Oracle® Communications DSR or SDS NOAM Failover



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ORACLE

Oracle Communications DSR or SDS NOAM Failover, Release 9.0.0.0.0

F79583-01

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My Oracle Support

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Call the Customer Access Support main number at 1-800-223-1711 (toll-free in the US), or call the Oracle Support hotline for your local country from the list at http://www.oracle.com/us/support/contact/index.html. When calling, make the selections in the sequence shown below on the Support telephone menu:

- 1. Select 2 for New Service Request.
- 2. Select **3** for Hardware, Networking and Solaris Operating System Support.
- 3. Select one of the following options:
 - For Technical issues such as creating a new Service Request (SR), select 1.
 - For Non-technical issues such as registration or assistance with My Oracle Support, select **2**.



Acronyms

The following table provides information about the acronyms used in this document.

Table Acronyms

Acronym	Meaning
CLI	Command Line Interface
DR	Disaster Recovery
DSR	Diameter Signaling Router
GUI	Graphical User Interface
NE	Network Element
NOAM (or NOAMP)	Network Operations, Administration, Maintenance and Provisioning
SDS	Subscriber Database Server
VIP	Virtual IP
ХМІ	External Management Interface



1 Introduction

Although each Product maintains individual Disaster Recovery Procedures, the steps required to manually transfer functionality between a Primary and a Secondary NOAM NE is currently common to all Oracle COMCOL based products matching a 3-tier topology with an installed DR NOAM. Therefore, the intent of this document is to function as a single reference supporting both the DSR and SDS.

Currently, the DSR and SDS Disaster Recovery procedures assume that the Primary NOAM is network isolated as a perquisite to Failover. It is important to note here that the reason for network isolation is not relevant to these procedures (i.e. the loss of the NOAM NE's default router, a site power outage or the site being underwater due to flooding all look the same to the rest of the topology).

It should also be noted that this document goes a step further than just addressing Disaster Recovery procedures in that it also offers the methodology required to perform a "graceful" Failover where the Primary NOAM is not network isolated and no outage scenario exist.

1.1 References

Following are the reference documents:

- 3-Tier NOAM Failover, MO008266
- DSR Disaster Recovery User's Guide
- SDS Disaster Recovery User's Guide

1.2 Required Materials

No physical materials are required for this procedure. However, the user must have access to an "Administrator" level account in the NOAM GUI and "root" access to both the Primary and Disaster Recovery servers CLI.

1.3 How to Use This Document

To effectively use this document, consider the following:

- Before beginning a procedure, completely read the instructional text (it will appear immediately after the Section heading for each procedure) and all associated procedural Warnings or Notes.
- 2. Before performing a step within a procedure, completely read the information in left and right columns including any step-specific Warnings or Notes.

If a procedural step fails to run successfully, **STOP** and contact My Oracle Support (MOS) for assistance before attempting to continue. Refer to My Oracle Support, for more information on contacting Oracle Customer Service.







2 DSR or SDS NOAM Failover Process Flow Chart

This document supports NOAM Failover for DSR/SDS 8.6.0.0.0 releases only, which is COMCOL 7.5.

The below flowchart is intended to act as the core procedure for DSR/SDS NOAM Failover.

- The user should perform all the procedures in this document as subroutines in a program (always returning to the flowchart after performing a called out procedure).
- After completing a "called out" procedure, never continue on to the next procedure unless directed to do so based on the logic trail followed from the flowchart in Figure 2-1.
- The user should understand that any NOAM NE may function as the "Primary" or the "Secondary" (*Disaster Recovery mode*). Do not confuse site names or designations with the actual functional state of the NOAM NE. Just because "DRNO" may be part of a NOAM server's hostname does not mean that server is currently running in Disaster Recovery mode, which is secondary mode.
- Before starting this procedure, it is recommended for the user to print out Figure 2-1 and write in the Primary (Site_1) and Disaster Recovery (Site_2) site names in the space provided (see detailed description in Figure 2-1 Legend).







3 Pre-Failover Procedures

3.1 Exporting Alarms

Perform the following steps on Primary NOAM VIP to export alarms at the Primary Active NOAM.

 Launch an HTML5 compliant browser and connect to the XMI Virtual IP address (VIP) assigned to Primary Active NOAM site. If a Certificate Error is received, click on Continue to this website (not recommended) link.

Certificate Error: Navigation_×
x
x
Certificate Error: Navigation_×
x
Error: Navigation_×
x
Certificate Error: Navigation_×
x
Error: Navigation_×
x
Certificate Error: Navigation_×
x
Error: Navigation_×
x
Error: Navigation_×
x
Certificate Error: Navigation_×
x
Error

Figure 3-1 Certificate Error

The login screen appears.

2. Log in to the GUI using a User account with Administrator privileges.

Figure 3-2 Login Screen

	ORACLE	=
Oracle System	Login	Wed Mar 1 18:53:06 2017 UTC
	Log In Enter your username and password to	o log in
	Username: guiadmin	
	Password: ••••••	
This application is de	Welcome to the Oracle System Login. esigned to work with most modern HTML5 compliant bro	wsers and uses both JavaScript and
cookie	Is. Please refer to the <u>Oracle Software Web Browser Sup</u> Unauthorized access is prohibited.	port Policy for details.



The Product Main Menu appears.

 Verify that the message shown at the bottom of the panel indicates that the browser is using the "VIP" to connect to the ACTIVE NETWORK OAM&P.

Administration Configuration	Main Menu: [Main] Wed Mar 01 19:03:11 2017 U
 Alarms & Events Security Log Status & Manage Measurements Communication Agent SDS Help Legal Notices Logout 	This is the user-defined welcome message. It can be modified using the 'General Options' item under the 'Administration' menu. Login Name: guiadmin Last Login Time: 2017-03-01 17:03:04 Last Login IP: 10.75.9.98 Recent Failed Login Attempts: 0 Oracle and Java are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.
	Copyright © 2010, 2017, Oracle and/or its affiliates. All rights reserved.
ccessfully connected using VIP to rig	hnc-sds-NO-b (ACTIVE NETWORK OAM&P) Updates enabled

Figure 3-3 Main Menu

4. Navigate to Main Menu, then Alarm & Events, and then to View Active.



5. Select the **Export** dialogue button from the bottom left corner of the screen.

Export N	Report	Clear Selections
Go	to form to schee	dule Active Alarm data export

6. Click **Ok** displayed at the bottom of the screen.



Attribute	Value	Description
Export Frequency	Once Fifteen Minutes Hourly Daily Weekly	Select how often the data will be writter provisioning is enabled. [Default: Once
Task Name *	APDE Alarm Export	Periodic export task name. [Required. 1 must be an alpha character or a number
Description		Periodic export task description. [Option The last character must be an alpha ch
Filename Prefix		Export filename prefix. Characters to pr
Minute	0	Select the minute of each hour when th field displays the minute of the first tran
Time of Day	12:00 AM	Select the time of day when the data w with AM/PM.]
Day of Week	 Sunday Monday Tuesday Wednesday Thursday Friday Saturday 	Select the day of week when the data v

The name of the exported Alarms CSV file appears in the banner under **Tasks** at the top of the right panel.

Filter* 🔻	Tasks	Graph* -					-
freeport_S	ID	Hostname	Name	Task State	Details	Progress	8
Seq #	9169	righnc-sds-NO-b	APDE Alarm Export	completed	Alarms 20170308-18 UTC 9169.csv.qz	100%	

Note:

Depending on the product version, the user may have to click **Tasks** in the banner in order to see the output dialogue box.

7. Record the filename of Alarms CSV file generated in the space provided on the right. *Example:* Alarms_<yyyymmdd> - <hhmmss> - <TimeZone>_<Task_ID>.csv.gz

Note:

Depending on the product version, the file suffix may vary (csv, csv.gz, so on).



8. Click **Report** at the bottom of the screen.



An Alarms & Events Report is generated in the right panel displaying all the Active alarms.

