Oracle Communications Diameter Signaling Router FABR Feature Activation Procedure, Release 8.2.

Copyright © 2017, 2018 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, then 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 about 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 unless otherwise set forth in an applicable agreement between you and Oracle. 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, except as set forth in an applicable agreement between you and Oracle.

⚠️ CAUTION: Use only the Upgrade procedure included in the Upgrade Kit.

Before upgrading any system, please access My Oracle Support (MOS) (https://support.oracle.com) and review any Technical Service Bulletins (TSBs) that relate to this upgrade.

My Oracle Support (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 My Oracle Support (MOS).
## Change History

<table>
<thead>
<tr>
<th>Date</th>
<th>Version</th>
<th>Author</th>
<th>Description</th>
<th>Approved (Yes/No)</th>
</tr>
</thead>
<tbody>
<tr>
<td>12/04/2014</td>
<td>0.1</td>
<td>K. Olschner</td>
<td>New Oracle part number formatting changed to reflect Customer facing.</td>
<td>No</td>
</tr>
<tr>
<td>12/16/2014</td>
<td>0.85</td>
<td>K. Olschner</td>
<td>Changes after review comments</td>
<td>No</td>
</tr>
<tr>
<td>05/27/2015</td>
<td>0.1</td>
<td>K. Olschner</td>
<td>New Revision for DSR 7.1</td>
<td>No</td>
</tr>
<tr>
<td>09/28/2015</td>
<td>0.2</td>
<td>K. Olschner</td>
<td>DSR 7.2, no changes</td>
<td>Yes</td>
</tr>
<tr>
<td>06/09/2016</td>
<td>0.3</td>
<td>K. Olschner</td>
<td>DSR 7.3, no changes</td>
<td>Yes</td>
</tr>
<tr>
<td>07/07/2016</td>
<td>0.4</td>
<td>K. Olschner</td>
<td>Copyright update</td>
<td>Yes</td>
</tr>
<tr>
<td>08/16/2016</td>
<td>1.0</td>
<td>K. Olschner</td>
<td>DSR 8.0, updated screenshots, new doc number</td>
<td>No</td>
</tr>
<tr>
<td>06/19/2017</td>
<td>0.6</td>
<td>Gurjeet Singh</td>
<td>DSR 8.1 updates</td>
<td>Yes</td>
</tr>
<tr>
<td>07/14/2014</td>
<td>0.7</td>
<td>J. Carlino</td>
<td>Format, Edit, and Post to OTN</td>
<td>Yes</td>
</tr>
<tr>
<td>10/04/2017</td>
<td>0.8</td>
<td>Pallavi Manikere</td>
<td>Initial draft for DSR 8.2</td>
<td>No</td>
</tr>
<tr>
<td>10/23/2017</td>
<td>0.9</td>
<td>Pallavi Manikere</td>
<td>Review comments incorporated</td>
<td>No</td>
</tr>
<tr>
<td>11/14/2017</td>
<td>1.0</td>
<td>Pallavi Manikere</td>
<td>Approved</td>
<td>Yes</td>
</tr>
<tr>
<td>11/30/2017</td>
<td>1.1</td>
<td>J. Carlino</td>
<td>Post to OHC for DSR version 8.2</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Table of Contents

