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FABR Feature Activation Procedure

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Oracle Communications FABR Feature Activation Procedure, Release 9.3

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Preface

My Oracle Support

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

You are connected to a live agent who can assist you with My Oracle Support registration and opening a support ticket.

My Oracle Support is available 24 hours a day, 7 days a week, 365 days a year.

What's New in This Guide

This section introduces the documentation updates for Release 9.3.0.0.0.

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Added a note about FABR installation in the Feature Activation Overview section.

1 Feature Activation Overview

This section lists the required materials and information needed to execute the feature activation. In addition, through 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.

> **Note**
>
> If FABR is installed in the system that is being recovered, perform the following steps on all the active applications:
>
> - Activate FABR on the standby NOAM using the recovered standby NOAM server.
> - Activate FABR on the active SOAM using the recovered active SOAM server to reactivate FABR.

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 or 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 or provision this component for use by FABR.

The configuration and setup of the DP and 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 or OAM code required to configure communication with the subscriber database). The process of activating the feature simply makes proper use of software elements and 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, which is 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 or provisioning) and SOAM (in case of FABR configuration or provisioning).

> **Note**
>
> 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 (through 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 or reachable. However, these networking setup and concerns are beyond the scope of the activation procedure.

1.1 Feature Activation Procedure

This section provides overview on pre and post feature activation procedure.

1.1.1 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 1-1 Pre-Feature Activation Overview

Procedure	Elapsed Time (Hours:Minutes)		Activity Feature Activation Preparation	Impact
	This Step	Cum.		
System Topology Check	0:20	0:20	1. Verify Network Element Configuration data. 2. Verify System Group Configuration data. 3. Analyze and plan DA-MP restart sequence.	None
Perform Health Check	0:05	0:25	1. Verify DSR release. 2. Verify server status. 3. Log all current alarms.	None

1.1.2 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 1-2 Feature Activation Execution Overview

Procedure	Elapsed Time (Hours:Minutes)		Activity Feature Activation Execution	Impact
	This Step	Cum.		
Perform Health Check	0:05	0:05	• Verify DSR release. • Verify proper feature state. • Verify server status. • Log all current alarms.	None
Feature Activation	0:20	0:25	1. Log out of NOAM/SOAM GUI. 2. SSH to active NOAM. 3. Login as admusr. 4. Change directory to `/usr/TKLC/dsr/prod/maint/loaders/`. 5. Execute the feature activation script. 6. Log into SOAM GUI. 7. Verify the **Feature** Folder. 8. Verify Maintenance screen. 9. Log into NOAM GUI. 10. Verify Maintenance screen. 11. Close SSH connections to NOAM.	Feature is activated

1.1.3 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 1-3 Post-Feature Activation Overview

Procedure	Elapsed Time (Hours:Minutes)		Activity Feature Activation Preparation	Impact
	This Step	Cum.		
Perform Health Check	0:05	0:05	1. Verify server status. 2. Log all current alarms.	Feature has been activated on DSR

2
Feature Deactivation Overview

This section lists the required materials and information needed to execute the feature deactivation. In addition, through 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 deactivation. The timing values shown are estimates only - use these tables to plan the timing of the deactivation, **not** to execute the procedure. The detailed procedure steps to be executed begin in Section

2.1 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 2-1 Pre-Feature Deactivation Overview

Procedure	Elapsed Time (Hours:Minutes)		Activity Feature Deactivation Preparation	Impact
	This Step	Cum.		
Perform Health Check	0:05	0:05	1. Verify DSR release. 2. Verify proper FABR feature state. 3. Verify server status. 4. Log all current alarms.	None

2.2 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 2-2 Feature Deactivation Overview

Procedure	Elapsed Time (Hours:Minutes)		Activity Feature Deactivation Execution	Impact
	This Step	Cum.		
Deactivation Setup	0:30	0:30	The reason to deactivate has a direct impact on any additional backout preparation that must be done. Since not all possible reasons can be predicted ahead of time, only estimates are given here. Execution time will vary.	None

Table 2-2 (Cont.) Feature Deactivation Overview

Feature Activation	0:20	0:25	1. Log out of active NOAM/SOAM GUI. 2. SSH to active NOAM. 3. Login as admusr. 4. Change directory to `/usr/TKLC/dsr/prod/maint/loaders/`. 5. Execute the feature activation script. 6. Log into NOAM or SOAM GUI. 7. Verify the **Feature** Folder. 8. Verify Maintenance screen. 9. Close SSH connections to NOAM.	Feature is deactivated

2.3 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 2-3 Post-Feature Deactivation Overview

Procedure	Elapsed Time (Hours:Minutes)		Activity Feature Deactivation Preparation	Impact
	This Step	Cum.		
Perform Health Check	0:05	0:05	1. Verify server status. 2. Log all current alarms.	None

3 Feature Activation Preparation

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

3.1 System Topology Check

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.