	Main Menu: Alarms & Events -> Vie Thu Mar 09 13:19:59 20
TIMESTAMP:	2017-03-09 13:19:48.034 UTC
NETWORK_ELEMENT:	NO_RLGHNC
SERVER:	rlghnc-sds-NO-b
SEQ_NUM:	5409
EVENT_NUMBER:	32500
SEVERITY:	MINOR
PRODUCT:	TPD
PROCESS:	cmplatalarm
TYPE:	PLAT
INSTANCE:	hrFSMountPoint=/var hrStorageDescr=/dev
NAME :	Server Disk Space Shortage Warning
DESCR:	Server Disk Space Shortage Warning
ERR INFO:	
GN WARNING/WR	N Platform detected an error condition
^^ Additional	details captured in /var/TKLC/log/sysche
^^ [7798:cmpla	talarm.cxx:200]

9. Click Save.



Depending on the web browser, a **Save**.

			_	
_UTC.txt from 10.75.160.132?	Open	Save 🔻	Cancel	×
				_

10. If the pop-up box appears, click **Save** or **Save File**.



	open
ActiveAlarm:	Report_2017Mar09_133310_UTC.txt
which is: Text	Document (561 bytes)
from: https://	10.75.160.132
Vhat should Firefo	ox do with this file?
Open with	Notepad (default)
Save File	
Do this out	amatically for files like this from now on
Do this auto	omatically for files like this from now on.

11. Select a directory on the local disk drive to store the Active Alarms & Events Report file and click **Save**.



3.2 Disable Global Provisioning or PDB Relay Verification

Perform the following steps on **Primary NOAM VIP** to disable global provisioning at the **Primary NOAM GUI**.

 Launch an HTML5 compliant browser and connect to the XMI Virtual IP address (VIP) assigned to Primary Active NOAM site.

If a Certificate Error is received, click on **Continue to this website (not recommended)** link.

Figure 3-4 Certificate Error



The login screen appears.



2. Log in to the GUI using a User account with Administrator privileges.

Oracle System Login					
				Wed Mar 1	18:53:06 2017 UTC
Enter your	Log	g In and pass	word to lo	og in	
L. L	Jsername:	guiadmin			
	Password:	•••••			
		Change pas	sword		
	Lo	g In 🔈			
Web	come to the Or	acle System	Login.		
This application is designed to work with n cookies. Please refer to the	nost modern H Oracle Softwa	TML5 comp re Web Brow	liant browse	rs and uses t Policy for d	both JavaScript and letails.
Un	authorized acc	cess is prohi	bited.		

Figure 3-5 Login Screen

The Product Main Menu appears.

3. Verify if the message shown at the bottom of the panel indicates that the browser is using **VIP** to connect to the **ACTIVE NETWORK OAM&P**.

Figure 3-6 Main Menu

Main Menu Administration	Main Menu: [Main]	Wed Mar 01 19:03:11 2017 UT
Computation Alarms & Events Security Log Status & Manage Measurements Communication Agent SDS Help Legal Notices E Logout	This is the user-defined welcome It can be modified using the 'General Options' item un Login Name: guiadmin Last Login Time: 2017-03-01 Last Login P: 10.75.9.9 Recent Failed Login Attemp Oracle and Java are registered trademarks of Oracle Cor names may be trademarks of their resp	message. Ider the 'Administration' menu. 17:03:04 I8 pts: 0 poration and/or its affiliates. Other pective owners.
	Copyright © 2010, 2017, Ora-	acle and/or its affiliates. All rights reserved.
ccessfully connected using VIP to r	nnc-sds-NO-b (ACTIVE NETWORK OAM&P) Updates enabl	led 0 0 0 0 Cr Ma Mi Tr

4. To disable PDB Relay, go to Main Menu, and then Configurations, and then Options. Then, uncheck PDB Relay Enabled.



 Administration 	Main Menu: SDS -> Config	uration -> Options
Configuration		
Security Log		
💿 🛅 Status & Manage		
 Measurements 	PDB Relay Enabled	
Communication Agent		
🖻 😋 SDS		
🖃 😋 Configuration		16
Options		
DRMP		
Connections		
NAJ Hosts		
Destinations		
Domain Identifiers		
Destination Map		
Routing Entities		
Subscribers		
Blacklist		

Figure 3-7 Main Menu - Options

Click **Apply**.

The following confirmation message appears.



Info	•	
Info	8	Value
1	Data committed!	
Allow C	onnections	

5. Go to Main Menu, and then Status & Manage, and then Database.

Figure 3-8 Main Menu - Database

enu ninistration nfiguration rms & Events	Main Menu: Sta	tus & Manage ▼ Tasks ▼	-> Database
ty Log & Manage	Network Element	Server	Role
k Elements	SDS_SO_Nassau	nassau-dp-1	MP
	SDS_SO_Freeport	freeport-sds-so-a	System OAM
	SDS_SO_Nassau	nassau-sds-so-a	System OAM
	NO_MRSVNC	mrsvnc-sds-NO-b	Network OAM&P
	NO_RLGHNC	rlghnc-sds-NO-a	Network OAM&P
	SDS_SO_Turks	turks-dp-1	MP
ts	SDS_SO_Freeport	freeport-dp-1	MP

6. Select the **Disable Provisioning** dialogue button at the bottom of the right panel.

Disable Provisioning	Report
1	

Click **OK** on the pop-up confirmation dialogue box.



10.75.160.132 says:		
Disable provisioning. Are you sure?		
Prevent this page fro	m creating addi	tional dialogs.

A Warning banner message appears indicating that "Global Provisioning has been manually disabled".

Filter* 🔻	Warning	 Info* 	 Task 	s 🔻			
	Warning						8
Network Ele		IWarning	Code 0021-	- Global provisio	oning has been	manually disable	be

Note:

- Event(s) 10008 appearing at this time can be ignored.
- For DSR systems, return to NOAM Failover Process Flowchart for next steps.
- 7. For SDS systems only, continue with the next steps in this procedure:
 - a. Access the command prompt (CLI).
 - b. Log in to the server as the **admusr** user.

```
rlghnc-sds-NO-b login: admusr
Password: <admusr password>
```

Note:

The password will not appear on the screen when you type the characters.

The following output appears as the server returns to a command prompt. ***** TRUNCATED OUTPUT *****

```
RUNID=00
VPATH=/var/TKLC/rundb:/usr/TKLC/appworks:/usr/TKLC/
awpcommon:/usr/TKLC/comagent-gui:/usr/TKLC/comagent-gui:/usr/
TKLC/comagent:/usr/TKLC/sds
PRODPATH=/opt/comcol/prod
[admusr@rlghnc-sds-NO-b ~]$
```



c. Confirm that you are connected to the **Primary Active NOAM** Server which is indicated as **VIP Active**.

```
[admusr@rlghnc-sds-NO-b ~]$ hostname
rlghnc-sds-NO-b
[admusr@rlghnc-sds-NO-b ~]$ ha.mystate -i |grep VIP
VIP Act/Act rlghnc-sds-NO-b 0 0302:235736.946
[admusr@rlghnc-sds-NO-b ~]$
```

d. Verify the value for pdbRelayEnabled.

```
[admusr@rlghnc-sds-NO-b ~]$ iqt -zhp -fvalue ProvOptions where
"var='pdbRelayEnabled'"
TRUE
[admusr@rlghnc-sds-NO-b ~]$
```

Note:

- If the value is false, then this procedure has been completed. Hence, return to figure 1 for next steps.
- If the value is true, then continue with further steps of this procedure.

e. Retrieve the pdbRelay timestamp.

```
[admusr@rlghnc-sds-NO-b ~]$ iqt -zhp -fvalue ProvOptions where
"var='pdbRelayMsgLogTimeStamp'"
1524776142883
[admusr@rlghnc-sds-NO-b ~]$
```

Record the value for the pdbRelay timestamp retrieved in the previous step.

pdbRelayMsgLogTimeStamp:

Note:

Wait for 30 seconds before executing the next step.

f. Retrieve the pdbRelay timestamp again.

```
[admusr@rlghnc-sds-NO-b ~]$ iqt -zhp -fvalue ProvOptions where
"var='pdbRelayMsgLogTimeStamp'"
1524776142883
[admusr@rlghnc-sds-NO-b ~]$
```

Record the value for the pdbRelay timestamp retrieved in the previous step.

pdbRelayMsgLogTimeStamp:



Note:

- Ensure that the time stamps recorded in last two steps are an exact match.
- If the values do not match, repeat the last two steps.
- Do not return to NOAM Failover Process Flowchart until both the time stamps recorded match.