1. Introduction ................................................................................................................................................. 6
   1.1 Purpose and Scope ............................................................................................................................... 6
   1.2 References .............................................................................................................................................. 6
   1.3 Acronyms ............................................................................................................................................... 6
   1.4 Terminology .......................................................................................................................................... 7
   1.5 General Procedure Step Format ......................................................................................................... 7
2. Feature Activation Overview ...................................................................................................................... 7
   2.1 Definition of Activation for the FABR Feature .................................................................................... 8
   2.2 Feature Activation Overview ............................................................................................................... 9
      2.2.1 Pre-Feature Activation Overview ............................................................................................... 9
      2.2.2 Feature Activation Execution Overview ...................................................................................... 9
      2.2.3 Post-Feature Activation Overview ............................................................................................. 10
3. Feature Deactivation Overview ................................................................................................................ 11
   3.1 Pre-Feature Deactivation Overview .................................................................................................. 11
   3.2 Feature Deactivation Execution Overview ......................................................................................... 11
   3.3 Post-Feature Deactivation Overview ............................................................................................... 12
4. Feature Activation Preparation ................................................................................................................. 13
   4.1 System Topology Check ...................................................................................................................... 13
   4.2 Perform Health Check ......................................................................................................................... 15
5. Feature Activation ..................................................................................................................................... 17
   5.1 Pre-Activation Procedures ................................................................................................................... 17
      5.1.1 Perform Health Check .................................................................................................................. 17
   5.2 Activation Procedures ......................................................................................................................... 21
      5.2.1 Feature Activation ....................................................................................................................... 21
   5.3 Post-Activation Procedures ................................................................................................................. 27
      5.3.1 Perform Health Check .................................................................................................................. 27
6. Feature Deactivation ............................................................................................................................... 28
   6.1 Pre-Deactivation Procedures .............................................................................................................. 28
      6.1.1 Perform Health Check .................................................................................................................. 28
   6.2 Deactivation Procedures ..................................................................................................................... 32
      6.2.1 Feature Deactivation .................................................................................................................... 32
   6.3 Post-Deactivation Procedures ............................................................................................................. 38
      6.3.1 Perform Health Check .................................................................................................................. 38
7. Engineering Notes ..................................................................................................................................... 40
   7.1 Sample Output of Activation (Active NOAM) .................................................................................... 40
7.2 Sample Output of Deactivation (Active NOAM) ........................................................................................................ 43
Appendix A. My Oracle Support (MOS) ......................................................................................................................... 46

List of Tables
Table 1. Acronyms ......................................................................................................................................................... 6
Table 2. Terminology .................................................................................................................................................... 7
Table 3. Pre-Feature Activation Overview .................................................................................................................. 9
Table 4. Feature Activation Execution Overview ....................................................................................................... 9
Table 5. Post-Feature Activation Overview ................................................................................................................ 10
Table 6. Pre-Feature Deactivation Overview ............................................................................................................. 11
Table 7. Feature Deactivation Overview ................................................................................................................... 11
Table 8. Post-Feature Deactivation Overview ........................................................................................................... 12

List of Figures
Figure 1. Example of a Procedure Step ....................................................................................................................... 7

List of Procedures
Procedure 1: System Topology Check ......................................................................................................................... 13
Procedure 2: Perform Health Check (Feature Activation Preparation) ........................................................................ 15
Procedure 3: Perform Health Check (Pre Feature Activation) .................................................................................... 18
Procedure 4: Feature Activation .................................................................................................................................. 21
Procedure 5: Perform Health Check (Post-Feature Activation) .................................................................................. 27
Procedure 6: Perform Health Check (Pre-Feature Deactivation) ............................................................................... 29
Procedure 7: Feature Deactivate .................................................................................................................................. 32
Procedure 8: Perform Health Check (Post-Feature Deactivation) .............................................................................. 38
1. 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 6 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 before 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

An alphabetized list of acronyms used in the document.

<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>
</tbody>
</table>
1.4 Terminology

Table 2. Terminology

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication Agent</td>
<td>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.</td>
</tr>
<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 identify the server explicitly 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. Example of a Procedure Step).

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.

| 1 | ServerX: Connect to the console of the server | Establish a connection to the server using cu on the terminal server/console. $ cu -l /dev/ttyS7 |

Figure 1. Example of a Procedure Step

2. Feature Activation Overview

This section lists the required materials and information needed to execute the feature activation. In addition, Table 3. Pre-Feature Activation Overview through Table 8. Post-Feature Deactivation Overview 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.

### 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 used 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 initializes the ComAgent component in such a way that it becomes 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.

Before 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 Maintenance 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 is added, to the Connection Groups screen, a Routed Service named DpService is added to the Routed Services screen and is 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) acts 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. Furthermore, for proper operation of FABR, Communication Agent and FABR applications assume the Remote server 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 3. Pre-Feature Activation Overview

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Elapsed Time (Hours:Minutes)</th>
<th>Activity Feature Activation Preparation</th>
<th>Impact</th>
</tr>
</thead>
</table>
|                                   | This Step | Cum. | • Verify Network Element Configuration data.  
| System Topology Check (Procedure 1) | 0:20      | 0:20 | • Verify System Group Configuration data.  
|                                   |           |     | • Analyze and plan DA-MP restart sequence.  
|                                   |           |     | None |
| Perform Health Check (Procedure 2) | 0:05      | 0:25 | • 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

