Oracle Communications Diameter Signaling Router FABR feature activation procedure, Release 5.1/6.0/7.0/7.1
Copyright © 2015 Oracle and/or its affiliates. All rights reserved.

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish, or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

If this is software or related documentation that is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. Government, the following notice is applicable:

U.S. GOVERNMENT END USERS: Oracle programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, delivered to U.S. Government end users are “commercial computer software” pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, use, duplication, disclosure, modification, and adaptation of the programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, shall be subject to license terms and license restrictions applicable to the programs. No other rights are granted to the U.S. Government.

This software or hardware is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use this software or hardware in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy, and other measures to ensure its safe use. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software or hardware in dangerous applications.

Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

Intel and Intel Xeon are trademarks or registered trademarks of Intel Corporation. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. AMD, Opteron, the AMD logo, and the AMD Opteron logo are trademarks or registered trademarks of Advanced Micro Devices. UNIX is a registered trademark of The Open Group.

This software or hardware and documentation may provide access to or information on content, products, and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services.

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.

See more information on MOS in the Appendix section.
# TABLE OF CONTENTS

TABLE OF CONTENTS .......................................................................................................................... 3

LIST OF TABLES ................................................................................................................................. 5

LIST OF FIGURES ............................................................................................................................... 5

LIST OF PROCEDURES .......................................................................................................................... 6

## 1.0 INTRODUCTION .......................................................................................................................... 7

1.1 PURPOSE AND SCOPE .................................................................................................................. 7

1.2 REFERENCES ................................................................................................................................. 7

1.3 ACRONYMS ................................................................................................................................... 8

1.4 TERMINOLOGY .............................................................................................................................. 9

1.5 GENERAL PROCEDURE STEP FORMAT ....................................................................................... 9

## 2.0 FEATURE ACTIVATION OVERVIEW ...................................................................................... 10

2.1 DEFINITION OF ACTIVATION FOR THE FABR FEATURE ......................................................... 10

2.2 FEATURE ACTIVATION OVERVIEW ......................................................................................... 11

2.2.1 Pre-Feature Activation Overview ...................................................................................... 11

2.2.2 Feature Activation Execution Overview .............................................................................. 12

2.2.3 Post-Feature Activation Overview ..................................................................................... 13

## 3.0 FEATURE DEACTIVATION OVERVIEW .............................................................................. 13

3.1.1 Pre-Feature Deactivation Overview .................................................................................. 13

3.1.2 Feature Deactivation Execution Overview ........................................................................ 14

3.1.3 Post-Feature Deactivation Overview ................................................................................ 14

## 4.0 FEATURE ACTIVATION PREPARATION .............................................................................. 15

4.1 SYSTEM TOPOLOGY CHECK ..................................................................................................... 15

4.2 PERFORM HEALTH CHECK ..................................................................................................... 18

## 5.0 FEATURE ACTIVATION ............................................................................................................ 21

5.1 PRE-ACTIVATION PROCEDURES ............................................................................................... 22

5.1.1 Perform Health Check ........................................................................................................ 22

5.1.2 Activation Procedures .......................................................................................................... 26

5.1.3 Feature Activation ................................................................................................................ 26

5.2 POST-ACTIVATION PROCEDURES .......................................................................................... 33

5.2.1 Perform Health Check ........................................................................................................ 33

## 6.0 FEATURE DEACTIVATION ...................................................................................................... 35

6.1 PRE-DEACTIVATION PROCEDURES ......................................................................................... 35

6.1.1 Perform Health Check ........................................................................................................ 35

6.2 DEACTIVATION PROCEDURES .............................................................................................. 36

6.2.1 Feature Deactivation ......................................................................................................... 36

6.3 POST-DEACTIVATION PROCEDURES .................................................................................... 45

6.3.1 Perform Health Check ........................................................................................................ 45

## 7.0 ENGINEERING NOTES ........................................................................................................... 48

