Oracle® Communications

Diameter Signaling Router

Release 5.1/6.0/7.0/7.1

DSR RBAR Feature Activation Procedure

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Oracle Communications Diameter Signaling Router RBAR feature activatioin procedure, Release 5.1/6.0/7.0/7.1

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See more information on MOS in the Appendix section.

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1.0 INTRODUCTION

1.1 PURPOSE AND SCOPE

This document defines the procedure that is executed to activate the Range-Based Address Resolution (RBAR) feature on a DSR network element (NE). This procedure may be run either 1) as part of a new DSR installation, after the standard DSR installation is complete but before the NE is in service, or 2) on an in-service DSR NE, where the RBAR feature is activated during a planned maintenance window to minimize the impact to network traffic.

This document also provides a procedure to deactivate RBAR after it has been activated. Please see Section 6.0 for a discussion of deactivation.

No additional software installation is required prior to executing this procedure. The standard DSR installation procedure has loaded all of the required software, even if the RBAR feature is activated at a later time.

1.0 ACRONYMS

Table 1. Acronyms

BNS	Broadband Networking Solutions
DA-MP	Diameter Agent Message Processor
DB	Database
DSR	Diameter Signaling Router
FOA	First Office Application
GUI	Graphical User Interface
HA	High Availability
IMI	Internal Management Interface
IP	Internet Protocol
MP	Message Processing or Message Processor
NE	Network Element
NO	Network OAM
NOAM	Network OAM
OAM	Operations, Administration and Maintenance
RBAR	Range-Based Address Resolution
SOAM	System OAM
SSH	Secure Shell
UI	User Interface
VIP	Virtual IP
VPN	Virtual Private Network
XMI	External Management Interface

1.2 TERMINOLOGY

Table 2. Terminology

Communication Agent	An EXG common infrastructure component delivered as part of a common plug-in that uses the COMCOL MX framework in support of communicating Stack Events between EXG application processes on different servers.
ComAgent	Same as Communication Agent

1.3 GENERAL PROCEDURE STEP FORMAT

Where it is necessary to explicitly identify the server on which a particular step is to be taken, the server name is given in the title box for the step (e.g. “ServerX” in Figure 1).

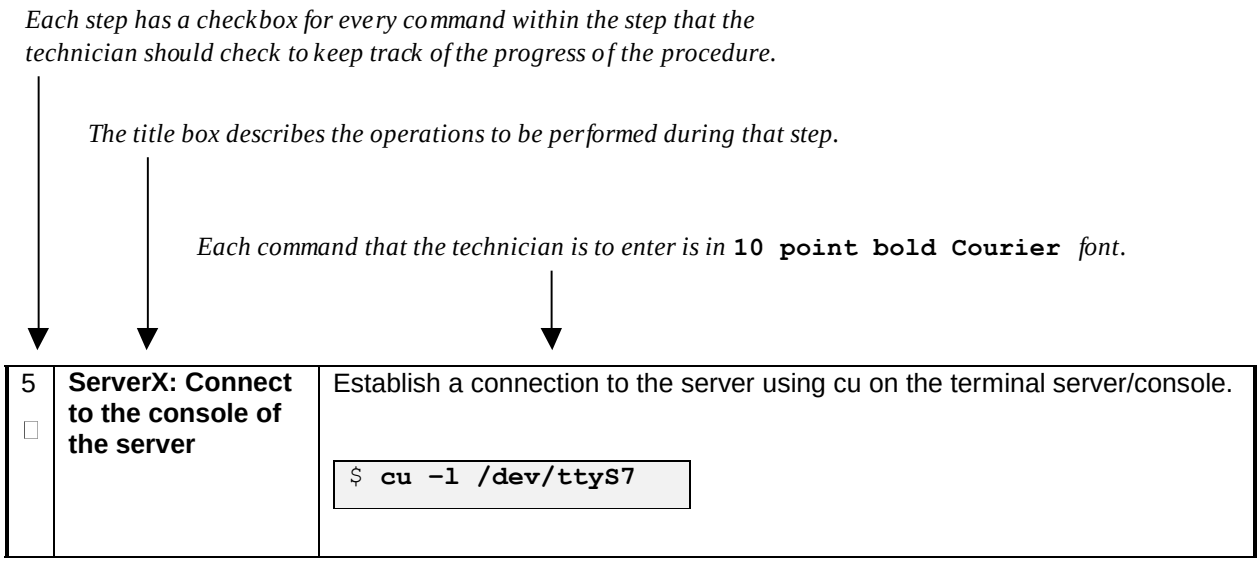


Figure 1. Example of a procedure step

2.0 FEATURE ACTIVATION OVERVIEW

This section lists the required materials and information needed to execute the feature activation. In addition,Table 3 through Table 8 provide estimates of the time required to execute the procedure. These tables can be used to estimate the total time necessary to complete the feature activation. The timing values shown are estimates only – use these tables to plan the timing of the activation, **not** to execute the procedure. The detailed procedure steps to be executed begin in Section 5.0

2.1 DEFINITION OF ACTIVATION FOR THE RBAR FEATURE

The precise meaning of activation varies from feature to feature. This section briefly defines what activation means with respect to the RBAR feature.

All software required to run RBAR is available by default as part of a DSR release installation or upgrade. The process of activating the feature simply makes proper use of software elements and file system files that are already present, to change the behavior of the DSR NE.

Prior to RBAR feature activation, there are no RBAR menu items visible on the SOAM GUI, and there is no RBAR-related processing taking place on the DA-MP(s).

After feature activation, all selectable RBAR-related menu items are present on the SOAM GUI, allowing full RBAR configuration and provisioning. Specifically, the top-level RBAR folder is visible on the Main Menu, and a new entry is added to the Diameter->Maintenance->Applications table, showing RBAR and its state. After activation, the DA-MP(s) are prepared to act on RBAR configuration and provisioning information entered at and replicated from the NOAM.

Important: Once the RBAR feature is activated, it is not automatically enabled. Activation simply means the mechanism for provisioning RBAR behavior is in place. But the DA-MP(s) will accept and act on RBAR provisioning information only after RBAR has been enabled (via the Diameter->Maintenance->Applications screen). RBAR should not be enabled until after the appropriate provisioning data has been entered. RBAR provisioning is beyond the scope of this document.

2.2 FEATURE ACTIVATION OVERVIEW

2.2.1 Pre-Feature Activation Overview

The pre-activation procedures shown in the following table may be executed outside a maintenance window if desired. Procedure completion times shown here are estimates. Times may vary due to differences in database size, network configuration and loading, user experience, and user preparation.

Table 3. Pre-Feature Activation Overview

Procedure	Elapsed Time (Hours: Minutes)		Activity	Impact
	This Step	Cum.	Feature Activation Preparation	
System Topology Check (Procedure 1)	0:00-0:20	0:00-0:20	• Verify Network Element Configuration data. • Verify System Group Configuration data. • Analyze and plan DA-MP restart sequence.	None
Perform Health Check (Procedure 2)	0:01-0:05	0:21-1:05	• Verify DSR Release. • Verify Server status. • Log all current alarms.	None

2.2.2 Feature Activation Execution Overview

The procedures shown in the following table are executed inside a single maintenance window. Procedure completion times shown here are estimates. Times may vary due to differences in database size, network configuration and loading, user experience, and user preparation.