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Elapsed Time (Hours:Minutes)</th>
<th>Activity Feature Activation Execution</th>
<th>Impact</th>
</tr>
</thead>
</table>
|                                   | This Step | Cum. | • Verify DSR release.  
| Perform Health Check (Procedure 3) | 0:05      | 0:05 | • Verify proper FABR feature state.  
|                                   |           |     | • Verify server status.  
|                                   |           |     | • Log all current alarms.  
|                                   |           |     | None |
### Feature Activation Procedure

**Procedure**

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Elapsed Time (Hours:Minutes)</th>
<th>Activity Feature Activation Execution</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feature Activation (Procedure 4)</td>
<td>0:20</td>
<td>• Log out of NOAM/SOAM GUI. • SSH to active NOAM. • Login 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. • Verify Maintenance screen. • Close SSH connections to NOAM.</td>
<td></td>
</tr>
</tbody>
</table>

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 5. Post-Feature Activation Overview**

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Elapsed Time (Hours:Minutes)</th>
<th>Activity Feature Activation Completion</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perform Health Check (Procedure 5)</td>
<td>0:05</td>
<td>• Verify server status. • Log all current alarms.</td>
<td>FABR has been activated on DSR</td>
</tr>
</tbody>
</table>
3. Feature Deactivation Overview

3.1 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

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

3.2 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:Minutes)</th>
<th>Activity Deactivation Procedures</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This Step</td>
<td>Cum.</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 Setup</td>
<td>0:30</td>
<td>0:30</td>
<td>None</td>
</tr>
</tbody>
</table>
### 3.3 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:Minutes)</th>
<th>Activity Deactivation Procedures</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deactivation (Procedure 7)</td>
<td>This Step: 0:20, Cum. 0:50</td>
<td>- Log out of active NOAM/SOAM GUI.</td>
<td>FABR is deactivated</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- SSH into active NOAM.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Login as admusr</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Change directory to /usr/TKLC/dsr/prod/maint/loaders/</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Execute the feature deactivation script.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Log into NOAM or SOAM GUI.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Verify the FABR folder.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Log into NOAM GUI</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Verify Maintenance screen.</td>
<td></td>
</tr>
<tr>
<td>Perform Health Check (Procedure 8)</td>
<td>This Step: 0:05, Cum. 0:05</td>
<td>- Verify server status.</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Log all current alarms.</td>
<td></td>
</tr>
</tbody>
</table>
4. 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>NOAM VIP GUI: Login</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>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 My Oracle Support (MOS) and ask for assistance.</td>
</tr>
</tbody>
</table>
| 1    | Establish a GUI session on the NOAM server by using the VIP 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.  
    | This application is designed to work with most modern HTML5 compliant browsers and uses both JavaScript and cookies. Please refer to the Oracle Software Web Browser Support Policy for details. |
Procedure 1: System Topology Check

2

NOAM VIP GUI: Verify network configuration data

Navigate to Configuration -> Networking -> Networks.

Select the site network element tab:

<table>
<thead>
<tr>
<th>Network Name</th>
<th>Network Type</th>
<th>Default</th>
<th>Locked</th>
</tr>
</thead>
<tbody>
<tr>
<td>XM1</td>
<td>C2M</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>IMI</td>
<td>C2M</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>xSR1</td>
<td>Signaling</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>xSR2</td>
<td>Signaling</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>xSR3</td>
<td>Signaling</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Click Report.

Verify the configuration data is correct for your network.
Save or Print this report to keep copies for future reference.

3

NOAM VIP GUI: Verify server configuration

Navigate to Configuration -> Server Groups.

Click Report.

Verify the configuration data is correct for your network.
Save or Print this report to keep copies for future reference.
Procedure 1: System Topology Check

<table>
<thead>
<tr>
<th>Step</th>
<th>Task</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Analyze and plan DA-MP restart sequence</td>
<td>Analyze system topology and plan for any DA-MPs which will be out-of-service during the feature activation sequence. Determine exact sequence which DA-MP servers will be restarted (with the expected out-of-service periods). <strong>Note:</strong> It is recommended that no more than 50% of the MPs be restarted at once.</td>
</tr>
</tbody>
</table>

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 before the start of the maintenance window in which the feature activation will take place.

