============
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
INSTANCE_NAME    STATUS       DATABASE_STATUS    HOST_NAME
---------------- ------------ ------------------ --------------------
ECPIX            OPEN         ACTIVE             SEP03VVM-001
```

Ensure that the values of the following are displayed as follows:

- OPEN_MODE: READ WRITE
- DATABASE ROLE: PRIMARY
- FLASH: YES

The system displays the "COMMAND COMPLETED, PRESS ENTER TO EXIT" message.

f Press **Enter** to exit the command.

The system prompts you to press any key to continue.

g Press any key to continue.

The system displays the PLEASE PROVIDE AN OPTION [E] : prompt.

h Type E at the prompt and press **Enter**.

The system displays the OPERATE DATABASE OPTIONS screen.

30 At the PLEASE PROVIDE AN OPTION [1,2,3,4,5,6,7,8,9,10,11,12,13,E]: prompt on the OPERATE DATABASE OPTIONS screen, type E and press **Enter**.

The system displays the SWITCH-OVER/SWITCH-BACK screen.

31 At the PLEASE PROVIDE AN OPTION [1, 2, 3, 4, E] : prompt on the SWITCH-OVER/SWITCH-BACK screen, type E and press **Enter**.

The system displays the DR-SCRIPTS screen.

32 At the PLEASE PROVIDE AN OPTION [1, 2, E] : prompt on the DR-SCRIPTS screen, type E and press **Enter**.

The system closes the DR-OPERATION script.

33 Update the IP address and server name of the P-CHG on CH and A-CHG servers.

a To change the IP address and server address on the CH:

i Login to the ImageMark ECPIX application.

ii Navigate to **Clearing Table.**

iii Select the **View/Edit Working** link of the Bank Table component.

iv Click on the number specified under the CHGs option (this number denotes the number of CHGs under the CH).

v Click on the name of the P-CHG under the CHG option.

vi Update the server addresses in the **HTTP** and **FTP** fields with the server addresses of A-CHG.

vii Click **Save**.

b At CH, execute the **Modify_CHI_details_in_CHT.bat** script located at D:\Program Files\NCR\ECPIX\Bin\AdminUtilities\AlternateCHI to update the Web server and FTP server names of the P-CHG with the values of server names of A-CHG in the CH master tables. After the successful execution of this script, the files for member bank(s) belonging to P-CHG are sent and received by the A-CHG.

c At A-CHG, to change the IP address and server name, execute the **Modify_F-CHI_details_in_CHG.bat** script located at D:\Program Files\NCR\ECPIX\Bin\AdminUtilities\AlternateCHG to update the Web server and FTP server name in the A-CHG database. The successful execution of this script updates the values in the SYSPARM and CLEARING_CENTRE tables.

Note: At A-CHG, the Web server and FTP server names needs to be updated in the working copy of CLEARING_CENTRE table using the ECPIX application.

34 At the A-CHG, start the following application services:

- EBS
- IBM WebSphere or JRun

35 Commit and transfer the latest version of CHT and WCS files from CH and import into A-CHG. This is done using the Media Manager application.

36 Verify that the session instances for current business day have been created at A-CHG using Session Monitor screen.

6

Scripts

The scripts required to set up the A-CHG are written in Perl or SQL. Their functionality is also available using a Java executable. Each script performs user authentication and requires database username and password.

Note: The scripts are available at ***D:\Program Files\NCR\ECPIX\Bin\AdminUtlities\AlternateCHI*** on the CH and CHG servers. These have to transferred to the A-CHG on a media.

You can run a script using ECPIXADM account where Operating System (OS) authentication is required to connect to the database. If this method is used, the script does not ask for username and password.

Alternatively, you can connect to the database by obtaining the username and password.

Note: After executing any of the following batch script files,

- Extract_Items_from_CH.bat
- Modify_CHI_details_in_CHT.bat
- Retry_Failed_Files_Transmission.bat

you need to enter the database password and then press *Enter* to proceed with the execution of the specified file.

Script to Extract Data from Clearing House

- **Extract_Items_from_CH.bat**
- **Extract_Items_from_CH.sql**

This script extracts item data from the Clearing House database during the restore of F-CHG operations on A-CHG. All presentment, return and extension items received in all sessions are extracted.

Note: While running this script, you are prompted to give inputs such as routing number and business date of the CHG whose data has to be extracted.