Table 4. Feature Activation Execution Overview

Procedure	Elapsed Time (Hours: Minutes)		Activity	Impact
	This Step	Cum.	Feature Activation Execution	
Perform Health Check (Procedure 3)	0:01-0:05	0:01-0:05	• Verify DSR Release. • Verify proper RBAR feature state. • Verify Server status. • Log all current alarms.	None
Feature Activation (Procedure 4)	0:10-0:40	0:11-0:50	• Log out of NOAM/SOAM GUI. • SSH to Active NOAM. • Log in as admusr. • Change directory to /usr/TKLC/dsr/prod/maint/loaders/. • Execute the feature activation script. • Log into SOAM GUI • Verify the RBAR Folder. • Verify Maintenance screen. • Log into NOAM GUI. • Restart each active DA-MP server. • Verify Maintenance screen. • Close SSH connections to NOAM.	RBAR is activated

2.2.3 Post-Feature Activation Overview

The procedures shown in the following table are executed inside a maintenance window. Procedure completion times shown here are estimates. Times may vary due to differences in database size, network configuration and loading, user experience, and user preparation.

Table 5. Post-Feature Activation Overview

Procedure	Elapsed Time (Hours: Minutes)		Activity	Impact
	This Step	Cum.	Feature Activation Completion	
Perform Health Check (Procedure 5)	0:01-0:05	0:01-0:05	• Verify Server status. • Log all current alarms.	RBAR has been activated on DSR

3.0 FEATURE DEACTIVATION OVERVIEW

3.1.1 Pre-Feature Deactivation Overview

The procedures shown in the following table are executed inside a maintenance window. Deactivation procedure times are only estimates as the reason to execute a deactivation has a direct impact on any additional deactivation preparation that must be done. Times may vary due to differences in database size, network configuration and loading, user experience, and user preparation.

Table 6. Pre-Feature Deactivation Overview

Procedure	Elapsed Time (Hours or Minutes)		Activity	Impact
	This Step	Cum.	Deactivation Procedures	
Perform Health Check (Procedure 6)	0:01-0:05	0:01-0:05	• Verify DSR Release. • Verify proper RBAR feature state. • Verify server status. • Log current alarms.	None

3.1.2 Feature Deactivation Execution Overview

The procedures shown in the following table are executed inside a maintenance window. Deactivation procedure times are only estimates as the reason to execute a deactivation has a direct impact on any additional deactivation preparation that must be done. Times may vary due to differences in database size, network configuration and loading, user experience, and user preparation.

Table 7. Feature Deactivation Overview

Procedure	Elapsed Time (Hours or Minutes)		Activity	Impact
	This Step	Cum.	Deactivation Procedures	
Deactivation Setup	0:10-0:30	0:10-0:30	The reason to deactivate has a direct impact on any additional backout preparation that must be done. Since all possible reasons cannot be predicted ahead of time, only estimates are given here. Execution time will vary.	None
Deactivation (Procedure 7)	00:10-00:40	0:20-1:15	• Log out of Active NOAM/SOAM GUI. • SSH into active NOAM. • Log in as admusr • Change directory to /usr/TKLC/dsr/prod/maint/loaders/.. • Execute the feature deactivation script. • Log into NOAM or SOAM GUI • Verify the RBAR folder. • Log into NOAM GUI • Restart each active DA-MP server. • Verify Maintenance screen.	RBAR is deactivated

3.1.3 Post-Feature Deactivation Overview

The procedures shown in the following table are executed inside a maintenance window. Deactivation procedure times are only estimates as the reason to execute a deactivation has a direct impact on any additional deactivation preparation that must be done. Times may vary due to differences in database size, network configuration and loading, user experience, and user preparation.

Table 8. Post-Feature Deactivation Overview

Procedure	Elapsed Time (Hours or Minutes)		Activity	Impact
	This Step	Cum.	Deactivation Procedures	
Perform Health Check (Procedure 8)	0:01-0:05	0:01-0:05	• Verify Server status. • Log all current alarms.	None

4.0 FEATURE ACTIVATION PREPARATION

This section provides detailed procedures to prepare a system for RBAR feature activation. These procedures are executed outside a maintenance window.

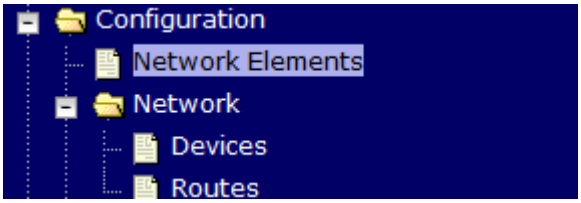
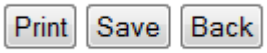
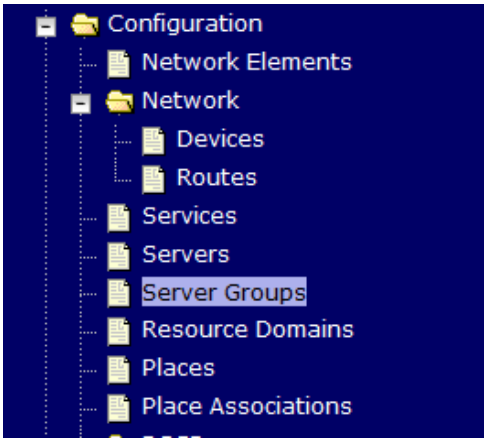
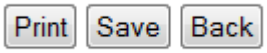
4.1 SYSTEM TOPOLOGY CHECK

This procedure is part of feature activation preparation and is used to verify the system topology of the DSR network and servers.

Procedure 1: System Topology Check

S T E P #		
	This procedure verifies System Topology. Check off (√) each step as it is completed. Boxes have been provided for this purpose under each step number. If this procedure fails, contact Appendix A. My *Oracle* Support (MOS), and ask for assistance.	
1 ☐	**NOAM VIP GUI:** Login	Establish a GUI session on the NOAM server by using the VIP IP address of the NOAM server. Open the web browser and enter a URL of: `http://<Primary_NOAM_VIP_IP_Address>` Login as the ***guiadmin*** user: 

Procedure 1: System Topology Check

2 ☐	**NOAM VIP GUI:** Verify Network Configuration Data	Navigate to **Main Menu -> Configuration -> Network Elements**  Click the **Report** button.  Verify the configuration data is correct for your network. **Save** or **Print** this report, keep copies for future reference. 
3 ☐	**NOAM VIP GUI:** Verify Server Configuration	Navigate to **Main Menu -> Configuration -> Server Groups**  Click the **Report** button.  Verify the configuration data is correct for your network. **Save** or **Print** this report, keep copies for future reference. 