Procedure 2: Perform Health Check (Feature Activation Preparation)

<table>
<thead>
<tr>
<th>Step #</th>
<th>Task</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>NOAM VIP GUI: Login</td>
<td>Establish a GUI session on the NOAM server by using the VIP address of the NOAM server. Open the web browser and enter a URL of: <code>http://&lt;Primary_NOAM_VIP_IP_Address&gt;</code> Login as the <code>guiadmin</code> user:</td>
</tr>
</tbody>
</table>
### Procedure 2: Perform Health Check (Feature Activation Preparation)

<table>
<thead>
<tr>
<th>Step</th>
<th>NOAM VIP GUI</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Verify server status</td>
<td>Navigate to <strong>Status &amp; Manage -&gt; Server</strong>. 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.</td>
</tr>
<tr>
<td>3</td>
<td>Log current alarms</td>
<td>Navigate to <strong>Alarms &amp; Events -&gt; View Active</strong>. Click <strong>Report</strong>. <strong>Save</strong> or <strong>Print</strong> this report to keep copies for future reference.</td>
</tr>
</tbody>
</table>

---

**NOAM VIP GUI**

- **Status & Manage**
  - Network Elements
  - Server
  - HA
  - Database
  - KPIs
  - Processes

- **Alarms & Events**
  - **View Active**
  - **View History**
  - **View Trap Log**

---
5. 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>SOAM VIP GUI: Login</th>
<th>NOAM VIP GUI: Verify FABR folder is not present</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Establish a GUI session on the SOAM server by using the VIP address of the SOAM server. Open the web browser and enter a URL of: http://&lt;Primary_SOAM_VIP_IP_Address&gt; Login as the guiadmin user:</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Under Main Menu, verify the FABR folder is NOT present.</td>
<td></td>
</tr>
</tbody>
</table>
### Procedure 3: Perform Health Check (Pre Feature Activation)

<table>
<thead>
<tr>
<th></th>
<th>NOAM VIP GUI: Login</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Establish a GUI session on the NOAM server by using the VIP address of the NOAM server. Open the web browser and enter a URL of:</td>
</tr>
</tbody>
</table>

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

Login as the `guiadmin` user:

![Oracle System Login]

---

This application is designed to work with most modern HTML5 compliant browsers and uses both JavaScript and cookies. Please refer to the Oracle Software Web Browser Support Policy for details.

Unauthorized access is prohibited.

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

Copyright © 2010, 2016, Oracle and/or its affiliates. All rights reserved.
Procedure 3: Perform Health Check (Pre Feature Activation)

<table>
<thead>
<tr>
<th></th>
<th>NOAM VIP GUI: Verify server status</th>
<th>Navigate to Status &amp; Manage -&gt; Server.</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td><img src="image1.png" alt="Image" /></td>
<td><img src="image2.png" alt="Image" /></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Verify all Server Status is Normal (Norm) for:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Alarm (Alm), Database (DB), Replication Status, and Processes (Proc).</td>
</tr>
<tr>
<td></td>
<td><img src="image3.png" alt="Image" /></td>
<td><img src="image4.png" alt="Image" /></td>
</tr>
<tr>
<td></td>
<td>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.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>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.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>NOAM VIP GUI: Verify server configuration</th>
<th>Navigate to Configuration -&gt; Server Groups.</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td><img src="image5.png" alt="Image" /></td>
<td><img src="image6.png" alt="Image" /></td>
</tr>
<tr>
<td></td>
<td>Verify the configuration data is correct for your network.</td>
<td></td>
</tr>
</tbody>
</table>
### Procedure 3: Perform Health Check (Pre Feature Activation)

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
</table>
| 6 | NOAM VIP GUI: Log current alarms  
Navigate to Alarms & Events -> View Active.  
Click Report.  
Save or Print this report to keep copies for future reference. |

### 5.2 Activation Procedures

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

#### 5.2.1 Feature Activation

Detailed steps for FABR feature activation are provided in this procedure.