7.1 SAMPLE OUTPUT OF ACTIVATION (ACTIVE NOAM) ............................................................. 48

7.2 SAMPLE OUTPUT OF DEACTIVATION (ACTIVE NOAM) ..................................................... 50
LIST OF TABLES

TABLE 1. ACRONYMS ..................................................................................................................8
TABLE 2. TERMINOLOGY ..............................................................................................................9
FIGURE 1. EXAMPLE OF A PROCEDURE STEP ...........................................................................9
TABLE 4. PRE-FEATURE ACTIVATION OVERVIEW .....................................................................11
TABLE 5. FEATURE ACTIVATION EXECUTION OVERVIEW .........................................................12
TABLE 6. POST-FEATURE ACTIVATION OVERVIEW ......................................................................13
TABLE 7. PRE-FEATURE DEACTIVATION OVERVIEW .................................................................13
TABLE 8. FEATURE DEACTIVATION OVERVIEW .........................................................................14
TABLE 9. POST-FEATURE DEACTIVATION OVERVIEW ...............................................................14
PROCEDURE 1: SYSTEM TOPOLOGY CHECK .............................................................................15
PROCEDURE 2: PERFORM HEALTH CHECK (FEATURE ACTIVATION PREPARATION) ............18
PROCEDURE 3: PERFORM HEALTH CHECK (PRE FEATURE ACTIVATION) ................................22
PROCEDURE 4: FEATURE ACTIVATION .......................................................................................26
PROCEDURE 5: PERFORM HEALTH CHECK (POST-FEATURE ACTIVATION) .........................33
PROCEDURE 6: PERFORM HEALTH CHECK (PRE-FEATURE DEACTIVATION) .......................36
PROCEDURE 7: FEATURE DEACTIVATE .....................................................................................39
PROCEDURE 8: PERFORM HEALTH CHECK (POST-FEATURE DEACTIVATION) .......................45

LIST OF FIGURESTABLE 1. ACRONYMS ...................................................................................8
TABLE 2. TERMINOLOGY ..............................................................................................................9
FIGURE 1. EXAMPLE OF A PROCEDURE STEP ...........................................................................9
TABLE 4. PRE-FEATURE ACTIVATION OVERVIEW .....................................................................11
TABLE 5. FEATURE ACTIVATION EXECUTION OVERVIEW .........................................................12
TABLE 6. POST-FEATURE ACTIVATION OVERVIEW ......................................................................13
TABLE 7. PRE-FEATURE DEACTIVATION OVERVIEW .................................................................13
TABLE 8. FEATURE DEACTIVATION OVERVIEW .........................................................................14
TABLE 9. POST-FEATURE DEACTIVATION OVERVIEW ...............................................................14
PROCEDURE 1: SYSTEM TOPOLOGY CHECK .............................................................................15
PROCEDURE 2: PERFORM HEALTH CHECK (FEATURE ACTIVATION PREPARATION) ............18
PROCEDURE 3: PERFORM HEALTH CHECK (PRE FEATURE ACTIVATION) ................................22
PROCEDURE 4: FEATURE ACTIVATION .......................................................................................26
PROCEDURE 5: PERFORM HEALTH CHECK (POST-FEATURE ACTIVATION) .........................33
PROCEDURE 6: PERFORM HEALTH CHECK (PRE-FEATURE DEACTIVATION) .......................36
PROCEDURE 7: FEATURE DEACTIVATE ................................................................. 39
PROCEDURE 8: PERFORM HEALTH CHECK (POST-FEATURE DEACTIVATION) ......................................... 45

LIST OF PROCEDURES
TABLE 1. ACRONYMS ................................................................................. 8
TABLE 2. TERMINOLOGY ........................................................................... 9
FIGURE 1. EXAMPLE OF A PROCEDURE STEP ........................................... 9
TABLE 4. PRE-FEATURE ACTIVATION OVERVIEW ...................................... 11
TABLE 5. FEATURE ACTIVATION EXECUTION OVERVIEW ........................... 12
TABLE 6. POST-FEATURE ACTIVATION OVERVIEW ..................................... 13
TABLE 7. PRE-FEATURE DEACTIVATION OVERVIEW .................................... 13
TABLE 8. FEATURE DEACTIVATION OVERVIEW ......................................... 14
TABLE 9. POST-FEATURE DEACTIVATION OVERVIEW ................................. 14
PROCEDURE 1: SYSTEM TOPOLOGY CHECK ............................................. 15
PROCEDURE 2: PERFORM HEALTH CHECK (FEATURE ACTIVATION PREPARATION) ............................................. 18
PROCEDURE 3: PERFORM HEALTH CHECK (PRE FEATURE ACTIVATION) ......................................................... 22
PROCEDURE 4: FEATURE ACTIVATION .......................................................... 26
PROCEDURE 5: PERFORM HEALTH CHECK (POST-FEATURE ACTIVATION) .......................................................... 33
PROCEDURE 6: PERFORM HEALTH CHECK (PRE-FEATURE DEACTIVATION) ......................................................... 36
PROCEDURE 7: FEATURE DEACTIVATE ......................................................... 39
PROCEDURE 8: PERFORM HEALTH CHECK (POST-FEATURE DEACTIVATION) ......................................................... 45
1.0 INTRODUCTION

1.1 PURPOSE AND SCOPE

This document defines the procedure that is executed to activate the Full-Address Based Resolution (FABR) 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 FABR feature is activated during a planned maintenance window to minimize the impact to network traffic.

This document also provides a procedure to deactivate FABR after it has been activated. Please see Section 3.0 for a discussion of deactivation.