Procedure 1: System Topology Check

4 ☐	**Analyze and plan DA-MP restart sequence**	Analyze system topology and plan for any DA-MPs which will be out-of-service during the feature activation sequence. Analyze system topology gathered in Steps 2 and 3. Determine exact sequence which DA-MP servers will be restarted (with the expected out-of-service periods). **Note:** It is recommended that no more than 50% of the MPs be restarted at once.

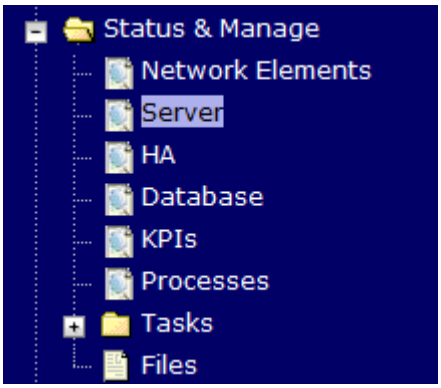
4.2 PERFORM HEALTH CHECK

This procedure is part of feature activation preparation and is used to determine the health and status of the DSR release network and servers. This may be executed multiple times but must also be executed at least once within the time frame of 24-36 hours prior to the start of the maintenance window in which the feature activation will take place.

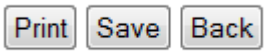
Procedure 2: Perform Health Check (Feature Activation Preparation)

S T E P #		
	This procedure provides steps to perform needed health checks. Check off (√) each step as it is completed. Boxes have been provided for this purpose under each step number. If this procedure fails, contact Appendix A. My *Oracle* Support (MOS), and ask for assistance.	
1 ☐	**NOAM VIP GUI:** Login	Establish a GUI session on the NOAM server by using the VIP IP address of the NOAM server. Open the web browser and enter a URL of: `http://<Primary_NOAM_VIP_IP_Address>` Login as the ***guiadmin*** user: 

Procedure 2: Perform Health Check (Feature Activation Preparation)

2 ☐	**NOAM VIP GUI:** Verify Server Status	Navigate to **Main Menu -> Status & Manage -> Server**  Verify all Server Status is Normal (Norm) for: Alarm (Alm), Database (DB), Replication Status, and Processes (Proc). | Appl State	Alm	DB	Reporting Status	Proc
---	---	---	---	---
Enabled	Norm	Norm	Norm	Norm
Enabled	Norm	Norm	Norm	Norm
Enabled	Norm	Norm	Norm	Norm
Enabled	Norm	Norm	Norm	Norm	 Do not proceed to feature activation if any of the above states are not Norm. If any of these are not Norm, corrective action should be taken to restore the non-Norm status to Norm before proceeding with the feature activation. If the Alarm (Alm) status is not Norm but only Minor alarms are present, it is acceptable to proceed with the feature activation. If there are Major or Critical alarms present, these alarms should be analyzed prior to proceeding with the feature activation. The activation may be able to proceed in the presence of certain Major or Critical alarms. Contact **Appendix** A. My Oracle Support **(MOS**) for assistance as necessary.

Procedure 2: Perform Health Check (Feature Activation Preparation)

3 ☐	**NOAM VIP GUI:** Log Current Alarms	Navigate to **Main Menu -> Alarms & Events -> View Active**  Click on the **Report** button  **Save** or **Print** this report, keep copies for future reference. 

5.0 FEATURE ACTIVATION

Before feature activation, perform the system health check in **Section 4.2**. This check ensures that the system is ready for feature activation. Performing the system health check determines which alarms are present in the system and if feature activation can proceed with alarms.

****** WARNING *******

If there are servers in the system which are not in Normal state, these servers should be brought to the Normal or the Application Disabled state before the feature activation process is started.

If alarms are present on the server, contact My *Oracle* Support (MOS) to diagnose those alarms and determine whether they need to be addressed or if it is safe to proceed with the feature activation.

Please read the following notes on feature activation procedures:

- Where possible, command response outputs are shown as accurately as possible. EXCEPTIONS are as follows:
  - Session banner information such as time and date.
  - System-specific configuration information such as hardware locations, IP addresses and hostnames.
  - ANY information marked with "XXXX" or "YYYY." Where appropriate, instructions are provided to determine what output should be expected in place of "XXXX **or** YYYY"
  - Aesthetic differences unrelated to functionality such as browser attributes: window size, colors, toolbars and button layouts.
- After completing each step and at each point where data is recorded from the screen, the technician performing the feature activation must initial each step. A check box should be provided. For procedures which are executed multiple times, the check box can be skipped, but the technician must initial each iteration the step is executed. The space on either side of the step number can be used (margin on left side or column on right side).
- Captured data is required for future support reference.

5.1 PRE-ACTIVATION PROCEDURES

5.1.1 Perform Health Check

This procedure is used to determine the health and status of the network and servers. This must be executed at the start of every maintenance window.

Note: The Health Check procedure below is the same as the Health Check procedure described in Section 4.2 when preparing for feature activation, but it is repeated here to emphasize that it is being re-executed if Section 4.2 was performed outside the maintenance window.

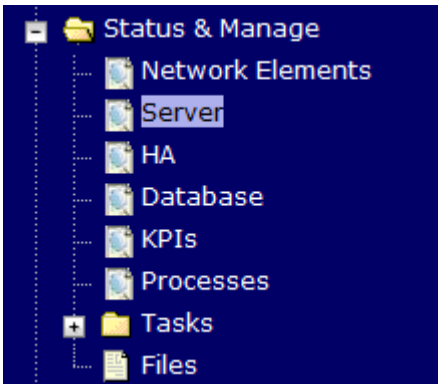
Procedure 3: Perform Health Check (Pre Feature Activation)

S T E P #	This procedure provides steps to perform needed health checks. Check off (√) each step as it is completed. Boxes have been provided for this purpose under each step number. If this procedure fails, contact My *Oracle* Support (MOS), and ask for assistance.	
1 ☐	**SOAM VIP GUI:** Login	Establish a GUI session on the SOAM server by using the VIP IP address of the SOAM server. Open the web browser and enter a URL of: `http://<Primary_SOAM_VIP_IP_Address>` Login as the ***guiadmin*** user: 
2 ☐	**NOAM VIP GUI:** Verify RBAR Folder is not Present	Under **Main Menu**, verify the RBAR folder is NOT present.