An extracted file is created in *C:\AlternateCHG* folder whose naming convention is:

CH_DataExtract_nnnnnnnnn_<business_date>_ddmmyyyy_hhmmss.DAT

where:

- **nnnnnnnnn**—CHG routing number entered by user
- **<business_date>**—business date entered by user
- **ddmmyyyy**—creation date
- **hhmmss**—creation time
- **.DAT**—a mandatory file type suffix

This script creates separate records in the DAT file as per following scenarios:

- For every item presented from the CHG in a session whose session date falls on business date. This recovers the items that arrived at CHG via the CXF files.
- For every return item presented from the CHG in a session whose session date falls on business date. This recovers the items that arrived at the CHG via RRF files.
- For every extension item presented from the CHG whose session date falls on the business date. This recovers the items arrived at CHG via ERF files.

Each item in the above DAT file consists of the following fields:

Field	Description
Record type	Indicates whether it is a presentment, return or an extension item
Session number	Session number in which the presentment/return item was received
Business date	Business Date
ItemSeqNo	Item Sequence Number of item
PresentmentBankRoutNo	Presenting Bank routing number
PresentmentDate	Date when the item was presented
CycleNo	Cycle number
PayorBankRoutNo	Drawee bank routing number
TransCode	Transaction code
SerialNo	Serial number

Note: If data across multiple days have to be extracted, run this script multiple times with the corresponding value in business date.

Script to Modify Mode of CHG to Recovery

- Modify_CHI_Operation_Mode_to_Recovery.bat
- Modify_CHI_Operation_Mode_to_Recovery.sql

This script is used to run A-CHG in recovery mode when restoring F-CHG operations on A-CHG.

Note: Whenever you execute the *Modify_CHI_Operation_Mode_to_Recovery.bat* file, you need to restart the EBS.

Script to Import Item Data at CHG

Item_Import_For_Recovery.bat

This script imports the item data that is extracted from the Clearing House into A-CHG database during the restoration of F-CHG operations on A-CHG.

It creates a log file to report errors during loading of the items in *C:\AlternateCHI* folder.

The script uses Oracle SQL Loader to import data from DAT file into **Item_Import_For_Recovery** table. If there is any existing data in this table, it is the responsibility of the Professional Services personnel to truncate the table prior to importing data.

Note: The Professional Services personnel also has to check the log file and verify that the data import was successful.

Script to Update Web Server and FTP Server Name of A-CHG/F-CHG in Clearing House Master Tables

- Modify_CHI_details_in_CHT.bat
- Modify_CHI_details_in_CHT.sql

This script updates web server name and FTP server name of A-CHG/F-CHG in Clearing House master tables.

While running this script, you are prompted to give inputs such as:

- Routing number of CHG whose details need to be modified
- New web server name
- New FTP host name

Important: Any changes to WS_FTP Server FTP account for F-CHG is done manually by the Professional Services personnel.

Script to Update Web Server and FTP Server name at A-CHG/F-CHG/B-CHG

- Modify_F-CHI_details_in_CHG.bat
- Modify_F-CHI_details_in_CHG.sql

This script modifies the web server name and FTP server name in its database. You are prompted to give It requires the following input:

- New web server name
- New FTP host name

This script updates the current CHG details in **CLEARING_CENTER** and **SYSPARM** tables with the values entered.

Script to Retry Transmission of Failed Files at Clearing House

- Retry_Failed_Files_Transmission.bat
- Retry_Failed_Files_Transmission.sql

This script retries transmission of failed files to A-CHG during the restoration operation of F-CHG on A-CHG.

The script requires routing number of CHG whose files are re-transmitted as input. It retries all failed transmission jobs for the CHG.

Script to Modify Mode of CHG to Normal

- Modify_CHI_Operation_Mode_to_Normal.bat
- Modify_CHI_Operation_Mode_to_Normal.sql

This script operates the A-CHG in normal mode from recovery mode when restoring F-CHG operations on A-CHG.

Note: Whenever you execute the *Modify_CHI_Operation_Mode_to_Normal.bat* file, you need to restart the EBS.

Script to Create Reconciliation Report

```
Create_Reconciliation_Report.bat
```

This script creates a report of the data send by the Clearing House to A-CHG. The report is used to verify whether the data is correctly imported by the A-CHG.

This script creates a ‘Reconciliation_Report.txt’ file in *C:\AlternateCHG* directory.