3.3 Database Backup

Perform the following steps at the Primary Active NOAM VIP, to perform database backup.

 Launch an HTML5 compliant browser and connect to the XMI Virtual IP address (VIP) assigned to Primary Active NOAM site.
 If a Certificate Error is received, click on Continue to this website (not

If a Certificate Error is received, click on **Continue to this website (not recommended)** link.

Figure 3-9 Certificate Error



The login screen appears.

2. Log in to the GUI using a user account with administrator privileges.



Dracle Syster	n Login		- Wed Mar 1	18:53:06 2017 U
	Log Enter your username	g In and password	to log in	
	Username:	guiadmin		
	Password:	•••••		
		Change password		
	Lo	g in 🔉		
	Welcome to the Or	acle System Login		

Figure 3-10 Login Screen

The Product Main Menu appears.

3. Verify if the message shown across the bottom of the panel indicates that the browser is using the VIP to connect to the Active NOAM server (hostname) on the ACTIVE NETWORK OAM&P NE.

Figure 3-11 Main Menu

Main Menu Administration Configuration Alarms & Events	Main Menu: [Main] ————————————————————————————————————
Security Log Status & Manage Measurements Communication Agent SDS Help Legal Notices Ega Logout	This is the user-defined welcome message. It can be modified using the 'General Options' item under the 'Administration' menu. Login Name: guiadmin Last Login Time: 2017-03-01 17:03:04 Last Login Time: 10.75.9:98 Recent Failed Login Attempts: 0
	Oracle and Java are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.
	Copyright © 2010, 2017, Oracle and/or its affiliates. All rights reserved.
cessfully connected using VIP to rig	hnc-sds-NO-b (ACTIVE NETWORK OAM&P) Updates enabled

4. Go to Main Menu, and then Status & Manage. Manage, and then select Database.



Figure 3-12 Database

Ain Menu Administration Configuration	Main Menu: St	atus & Manage	-> Database
Alarms & Events Security Log G Status & Manage Monore Kelements	Network Ele	ng • [Warning Code 0	02] - Global provisionir
- ₩ Server - ₩ HA - ₩ Database	SDS_SO_Freeport SDS_SO_Freeport	freeport-dp-1 freeport-sds-so-b	MP System OAM
KPIS	SDS_SO_Turks NO_MRSVNC	turks-sds-so-a mrsvnc-sds-NO-a	System OAM Network OAM&P
 Tasks Files Measurements 	NO_RLGHNC SDS_SO_Nassau	rlghnc-sds-NO-a nassau-dp-2	Network OAM&P

5. Select the row containing the **hostname** of the **Active NOAM server** (previously identified in Step 3 of this procedure). Then, click **Backup**.

	Info	• 🔹 Tas	iks 💌					
Network Element	Server		Role		OAN Role	Max HA	App Max	lication HA Role
NO_MRSVNC	mrsvnc-s	ds-NO-a	Network OAM	&P	Stan	dby	N/A	
NO_MRSVNC	mrsvnc-s	ds-NO-b	Network OAM	&P	Activ	e	N/A	
NO_RLGHNC	rlghnc-sd	s-NO-b	Network OAM	&P	Activ	e	N/A	
NO_RLGHNC	righnc-sd	s-NO-a	Network OAM	&P	Stan	dby	N/A	
NO_RLGHNC	rlghnc-sd	s-QS	Query Server		Obse	rver	N/A	
SDS_SO_Freeport	freeport-o	lp-1	MP		Activ	е	N/A	
SDS SO Freenort	freenort-s	de-en-h	System OAM		Stan	dhv	N/A	

Figure 3-13 Database Backup

The Database [Backup] screen appears.



Database Backup	5
Field	Value
Server: righnc-sds-NO	-b
Select data for backup	✓ Provisioning✓ Configuration
Compression *	 gzip bzip2 none
Archive Name *	Backup.sds.rlghnc-sds-NO-b.ProvisioningAndConfigur
Comment	

Figure 3-14 Database [Backup]

- 6. For SDS Systems only, perform the following steps:
 - a. Uncheck the **Configuration** checkbox, so that only the **Provisioning** checkbox is selected.
 - **b.** Enter a comment to reflect the reason for the manual backup in the **comment** field.
 - c. Click Ok.

Figure 3-15	Database	[Backup] -	SDS	Systems	Only
-------------	----------	------------	-----	---------	------

Database Backur	
Field	Value
Server: righnc-sds-NO	-b
Select data for backup	Provisioning Configuration
Compression *	 gzip bzip2 onne
Archive Name *	Backup.sds.rlghnc-sds-NO-b.Provisioning.NETWORK
Comment	Pre-Failover

- 7. For DSR Systems only, perform the following steps:
 - a. The **Provisioning** checkbox cannot be selected on DSR. Ensure that the **Configuration** checkbox is selected.
 - b. Enter a comment to reflect the reason for the manual backup in the **comment** field.
 - c. Click Ok.



Info* 👻	
Database Backup	0
Field	Value
Server: rlghnc-dsr-NO	-b
Select data for backup	 □ Provisioning ✓ Configuration
Compression *	 gzip bzip2 none
Archive Name*	Backup.dsr.rlghnc-dsr-NO-b.Provisioning.NETWORK
Comment	Pre-Failover

Figure 3-16 Database [Backup] - DSR Systems Only

8. Click on **Tasks** tab to verify that a new Database backup from GUI task has been created.

Figure 3-17 Database Task

Tasks" T										
	Tasks 🔽	/				5				
oc	ID	Hostname	Name	Task State	Details	Progress				
ł	9392	righnc-sds-NO-b	Database backup from GUI	completed	Provisioning	5%				
L										
Ŀ										
L										
l,	4									

9. Use the **Tasks** tab to monitor the status in the **Progress** column until it shows 100%.

Figure 3-18 Database Task Progress

Tasks*	1				
Tasks	0				
ID	Hostname	Name	Task State	Details	Progress
9392	righnc-sds-NO-b	Database backup from GUI	completed	Provisioning	100%



Note:

- Depending on the release version, the User may have to periodically click the Status & Manage, under Database menu option in order for the information on the Tasks tab to refresh and show real-time status.
- This procedure has been completed. Return to Figure 2-1.



4 Failover Procedures

4.1 Demoting the Active NOAM from Primary to Secondary

Perform the following steps on **Primary NOAM VIP** to stop the Application Software on **Primary and DR NOAM**.

 Launch an HTML5 compliant browser and connect to the XMI Virtual IP address (VIP) assigned to Primary Active NOAM site.

If a Certificate Error is received, click on Continue to this website (not recommended) link.



Figure 4-1 Certificate Error

The login screen appears.

2. Log in to the GUI using a User account with Administrator privileges.

Figure 4-2 Login Screen

ORA	ACLE [®]
Oracle System Login	Wed Mar 1 18:53:06 2017 UTC
Lo Enter your username Username:	g In and password to log in guiadmin
Password:	Change password
Lo	bg In Ly
Welcome to the O This application is designed to work with most modern H cookies. Please refer to the <u>Oracle Softwa</u>	racle System Login. 4TML5 compliant browsers and uses both JavaScript and are Web Browser Support Policy for details.
Unauthorized ac	cess is prohibited.



The Product Main Menu appears.

3. Verify that the message shown at the bottom of the panel indicates that the browser is using the **VIP** to connect to the **ACTIVE NETWORK OAM&P**.

Administration		Main Menu: [Main]
Configuration Alarms & Events Security Log Status & Manage Measurements Communication Agent SDS Help Legal Notices Zogout		This is the user-defined welcome message. It can be modified using the 'General Options' item under the 'Administration' menu. Login Name: guiadmin Last Login Time: 2017-03-01 17:03:04 Last Login P: 10 75:9:98 Recent Failed Login Attempts: 0
		Copyright © 2010, 2017, Oracle and/or its affiliates. All rights reserved.
ccessfully connected using VIP to	o rigni	10-S0S-NO-b (ACTIVE NE IWORK OAM&P) Updates enabled 0 0 0 0 Cr Ma Mi Tr

Figure 4-3 Main Menu

4. Go to Main Menu, and then Status & Manage. Then, select HA.

Figure 4-4 Main Menu - HA

Adin Menu Administration Configuration Administration	Main Menu: S	Main Menu: Status & Manage -> HA					
Generation Security Log Generation Security Log Generation Security Log	Hostname	OAM HA Role	Application HA Role	Max Allowed HA Role			
 Network Elements 	rlghnc-sds-NO-a	OOS	N/A	Active			
— 💽 Server — 🗟 損	rlghnc-sds-NO-b	Active	N/A	Active			
- 💽 D-labase	mrsvnc-sds-NO-a	OOS	N/A	Active			
- 💽 KPIs	mrsync-sds-NO-b	005	N/A	Active			

5. Use the Server hostname shown in the bottom banner for the ACTIVE NETWORK OAM&P to identify the current Primary NOAM site.