Procedure 3: Perform Health Check (Pre Feature Activation)

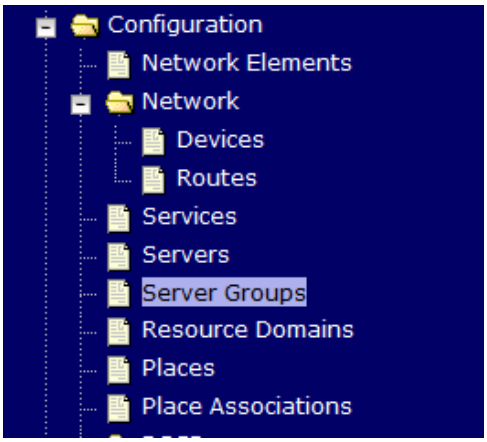
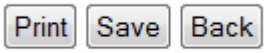
3 ☐	**NOAM VIP GUI:** Login	Establish a GUI session on the NOAM server by using the VIP IP address of the NOAM server. Open the web browser and enter a URL of: `http://<Primary_NOAM_VIP_IP_Address>` Login as the ***guiadmin*** user: 

Procedure 3: Perform Health Check (Pre Feature Activation)

3 ☐	**NOAM VIP GUI:** Verify Server Status	Navigate to **Main Menu -> Status & Manage -> Server**  Verify all Server Status is Normal (Norm) for: Alarm (Alm), Database (DB), Replication Status, and Processes (Proc). Do not proceed to feature activation if any of the above states are not Norm. If any of these are not Norm, corrective action should be taken to restore the non-Norm status to Norm before proceeding with the feature activation. If the Alarm (Alm) status is not Norm but only Minor alarms are present, it is acceptable to proceed with the feature activation. If there are Major or Critical alarms present, these alarms should be analyzed prior to proceeding with the feature activation. The activation may be able to proceed in the presence of certain Major or Critical alarms. Contact My *Oracle* Support (MOS) for assistance as necessary.

Appl State	Alm	DB	Reporting Status	Proc
Enabled	Norm	Norm	Norm	Norm
Enabled	Norm	Norm	Norm	Norm
Enabled	Norm	Norm	Norm	Norm
Enabled	Norm	Norm	Norm	Norm

Procedure 3: Perform Health Check (Pre Feature Activation)

4 ☐	**NOAM VIP GUI:** Verify Server Configuration	Navigate to **Main Menu -> Configuration -> Server Groups**  Verify the configuration data is correct for your network.
5 ☐	**NOAM VIP GUI:** Log Current Alarms	Navigate to **Main Menu -> Alarms & Events -> View Active**  Click on the **Report** button  **Save** or **Print** this report, keep copies for future reference. 

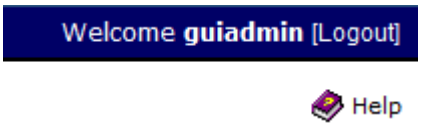
5.1.2 Activation Procedures

This section provides the detailed procedure steps of the feature activation execution. These procedures are executed inside a maintenance window.

5.1.3 Feature Activation

Detailed steps for RBAR feature activation are given in the procedure below.

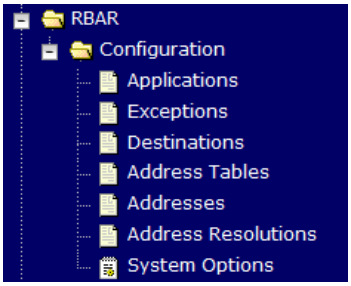
Procedure 4: Feature Activation

S T E P #	This procedure provides steps to Activate RBAR Check off (√) each step as it is completed. Boxes have been provided for this purpose under each step number. If this procedure fails, contact My *Oracle* Support (MOS), and ask for assistance.	
1 ☐	**NOAM/SOAM VIP GUI:** Logout	Logout of any active NOAM and/or SOAM GUI Sessions: 
2 ☐	**NOAM VIP:** Establish an SSH session	Establish an SSH session to the NOAM VIP. Login as ***admusr***.
3 ☐	**NOAM VIP:** Navigate to the Feature Activation Directory	Navigate to the feature activation directory by executing the following command: `$ cd /usr/TKLC/dsr/prod/maint/loaders/`

Procedure 4: Feature Activation

4 ☐	**NOAM VIP:** Execute the Feature Activation Script	Run the feature activation script by executing the following command:
		`$ ./featureActivateDeactivate`
		
		Choose **Activate**
		`You want to Activate or Deactivate the Feature :`
		`1.Activate`
		`2.Deactivate`
		
		`Enter your choice :`
		
		Choose **RBAR**
		`List of Feature you can Activate :`
		`1.CPA`
		`2.RBAR`
		`3.FABR`
		`4.Mediation`
		`5.LoadGen`
		`6.GLA`
		`7.MAP Interworking`
		
		`Enter the choice :`
		
		Choose the SOAM site for which the application will be activated:
		Note: As an alternative, you can also activate on all SOAM sites:
		`The Active SO server configured in the Topology are`
		`1. Jetta-SO-2`
		`2. ALL SOs`
		
		`Enter your choice on which SO you want to Activate or Deactivate the Feature :`
		
		Refer to **Section 7.1** for output Example.

Procedure 4: Feature Activation

5 ☐	**Active SOAM GUI:** Login	Establish a GUI session on the active SOAM server by using IP address of the SOAM server. Open the web browser and enter a URL of: `http://<Active_SOAM_IP_Address>` Login as the ***guiadmin*** user: 
6 ☐	**Active SOAM GUI:** Verify the RBAR Folder is Visible	Locate and verify the RBAR folder from Main Menu is visible and the configuration folder items are present 

Procedure 4: Feature Activation

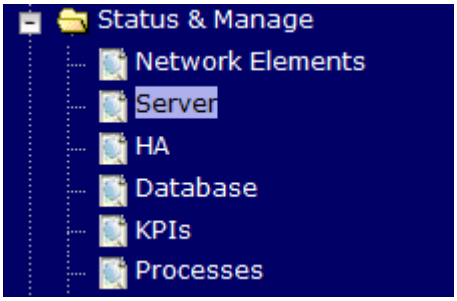
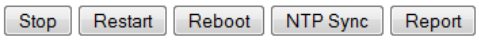
7 ☐	**Active SOAM GUI:** Verify Application Maintenance Screen is Visible	Verify the RBAR Application is present in the Application Status screen Navigate to **Main Menu -> Diameter -> Maintenance -> Applications**.  Verify RBAR status is uninitialized. The following data should be displayed: Admin State = Disabled Operational State = Unk Operational Reason =Unk Congestion Level = Unk
8 ☐	**Standby SOAM GUI:** Repeat Verification Steps	Repeat **Steps 5-7** for the Standby SOAM **Note:** If the verifications for the standby SOAM differ from the Active SOAM, stop and contact My Oracle Support (MOS)

9 ☐	**Spare SOAM GUI:** Verify and Activate	Repeat **Steps 5-7** for any spare SOAMs present.
		
		For DSR 5.1, 6.0, and 7.0, you will have to run the following command to activate RBAR on each spare SOAM:
		
		Note: For DSR 7.1, skip this step.
		