Configuration of FABR and ComAgent following successful activation is beyond the scope of this document. After successful activation, the crafts person is expected to configure ComAgent and FABR in that order for proper operation of FABR by following [1].

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 FABR feature is activated at a later time.

1.2 REFERENCES

### 1.3 ACRONYMS

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>BNS</td>
<td>Broadband Networking Solutions</td>
</tr>
<tr>
<td>DA-MP</td>
<td>Diameter Agent Message Processor</td>
</tr>
<tr>
<td>DB</td>
<td>Database</td>
</tr>
<tr>
<td>DP</td>
<td>Data Processor</td>
</tr>
<tr>
<td>DSR</td>
<td>Diameter Signaling Router</td>
</tr>
<tr>
<td>FABR</td>
<td>Full-Address Based Resolution</td>
</tr>
<tr>
<td>FOA</td>
<td>First Office Application</td>
</tr>
<tr>
<td>GUI</td>
<td>Graphical User Interface</td>
</tr>
<tr>
<td>HA</td>
<td>High Availability</td>
</tr>
<tr>
<td>IMI</td>
<td>Internal Management Interface</td>
</tr>
<tr>
<td>IP</td>
<td>Internet Protocol</td>
</tr>
<tr>
<td>MP</td>
<td>Message Processing or Message Processor</td>
</tr>
<tr>
<td>NE</td>
<td>Network Element</td>
</tr>
<tr>
<td>NOAM</td>
<td>Network OAM</td>
</tr>
<tr>
<td>OAM</td>
<td>Operations, Administration and Maintenance</td>
</tr>
<tr>
<td>SDS</td>
<td>Subscriber Database Server</td>
</tr>
<tr>
<td>SOAM</td>
<td>System OAM</td>
</tr>
<tr>
<td>SSH</td>
<td>Secure Shell</td>
</tr>
<tr>
<td>UI</td>
<td>User Interface</td>
</tr>
<tr>
<td>VIP</td>
<td>Virtual IP</td>
</tr>
<tr>
<td>VPN</td>
<td>Virtual Private Network</td>
</tr>
<tr>
<td>XMI</td>
<td>External Management Interface</td>
</tr>
</tbody>
</table>
1.4 TERMINOLOGY

Table 2. Terminology

<table>
<thead>
<tr>
<th>Communication Agent</th>
<th>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.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ComAgent</td>
<td>Same as Communication Agent</td>
</tr>
<tr>
<td>SOAM</td>
<td>System Operations and Maintenance</td>
</tr>
</tbody>
</table>

1.5 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).

*Each step has a checkbox for every command within the step that the technician should check to keep track of the progress of the procedure.*

*The title box describes the operations to be performed during that step.*

*Each command that the technician is to enter is in 10 point bold Courier font.*

---

<table>
<thead>
<tr>
<th>5</th>
<th>ServerX: Connect to the console of the server</th>
<th>Establish a connection to the server using cu on the terminal server/console.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td><code>$ cu -l /dev/ttyS7</code></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>5</th>
<th>ServerX: Connect to the console of the server</th>
<th>Establish a connection to the server using cu on the terminal server/console.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td><code>$ cu -l /dev/ttyS7</code></td>
</tr>
</tbody>
</table>

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 FABR FEATURE

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

The main components of a FABR system include the FABR (DSR) application, the subscriber database (hosted by the DP/SDS system that supports one or more DPs), and finally the ComAgent which provides reliable connectivity and load sharing of multiple DP servers from FABR application.

ComAgent is a component which is also used by other features to enable connectivity to servers required by such features. Hence ComAgent, as a component, is not unique to FABR. However certain aspects of this component are utilized by FABR to provide connectivity to the DP servers. Configuration/provisioning of these aspects of ComAgent is beyond the scope of this document. However the activation procedure will initialize the ComAgent component in such a way that it will become possible to further configure/provision this component for use by FABR.

The configuration and setup of the DP/SDS is beyond the scope of this document, the configuration and setup of FABR (DSR) application and ComAgent (on DSR) post activation is beyond the scope of this document.

All software required to run FABR is available by default as part of a DSR release installation or upgrade (This includes the ComAgent libraries and GUI/OAM code required to configure communication with the subscriber database). 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 FABR feature activation, there are no FABR menu items visible on the SOAM GUI, and there is no FABR-related processing taking place on the DA-MP(s).

All ComAgent-related menu items are present on the NOAM GUI, allowing full ComAgent configuration and provisioning. The ComAgent managed objects are under the “Communication Agent” folder on the GUI menu. For the ComAgent, this means that the top level “Communication Agent” folder is visible on the Main Menu, i.e., the ComAgent “Configuration” screens (Remote Servers, Connection Groups, and Routed Services), and the ComAgent “Maintenence” screens (Connection Status, Routed Services Status, HA Services Status) are visible.

