Oracle® Communications
Diameter Signaling Router
Release 8.0
Policy and Charging DRA Feature Activation Procedure
E81528 Revision 05

April 2017
Policy and Charging DRA Feature Activation Procedure

Oracle Communications Diameter Signaling Router PCA feature activation procedure, Release 8.0.

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See more information on MOS in the Appendix section.

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1. Introduction

1.1 Purpose and Scope

This document defines the procedure that are executed to activate the Policy and Charging Application (PCA) 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 PCA feature is activated during a planned maintenance window to minimize the impact to network traffic.

This document also provides a procedure to deactivate PCA after it has been activated. Please see Section 3 for a discussion of deactivation.

Configuration of PCA following successful activation is beyond the scope of this document. Please refer to the PCA User's Guide for guidance on PCA configuration post activation.

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

1.2 References

[1] DSR 7.0/7.1/7.2 Software Installation and Configuration Procedure 2/2, E58954
[2] DSR 7.0 PCA Configuration, E58667
[3] DSR PDRA Configuration Work Instruction, WI006808
[4] DSR PDRA Activation/Deactivation Work Instruction, WI006835
[5] DSR 7.1/7.2 PCA Activation and Configuration, E63560
[6] C-Class Software Installation and Configuration Procedure 2/2, E76181
[8] DSR GLA Feature Activation Procedure, E78946
[9] DSR Software Upgrade Guide
[10] Policy and Charging Application Configuration, E67989

1.3 Acronyms

Table 1. Acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Definition</th>
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<tbody>
<tr>
<td>DA-MP</td>
<td>Diameter Agent Message Processor</td>
</tr>
<tr>
<td>DB</td>
<td>Database</td>
</tr>
<tr>
<td>DPI</td>
<td>Diameter Plug-In</td>
</tr>
<tr>
<td>DSR</td>
<td>Diameter Signaling Router</td>
</tr>
<tr>
<td>GLA</td>
<td>Gateway Location 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>IPFE</td>
<td>Internet Protocol Front End</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>NO</td>
<td>Network OAM</td>
</tr>
<tr>
<td>NOAM</td>
<td>Network OAM</td>
</tr>
<tr>
<td>PDRA</td>
<td>Policy DIAMETER Routing Agent</td>
</tr>
</tbody>
</table>
### Acronym | Definition
---|---
SBR | Session Binding Repository (when used without the "B" or "S" suffix, refers to both binding and session SBRs)
PCA | Policy and Charging Application
PCRF | Policy and Charging Rules Function
OAM | Operations, Administration and Maintenance
SSH | Secure Shell
UI | User Interface
VIP | Virtual IP
VPN | Virtual Private Network
XMI | External Management Interface
SBR-B | Session Binding Repository – Binding
SBR-S | Session Binding Repository – Session
SOAM | System OAM

#### 1.4 Terminology

**Table 2. Terminology**

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication Agent</td>
<td>Software infrastructure that allows applications to communicate with the SBR databases in a reliable manner.</td>
</tr>
<tr>
<td>ComAgent</td>
<td>Same as Communication Agent</td>
</tr>
<tr>
<td>NOAM</td>
<td>Network Operations and Maintenance</td>
</tr>
<tr>
<td>SBR-B</td>
<td>Holds network-wide subscriber binding information. Maps subscriber keys to the PCRF that hosts the subscriber’s policy rules.</td>
</tr>
<tr>
<td>SBR-S</td>
<td>Holds session information that is used for routing in-session messages.</td>
</tr>
<tr>
<td>SOAM</td>
<td>System Operations and Maintenance</td>
</tr>
</tbody>
</table>

#### 1.5 General Procedure Step Format

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

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

*Figure 1. Example of a Procedure Step*
1.6 Release Document Matrix

Table 3. PCA Activation\Configuration Procedure Reference Table

<table>
<thead>
<tr>
<th>DSR Release</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSR 5.1/6.0</td>
<td>[3] and [4]</td>
</tr>
<tr>
<td>DSR 7.0</td>
<td>[1] and [2]</td>
</tr>
<tr>
<td>DSR 7.1/7.2</td>
<td>[1] and [5]</td>
</tr>
<tr>
<td>DSR 7.3</td>
<td>[10]</td>
</tr>
<tr>
<td>DSR 8.x</td>
<td>[6], [7] and [8]</td>
</tr>
</tbody>
</table>

2. Feature Activation Overview

This section lists the required materials and information needed to execute the feature activation. In addition, Table 4. Pre-Feature Activation Overview through Table 9. Post-Feature Deactivation Overview provide estimates of the time required to execute the procedures. 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 PCA Feature

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

The main components of a PCA system include the PCA (DSR) application, the binding database (hosted by the Session Binding Repository, i.e., SBR), and finally the ComAgent which provides an interface and means to enable the PCA MPs and the SBR MPs communicating to each other via reliable ComAgent routing services. Subscriber data concerning binding and session information is populated in the SBR-B and SBR-S respectively by the Policy Diameter Routing Agent (Policy DRA).