Table 3-1 Pre-Feature Activation Overview

Step No.#	Procedure	Description
1 ☐	**NOAM VIP GUI** : Login	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:
2 ☐	**NOAM VIP GUI** : Verify network configuration data	Navigate to **Configuration -> Networking -> Networks**. Select the site network element tab: 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.

Table 3-1 (Cont.) Pre-Feature Activation Overview

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

3.2 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.

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.

Table 3-2 Perform Health Check

Step No. #	Procedure	Description
1 ☐	**NOAM VIP GUI** : Login	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:
2 ☐	**NOAM VIP GUI** : Verify server status	Navigate to **Status & Manage -> Server**. Verify all Server Status is Normal (Norm) for: Alarm (Alm), Database (DB), Replication Status, and Processes (Proc). Do not proceed to feature activation if any of the above states are not Norm. If any of these are not Norm, corrective action should be taken to restore the non-Norm status to Norm before proceeding with the feature activation. If the Alarm (Alm) status is not Norm but only Minor alarms are present, it is acceptable to proceed with the feature activation. If there are Major or Critical alarms present, these alarms should be analyzed prior to proceeding with the feature activation. The activation may be able to proceed in the presence of certain Major or Critical alarms. Contact My Oracle Support (MOS) and ask for assistance.
3 ☐	**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.

4 Feature Activation

Before feature activation, perform the system health check in Section . 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.

> **Note**
>
> 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.

Read the following notes on feature activation procedures:

1. 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.
2. 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).
3. Captured data is required for future support reference.

4.1 Pre-activation 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 when preparing for feature activation, but it is repeated here to emphasize that it is being re-executed if Section was performed outside the maintenance window.

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.

Table 4-1 Pre-activation Health Check

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

Table 4-1 (Cont.) Pre-activation Health Check

Steps	Procedure	Description
5. ☐	**NOAM VIP GUI** : Verify server configuration	Navigate to **Configuration -> Server Groups** . Verify the configuration data is correct for your network.
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.

4.2 Feature Activation

This procedure provides steps to perform feature activation.

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.

Table 4-2 Feature Activation

Steps	Procedure	Description
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/`
4. ☐	**NOAM VIP** : Execute the feature activation script	Run the feature activation script by executing the following command: `$ ./featureActivateDeactivate` Select **Activate**. Select **FABR**. Select the SOAM site for which the application will be activated: 1. ***Note:*** As an alternative, you can also activate on all SOAM sites: Refer to Section for output example.

Table 4-2 (Cont.) Feature Activation

Steps	Procedure	Description
5. ☐	**Active SOAM GUI** : Login	Establish a GUI session on the active SOAM server by using IP address of the SOAM server. Open the web browser and enter a URL of: http://<Active_SOAM_IP_Address>Login as the ***guiadmin*** user:
6. ☐	**Active SOAM GUI** : Verify the FABR folder is visible	Locate and verify the FABR folder from Main Menu is visible and the configuration folder items are present.
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** . Verify FABR status is uninitialized. The following data should be displayed: Admin State = Disabled Operational Status = Unk Operational Reason = Unk Congestion Level = Unk
8. ☐	**Standby SOAM GUI** : Repeat verification steps	Repeat Steps 5-7 for the standby SOAM. 1. ***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	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:
10. ☐	**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 **Status & Manage -> Server** . Select the desired DA-MPs, press **Ctrl** to select multiple DA-MPs at once. Click **Restart** . Click **OK** 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.

Table 4-2 (Cont.) Feature Activation

Steps	Procedure	Description
11. ☐	**SOAM VIP GUI** : Enable application	Navigate to **Diameter -> Maintenance -> Applications** . Select the MP servers on which FABR is present, press **Ctrl** to select multiple servers at once. Click **Enable** . Click **OK** to confirm 1. ***Note:*** If ComAgent remote server DP connections have not already been setup, you will receive the following Status after enabling: 2. ***Note:*** If not already done so, follow to configure the needed ComAgent connections.
12. ☐	Complete FABR configuration	Follow the instructions in to complete FABR configuration.
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 Status = Available Operational Reason = Normal Congestion Level = Normal

4.3 Post-activation Health Check

This procedure provides steps to perform feature activation.

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.

Table 4-3 Post-activation Health Check

Steps	Procedure	Description
1. ☐	**NOAM VIP GUI** : Login	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:
2. ☐	**NOAM VIP GUI** : Verify server status	Navigate to **Status & Manage -> Server** . Verify all Server Status is Normal (Norm) for: Alarm (Alm), Database (DB), Replication Status, and Processes (Proc).

Table 4-3 (Cont.) Post-activation Health Check

Steps	Procedure	Description
3. ☐	**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.

5

Reference Topic Title

Section Title

(Optional) Enter reference information in this section.

Syntax

(Optional) Enter syntax information here.

Example 5-1 Example Title

(Optional) Enter an example to illustrate your reference here.