After feature activation, all selectable FABR menu items are present on the SOAM GUI, allowing full FABR configuration and provisioning. Specifically, for FABR application, the top-level FABR folder is visible on the Main Menu, and a new entry is added to the Diameter->Maintenance->Applications table, showing FABR and its state. After successful feature activation, a Connection Group named “DpSvcGroup” will be added, to the Connection Groups screen, a Routed Service named “DpService” will be added to the Routed Services screen and will be mapped to use the “DpSvcGroup” Connection Group at default priority 10.
After activation:

The DA-MP(s) are prepared to act on FABR and ComAgent configuration and provisioning information entered at and replication from the NOAM (in case of comAgent configuration/provisioning) and SOAM (in case of FABR configuration/provisioning).

Important: once the FABR feature is activated, it is not automatically enabled. Activation simply means the mechanism for provisioning FABR behavior is in place. But the DA-MP(s) will act on FABR provisioning information only after FABR has been enabled (via the Diameter->Maintenance->Applications screen). FABR should not be enabled until after the appropriate provisioning data has been entered. FABR provisioning is beyond the scope of this document. Further more, for proper operation of FABR, Communication Agent and FABR application assumes that the Remote Servers IP addresses are routable/reachable. However these networking setup/concerns are beyond the scope of the activation procedure.

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

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Elapsed Time (Hours: Minutes)</th>
<th>Activity</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This Step</td>
<td>Cum.</td>
<td>Feature Activation Execution</td>
</tr>
</tbody>
</table>
| Perform Health Check       | 0:01-0:05 | 0:01-0:05 | Verify DSR Release.  
                           | (Procedure 3) |                               | Verify proper FABR feature state.  
                           |                      |                               | Verify Server status.  
                           |                      |                               | Log all current alarms.  |
| Feature Activation         | 0:10-0:40 | 0:11-0:50 | Log out of NOAM/SOAM GUI.  
                           | (Procedure 4) |                               | 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 FABR Folder.  
                           |                      |                               | Verify Maintenance screen.  
                           |                      |                               | Log into NOAM GUI.  
                           |                      |                               | Restart each active DA-MP server.  
                           |                      |                               | Verify Maintenance screen.  
                           |                      |                               | Close SSH connections to NOAM.  |

FABR 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>
<thead>
<tr>
<th>Procedure</th>
<th>Elapsed Time (Hours: Minutes)</th>
<th>Activity</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This Step</td>
<td>Cum.</td>
<td>Feature Activation Completion</td>
</tr>
<tr>
<td>Perform Health Check (Procedure 5)</td>
<td>0:01-0:05</td>
<td>0:01-0:05</td>
<td>• Verify Server status.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Log all current alarms.</td>
</tr>
</tbody>
</table>

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>
<thead>
<tr>
<th>Procedure</th>
<th>Elapsed Time (Hours or Minutes)</th>
<th>Activity</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This Step</td>
<td>Cum.</td>
<td>Deactivation Procedures</td>
</tr>
<tr>
<td>Perform Health Check (Procedure 6)</td>
<td>0:01-0:05</td>
<td>0:01-0:05</td>
<td>• Verify DSR Release.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Verify proper FABR feature state.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Verify server status.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Log current alarms.</td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Elapsed Time (Hours or Minutes)</th>
<th>Activity</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This Step</td>
<td>Cum.</td>
<td>Deactivation Procedures</td>
</tr>
<tr>
<td>Deactivation Setup</td>
<td>0:10-0:30</td>
<td>0:10-0:30</td>
<td>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.</td>
</tr>
<tr>
<td>Deactivation (Procedure 7)</td>
<td>00:10-00:40</td>
<td>0:20-1:15</td>
<td>• Log out of Active NOAM/SOAM GUI.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• SSH into active NOAM.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Log in as admusr</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Change directory to /usr/TKLC/dsr/prod/maint/loaders/*</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Execute the feature deactivation script.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Log into NOAM Or SOAM GUI</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Verify the FABR folder.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Log into NOAM GUI</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Restart each active DA-MP server.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Verify Maintenance screen.</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Elapsed Time (Hours or Minutes)</th>
<th>Activity</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This Step</td>
<td>Cum.</td>
<td>Deactivation Procedures</td>
</tr>
<tr>
<td>Perform Health Check</td>
<td>0:01-0:05</td>
<td>0:01-0:05</td>
<td>• Verify Server status.</td>
</tr>
<tr>
<td>(Procedure 8)</td>
<td></td>
<td></td>
<td>• Log all current alarms.</td>
</tr>
</tbody>
</table>
4.0 FEATURE ACTIVATION PREPARATION

This section provides detailed procedures to prepare a system for FABR 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