Note:

The server **hostname** of the **ACTIVE NETWORK OAM&P** identifies the current Primary NOAM site. For example, rlghnc.

6. As the Primary NOAM site is identified, next identify the Primary Active, Primary Standby, Secondary Active (DR) and Secondary Standby NOAM Servers.

Main Menu: S	lain Menu: Status & Manage -> HA										
Hostname	OAM HA Role	Application HA Role	Max Allowed HA Role	Mate Hostname List	Network Element	Server Role					
rlghnc-sds-NO-a	Standby	N/A	Active	righnc-sds-NO-b	NO_RLGHNC	Network OAM&F					
rlghnc-sds-NO-b	Active	N/A	Active	righnc-sds-NO-a	NO_RLGHNC	Network OAM&					
mrsvnc-sds-NO-a	Standby	N/A	Active	mrsvnc-sds-NO-b	NO_MRSVNC	Network OAM&F					
mrsvnc-sds-NO-b	Active	N/A	Active	mrsvnc-sds-NO-a	NO_MRSVNC	Network OAM&F					
rlghnc-sds-QS	Observer	N/A	Observer	rlghnc-sds-NO-a rlghnc-sds-NO-b	NO_RLGHNC	Query Server					



Active or Standby states for each NOAM server must be recorded as it is critical that the SW on each server be stopped in the exact order specified in Steps 8 - 12 of this procedure.

7. Record the hostnames of the Active/Standby NOAM servers at the Primary and Secondary (DR) NOAM sites in the space provided.



8. Go to Main Menu, and then Status & Manage. Manage, and then select Server.

 Administration 	Main Menu: Status & Manage -> Server				
 Configuration Alarms & Events 	Filter* 👻				
Security Log Status & Manage	Server Hostname	Network Element	Appl State		
Status & Manage Network Elements	freeport-dp-1	SDS_SO_Freeport	Enabled		
- Server	freeport-dp-2	SDS_SO_Freeport	Enabled		
- Natabase	freeport-sds-so-a	SDS_SO_Freeport	Enabled		
KPIs	freeport-sds-so-b	SDS_SO_Freeport	Enabled		

Figure 4-5 Main Menu - Server

- 9. Based on the information recorded in **Step 6** of this procedure, perform the following steps on the **Primary NOAM Standby** server:
 - a. Select the server in the right panel.



b. Click Stop.

Filter* -	atus & manage	-> Server				
Server Hostname	Network Element	Appl State	Alm	DB	Reporting Status	Proc
nassau-sds-so-b	SDS_SO_Nassau	Enabled	Norm	Norm	Norm	Norm
rlghnc-sds-NO-a	NO_RLGHNC	Enabled	Norm	Norm	Norm	Norm
rlghnc-sds-NO-b	NO_RLGHNC	Enabled	Norm	Norm	Norm	Norm
rlghnc-sds-QS	NO_RLGHNC	Enabled	Norm	Norm	Norm	Norn
turks-dp-1	SDS SO Turks	Enabled	Norm	Norm	Norm	Norn

c. Click **OK** in the pop-up confirmation box.

		•	on the following server(s)? rlghnc-sds-NO-a
--	--	---	------------------------------------------------



10. After the screen refreshes, verify that the server now shows an Appl State value of **Disabled** and a Proc value of **Man**.

Aain Menu: Status & Manage -> Server Filter⁴ ╺								
Server Hostname	Network Element	Appl State	Alm	DB	Reporting Status	Proc		
nassau-sds-so-b	SDS_SO_Nassau	Enabled	Norm	Norm	Norm	Norm		
rlghnc-sds-NO-a	NO_RLGHNC	Disabled	Warn	Norm	Norm	Man		
rlghnc-sds-NO-b	NO_RLGHNC	Enabled	Warn	Warn	Norm	Norm		
rlghnc-sds-QS	NO_RLGHNC	Enabled	Norm	Norm	Norm	Norm		
turks-dp-1	SDS_SO_Turks	Enabled	Norm	Norm	Norm	Norm		

Note:

Although the screen automatically refreshes after several seconds, the user may refresh it immediately if desired by re-selecting the left menu option for the **Main Menu: Status & Manage**, and then **Server**.



Note:

- To stop the SW on the Primary NOAM Active server, refer to Steps 8 9 of this Procedure for the Primary NOAM "Active" Server.
- To stop the SW on the **DR NOAM Standby** Server, refer to **Steps 8 9** of this Procedure for the **DR NOAM Standby** Server.
- To stop the SW on the DR NOAM Active server, refer to Steps 8 9 of this Procedure for the DR NOAM Active server.
- 11. Access the command prompt (CLI) and log in to the server as the **admusr** user.

```
rlghnc-sds-NO-b login: admusr
Password: <admusr password>
```

Note:

The password does not appear on the screen as you type the characters.

Output received is similar to that shown below, as the server returns to a command prompt.

*** TRUNCATED OUTPUT ***

```
PRODPATH=
RELEASE=8.6.0
RUNID=00
VPATH=/var/TKLC/rundb:/usr/TKLC/appworks:/usr/TKLC/awpcommon:/usr/TKLC/
comagent-gui:/usr/TKLC/comagent-gui:/usr/TKLC/comagent:/usr/TKLC/sds
PRODPATH=/opt/comcol/prod
[admusr@rlghnc-sds-NO-b ~]$
```

12. Confirm that you are connected to the **Primary Active NOAM** server by verifying that the server hostname matches the entry showing **VIP Act/Act**.

```
[admusr@rlghnc-sds-NO-b ~]$ hostname
rlghnc-sds-NO-b
[admusr@rlghnc-sds-NO-b ~]$ ha.mystate -i |grep VIP
VIP Act/Act rlghnc-sds-NO-b 0
0302:235736.946
[admusr@rlghnc-sds-NO-b ~]$
```

13. Verify that the current value for **myClusterRole** is **Primary**.

```
[admusr@rlghnc-sds-NO-b ~]$ top.myrole
myNodeId=A0907.121
myParentClusters=( )
myClusterRole=Primary
myRecognizedPrimary=A0907
```



```
myRecognizedSecondary=A1103
[admusr@rlghnc-sds-NO-b ~]$
```

14. Set the value for myClusterRole to Secondary.

```
[admusr@rlghnc-sds-NO-b ~]$ top.setSecondary
```

- Using my cluster: A0907
- New Secondary Timestamp: 03/03/17 00:19:07.181
- Updating To A0907.060: rlghnc-sds-NO-a
- Updating To A0907.113: rlghnc-sds-QS
- Updating To A0907.121: rlghnc-sds-NO-b
- Updating To A1103.165: mrsvnc-sds-NO-b

```
- Updating To A1103.223: mrsvnc-sds-NO-a [admusr@rlqhnc-sds-NO-b ~]$
```

```
15. Verify that the value for myClusterRole is now Secondary.
```

```
[admusr@rlghnc-sds-NO-b ~]$ top.myrole
myNodeId=A0907.121
myParentClusters=( )
myClusterRole=Secondary
myRecognizedPrimary=A0907
myRecognizedSecondary=Unknown
[admusr@rlghnc-sds-NO-b ~]$
```

16. Verify the current PID for the **apwSoapServer** process.

```
[admusr@rlghnc-sds-NO-b ~]$ pl |grep Server
A 946215 apwSoapServer Up 03/02 23:52:31 3 !CMNOSIGCHK=1
apwSoapServer
[admusr@rlghnc-sds-NO-b ~]$
```

17. Restart the apwSoapServer process.

```
[admusr@rlghnc-sds-NO-b ~]$ sudo pm.kill apwSoapServer
[admusr@rlghnc-sds-NO-b ~]$
```

 Verify that the PID for the apwSoapServer process has changed from the previous value shown in the previous step of this procedure.

```
[admusr@rlghnc-sds-NO-b ~]$ pl |grep Server
A 951908 apwSoapServer Up 03/02 23:52:31 3 !CMNOSIGCHK=1
apwSoapServer
[admusr@rlghnc-sds-NO-b ~]$
```

Note:

Post completion of this procedure, return to Figure 2-1.