		`$ cd /usr/TKLC/dsr/prod/maint/loaders/activate`
		`$ ./load.rbarActivateBsourced`

Procedure 4: Feature Activation

10 ☐	**SOAM VIP GUI:** Login	Establish a GUI session on the SOAM server by using the VIP IP address of the SOAM server. Open the web browser and enter a URL of: `http://<Primary_SOAM_VIP_IP_Address>` Login as the ***guiadmin*** user: 

Procedure 4: Feature Activation

12 ☐	**SOAM VIP GUI:** Restart DA-MPs	Multiple iterations of this step may be executed during the feature activation procedure. This is dependent on the number of DA-MP servers within your system. Make a written record of the number of times the step was performed. It is recommended that no more than 50% of the DA-MPs be restarted at once. Navigate to **Main Menu -> Status & Manage -> Server**  Select the desired DA-MPs, you can use 'Ctrl' to select multiple DA-MPs at once. Click the **Restart** button.  Verify the Server changes to the Err state and wait until it returns to the Enabled/Norm state. Repeat for the additional DA-MPs.
13 ☐	**Active SOAM GUI:** Verify Application Maintenance Screen is Visible	Verify the RBAR Application is present in the Application Status screen Navigate to **Main Menu -> Diameter -> Maintenance -> Applications**.  Verify RBAR status is initialized. The following data should be displayed: Admin State = Disabled Operational State = Unavailable Operational Reason = Shutdown Congestion Level = Normal

5.2 POST-ACTIVATION PROCEDURES

5.2.1 Perform Health Check

This procedure is used to determine the health and status of the DSR release network and servers.

Procedure 5: Perform Health Check (Post-Feature Activation)

S T E P #		
	This procedure performs a post activation Health Check. Check off (√) each step as it is completed. Boxes have been provided for this purpose under each step number. If this procedure fails, contact My *Oracle* Support (MOS), and ask for assistance.	
1 ☐	**NOAM VIP GUI:** Login	Establish a GUI session on the NOAM server by using the VIP IP address of the NOAM server. Open the web browser and enter a URL of: `http://<Primary_NOAM_VIP_IP_Address>` Login as the ***guiadmin*** user: 

Procedure 5: Perform Health Check (Post-Feature Activation)

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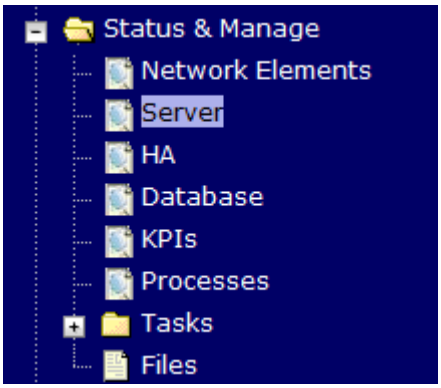
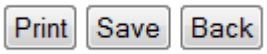
<td>2
☐</td>
<td>NOAM VIP GUI:
Verify Server Status</td>
<td>Navigate to Main Menu -> Status & Manage -> Server
 

Verify all Server Status is Normal (Norm) for:
Alarm (Alm), Database (DB), Replication Status, and Processes (Proc).

<table>
<tr><th>Appl State</th><th>Alm</th><th>DB</th><th>Reporting Status</th><th>Proc</th></tr>
<tr><td>Enabled</td><td>Norm</td><td>Norm</td><td>Norm</td><td>Norm</td></tr>
<tr><td>Enabled</td><td>Norm</td><td>Norm</td><td>Norm</td><td>Norm</td></tr>
<tr><td>Enabled</td><td>Norm</td><td>Norm</td><td>Norm</td><td>Norm</td></tr>
<tr><td>Enabled</td><td>Norm</td><td>Norm</td><td>Norm</td><td>Norm</td></tr>
</table>
</td>
</tr>
<tr>
<td>3
☐</td>
<td>NOAM VIP GUI:
Log Current Alarms</td>
<td>Navigate to Main Menu -> Alarms & Events -> View Active
 

Click on the Report button
 

Save or Print this report, keep copies for future reference.
 

Compare this alarm report with those gathered in the pre-activation procedures. Contact My Oracle Support (MOS) if needed.</td>
</tr>
</table>

6.0 FEATURE DEACTIVATION

Execute this section only if there is a problem and it is desired to revert back to the pre-activation version of the software. In general, as long as there are no Application Routing Rules using the RBAR application, it will have no impact on the system and does not need to be deactivated. The deactivation procedure will cause all the RBAR related configuration data to be removed. The crafts person must ensure that this is acceptable.

6.1 PRE-DEACTIVATION PROCEDURES

Before beginning the feature deactivation, complete the Pre-Deactivation procedure below.

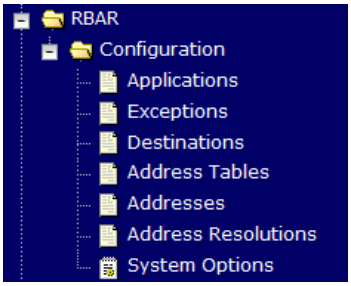
6.1.1 Perform Health Check

This procedure is used to determine the health and status of the DSR network and servers.

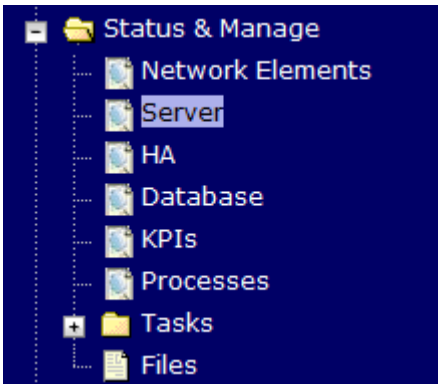
Procedure 6: Perform Health Check (Pre-Feature Deactivation)

S T E P #	This procedure performs a Health Check. Check off (√) each step as it is completed. Boxes have been provided for this purpose under each step number. If this procedure fails, contact My *Oracle* Support (MOS), and ask for assistance.

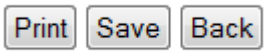
Procedure 6: Perform Health Check (Pre-Feature Deactivation)

1 ☐	**SOAM VIP GUI:** Login	Establish a GUI session on the SOAM server by using the VIP IP address of the SOAM server. Open the web browser and enter a URL of: `http://<Primary_SOAM_VIP_IP_Address>` Login as the ***guiadmin*** user: 
2 ☐	**SOAM VIP GUI:** Verify the RBAR Folder is Visible	Locate and verify the RBAR folder from Main Menu is visible and the configuration folder items are present  **Note:** It should only be present after feature activation, so if it is not present, then the feature is already deactivated and there is no need to complete this deactivation procedure.

Procedure 6: Perform Health Check (Pre-Feature Deactivation)

3 ☐	**NOAM VIP GUI:** Login	Establish a GUI session on the NOAM server by using the VIP IP address of the NOAM server. Open the web browser and enter a URL of: `http://<Primary_NOAM_VIP_IP_Address>` Login as the ***guiadmin*** user: 
4 ☐	**NOAM VIP GUI:** Verify Server Status	Navigate to **Main Menu -> Status & Manage -> Server**  Verify all Server Status is Normal (Norm) for: Alarm (Alm), Database (DB), Replication Status, and Processes (Proc). Appl State | Alm | DB | Reporting Status | Proc Enabled | Norm | Norm | Norm | Norm Enabled | Norm | Norm | Norm | Norm Enabled | Norm | Norm | Norm | Norm Enabled | Norm | Norm | Norm | Norm

Procedure 6: Perform Health Check (Pre-Feature Deactivation)

5 ☐	**NOAM VIP GUI:** Log Current Alarms	Navigate to **Main Menu -> Alarms & Events -> View Active**  Click on the **Report** button  **Save** or **Print** this report, keep copies for future reference.  Compare this alarm report with those gathered in the pre-activation procedures. Contact My Oracle Support (MOS) if needed.