<table>
<thead>
<tr>
<th>STEP #</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>NOAM VIP GUI: Login</td>
</tr>
</tbody>
</table>

   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:

   ![Oracle System Login](image)

If this procedure fails, contact My Oracle Support (MOS), and ask for assistance.
### Procedure 1: System Topology Check

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
<th>Navigation Path</th>
<th>Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>NOAM VIP GUI: Verify Network Configuration Data</td>
<td>Navigate to Main Menu -&gt; Configuration -&gt; Network Elements</td>
<td>Click the Report button. Verify the configuration data is correct for your network. Save or Print this report, keep copies for future reference.</td>
</tr>
<tr>
<td>3</td>
<td>NOAM VIP GUI: Verify Server Configuration</td>
<td>Navigate to Main Menu -&gt; Configuration -&gt; Server Groups</td>
<td>Click the Report button. Verify the configuration data is correct for your network. Save or Print this report, keep copies for future reference.</td>
</tr>
</tbody>
</table>
Procedure 1: System Topology Check

<table>
<thead>
<tr>
<th></th>
<th>Analyze and plan DA-MP restart sequence</th>
</tr>
</thead>
</table>
| 4 | **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)

| STEP # | 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 | 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).

<table>
<thead>
<tr>
<th>App State</th>
<th>Alm</th>
<th>DB</th>
<th>Reporting Status</th>
<th>Proc</th>
</tr>
</thead>
<tbody>
<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>
</tbody>
</table>

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.
### Procedure 2: Perform Health Check (Feature Activation Preparation)

<table>
<thead>
<tr>
<th>3</th>
<th><strong>NOAM VIP GUI:</strong> Log Current Alarms</th>
<th>Navigate to <strong>Main Menu -&gt; Alarms &amp; Events -&gt; View Active</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Alarms &amp; Events</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>View Active</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>View History</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>View Trap Log</strong></td>
<td></td>
</tr>
</tbody>
</table>

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)

<table>
<thead>
<tr>
<th>STEP #</th>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
</table>
| 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:  
  ![Oracle System Login](image)
| 2      | NOAM VIP GUI: Verify FABR Folder is not Present | Under Main Menu, verify the FABR folder is NOT present. |
Procedure 3: Perform Health Check (Pre Feature Activation)

<table>
<thead>
<tr>
<th></th>
<th>NOAM VIP GUI:</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Login</td>
</tr>
</tbody>
</table>

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:

![Oracle System Login](image)

Welcome to the Oracle System Login.

Unauthorized access is prohibited. This Oracle system requires the use of Microsoft Internet Explorer 8.0, 9.0, or 10.0 with support for JavaScript and cookies.

Oracle and Java are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.
Procedure 3: Perform Health Check (Pre Feature Activation)

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
- Processes (Proc)

<table>
<thead>
<tr>
<th>Appi State</th>
<th>Alm</th>
<th>DB</th>
<th>Reporting Status</th>
<th>Proc</th>
</tr>
</thead>
<tbody>
<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>
</tbody>
</table>

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.
Procedure 3: Perform Health Check (Pre Feature Activation)

<table>
<thead>
<tr>
<th></th>
<th>NOAM VIP GUI:</th>
<th>Navigate to Main Menu -&gt; Configuration -&gt; Server Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Verify Server Configuration</td>
<td>![Configuration Tree Diagram]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Verify the configuration data is correct for your network.</td>
</tr>
<tr>
<td>6</td>
<td>NOAM VIP GUI: Log Current Alarms</td>
<td>Navigate to Main Menu -&gt; Alarms &amp; Events -&gt; View Active</td>
</tr>
<tr>
<td></td>
<td></td>
<td>![Alarms &amp; Events Tree Diagram]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Click on the Report button</td>
</tr>
<tr>
<td></td>
<td></td>
<td>![Report Button]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Save or Print this report, keep copies for future reference.</td>
</tr>
</tbody>
</table>
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 FABR feature activation are given in the procedure below.

Procedure 4: Feature Activation

<table>
<thead>
<tr>
<th>STEP #</th>
<th>Description</th>
</tr>
</thead>
</table>
| 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

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td><strong>NOAM VIP:</strong> Execute the Feature Activation Script</td>
</tr>
</tbody>
</table>