PDRA/PCA DSR application requires configuration of SBR-Binding as well as SBR-Session servers and comAgent connections to these SBR servers.

All software required to run GLA is available by default as part of a DSR release installation or upgrade. GLA cannot be activated until after PCA is activated. The process of activating the feature simply makes proper use of software elements and file system files that are already present, to change the behavior of the DSR NE.

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

After feature activation, all selectable PCA menu items are present on the SOAM GUI and NOAM GUI, allowing full PCA configuration and provisioning. Specifically, for PCA application, the top-level PCA folder is visible on the Main Menu, and a new entry is added to the Diameter->Maintenance->Applications table, showing PCA and its state. Activation of PCA does not affect DSR signaling behavior except for process restarts necessary during the activation.

After activation:

DSR setup is ready to act as PCA application subject to the PCA configuration.

**Important:** Upon PCA feature activation, it is not automatically enabled. Activation simply means the mechanism for configuring PCA behavior is in place. But the DA-MP(s) acts on PCA provisioning information only after PCA has been enabled (via the Diameter->Maintenance->Applications screen). PCA should not be enabled until after the appropriate provisioning data has been entered. PCA provisioning is beyond the scope of this document, refer [7]
Policy and Charging Application User’s Guide, E73186 for PCA configuration. Furthermore, for proper operation of PCA, Communication Agent and PCA application assumes that the Remote Servers IP addresses corresponding to the comAgent HA service (for Binding Resource) are routable/reachable. However these networking setup/concerns are beyond the scope of the activation procedure. After PCA activation, please refer [7] Policy and Charging Application User’s Guide, E73186 for PCA configuration.

2.2 Feature Activation Overview

2.2.1 Pre-Feature Activation Overview

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

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Elapsed Time (Hours: Minutes)</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This Step</td>
<td>Cum.</td>
</tr>
</tbody>
</table>
| System Topology Check (Procedure 1) | 0:00-1:00 | 0:00-1:00 | • Verify Network Element Configuration data.  
• Verify Server Group Configuration data.  
• Analyze and plan DA-MP restart sequence. |
| Perform Health Check (Procedure 2) | 0:01-0:20 | 1:01-1:20 | • Verify Server status.  
• Log all current alarms. |

2.2.2 Feature Activation Execution Overview

The procedures shown in the following table are executed inside a single maintenance window.

Either procedure 4 or procedure 5 should be executed as per the requirement. Procedure 4 should be executed when NOAM and SOAM servers for atleast one DSR site are installed and configured. Procedure 5 must be repeated if one or more DSR sites are added to a DSR network and PCA is to be used on the new sites.

Procedure completion times shown here are estimates. Times may vary due to differences in database size, network configuration and loading, user experience, and user preparation.

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Elapsed Time (Hours: Minutes)</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This Step</td>
<td>Cum.</td>
</tr>
</tbody>
</table>
| Perform Health Check (Procedure 3) | 0:01-0:05 | 0:01-0:05 | • Verify Verify all servers in the network are on the same DSR release.  
• Verify proper PCA feature state.  
• Verify Server status.  
• Verify server and server group configurations.  
• Log all current alarms. |
Policy and Charging DRA Feature Activation Procedure

### Procedure

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Elapsed Time (Hours: Minutes)</th>
<th>Activity Feature Activation Execution</th>
</tr>
</thead>
</table>
| Feature Activation for Entire Network (Procedure 4) or Feature Activation for Newly Added Sites (Procedure 5) | 0:10-0:40 0:11-0:45 | • Log out of NOAM/SOAM GUI.  
• SSH to Active NOAM.  
• Log in as admusr.  
• Change directory to /usr/TKLC/dsr/prod/maint/loaders/activate.  
• Execute the feature activation script.  
• Log into NOAM or SOAM GUI.  
• Verify the Policy and Charging Folder.  
• Verify Maintenance screen.  
• Log into NOAM GUI (Optional).  
• Restart each active DA-MP server.  
• Verify Maintenance screen.  |
| Restart Process (Procedure 6) | | • Restart Process on DA-MP Servers.  
• Restart Process on SBR Servers.  |

#### 2.2.3 Post-Feature Activation Overview

The procedures shown in the following table can be executed outside 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 6. Post-Feature Activation Overview**

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Elapsed Time (Hours: Minutes)</th>
<th>Activity Feature Activation Completion</th>
</tr>
</thead>
</table>
| Perform Health Check (Procedure 7) | 0:01-0:05 0:01-0:05 | • Establish GUI Session on the NOAM VIP.  
• Verify the KPIs.  
• Verify the Measurements.  
• Verify GUI left hand menu item.  |
| Perform Health Check (Procedure 8) | 0:01-0:05 0:02-0:10 | • Establish GUI Session on the SOAM VIP.  
• Verify GUI left hand menu item.  |