6.2 DEACTIVATION PROCEDURES

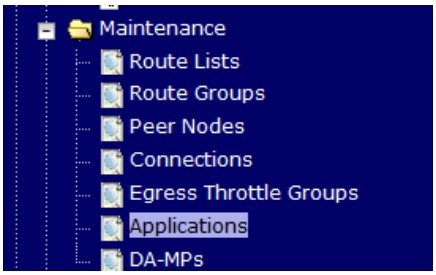
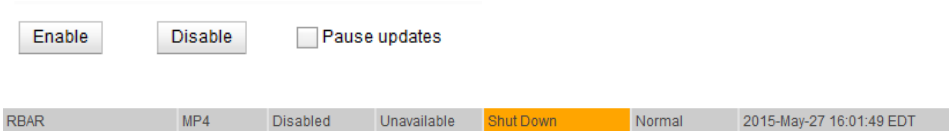
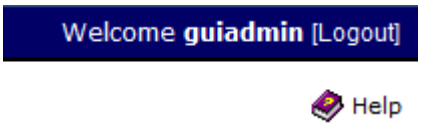
6.2.1 Feature Deactivation

This section provides the detailed steps of the RBAR deactivation procedures

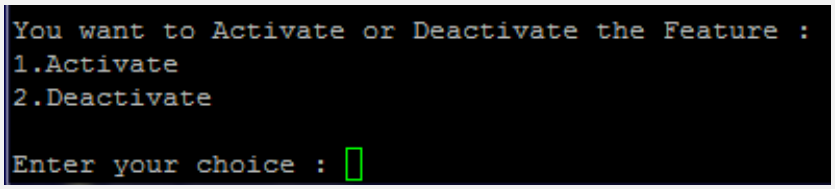
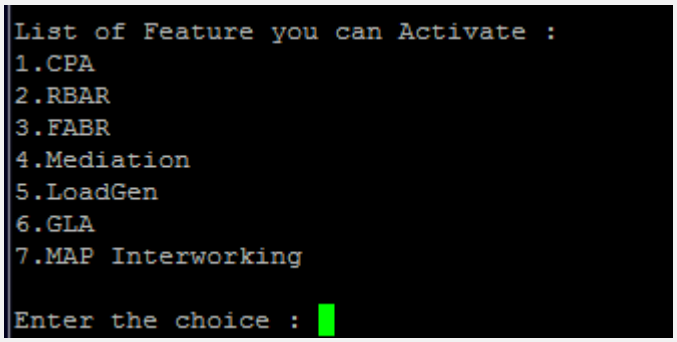
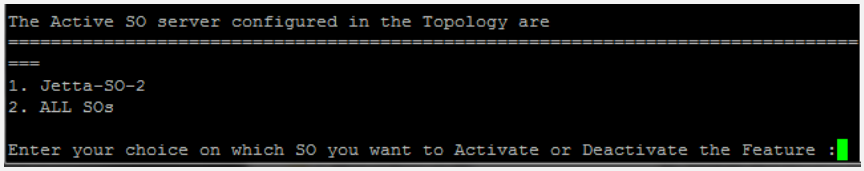
Procedure 7: Feature Deactivate

S T E P #	This procedure provides steps to Activate RBAR. Check off (√) each step as it is completed. Boxes have been provided for this purpose under each step number. If this procedure fails, contact My *Oracle* Support (MOS), and ask for assistance.	
1 ☐	**SOAM VIP GUI:** Login	Establish a GUI session on the SOAM server by using the VIP IP address of the SOAM server. Open the web browser and enter a URL of: `http://<Primary_SOAM_VIP_IP_Address>` Login as the ***guiadmin*** user: 

Procedure 7: Feature Deactivate

2 ☐	**Active SOAM GUI:** Disable RBAR Application	Navigate to **Main Menu -> Diameter -> Maintenance -> Applications**  Select the RBAR applications to disable. Click the **Disable** button. 
3 ☐	**NOAM/SOAM VIP GUI:** Logout	Logout of any active NOAM and/or SOAM GUI Sessions: 
4 ☐	**NOAM VIP:** Establish an SSH session	Establish an SSH session to the NOAM VIP. Login as ***admusr***.
5 ☐	**NOAM VIP:** Navigate to the Feature Activation Directory	Navigate to the feature activation directory by executing the following command: `$ cd /usr/TKLC/dsr/prod/maint/loaders/`

Procedure 7: Feature Deactivate

6 ☐	**NOAM VIP:** Execute the Feature Activation Script	Run the feature activation script by executing the following command: `$ ./featureActivateDeactivate` Choose **Deactivate**  Choose **RBAR**  Choose the SOAM site for which the application will be deactivated: **Note:** As an alternative, you can also deactivate on all SOAM sites:  Refer to **Section 7.2** for output Example.

Procedure 7: Feature Deactivate

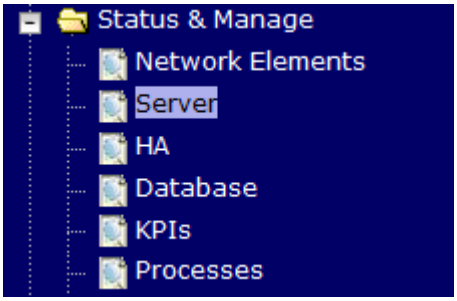
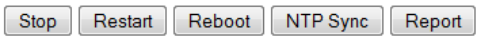
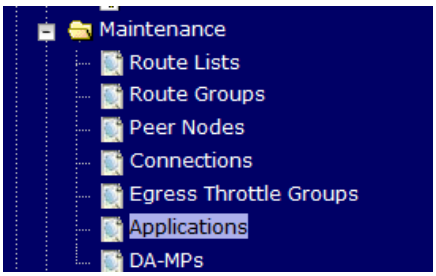
7 ☐	**Active SOAM GUI:** Login	Establish a GUI session on the active SOAM server by using IP address of the SOAM server. Open the web browser and enter a URL of: `http://<Active_SOAM_IP_Address>` Login as the ***guiadmin*** user: 
8 ☐	**Active SOAM GUI:** Verify the RBAR Folder is not visible	Verify the RBAR folder is not visible under Main Menu.
9 ☐	**Standby SOAM GUI:** Repeat Verification Steps	Repeat **Steps 7-8** for the Standby SOAM **Note:** If the verifications for the standby SOAM differ from the Active SOAM, stop and contact My Oracle Support (MOS)

10
☐
	Spare SOAM GUI: Verify and Deactivate	Repeat **Steps 7-8** for any spare SOAMs present.
		
		For DSR 5.1, 6.0, and 7.0, you will have to run the following command to Deactivate RBAR on each spare SOAM:
		
		Note: For DSR 7.1, skip this step.
		