### 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></th>
<th>NOAM VIP: Execute the feature activation script</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Run the feature activation script by executing the following command: $ ./featureActivateDeactivate</td>
</tr>
</tbody>
</table>

**Select Activate.**

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

Enter your choice: [ ]

**Select FABR.**

List of Feature you can Activate:
1. ROAR
2. FABR
3. Mediation
4. LoadGen
5. GLA
6. MAP Interworking
7. DTLS
8. DCA Framework
9. DCA Application

Select 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-50-2
2. ALL 50s

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>Step</th>
<th>Active SOAM GUI:</th>
<th>Action</th>
</tr>
</thead>
</table>
| 5    | 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>Step</th>
<th>Active SOAM GUI:</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Verify the FABR folder is visible</td>
<td>Locate and verify the FABR folder from Main Menu is visible and the configuration folder items are present.</td>
</tr>
</tbody>
</table>

- **FABR**
  - **Configuration**
    - Applications
    - Exceptions
    - Default Destinations
    - Address Resolutions
    - System Options
### Procedure 4: Feature Activation

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 7    | **Active SOAM GUI:** Verify application maintenance screen is visible. Verify the FABR application is present in the Application Status screen. **Navigate to Diameter -> Maintenance -> Applications.**<br>![Application Status Screen](image)
|      | Verify FABR status is uninitialized. The following data should be displayed:<br>Admin State = Disabled<br>Operational State = Unk<br>Operational Reason = Unk<br>Congestion Level = Unk |
| 8    | **Standby SOAM GUI:** Repeat verification steps. Repeat Steps 5-7 for the standby SOAM.<br>**Note:** If the verifications for the standby SOAM differ from the active SOAM, stop and contact My Oracle Support (MOS). |
| 9    | **SOAM VIP GUI:** Login<br>Establish a GUI session on the SOAM server by using the VIP address of the SOAM server. Open the web browser and enter a URL of:<br>`http://<Primary_SOAM_VIP_IP_Address>`<br>Login as the `guiadmin` user: |
### Procedure 4: Feature Activation

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
<th>Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td><strong>SOAM VIP GUI:</strong> Restart DA-MPs</td>
<td>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 <strong>Status &amp; Manage -&gt; Server.</strong> Select the desired DA-MPs, press <strong>Ctrl</strong> to select multiple DA-MPs at once. Click <strong>Restart.</strong> Click <strong>OK</strong> to confirm. Verify the server changes to the Err state and wait until it returns to the Enabled/Norm state. Repeat for the additional DA-MPs.</td>
</tr>
<tr>
<td>11</td>
<td><strong>SOAM VIP GUI:</strong> Enable application</td>
<td>Navigate to <strong>Diameter -&gt; Maintenance -&gt; Applications.</strong> Select the MP servers on which FABR is present, press <strong>Ctrl</strong> to select multiple servers at once. Click <strong>Enable.</strong> Click <strong>OK</strong> to confirm <strong>Note:</strong> If ComAgent remote server DP connections have not already been setup, you will receive the following Status after enabling:</td>
</tr>
<tr>
<td>12</td>
<td>Complete FABR configuration</td>
<td>Follow the instructions in [1] to complete FABR configuration.</td>
</tr>
</tbody>
</table>
Procedure 4: Feature Activation

| 13 | SOAM VIP GUI: Verify application maintenance screen is visible |

Assuming SDS is installed, and ComAgent remote server connections are configured, the following should be displayed.

Navigate to **Diameter -> Maintenance -> Applications.**

Verify FABR status is initialized. The following data should display:

**Admin State = Enabled**

**Operational State = Available**

**Operational Reason = Normal**

**Congestion Level = Normal**
5.3 Post-Activation Procedures

5.3.1 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>1</td>
<td><strong>NOAM VIP GUI:</strong> Establish a GUI session on the NOAM server by using the VIP address of the NOAM server. Open the web browser and enter a URL of:</td>
</tr>
<tr>
<td></td>
<td>http://&lt;Primary_NOAM_VIP_IP_Address&gt;</td>
</tr>
<tr>
<td></td>
<td>Login as the <em>guiadmin</em> user:</td>
</tr>
</tbody>
</table>