4.2 Promoting the DR NOAM from Secondary to Primary



4.2.1 Promoting the DR NOAM from Secondary to Primary (Graceful)

Perform the following steps in DR NOAM to promote the DR NOAM from Secondary to Primary.

1. Establish an SSH session to the SDS/DSR DR NOAM XMI IP address, access the command prompt (CLI) and log in to the server as **admusr** user.

```
msvnc-sds-NO-b login: admusr
Password: <admusr password>
```

2. To check NOAM Status of the server, run the following command on the Active NOAM.

```
$ ha.mystate
[admusr@msvnc-sds-NO-b ~]$ ha.mystate
```

resourceId	role	node	DC	subResources	lastUpdate
DbReplication	Act/Act	A3374.144	*	 0	180712:064445.775
VIP	Act/Act	A3374.144			180712:064445.875
CacdProcessRes	Act/Act	A3374.144			180712:064445.873
PDBA_Process	Act/Act	A3374.144			180712:064445.876
PDBAUDIT Process	Act/Act	A3374.144			180712:064445.875
PDBRELAY Process	Act/Act	A3374.144			180712:064445.876
XDS_Process	Act/Act	A3374.144			180712:064445.878
IMPORT Process	Act/Act	A3374.144			180712:064445.876
EXPORT_Process	Act/Act	A3374.144			180712:064445.877
DPSERVER Process	Act/00S	A3374.144			180711:062936.051

3. Verify that the current value for myClusterRole is Secondary.

```
[admusr@mrsvnc-sds-NO-b ~]$ top.myrole
myNodeId=A1103.165
myParentClusters=( )
myClusterRole=Secondary
myRecognizedPrimary=A1103
myRecognizedSecondary=Unknown
[admusr@mrsvnc-sds-NO-b ~]$
```

4. Set the value for myClusterRole to Primary.

[admusr@mrsvnc-sds-NO-b ~]\$ top.setPrimary

- Using my cluster: A1103
- New Primary Timestamp: 03/03/17 00:50:40.986
- Updating To A0907.060: rlghnc-sds-NO-a
- Updating To A0907.113: rlghnc-sds-QS
- Updating To A0907.121: rlghnc-sds-NO-b
- Updating To A1103.165: mrsvnc-sds-NO-b
- Updating To A1103.223: mrsvnc-sds-NO-a

[admusr@mrsvnc-sds-NO-b ~]\$

5. Verify that the value for **myClusterRole** is now **Primary**.

```
[admusr@mrsvnc-sds-NO-b ~]$ top.myrole
myNodeId=A1103.165
```



```
myParentClusters=( )
myClusterRole=Primary
myRecognizedPrimary=A1103
myRecognizedSecondary=A0907
[admusr@mrsvnc-sds-NO-b ~]$
```

Note: Perform the next steps in New Primary NOAM VIP (former DR).

 Launch an HTML5 compliant browser and connect to the XMI Virtual IP address (VIP) assigned to Primary Active NOAM site.

If a Certificate Error is received, click on Continue to this website (not recommended) link.

Continue to this webgage.

Figure 4-6 Certificate Error

The login screen appears.

7. Log in to the GUI using a user account with administrator privileges.

	ORACLE	Ξ.
Oracle System	Login	Wed Mar 1 18:53:06 2017 UTC
	Log In Enter your username and password to	log in
	Username: guiadmin	
	Password:	
	Change password	
	Log In 😡	
	Welcome to the Oracle System Login.	
This application is d cookie	esigned to work with most modern HTML5 compliant brow is. Please refer to the <u>Oracle Software Web Browser Sup</u>	vsers and uses both JavaScript and port Policy for details.
	Unauthorized access is prohibited.	

8. Go to Main Menu, and then Status & Manage, and then HA.



Figure 4-7 Main Menu - H/	IA
---------------------------	----

Ain Menu Administration Configuration Alarms & Events	Main Menu: S	tatus & N	/anage ->	HA
 	Hostname	OAM HA Role	Application HA Role	Max Allowed HA Role
Network Elements	rlghnc-sds-NO-a	OOS	N/A	Active
— 💽 Server	rlghnc-sds-NO-b	Active	N/A	Active
D_dabase	mrsvnc-sds-NO-a	OOS	N/A	Active
- N KPIs	mrsync.sds.NO.h	005	N/A	Active

9. Use the Server hostname shown in the bottom banner for the ACTIVE NETWORK OAM&P to identify the current Primary NOAM site.



Note:

The server **hostname** of the **ACTIVE NETWORK OAM&P** identifies the current **Primary** NOAM site. For example, mrsvnc.

Now that we know which NOAM site is Primary, identify the **Primary Active**, **Primary Standby**, **Secondary Active (DR)**, and **Secondary Standby** NOAM Servers.

Main Menu: S	tatus & M	anage -> H	A					
Filter* •								
Hostname	OAM HA Role	Application HA Role	Max Allowed HA Role	Mate Hostname List	Network Element	Server Role		
righnc-sds-NO-a	Standby	N/A	Active	rlghnc-sds-NO-b	NO_RLGHNC	Network OAM&P		
righnc-sds-NO-b	Active	N/A	Active	rlghnc-sds-NO-a	NO_RLGHNC	Network OAM&P		
mrsvnc-sds-NO-a	Standby	N/A	Active	mrsvnc-sds-NO-b	NO_MRSVNC	Network OAM&P		
mrsvnc-sds-NO-b	Active	N/A	Active	mrsvnc-sds-NO-a	NO_MRSVNC	Network OAM&P		
rlghnc-sds-QS	Observer	N/A	Observer	rlghnc-sds-NO-a rlghnc-sds-NO-b	NO_RLGHNC	Query Server		

Note:

Do not skip the following step.

Active/Standby states for each NOAM server must be recorded as it is Critical that the SW on each server be restarted in the exact order specified in Steps 12 and 13 of this procedure.

 Based on the information identified in the previous step, record the hostnames of the Primary Active, Primary Standby, Secondary Active (DR), and Secondary Standby NOAM Servers.

```
Site_1 = Primary_NOAM (Active) = ______
Site_1 = Primary_NOAM (Standby) = _____
```



```
Site_2 = DR_NOAM (Active) = ______
Site_2 = DR_NOAM (Standby) = _____
```

11. Go to **Main Menu**, and then **Status & Manage**, and then **Server**.

 Administration 	Main Menu: Status & Manage -> Server				
 Configuration Alarms & Events 	Filter* 👻				
🗉 🧰 Security Log = 😋 Status & Manage	Server Hostname	Network Element	Appl State		
Network Elements	freeport-dp-1	SDS_SO_Freeport	Enabled		
Server	freeport-dp-2	SDS_SO_Freeport	Enabled		
atabase	freeport-sds-so-a	SDS_SO_Freeport	Enabled		
KPIs	freeport-sds-so-b	SDS_SO_Freeport	Enabled		

Based on the information recorded in **Step 10** of this procedure, perform the below sub-steps on the newly promoted **Primary NOAM Active** Server (Site_2).

12. Select the Server in the right panel (highlight will occur) and click **Restart** in the right panel.

lain Menu: S	tatus & Manage -	> Server					
Filter* - Info	•				En Mar 03 0	3140111 201	701
Server Hostname	Network Element	Appl State	Alm	DB	Reporting Status	Proc	
freeport-sds-so-b	SDS_SO_Freeport	Enabled	Norm	Norm	Norm	Norm	^
mrsvnc-sds-NO-a	NO_MRSVNC	Disabled	Warn	Norm	Norm	Man	1
mrsvnc-sds-NO-b	NO_MRSVNC	Disabled	Err	Warn	Norm	Man	ï
rlghnc-sds-NO-a	NO_RLGHNC	Disabled	Warn	Norm	Norm	Man	1
rlghnc-sds-NO-b	NO_RLGHNC	Disabled	Warn	Norm	Norm	Man	0
righne-sds-OS	NO REGHNC	Enabled	Norm	Norm	Norm	Norm	

Click **OK** in the pop-up confirmation box.