		`$ cd /usr/TKLC/dsr/prod/maint/loaders/deactivate`
		`$ ./load.rbarDeactivateBsourced`

Procedure 7: Feature Deactivate

11 ☐	**SOAM VIP GUI:** Login	Establish a GUI session on the SOAM server by using the VIP IP address of the SOAM server. Open the web browser and enter a URL of: `http://<Primary_SOAM_VIP_IP_Address>` Login as the ***guiadmin*** user: 

Procedure 7: Feature Deactivate

12 ☐	**SOAM VIP GUI:** Restart DA-MPs	Multiple iterations of this step may be executed during the feature activation procedure. This is dependent on the number of DA-MP servers within your system. Make a written record of the number of times the step was performed. It is recommended that no more than 50% of the DA-MPs be restarted at once. Navigate to **Main Menu -> Status & Manage -> Server**  Select the desired DA-MPs, you can use 'Ctrl' to select multiple DA-MPs at once. Click the **Restart** button.  Verify the Server changes to the Err state and wait until it returns to the Enabled/Norm state. Repeat for the additional DA-MPs.
13 ☐	**SOAM VIP GUI:** Verify Maintenance Screen	Navigate to **Main Menu -> Diameter -> Maintenance -> Applications**  Verify the RBAR application is not present.

6.3 POST-DEACTIVATION PROCEDURES

To complete a deactivation, complete the Post-Deactivation procedure below.

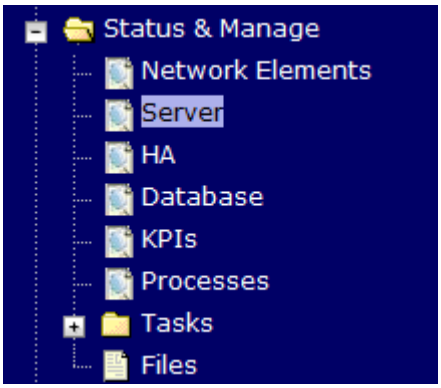
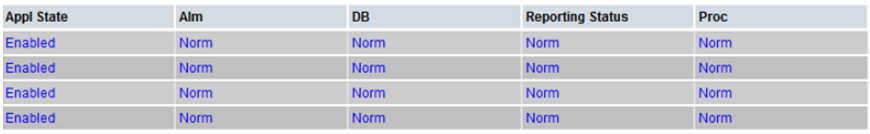
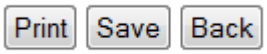
6.3.1 Perform Health Check

This procedure is used to determine the health and status of the network and servers.

Procedure 8: Perform Health Check (Post-Feature Deactivation)

S T E P #	This procedure performs a post activation Health Check. Check off (√) each step as it is completed. Boxes have been provided for this purpose under each step number. If this procedure fails, contact My *Oracle* Support (MOS), and ask for assistance.	
1 ☐	**NOAM VIP GUI:** Login	Establish a GUI session on the NOAM server by using the VIP IP address of the NOAM server. Open the web browser and enter a URL of: `http://<Primary_NOAM_VIP_IP_Address>` Login as the ***guiadmin*** user: 

Procedure 8: Perform Health Check (Post-Feature Deactivation)

2 ☐	**NOAM VIP GUI:** Verify Server Status	Navigate to **Main Menu -> Status & Manage -> Server**  Verify all Server Status is Normal (Norm) for: Alarm (Alm), Database (DB), Replication Status, and Processes (Proc). 
3 ☐	**NOAM VIP GUI:** Log Current Alarms	Navigate to **Main Menu -> Alarms & Events -> View Active**  Click on the **Report** button  **Save** or **Print** this report, keep copies for future reference.  Compare this alarm report with those gathered in the pre-Deactivation procedures. Contact My Oracle Support (MOS) if needed.

7.0 ENGINEERING NOTES

FIPS integrity verification test failed: In DSR 7.1+, you may see 'FIPs integrity verification test failed' message displayed during the activation/Deactivation output, this message is expected and harmless.

7.1 SAMPLE OUTPUT OF ACTIVATION (ACTIVE NOAM)

```
Run script to Activate rbar Feature


====================================S-T-A-R-T=====================================



================================================================================
Execution of Activation/Deactivation Process Starts
================================================================================
Starting Activation/Deactivation process....
Executing /usr/TKLC/dsr/prod/maint/loaders/activate/load.rbarActivateAsourced script on NO1
================================================================================
Add RBAR KPI group
================================================================================
KPI_Group=RBAR
Visibility=VIS_SO
================================
================================================================================
Add RBAR Measurement groups
================================================================================
Meas_Group=Address Resolution Performance
Visibility=VIS_SO
================================
Meas_Group=Address Resolution Exception
Visibility=VIS_SO
================================
================================================================================
Add RBAR GUI Configuration Permissions.
================================================================================
_appid=17
group_id=7000
group_name=RBAR Configuration Permissions
================================
================================================================================
Starting to Execute the Loaders on Mate server
```

```
================================================================================
Executing /usr/TKLC/dsr/prod/maint/loaders/activate/load.rbarActivateAsourced script on NO2
================================================================================
FIPS integrity verification test failed.
KPI_Group=RBAR
Visibility=VIS_SO
==================================
Meas_Group=Address Resolution Performance
Visibility=VIS_SO
==================================
Meas_Group=Address Resolution Exception
Visibility=VIS_SO
==================================
================================================================================
Add RBAR GUI Configuration Permissions.
================================================================================
_appid=17
group_id=7000
group_name=RBAR Configuration Permissions
==================================
FIPS integrity verification test failed.
================================================================================
The Active SO server configured in the Topology are
================================================================================
1. SO1
2. ALL SOs

Enter your choice on which SO you want to Activate or Deactivate the Feature :1


================================================================================
This is a 3 Tier Setup , So run the B sourced loaders on SO server : SO1
Executing /usr/TKLC/dsr/prod/maint/loaders/activate/load.rbarActivateBsourced script on SO1
FIPS integrity verification test failed.
================================================================================
Current server is HA ACTIVE
================================================================================
================================================================================
Add RBAR to DsrApplication. If already present, do not update - display a
warning instead
================================================================================
================================================================================
Verify that RBAR is in the table
================================================================================
id=3
name=RBAR
unavailableAction=ContinueRouting
avpInsertion=Yes
shutdownMode=Forced
shutdownTimer=0
resultCode=3002
```

```
vendorId=0
errorString=RBAR Unavailable
resExhResultCode=3004
resExhVendorId=0
resExhErrorString=RBAR Resource Exhausted
routeListId=-1
realm=
fqdn=
mcl=0
=================================
================================================================================
Add Common DSR Application measurements for RBAR.
================================================================================
repgrp=DSR Application Exception
measid=10302
subgrp=
=================================
repgrp=DSR Application Exception
measid=10303
subgrp=
=================================
repgrp=DSR Application Performance
measid=10300
subgrp=
=================================
repgrp=DSR Application Performance
measid=10301
subgrp=
=================================
repgrp=DSR Application Performance
measid=10304
subgrp=
=================================
repgrp=DSR Application Performance
measid=10305
subgrp=
=================================
repgrp=DSR Application Performance
measid=10350
subgrp=
=================================
================================================================================
Add RBAR GUI Configuration Permissions.
================================================================================
_appid=17
group_id=7000
group_name=RBAR Configuration Permissions
=================================
FIPS integrity verification test failed.
================================================================================
```

```
Executing the Loaders and Clearing Cache on Standby SO servers.
================================================================================
================================================================================
Starting to Execute the Loaders on Mate server
================================================================================
Executing /usr/TKLC/dsr/prod/maint/loaders/activate/load.rbarActivateBsourced script on SO2
================================================================================
FIPS integrity verification test failed.
================================================================================
Current server is HA STANDBY
================================================================================
================================================================================
Verify that RBAR is in the table
================================================================================
id=3
name=RBAR
unavailableAction=ContinueRouting
avpInsertion=Yes
shutdownMode=Forced
shutdownTimer=0
resultCode=3002
vendorId=0
errorString=RBAR Unavailable
resExhResultCode=3004
resExhVendorId=0
resExhErrorString=RBAR Resource Exhausted
routeListId=-1
realm=
fqdn=
mcl=0
==================================
================================================================================
Add Common DSR Application measurements for RBAR.
================================================================================
repgrp=DSR Application Exception
measid=10302
subgrp=
==================================
repgrp=DSR Application Exception
measid=10303
subgrp=
==================================
repgrp=DSR Application Performance
measid=10300
subgrp=
==================================
repgrp=DSR Application Performance
measid=10301
subgrp=
==================================
```

```
repgrp=DSR Application Performance
measid=10304
subgrp=
================================
repgrp=DSR Application Performance
measid=10305
subgrp=
================================
repgrp=DSR Application Performance
measid=10350
subgrp=
================================
================================================================================
Add RBAR GUI Configuration Permissions.
================================================================================
_appid=17
group_id=7000
group_name=RBAR Configuration Permissions
================================
FIPS integrity verification test failed.
================================================================================
Do you want to activate/deactivate this feature on another System OAM Server[Y/N] : n
[admusr@NO1 loaders]$
```