![Oracle System Login](image)
FABR Feature Activation Procedure

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

<table>
<thead>
<tr>
<th></th>
<th>NOAM VIP GUI: Verify server status</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Navigate to <strong>Status &amp; Manage -&gt; Server</strong>. Verify all Server Status is Normal (Norm) for: Alarm (Alm), Database (DB), Replication Status, and Processes (Proc).</td>
</tr>
<tr>
<td></td>
<td>**</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>NOAM VIP GUI: Log current alarms</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Navigate to <strong>Alarms &amp; Events -&gt; View Active</strong>. Click <strong>Report</strong>. Save or Print this report to keep copies for future reference.</td>
</tr>
<tr>
<td></td>
<td>**</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Compare this alarm report with those gathered in the pre-activation procedures. Contact My Oracle Support (MOS) if needed.

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

<table>
<thead>
<tr>
<th>STEP #</th>
<th><strong>SOAM VIP GUI:</strong> Login</th>
</tr>
</thead>
</table>
| 1      | Establish a GUI session on the SOAM server by using the VIP 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.  
This application is designed to work with most modern HTML5 compliant browsers and uses both JavaScript and cookies. Please refer to the [Oracle Software Web Browser Support Policy](#) for details.  
Unauthorized access is prohibited. |
| 2      | Locate and verify the FABR 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)

<table>
<thead>
<tr>
<th></th>
<th>NOAM VIP GUI: Login</th>
<th>Establish a GUI session on the NOAM server by using the VIP address of the NOAM server. Open the web browser and enter a URL of:</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td></td>
<td>http://&lt;Primary_NOAM_VIP_IP_Address&gt;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Login as the <strong>guiadmin</strong> user:</td>
</tr>
<tr>
<td></td>
<td><img src="image" alt="Oracle System Login" /></td>
<td></td>
</tr>
</tbody>
</table>

**Oracle System Login**

*Welcome to the Oracle System Login.*

This application is designed to work with most modern HTML5 compliant browsers and uses both JavaScript and cookies. Please refer to the [Oracle Software Web Browser Support Policy](#) for details.

Unauthorized access is prohibited.

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

*Copyright © 2010, 2016, Oracle and/or its affiliates. All rights reserved.*

<table>
<thead>
<tr>
<th></th>
<th>NOAM VIP GUI: Verify server status</th>
<th>Navigate to <strong>Status &amp; Manage -&gt; Server.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td></td>
<td><strong>Status &amp; Manage</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Network Elements</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Server</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>HA</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Database</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>KPIs</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Processes</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Verify all Server Status is Normal (Norm) for:</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Alarm (Alm), Database (DB), Replication Status, and Processes (Proc).</strong></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Step</th>
<th>Task</th>
<th>Action</th>
</tr>
</thead>
</table>
| 5    | NOAM VIP GUI: Log current alarms | Navigate to **Alarms & Events -> View Active**.  
- Click **Report**.  
- **Save** or **Print** this report to 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 FABR de-activation procedures.

Procedure 7: Feature Deactivate

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
</table>
| 1    | **SOAM VIP GUI:** Establish a GUI session on the SOAM server by using the VIP 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: |

```plaintext
Welcome to the Oracle System Login.
This application is designed to work with most modern HTML5 compliant browsers and uses both JavaScript and cookies. Please refer to the Oracle Software Web Browser Support Policy for details.
Unauthorised access is prohibited.

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

Copyright © 2010, 2016, Oracle and/or its affiliates. All rights reserved.
```
### Procedure 7: Feature Deactivate

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td><strong>Active SOAM GUI</strong>: Disable FABR application</td>
<td><strong>Navigate to Diameter -&gt; Maintenance -&gt; Applications.</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Select the FABR applications to disable.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Click <strong>Disable</strong>.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Click <strong>OK</strong> to confirm.</td>
</tr>
<tr>
<td>3</td>
<td><strong>NOAM/SOAM VIP GUI</strong>: Logout</td>
<td><strong>Logout of any active NOAM and/or SOAM GUI sessions:</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Establish an SSH session to the NOAM VIP. Login as <strong>admusr</strong>.</td>
</tr>
<tr>
<td>4</td>
<td><strong>NOAM VIP</strong>: Establish an SSH session</td>
<td>Navigate to the feature activation directory by executing the following command:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$ cd /usr/TKLC/dsr/prod/maint/loaders/</td>
</tr>
</tbody>
</table>
Procedure 7: Feature Deactivate