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 FABR**

```
List of Feature you can Activate :
1.CPA
2.RBAR
3.FABR
4.Mediation
5.LoadGen
6.GL
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. Cnto-50-2
2. Xil 50u

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

<table>
<thead>
<tr>
<th></th>
<th>Active SOAM GUI: Login</th>
<th>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:</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td></td>
<td><strong>http://&lt;Active_SOAM_IP_Address&gt;</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Login as the <em>guiadmin</em> user:</td>
</tr>
</tbody>
</table>

#### 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:

![Oracle System Login](image)

---

<table>
<thead>
<tr>
<th></th>
<th>Active SOAM GUI: Verify the FABR Folder is Visible</th>
<th>Locate and verify the FABR folder from Main Menu is visible and the configuration folder items are present</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td></td>
<td><img src="image" alt="FABR Configuration" /></td>
</tr>
</tbody>
</table>

---
### Procedure 4: Feature Activation

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td><strong>Active SOAM GUI:</strong> Verify Application Maintenance Screen is Visible</td>
</tr>
<tr>
<td></td>
<td>Verify the FABR Application is present in the Application Status screen. Navigate to <strong>Main Menu -&gt; Diameter -&gt; Maintenance -&gt; Applications.</strong></td>
</tr>
</tbody>
</table>
|      | Verify FABR status is uninitialized. The following data should be displayed:  
  - Admin State = Disabled  
  - Operational State = Unk  
  - Operational Reason = Unk  
  - Congestion Level = Unk  
  Select the MP servers on which FABR is present, use **[Ctrl]** to select multiple servers at once.  
  Click the **Enable** button |
|      | **Note:** If ComAgent remote server DP connections have not already been setup, you will receive the following Status after enabling:  
  ![Status](image)  
  **Note:** If not already done so, follow [1] to configure the needed ComAgent connections. |
| 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 FABR on each spare SOAM:  
  **Note:** For DSR 7.1, skip this step.  
  ```bash  
  $ cd /usr/TKLC/dsr/prod/maint/loaders/activate  
  $ ./load.fabrActivateBsourced  
  ```
## Procedure 4: Feature Activation

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td><strong>SOAM VIP GUI:</strong> Login</td>
</tr>
</tbody>
</table>

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:

```plaintext
http://<Primary_SOAM_VIP_IP_Address>
```

Login as the `guiadmin` user:

![Oracle System Login](image)

Welcome to the Oracle System Login.

Unauthorized access is prohibited. This Oracle system requires the use of Microsoft Internet Explorer 8.0, 9.0, or 10.0 with support for Javascript and cookies.

Oracle and Java are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.
### Procedure 4: Feature Activation

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
</table>
|   | **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. |
| 12 |   |   |

**Complete FABR Configuration**

Follow the instructions in [1] to complete FABR configuration.
### Procedure 4: Feature Activation

<table>
<thead>
<tr>
<th></th>
<th><strong>SOAM VIP GUI:</strong> Verify Application Maintenance Screen is Visible</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td><strong>Assuming SDS is installed, and ComAgent Remote server connections are configured, the following should be displayed.</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Navigate to Main Menu -&gt; Diameter -&gt; Maintenance -&gt; Applications</strong></td>
</tr>
<tr>
<td></td>
<td><img src="image.png" alt="GUI Screenshot" /></td>
</tr>
<tr>
<td></td>
<td><strong>Verify FABR status is initialized. The following data should be displayed:</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Admin State = Enabled</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Operational State = Available</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Operational Reason = Normal</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Congestion Level = Normal</strong></td>
</tr>
<tr>
<td></td>
<td><img src="image.png" alt="Table" /></td>
</tr>
</tbody>
</table>
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)**

<table>
<thead>
<tr>
<th>Step #</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>This procedure performs a post activation Health Check.</td>
<td></td>
</tr>
<tr>
<td>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</td>
<td></td>
</tr>
<tr>
<td>If this procedure fails, contact My Oracle Support (MOS), and ask for assistance.</td>
<td></td>
</tr>
</tbody>
</table>

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)

| 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-activation procedures. Contact My Oracle Support (MOS) if needed.
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 FABR application, it will have no impact on the system and does not need to be deactivated. The deactivation procedure will cause all the FABR related configuration data (including the ComAgent DP service related configuration and Application Routing Rules using FABR) 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.
### 6.2 DEACTIVATION PROCEDURES

#### 6.2.1 Feature Deactivation

This section provides the detailed steps of the FABR de-activation procedures.

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

<table>
<thead>
<tr>
<th>Step #</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>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.</td>
</tr>
</tbody>
</table>

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:

   ![Oracle System Login](image)

   ![Welcome to the Oracle System Login](image)
## Procedure 6: Perform Health Check (Pre-Feature Deactivation)

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
</table>
| 2    | **SOAM VIP GUI:** Verify the FABR Folder is Visible  
Locate and verify the FABR folder from Main Menu is visible and the configuration folder items are present  

![FABR Folder Structure](image)

*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. |
| 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:  