7.2 SAMPLE OUTPUT OF DE-ACTIVATION (ACTIVE NOAM)

```
====================================S-T-A-R-T=====================================



================================================================================
Execution of Activation/Deactivation Process Starts
================================================================================
Starting Activation/Deactivation process....
================================================================================
The Active SO server configured in the Topology are
================================================================================
1. SO1
2. ALL SOs

Enter your choice on which SO you want to Activate or Deactivate the Feature :1
Verifying feature is activated or not on SO1
FIPS integrity verification test failed.
================================================
RBAR is activated on SO1
================================================
Executing /usr/TKLC/dsr/prod/maint/loaders/deactivate/load.rbarDeactivateAsourced script on NO1
  === deleted 1 records ===
  === deleted 1 records ===
  === deleted 1 records ===
```

```
================================================================================
Removing RBAR GUI permissions.
================================================================================
  === deleted 1 records ===
================================================================================
Starting to Execute the Loaders on Mate server
================================================================================
Executing /usr/TKLC/dsr/prod/maint/loaders/deactivate/load.rbarDeactivateAsourced script on NO2
================================================================================
FIPS integrity verification test failed.
================================================================================
Removing RBAR GUI permissions.
================================================================================
  === deleted 1 records ===
FIPS integrity verification test failed.


================================================================================
This is a 3 Tier Setup , So run the B sourced loaders on SO server : SO1
Executing /usr/TKLC/dsr/prod/maint/loaders/deactivate/load.rbarDeactivateBsourced script on SO1
FIPS integrity verification test failed.
================================================================================
Current server is HA ACTIVE
================================================================================
  === deleted 0 records ===
================================================================================
Verify there are no dsrAppId=3 [RBAR] entries
================================================================================
   id priority                            name                action ansResultCode
errorMessage   vendorId   dsrAppId appRouteTableId gxPrimeRequest               birthTime                   mcl

    0        1                      Gx_ART_Rule            RouteToAppl             0
0          6               1             No 05/18/2015 16:28:13.000                  27
  === deleted 2 records ===
================================================================================
Verify dsrAppId=3 [RBAR] are not present in the DsrApplicationPerMp table
================================================================================
  === deleted 1 records ===
================================================================================
Verify RBAR is not present in the DsrApplication table
================================================================================
  === deleted 1 records ===
  === deleted 1 records ===
  === deleted 1 records ===
  === deleted 1 records ===
  === deleted 1 records ===
  === deleted 1 records ===
  === deleted 1 records ===
  === deleted 1 records ===
================================================================================
Removing RBAR GUI permissions.
================================================================================
  === deleted 1 records ===
FIPS integrity verification test failed.
```

```
================================================================================

Executing the Loaders and Clearing Cache on Standby SO servers.

================================================================================

================================================================================

Starting to Execute the Loaders on Mate server

================================================================================

Executing /usr/TKLC/dsr/prod/maint/loaders/deactivate/load.rbarDeactivateBsourced script on SO2

================================================================================

FIPS integrity verification test failed.

================================================================================

Current server is HA STANDBY

================================================================================

================================================================================

Verify there are no dsrAppId=3 [RBAR] entries

================================================================================

   id priority                              name                action ansResultCode
errorMessage   vendorId   dsrAppId appRouteTableId gxPrimeRequest               birthTime                  mcl

    0        1                       Gx_ART_Rule            RouteToAppl             0
0          6               1             No 05/18/2015 16:28:13.000                  27

================================================================================

Verify dsrAppId=3 [RBAR] are not present in the DsrApplicationPerMp table

================================================================================

================================================================================

Verify RBAR is not present in the DsrApplication table

================================================================================

  === deleted 1 records ===

  === deleted 1 records ===

  === deleted 1 records ===

  === deleted 1 records ===

  === deleted 1 records ===

  === deleted 1 records ===

  === deleted 1 records ===

================================================================================

Removing RBAR GUI permissions.

================================================================================

  === deleted 1 records ===

FIPS integrity verification test failed.

================================================================================

Do you want to activate/deactivate this feature on another System OAM Server[Y/N] : n
```

APPENDIX A. MY *ORACLE* SUPPORT (MOS)

MOS (https://support.oracle.com) is your initial point of contact for all product support and training needs. A representative at Customer Access Support (CAS) can assist you with MOS registration.

Call the CAS 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, there are multiple layers of menus selections. Make the selections in the sequence shown below on the Support telephone menu:

1. For the first set of menu options, select `2,` "New Service Request". You will hear another set of menu options.
2. In this set of menu options, select `3,` "Hardware, Networking and Solaris Operating System Support". A third set of menu options begins.
3. In the third set of options, select `2,` " Non-technical issue". Then you will be connected to a live agent who can assist you with MOS registration and provide Support Identifiers. Simply mention you are a Tekelec Customer new to MOS.