 After the screen refresh, verify that the server now shows an Appl State value of Enabled and a Proc value of Norm.

Nain Menu: Status & Manage -> Server							
Filter*							
Server Hostname	Network Element	Appl State	Alm	DB	Reporting Status	Proc	
mrsvnc-sds-NO-a	NO_MRSVNC	Disabled	Warn	Norm	Norm	Man	
mrsvnc-sds-NO-b	NO_MRSVNC	Enabled	Warn	Warn	Norm	Norm	
righnc-sds-NO-a	NO_RLGHNC	Disabled	Warn	Norm	Norm	Man	
rlghnc-sds-NO-b	NO_RLGHNC	Disabled	Warn	Norm	Norm	Man	
righnc-sds-QS	NO_RLGHNC	Enabled	Norm	Norm	Norm	Norm	



Note:

- Restart the SW on the Primary NOAM Standby Server, by repeating Steps 12 - 13 of this Procedure for the Primary NOAM Standby Server.
- Restart the SW on the DR NOAM Standby Server, by repeating Steps 12 -13 of this Procedure for the DR NOAM Standby Server.
- Restart the SW on the DR NOAM Active Server, by repeating Steps 12 -13 of this Procedure for the DR NOAM Active Server.
- For SDS systems, this procedure is completed. Return to NOAM Failover Process Flowchart for next steps.
- For DSR systems only, perform the next steps in this procedure.
- 14. Identify the clusterid values for the myRecognizedPrimary and the myRecognizedSecondary. For example, Axxxx.

```
[admusr@dominica-dr-noam-b ~]$ top.myrole
myNodeId=A0568.058
myParentClusters=( )
myClusterRole=Primary
myRecognizedPrimary=A0568
myRecognizedSecondary=A1667
[admusr@dominica-dr-noam-b ~]$
```

15. Record the clusterid values for the myRecognizedPrimary and the myRecognizedSecondary in the space provided.

myRecognizedPrimary (clusterId) = ______ myRecognizedSecondary (clusterId) = ______

 Identify which A-Level clusterId (for example, Axxxx) is located in the HaClusterResourceCfg table.

```
[admusr@dominica-dr-noam-b ~]$ iqt -p HaClusterResourceCfg
cluster resource optional
A0568 DSROAM_Proc Yes
C0804 DSROAM_Proc Yes
C1223 DSROAM_Proc Yes
C2346 DSROAM_Proc Yes
C3147 DSROAM_Proc Yes
C3316 DSROAM_Proc Yes
[admusr@dominica-dr-noam-b ~]$
```

17. If the A-Level clusterId located in the HaClusterResourceCfg table is the myRecognizedPrimary value recorded in Step 15 of this procedure, delete the entry.

For example:

```
$ irem HaClusterResourceCfg where
"cluster='<myRecognizedPrimary_clusterId>'"
[admusr@dominica-dr-noam-b ~]$ irem HaClusterResourceCfg where
```



```
"cluster='A0568'" === deleted 1 records ===
[admusr@dominica-dr-noam-b ~]$
```

If the A-Level **clusterid** is not located there, then continue to the next step.

 Add an entry to the HaClusterResourceCfg table for the myRecognizedSecondary value recorded in Step 15 of this procedure.

For example:

```
$ echo "<myRecognizedSecondary_clusterId>|DSROAM_Proc|Yes" | iload -
ha -xun -fcluster -fresource -foptional HaClusterResourceCfg
[admusr@dominica-dr-noam-b ~]$ echo "A1667|DSROAM_Proc|Yes" | iload
-ha -xun -fcluster -fresource -foptional HaClusterResourceCfg
[admusr@dominica-dr-noam-b ~]$
```

19. Verify that the **HaClusterResourceCfg** table now displays an entry for the myRecognizedSecondary value recorded in Step 15 of this procedure.

```
[admusr@dominica-dr-noam-b ~]$ iqt -p HaClusterResourceCfg
cluster resource optional
A1667 DSROAM_Proc Yes
C0804 DSROAM_Proc Yes
C1223 DSROAM_Proc Yes
C2346 DSROAM_Proc Yes
C3147 DSROAM_Proc Yes
C3316 DSROAM_Proc Yes
[admusr@dominica-dr-noam-b ~]$
```

Note:

Once this procedure is completed, return to Figure 2-1.

4.2.2 Promoting the DR NOAM from Secondary to Primary (Outage)

Perform the following steps in DR NOAM to promote the DR NOAM from Secondary to Primary:

 Establish an SSH session to the SDS/DSR DR NOAM XMI IP address, access the command prompt (CLI) and log in to the server as **admusr** user.

```
msvnc-sds-NO-b login: admusr
Password: <admusr password>
```

2. To check NOAM Status of the server, run the following command on the Active NOAM.

```
$ ha.mystate
[admusr@msvnc-sds-NO-b ~]$ ha.mystate
```

resourceId	role	node	DC	subResources	lastUpdate
DbReplication	Act/Act	A3374.144	*	0	180712:064445.775
VIP	Act/Act	A3374.144			180712:064445.875
CacdProcessRes	Act/Act	A3374.144			180712:064445.873
PDBA_Process	Act/Act	A3374.144			180712:064445.876
PDBAUDIT Process	Act/Act	A3374.144			180712:064445.875
PDBRELAY Process	Act/Act	A3374.144			180712:064445.876
XDS Process	Act/Act	A3374.144			180712:064445.878
IMPORT Process	Act/Act	A3374.144			180712:064445.876
EXPORT Process	Act/Act	A3374.144			180712:064445.877
DPSERVER Process	Act/00S	A3374.144			180711:062936.051

3. Verify that the current value for myClusterRole is Secondary.

```
[admusr@mrsvnc-sds-NO-b ~]$ top.myrole
myNodeId=A1103.165
myParentClusters=( A0907 )
myClusterRole=Secondary
myRecognizedPrimary=A0907
myRecognizedSecondary=A1103
[admusr@mrsvnc-sds-NO-b ~]$
```

4. Using the clusterid of the myRecognizedPrimary from the previous step, set the clusterid to Secondary.

```
[admusr@mrsvnc-sds-NO-b ~]$ top.setSecondary A0907
- New Secondary Timestamp: 03/03/17 18:28:48.318
- Updating To A0907.060: rlqhnc-sds-NO-asetSecondaryTo(A0907) returned
proxy error=28
SOAP 1.2 fault SOAP-ENV:Receiver [no subcode]
"Connection timed out"Detail: connect failed in tcp connect()
- Updating To A0907.113: rlqhnc-sds-QSsetSecondaryTo(A0907) returned
proxy error=28
SOAP 1.2 fault SOAP-ENV:Receiver [no subcode]
"Connection timed out"Detail: connect failed in tcp connect()
- Updating To A0907.121: rlghnc-sds-NO-bsetSecondaryTo(A0907) returned
proxy error=28
SOAP 1.2 fault SOAP-ENV:Receiver [no subcode]
"Connection timed out"Detail: connect failed in tcp connect()
- Updating To A1103.165: mrsvnc-sds-NO-b- Updating To A1103.223: mrsvnc-
sds-NO-a
[admusr@mrsvnc-sds-NO-b ~]$
```

Note:

The **connection timeouts** to the **Primary NOAM NE** are expected when that NE is network isolated. Under these circumstances, the user should allow several minutes (\approx 7) for this

Under these circumstances, the user should allow several minutes (\approx /) for this command to complete.