```text
http://<Primary_NOAM_VIP_IP_Address>
```

Login as the `guiadmin` user:  

![Oracle System Login](image)
Procedure 6: Perform Health Check (Pre-Feature Deactivation)

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).

<table>
<thead>
<tr>
<th>App State</th>
<th>Alm</th>
<th>DB</th>
<th>Reporting Status</th>
<th>Proc</th>
</tr>
</thead>
<tbody>
<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>
</tbody>
</table>

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.
Procedure 7: Feature Deactivate

<table>
<thead>
<tr>
<th>STEP #</th>
<th>SOAM VIP GUI: Login</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>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:</td>
</tr>
<tr>
<td></td>
<td>http://&lt;Primary_SOAM_VIP_IP_Address&gt;</td>
</tr>
<tr>
<td></td>
<td>Login as the guiadmin user:</td>
</tr>
</tbody>
</table>

Oracle System Login

Welcome to the Oracle System Login.

Unauthorized access is prohibited. This Oracle system requires the use of Microsoft Internet Explorer 8.0, 9.0, or 10.0 with support for JavaScript and cookies.

Oracle and Java are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.
## Procedure 7: Feature Deactivate

<table>
<thead>
<tr>
<th></th>
<th>Active SOAM GUI: Disable FABR Application</th>
<th>Navigate to Main Menu -&gt; Diameter -&gt; Maintenance -&gt; Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td></td>
<td><img src="image-url" alt="Main Menu Screenshot" /></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Select the FABR applications to disable.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Click the <strong>Disable</strong> button.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>NOAM/SOAM VIP GUI: Logout</th>
<th>Logout of any active NOAM and/or SOAM GUI Sessions:</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td></td>
<td><img src="image-url" alt="Welcome guiadmin" /> [Logout]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>NOAM VIP: Establish an SSH session</th>
<th>Establish an SSH session to the NOAM VIP. Login as <strong>admusr</strong>.</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>NOAM VIP: Navigate to the Feature Activation Directory</th>
<th>Navigate to the feature activation directory by executing the following command:</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td></td>
<td><code>$ cd /usr/TKLC/dsr/prod/maint/loaders/</code></td>
</tr>
</tbody>
</table>

![Image](image-url)
Procedure 7: Feature Deactivate

Run the feature activation script by executing the following command:

```
./featureActivateDeactivate
```

Choose **Deactivate**

You want to Activate or Deactivate the Feature :
1. Activate
2. Deactivate

Enter your choice :

Choose **FABR**

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 Deactivated:

**Note:** As an alternative, you can also deactivate on all SOAM sites:

```
The Active SO server configured in the Topology are
1. Cetra-50-2
2. All SOa

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

Refer to **Section 7.2** for output Example.
### Procedure 7: Feature Deactivate

<table>
<thead>
<tr>
<th></th>
<th>Active SOAM GUI: Login</th>
<th>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:</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td></td>
<td><img src="image" alt="Oracle System Login" /></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Login as the <em>guiadmin</em> user:</td>
</tr>
<tr>
<td>8</td>
<td>Active SOAM GUI: Verify the FABR Folder is not visible</td>
<td>Verify the FABR folder is not visible under Main Menu.</td>
</tr>
</tbody>
</table>
| 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 FABR on each spare SOAM:  
**Note:** For DSR 7.1, skip this step.  
```
$ cd /usr/TKLC/dsr/prod/maint/loaders/deactivate
$ ./load.fabrDeactivateBsourced
```
Procedure 7: Feature Deactivate

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:

![Login screen]

Welcome to the Oracle System Login.

Unauthorized access is prohibited. This Oracle system requires the use of Microsoft Internet Explorer 8.0, 9.0, or 10.0 with support for JavaScript and cookies.

Oracle and Java are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.
**Procedure 7: Feature Deactivate**

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
</table>
| 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.

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
</table>
| 13   | **SOAM VIP GUI:** Verify Maintenance Screen

Navigate to **Main Menu -> Diameter -> Maintenance -> Applications**

Verify the FABR 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)

<table>
<thead>
<tr>
<th>STEP #</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>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.</td>
</tr>
</tbody>
</table>

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:

   \[
   \text{http://<Primary_NOAM_VIP_IP_Address>}
   \]

   - Login as the `guiadmin` user:

   ![Oracle System Login]

   Unauthorized access is prohibited. This Oracle system requires the use of Microsoft Internet Explorer 8.0, 9.0, or 10.0 with support for JavaScript and cookies.
Procedure 8: Perform Health Check (Post-Feature Deactivation)

Navigate to Main Menu -> Status & Manage -> Server

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

```
<table>
<thead>
<tr>
<th>App State</th>
<th>Alm</th>
<th>DB</th>
<th>Reporting Status</th>
<th>Proc</th>
</tr>
</thead>
<tbody>
<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>
</tbody>
</table>
```
Procedure 8: Perform Health Check (Post-Feature Deactivation)

<table>
<thead>
<tr>
<th></th>
<th>NOAM VIP GUI: Log Current Alarms</th>
<th>Navigate to Main Menu -&gt; Alarms &amp; Events -&gt; View Active</th>
</tr>
</thead>
</table>

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.