Run the feature activation script by executing the following command:

```
$ ./featureActivateDeactivate
```

Select **Deactivate**.

```
You want to Activate or Deactivate the Feature :
1. Activate
2. Deactivate
Enter your choice :
```

Select **FABR**.

```
Which Feature you want to DeActivate :
1. RBAR
2. FABR
3. Mediation
4. LoadGen
5. GLA
6. MAP Interworking
7. DTLS
8. DCA Framework
9. DCA Application
```

Select 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. Jetsa-30-2
2. ALL 809
```

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>Step</th>
<th>Action</th>
<th>Description</th>
</tr>
</thead>
</table>
| 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 FABR folder is not visible | Verify the FABR 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). |
### Procedure 7: Feature Deactivate

<table>
<thead>
<tr>
<th>10</th>
<th><strong>SOAM VIP GUI:</strong> Login</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Establish a GUI session on the SOAM server by using the VIP address of the SOAM server. Open the web browser and enter a URL of: http://&lt;Primary_SOAM_VIP_IP_Address&gt;</td>
</tr>
<tr>
<td></td>
<td>Login as the <em>guiadmin</em> user:</td>
</tr>
</tbody>
</table>

![Oracle System Login](image-url)

Welcome to the Oracle System Login.

This application is designed to work with most modern HTML5 compliant browsers and uses both JavaScript and cookies. Please refer to the Oracle Software Web Browser Support Policy for details.

Unauthorized access is prohibited.

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

*Copyright © 2010, 2016, Oracle and/or its affiliates. All rights reserved.*
### Procedure 7: Feature Deactivate

<table>
<thead>
<tr>
<th>Step</th>
<th>SOAM VIP GUI: Restart DA-MPs</th>
<th>SOAM VIP GUI: Verify maintenance screen</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td><strong>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.</strong></td>
<td><strong>Navigate to Diameter -&gt; Maintenance -&gt; Applications.</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Navigate to Status &amp; Manage -&gt; Server.</strong></td>
<td><strong>Verify the FABR application is not present.</strong></td>
</tr>
<tr>
<td></td>
<td>Select the desired DA-MPs, press <strong>Ctrl</strong> to select multiple DA-MPs at once. <strong>Click Restart.</strong></td>
<td><strong>Verify the server changes to the Err state and wait until it returns to the Enabled/Norm state. Repeat for the additional DA-MPs.</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Click OK to confirm.</strong></td>
<td></td>
</tr>
</tbody>
</table>

Verify the server changes to the Err state and wait until it returns to the Enabled/Norm state. Repeat for the additional DA-MPs.
6.3 Post-Deactivation Procedures

To complete a deactivation, complete the Post-Deactivation by following the procedures in this chapter.

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

Establish a GUI session on the NOAM server by using the VIP 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 Status & Manage -> Server.

- Network Elements
- Server
- HA
- Database
- KPIs
- Processes

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

<table>
<thead>
<tr>
<th>Appl 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>

3

NOAM VIP GUI:
Log current alarms

Navigate to Alarms & Events -> View Active.

- View Active
- View History
- View Trap Log

Click Report.

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

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

Save or Print this report to 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. 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)

<table>
<thead>
<tr>
<th>Run script to activate FABR feature:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Execution of Activation/Deactivation Process Starts</td>
</tr>
<tr>
<td>Starting Activation/Deactivation process....</td>
</tr>
<tr>
<td>Executing /usr/TKLC/dsr/prod/maint/loaders/activate/load.fabrActivateAsourced script on E1B180NOAM1</td>
</tr>
<tr>
<td>Add COM Agent Routed service Configuration.</td>
</tr>
<tr>
<td>id=14</td>
</tr>
<tr>
<td>name=DPService</td>
</tr>
<tr>
<td>preDefined=No</td>
</tr>
<tr>
<td>editableOnGui=Yes</td>
</tr>
<tr>
<td>birthTime=12/31/1969 19:00:00.000</td>
</tr>
<tr>
<td>Add COM Agent connection group for the DP service.</td>
</tr>
<tr>
<td>id=1</td>
</tr>
<tr>
<td>name=DPSvcGroup</td>
</tr>
<tr>
<td>preDefined=No</td>
</tr>
<tr>
<td>Add DP Service and Connection group mapping.</td>
</tr>
<tr>
<td>routedServiceId=14</td>
</tr>
<tr>
<td>connGroupId=1</td>
</tr>
<tr>
<td>priority=10</td>
</tr>
<tr>
<td>Add FABR KPI group</td>
</tr>
<tr>
<td>KPI_Group=FABR</td>
</tr>
</tbody>
</table>
Visibility=VIS_SO