5. Set the value for myClusterRole to Primary.

```
[admusr@mrsvnc-sds-NO-b ~]$ top.setPrimary
- Using my cluster: A1103
- New Primary Timestamp: 03/03/17 18:35:26.279
- Updating To A0907.060: rlghnc-sds-NO-asetPrimaryTo(A1103)
returned proxy error=28
SOAP 1.2 fault SOAP-ENV:Receiver [no subcode]
"Connection timed out"
Detail: connect failed in tcp_connect()
- Updating To A0907.113: rlqhnc-sds-QSsetPrimaryTo(A1103) returned
proxy error=28
SOAP 1.2 fault SOAP-ENV:Receiver [no subcode]
"Connection timed out"
Detail: connect failed in tcp connect()
- Updating To A0907.121: rlghnc-sds-NO-bsetPrimaryTo(A1103)
returned proxy error=28
SOAP 1.2 fault SOAP-ENV:Receiver [no subcode]
"Connection timed out"
Detail: connect failed in tcp connect()
- Updating To A1103.165: mrsvnc-sds-NO-b
- Updating To A1103.223: mrsvnc-sds-NO-a
```

```
[admusr@mrsvnc-sds-NO-b ~]$
```

Note:

The **connection timeouts** to the **Primary NOAM NE** (shown in the output to the right) are expected when that NE is network isolated. Under these circumstances, the user should allow several minutes (\approx 7) for this command to complete.

6. Verify that the value for myClusterRole is now set to Primary.

```
[admusr@mrsvnc-sds-NO-b ~]$ top.myrole
myNodeId=A1103.165
myParentClusters=( )
myClusterRole=Primary
myRecognizedPrimary=A1103
myRecognizedSecondary=A0907
[admusr@mrsvnc-sds-NO-b ~]$
```

Note:

Perform the next steps on the New Primary NOAM VIP (former DR).

 Launch an HTML5 compliant browser and connect to the XMI Virtual IP address (VIP) assigned to Primary Active NOAM site.



If a Certificate Error is received, click on **Continue to this website (not recommended)** link.

Figure 4-8 Certificate Error



The login screen appears.

8. Log in to the GUI using a user account with administrator privileges.

ORA	ACLE [®]
Oracle System Login	Wed Mar 1 18:53:06 2017 UTC
Log Enter your username	g In and password to log in
Username:	guiadmin
Password:	•••••
	Change password
Lo	ig in 🕞
Welcome to the Or	racle System Login.
This application is designed to work with most modern H cookies. Please refer to the <u>Oracle Softwa</u>	ITML5 compliant browsers and uses both JavaScript and re Web Browser Support Policy for details.
Unauthorized acc	cess is prohibited.

The Product Main Menu appears.

9. Verify that the message shown across the bottom of the panel indicates that the browser is using the VIP to connect to the ACTIVE NETWORK OAM&P.



Main Menu		Main Menu: [Main]
Configuration		Fri Mar 03 01:34:57 2017 UTC
Alarins & Evenis Security Log Security Log Measurements Communication Agent SDS Help Legal Notices Zoout		This is the user-defined welcome message. It can be modified using the 'General Options' item under the 'Administration' menu. Login Name: guiadmin Last Login Time: 2017-03-02 20:15:17 Last Login Time: 2017-03-02 20:15:17 Last Login Tine: 2017-03-02 20:15:17 Becent Failed Login Attempts: 0 Oracle and Java are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.
		Copyright © 2010, 2017, Oracle and/or its affiliates. All rights reserved.
accessfully connected using VIP to mrs	wnc-sd	s-NO-b (ACTIVE NETWORK OAM&P) - Global Provisioning disabled Updates enabled
		Copyright © 2010, 2017, Oracle and/or its affiliates. Al

10. Go to Main Menu, and then Administration, and then General Options.

Administration General Options General Options	Main Menu: Adr	ninistration -> General Options
Constant Servers Constant Servers	General options	settings
Configuration Alarms & Events Security Log	Variable	Value

11. Verify the value for **Durability Administrative State**.

If performing this procedure in response to a network isolated Primary NOAM (outage), modify the **Durability Administrative State** value to **1** (if necessary).

Main Menu: Administra	ation -> General Options	Fri Mar 03 02:23:23 2017 U
General options settings	3	
Durability Administrative State *	1	Durability Administrative State (1 = NO disk, 2 = NO pair, 3 = NO DRNO). [Default = 1; Range = 1-3] [A value is required.]
Disabled Account	This account has been disabled.	Message displayed when attempting to login to a disabled account





12. Go to **Main Menu**, and then **Status & Manage**, and then **Server** and identify the hostname of the Primary Active NOAM server from the banner message at the bottom of the browser window.

 Main Menu Administration 		Main	Menu:	Status a	& Manage	e -> Serv	ver
Configuration Alarms & Events		Filter	•				
 Security Log 		Serve	r Hostname	e Netv	vork Element	Appl	State
🖃 🤄 Status & Manage		freepo	rt-dp-1	SDS	_SO_Freeport	t Enab	led
Network Elements Server		freepo	ort-dp-2	SDS	_SO_Freeport	t Enat	led
AD -	1	freepo	rt-sds-so-a	SDS	_SO_Freeport	t Enat	led
🔄 💽 Database		freepo	rt-sds-so-b	SDS	_SO_Freeport	Enab	led
KPIs		mrsvn	c-sds-NO-a	NO_	MRSVNC	Enat	led
Processes Tasks		mrsvn	c-sds-NO-b	NO_	MRSVNC	Enat	led
Files							
💿 🧰 Measurements							
💿 🗋 Communication Agent							
💿 🧰 SDS							
i elp		Stop	Restart	Reboot	NTP Sync	Report	
Legal Notices							
🔄 🔄 Logout							

Note:

Based on the information recorded in this step, perform the next steps on the newly promoted **Primary NOAM Active Server (Site_2)**.

13. Select the Server Hostname (highlighted once selected) and click **Restart**.

Filter* 🔻						
Server Hostname	Network Element	Appl State	Alm	DB	Reporting Status	Proc
mrsvnc-sds-NO-a	NO_MRSVNC	Enabled	Err	Norm	Norm	Norm
mrsvnc-sds-NO-b	NO_MRSVNC	Enabled	Err	Norm	Norm	Norm
nassau-dp-1	SDS_SO_Nassau	Enabled	Norm	Norm	Norm	Norm
nassau-dp-2	SDS_SO_Nassau	Enabled	Norm	Norm	Norm	Norm
nassau-sds-so-a	SDS_SO_Nassau	Enabled	Warn	Norm	Norm	Norm
nassau-sds-so-b	SDS_SO_Nassau	Enabled	Warn	Norm	Norm	Norm

Click **Ok**, in the pop-up confirmation box.



Message fr	om webpage
0	Are you sure you wish to restart application software on the following server(s)? mrsvnc-sds-NO-b
	OK Cancel

Note:

- For SDS systems, this procedure is completed. Return to NOAM Failover Process Flowchart for next steps.
- For DSR systems only, perform the next steps in this procedure on the New Primary NOAM VIP (former DR).
- 14. Identify the clusterId values for the myRecognizedPrimary and the myRecognizedSecondary. For example, Axxxx.

```
[admusr@dominica-dr-noam-b ~]$ top.myrole
myNodeId=A0568.058
myParentClusters=( )
myClusterRole=Primary
myRecognizedPrimary=A0568
myRecognizedSecondary=A1667
[admusr@dominica-dr-noam-b ~]$
```

15. Record the clusterid values for the myRecognizedPrimary and the myRecognizedSecondary in the space provided.

```
myRecognizedPrimary (clusterId) = ______
myRecognizedSecondary (clusterId) = ______
```

16. Identify which A-Level **clusterId** (example, Axxxx) is located in the **HaClusterResourceCfg** table.

```
[admusr@dominica-dr-noam-b ~]$ iqt -p HaClusterResourceCfg
cluster resource optional
A0568 DSROAM_Proc Yes
C0804 DSROAM_Proc Yes
C1223 DSROAM_Proc Yes
C2346 DSROAM_Proc Yes
C3147 DSROAM_Proc Yes
C3316 DSROAM_Proc Yes
[admusr@dominica-dr-noam-b ~]$
```

17. If the A-Level clusterId located in the HaClusterResourceCfg table is the myRecognizedPrimary value recorded in next step of this procedure, delete the entry.



For example:

```
$ irem HaClusterResourceCfg where
"cluster='<myRecognizedPrimary_clusterId>'"
[admusr@dominica-dr-noam-b ~]$ irem HaClusterResourceCfg where
"cluster='A0568'"
=== deleted 1 records ===
[admusr@dominica-dr-noam-b ~]$
```

If the A-Level clusterid is not located in the table, continue to the next step.

18. Add an entry to the **HaClusterResourceCfg** table for the **myRecognizedSecondary** value recorded in Step 18 of this procedure.