**Note:** No routed service alarms should exist. These include the following alarms:

<table>
<thead>
<tr>
<th>Alarm-ID</th>
<th>Alarm Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>19820</td>
<td>Communication Agent Routed Service Unavailable</td>
</tr>
<tr>
<td>19821</td>
<td>Communication Agent Routed Service Degraded</td>
</tr>
<tr>
<td>19822</td>
<td>Communication Agent Routed Service Congested</td>
</tr>
<tr>
<td>19823</td>
<td>Communication Agent Routed Service Using Low-Priority Connection Group</td>
</tr>
</tbody>
</table>
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)

```plaintext
Run script to Activate fabr Feature
---------------------------------

Execution of Activation/Deactivation Process Starts
 Executing /usr/TKLC/dsr/prod/maint/loaders/activate/load.fabrActivateAsourced script on Jetta-N0-2
 id=13
 name=DPService
 preDefined=No
 editableOnGui=Yes
 birthTime=12/31/1969 19:00:00.000

 id=0
 name=DPSvcGroup
 preDefined=No

 Add DP Service and Connection group mapping.
 routedServiceId=13
 connGroupId=0
 priority=10

 Add FABR KPI group
 KPI_Group=FABR
 Visibility=VIS_SO

 Add FABR Measurement groups
 Meas_Group=Full Address Resolution Performance
 Visibility=VIS_SO

 Meas_Group=Full Address Resolution Exception
 Visibility=VIS_SO

 Add FABR GUI Configuration Permissions.
 _appid=17
 group_id=7051
 group_name=FABR Configuration Permissions

 Starting to Execute the Loaders on Mate server
 Executing /usr/TKLC/dsr/prod/maint/loaders/activate/load.fabrActivateAsourced script on Jetta-N0-1

 FIPS integrity verification test failed.
 id=13
 name=DPService
 preDefined=No
 editableOnGui=Yes
 birthTime=12/31/1969 19:00:00.000

 id=0
 name=DPSvcGroup
 preDefined=No
 routedServiceId=13
 connGroupId=0
 priority=10
 KPI_Group=FABR
 Visibility=VIS_SO
```

---
Add FABR GUI Configuration Permissions.

appid=17
group_id=7051
group_name=FABR Configuration Permissions

FIPS integrity verification test failed.

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 :

This is a 3 Tier Setup, So run the B sourced loaders on SO server : Jetta-SO-2
Executing /usr/TKLC/dsr/prod/maint/loaders/activate/load.fabrActivateBsourced script on Jetta-SO-2

FIPS integrity verification test failed.

Current server is HA ACTIVE

FABR Feature is Already Activated

Starting to Execute the Loaders on Mate server

Executing /usr/TKLC/dsr/prod/maint/loaders/activate/load.fabrActivateBsourced script on Jetta-SO-1

FIPS integrity verification test failed.

Current server is HA STANDBY

id=4
name=FABR
unavailableAction=ContinueRouting
avpInsertion=Yes
shutdownMode=Forced
shutdownTimer=0
resultCode=3002
vendorId=0
errorString=FABR Unavailable
resExhResultCode=3004
resExhVendorId=0
resExhErrorString=FABR Resource Exhausted
routeListId=-1
realm=
fqdn=
mcl=0

Add Common DSR Application measurements for FABR.

Add FABR GUI Configuration Permissions.
7.2 SAMPLE OUTPUT OF DEACTIVATION (ACTIVE NOAM)

Run script to Deactivate fabr Feature

Execution of Activation/Deactivation Process Starts

Hiding FABR KPI group and Measurement Groups

Removing DP Service COM Agent Loader Entries

Since remote servers are not deleted on FABR Deactivation, operator should manually delete all the remote server entries from configuration.

Removing FABR GUI permissions.

Starting to Execute the Loaders on Mate server

FIPS integrity verification test failed.

Removing FABR GUI permissions.

FIPS integrity verification test failed.

This is a 3 Tier Setup, so run the B sourced loaders on SO server: Jetta-SO-2

Removing all ART rules pointing to FABR

Removing applicationId=4(FABR) from the DSR Application Per Mp Table

Removing FABR from the DSR Application Table

FIPS integrity verification test failed.
Removing common DSR Application measurements for FABR

- === deleted 1 records ===
- === deleted 1 records ===
- === deleted 1 records ===
- === deleted 1 records ===
- === deleted 1 records ===
- === deleted 1 records ===
- === deleted 1 records ===

Removing FABR GUI permissions.

- === deleted 1 records ===

FIPS integrity verification test failed.

Executing the Loaders and Clearing Cache on StandBy SO servers.

Removing FABR 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.
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.