=======================================================================================================
Add FABR Measurement groups
=======================================================================================================
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 E1B280NOAM2
=======================================================================================================
FIPS integrity verification test failed.
id=14
name=DPService
preDefined=No
editableOnGui=Yes
birthTime=12/31/1969 19:00:00.000
=======================================================================================================
id=1
name=DFSvcGroup
preDefined=No
=======================================================================================================
routedServiceId=14
connGroupId=1
priority=10
=======================================================================================================
KPI_Group=FABR
Visibility=VIS_SO
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

FIPS integrity verification test failed.

The Active SO server configured in the Topology are

1. E1B380SOAM1
2. ALL SOs

Enter your choice on which SO you want to Activate or Deactivate the Feature: 2

Activate/Deactivate fabr on all SOs configured in the Topology

This is a 3 Tier Setup, So run the B sourced loaders on SO server: E1B380SOAM1

Executing /usr/TKLC/dsr/prod/maint/loaders/activate/load.fabrActivateBsourced script on E1B380SOAM1

FIPS integrity verification test failed.

Current server is HA ACTIVE

Add FABR to DsrApplication.

id=4
name=FABR
unavailableAction=ContinueRouting
avpInsertion=Yes
shutdownMode=Forced
shutdownTimer=0
resultCode=3002
vendorId=0
errorString=FABR Unavailable
Add FABR GUI Configuration Permissions.

FIPS integrity verification test failed.

Executing the Loaders and Clearing Cache on Standby SO servers.

There is no Standby/Spare SOAMP server configured in the Topology

[admusr@Jetta-NO-2 loaders]$ 7.2 Sample Output of Deactivation (Active NOAM)

Run script to deactivate FABR feature:

Execution of Activation/Deactivation Process Starts

Starting Activation/Deactivation process....

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 :1

Verifying feature is activated or not on Jetta-SO-2

FIPS integrity verification test failed.
FABR Feature Activation Procedure

================================================
FABR is activated on Jetta-SO-2
================================================
Executing /usr/TKLC/dsr/prod/main/loaders/deactivate/load.fabrDeactivateAsourced script on Jetta-NO-2

Hiding FABR KPI group and Measurement Groups

=== deleted 1 records ===

Hiding FABR measurement groups

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

Removing DP Service COM Agent Loader Entries

Log path: /var/TKLC/db/filemgmt/dpservice_deactivate.log

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

Removing FABR GUI permissions.

=== deleted 1 records ===

Starting to Execute the Loaders on Mate server

Executing /usr/TKLC/dsr/prod/maint/loaders/deactivate/load.fabrDeactivateAsourced script on Jetta-NO-1

FIPS integrity verification test failed.

Removing FABR 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: Jetta-SO-2

Executing /usr/TKLC/dsr/prod/maint/loaders/deactivate/load.fabrDeactivateBsourced script on Jetta-SO-2
FIPS integrity verification test failed.

Current server is HA ACTIVE

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

Removing common DSR Application measurements for FABR

Removing FABR GUI permissions.

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.fabrDeactivateBsourced script on Jetta-SO-1

FIPS integrity verification test failed.
Current server is HA STANDBY
================================================================================
Removing common DSR Application measurements for FABR
================================================================================
=== deleted 1 records ===
=== delete ===
=== 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.
================================================================================
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, make the selections in the sequence shown below on the Support telephone menu:
1. Select 2 for New Service Request.
2. Select 3 for Hardware, Networking and Solaris Operating System Support.
3. Select one of the following options:
   • For technical issues such as creating a new Service Request (SR), select 1.
   • For non-technical issues such as registration or assistance with MOS, select 2.
You are connected to a live agent who can assist you with MOS registration and opening a support ticket. MOS is available 24 hours a day, 7 days a week, 365 days a year.