For example:

```
$ echo "<myRecognizedSecondary_clusterId>|DSROAM_Proc|Yes" | iload -ha -
xun -fcluster -fresource -foptional HaClusterResourceCfg
[admusr@dominica-dr-noam-b ~]$ echo "A1667|DSROAM_Proc|Yes" | iload -ha -
xun -fcluster -fresource -foptional HaClusterResourceCfg
[admusr@dominica-dr-noam-b ~]$
```

 Verify if the HaClusterResourceCfg table now displays an entry for the myRecognizedSecondary value recorded in Step 18 of this procedure.

```
[admusr@dominica-dr-noam-b ~]$ iqt -p HaClusterResourceCfg
cluster resource optional
A1667 DSROAM_Proc Yes
C0804 DSROAM_Proc Yes
C1223 DSROAM_Proc Yes
C2346 DSROAM_Proc Yes
C3147 DSROAM_Proc Yes
C3316 DSROAM_Proc Yes
[admusr@dominica-dr-noam-b ~]$
```

Note:

Once this Procedure is completed, return to Figure 2-1.

4.3 Enabling Global Provisioning

Perform the following steps on **Primary NOAM VIP** to enable Global Provisioning at the newly promoted Primary NOAM GUI.

 Launch an HTML5 compliant browser and connect to the XMI Virtual IP address (VIP) assigned to Primary Active NOAM site.

If a Certificate Error is received, click on **Continue to this website (not recommended)** link.



Figure 4-9 Certificate Error



The login screen appears.

2. Log in to the GUI using a user account with administrator privileges.

Figure 4-10 Login Screen

	ORACL	.e
Oracle System	Login	
	Log In Enter your username and passwo	ord to log in
	Username: guiadmin	
	Password: ••••••	
	Change passw	rord
	Log In 💦	
	Welcome to the Oracle System Lo	igin.
This application is de	esigned to work with most modern HTML5 complian	t browsers and uses both JavaScript and
	Unauthorized access is prohibite	id.

The Product Main Menu appears.

3. Verify that the message shown across the bottom of the panel indicates that the browser is using the VIP to connect to the ACTIVE NETWORK OAM&P.





Figure 4-11 Main Menu

4. Go to Main Menu, and then Status & Manage. Then, select Database.

Figure 4-12 Main Menu - Database

 Main Menu Administration 	Main Menu: St	atus & Manage	-> Database
Configuration Alarms & Events Security Log	Filter* Varnin Warnin	g 👻 Info* 👻 T ng	asks 🔻
🖃 😋 Status & Manage 🔤 🙀 Network Elements	SDS_SO_T	[Warning Code 0	02] - Global provisionir
Server	SDS_SO_Freeport	freeport-dp-1	MP
Database	SDS_SO_Freeport	freeport-sds-so-b	System OAM
- RPIS	NO_MRSVNC	mrsvnc-sds-NO-a	Network OAM&P
Tasks Files	NO_RLGHNC	righnc-sds-NO-a	Network OAM&P
Measurements	SDS_SO_Nassau	nassau-dp-2	MP

5. Select Enable Provisioning at the bottom of the right panel.

	Disable Provisioning	Report

Click **OK** on the pop-up confirmation box.

creating add	itional dialogs.	
ок	Cancel	
	o creating add	or creating additional dialogs.



6. Verify that the dialogue button located at the bottom of the right panel changes text to **Disable Provisioning**.

Disable Provisioning	Report
ar .	
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	

7. To enable PDB Relay, go to Main Menu, then Configurations, and then Options. Then, check the PDB Relay Enabled option box.

<ul> <li>Administration</li> </ul>	Main Menu: SDS -> Configu	uration -> Options
Configuration		
Alarms & Events		
💿 🧰 Security Log		
💿 🧰 Status & Manage		
Measurements	PDB Relay Enabled	J.
Communication Agent		
🖻 😋 SDS		
Configuration		¥6
- Dptions		
DRMP		
Connections		
NAI Hosts		
Destinations		
Domain Identifiers		
Destination Map		
Routing Entities		
Subscribers		
Blacklist		

Click Apply.

Apply	

The following confirmation message is displayed.

Main Menu: SDS -> Configuration -> Options

Info	•	
Info	8	Value
1	Data committed!	
Allow C	onnections	





# 5 Verifying Alarm Status (After Failover)

Perform the following steps in **New Primary NOAM VIP (former DR)** to verify alarms status at the Primary Active NOAM.

- Launch an HTML5 compliant browser and connect to the XMI Virtual IP address (VIP) assigned to Primary Active NOAM site.
- 2. If a Certificate Error is received, click on **Continue to this website (not recommended)** link.



Figure 5-1 Certificate Error

The login screen appears.

3. Log in to the GUI using a user account with administrator privileges.

	ORACL	E.
Oracle System	Login	— Wed Mar 1 18:53:06 2017 UTC
	Log In Enter your username and password	to log in
	Username: guiadmin	
	Password:	
	Change password	ı
	Log In D	
	Welcome to the Oracle System Login	l.
This application is d cookie	esigned to work with most modern HTML5 compliant b is. Please refer to the <u>Oracle Software Web Browser S</u>	rowsers and uses both JavaScript and upport Policy for details.
	Unauthorized access is prohibited.	

#### The Product Main Menu appears.

4. Verify that the message shown across the bottom of the panel indicates that the browser is using the VIP to connect to the ACTIVE NETWORK OAM&P.



Figure 5-2	Product Main Menu
------------	-------------------



5. Go to Main Menu, and then Alarm & Events. Then, select View Active.

Figure 5-3 View Active

Main Menu   Administration	Main Menu:	Alarms & Ever	nts -> View Active
<ul> <li>Configuration</li> <li>Alarms &amp; Events</li> </ul>	Filter*	sks ▼ Graph* ▼	
View Active	freeport_SO_gr	nassau_SO_grp	rlghnc_NO_grp turks_S
Security Log	Sec. #	Event ID	Timestamp
🔹 🦳 Status & Manage	Seq #	Alarm Text	

The current list of Active Alarms appears.

Figure 5-4 Active Alarms

ter* 🔻	Tasks 🔻	Graph* 👻	
reeport_SC	D_grp nassa	u_SO_grp rlghnc_NO_grp	turks_SO_grp
Food	Event ID	Timestamp	Severit
Seq #	Alarm Text		Additio
	31283	2017-03-08 14:26:17.042 UTC	MAJOR
5288	Lost Commu	nication with server	GN_DO More
	31283	2017-03-08 14:26:17.007 UTC	MAJOR
3885	Lost Commu	nication with server	GN_DO More



Note:
 Alarms visible at this time may include but are not limited to Event ID(s): 31106, 31107, 31114, 31233 & 31283.

6. Monitor the current list of Active alarms until all alarms associated with the Failover have cleared.

ter* 🔻	Tasks 🔻	Graph* -	
eeport_S	6O_grp nassa	u_SO_grp rlghnc_NO_grp	turks_SO_grp
Sog #	Event ID	Timestamp	Severi
Sed #	Alarm Text		Additio

## Note:

The user should allow at least 15 minutes for resulting alarms to clear before attempting any troubleshooting activities.

### Note:

- Contact My Oracle Support (MOS) for assistance with any reoccurring alarms or alarms which fail to clear within a 15 minute timeframe.
- Refer to My Oracle Support (MOS), for more information on contacting Oracle Customer Service.
- If alarms fail to clear that are related to features that use **SSH key exchange** based **file transfer** and the user wishes to re-enable them prior to performing a Failover back to the original Primary or Secondary states, then the feature may be reconfigured using the product feature's initial configuration procedures. Partial list of features that use SSH key exchange based file transfer:
  - SDS: provimport, provexport, APDE
  - HLRR: PDE, APDE
  - DSR: APDE
- This procedure has been completed. Return to Figure 2-1.



# 6 Backout Procedures

This section provides instructions on reversing Primary or Secondary NOAM Failover (Backout).

The user should recognize that the Primary or Secondary NOAM states are now reversed from what they were prior to the previous implementation of this procedure.

Insert the **Site_1** and **Site_2** names in the bottom of Figure 2-1 figure. According to the realtime state (primary or secondary) for each NOAM site and follow the Flowchart.