#### 3. Feature Deactivation Overview

### 3.1 Pre-Feature Deactivation Overview

The procedures shown in the following table can be executed outside 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. Pre-Feature Deactivation Overview**

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Elapsed Time (Hours or Minutes)</th>
<th>Activity Deactivation Procedures</th>
</tr>
</thead>
</table>
| Perform Health Check (Procedure 9) | 0:01-0:05 0:01-0:05 | • Establish GUI Session on the SOAM VIP.  
• Verify GUI left hand menu item.  
• Establish GUI Session on the NOAM VIP.  
• Verify server status.  
• Log current alarms.  |
### 3.2 Feature Deactivation Execution Overview

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

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Elapsed Time (Hours or Minutes)</th>
<th>Activity Deactivation Procedures</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Procedure</strong></td>
<td><strong>This Step</strong></td>
<td><strong>Cum.</strong></td>
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### Table 8. Feature Deactivation Overview

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Elapsed Time (Hours or Minutes)</th>
<th>Activity Deactivation Procedures</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Feature Activation state and deactivate GLA</strong></td>
<td><strong>00:01-00:05</strong></td>
<td><strong>0:02-0:10</strong></td>
</tr>
<tr>
<td><strong>Verify PCA application state and deactivate GLA</strong></td>
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<tr>
<td><strong>Procedure 10</strong></td>
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<td><strong>Procedure 10</strong></td>
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<tr>
<td><strong>Verify PCA application state and deactivate GLA</strong></td>
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<td><strong>Verify PCA application state and deactivate GLA</strong></td>
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</table>

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### Table 8. Feature Deactivation Overview

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Elapsed Time (Hours or Minutes)</th>
<th>Activity Deactivation Procedures</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Verify PCA application state and deactivate GLA</strong></td>
<td><strong>00:01-00:05</strong></td>
<td><strong>0:02-0:10</strong></td>
</tr>
<tr>
<td><strong>Verify PCA application state and deactivate GLA</strong></td>
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<tr>
<td><strong>Verify PCA application state and deactivate GLA</strong></td>
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</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>
<thead>
<tr>
<th>Procedure</th>
<th>Elapsed Time (Hours or Minutes)</th>
<th>Activity Deactivation Procedures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Move SBR Servers to OOS State (Procedure 20)</td>
<td>0:01-0:05</td>
<td>• Establish GUI Session on the NOAM VIP</td>
</tr>
<tr>
<td>Remove SBR Servers from Server Groups (Procedure 21)</td>
<td>0:01-0:05</td>
<td>• Establish GUI Session on the NOAM VIP</td>
</tr>
<tr>
<td>Reboot the Servers (Procedure 23)</td>
<td>0:10-1:00</td>
<td>• Identify the sequence of the server to be rebooted</td>
</tr>
<tr>
<td>Perform Health Check (Procedure 27, Procedure 28, and Procedure 29)</td>
<td>0:01-0:05</td>
<td>• Verify Server status.</td>
</tr>
</tbody>
</table>

4. Feature Activation Preparation

This section provides detailed procedures to prepare a system for PCA 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**

- 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.
### Procedure 1: System Topology Check

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><strong>NOAM VIP GUI: Login</strong>&lt;br&gt;Establish a GUI session on the NOAM server by using the VIP IP address of the NOAM server. Open the web browser and enter a URL of:&lt;br&gt;&lt;br&gt;<strong>http://&lt;Primary_NOAM_VIP_IP_Address&gt;</strong>&lt;br&gt;&lt;br&gt;Login as the <em>guiadmin</em> user:</td>
</tr>
<tr>
<td>2</td>
<td><strong>NOAM VIP GUI: Verify Network Configuration Data</strong>&lt;br&gt;Navigate to Main Menu -&gt; Configuration -&gt; Networking -&gt; Networks.&lt;br&gt;&lt;br&gt;Click <strong>Report</strong>.&lt;br&gt;&lt;br&gt;Verify the configuration data is correct for your network.&lt;br&gt;&lt;br&gt;<strong>Save</strong> or <strong>Print</strong> this report, keep copies for future reference.</td>
</tr>
</tbody>
</table>
Procedure 1: System Topology Check

<table>
<thead>
<tr>
<th>Step</th>
<th>Task Description</th>
</tr>
</thead>
</table>
| 3    | **NOAM VIP GUI:**
   - Verify Server Configuration
     - Verify the configuration data is correct for your network.
     - Save or Print this report, keep copies for future reference.

| 4    | **Analyze and plan DA-MP restart sequence**
- During PCA Activation procedure 6 for activation of PCA on an existing system, it will be necessary to restart the application process on each DA-MP server. This step is to plan the order and level of parallelism for the process restarts such that signaling disruption is minimized.
- Analyze system topology and plan for any DA-MPs which will be out-of-service during the feature activation sequence.
- Analyze system topology gathered in Steps 2 and 3.
- Determine exact sequence which DA-MP servers will be restarted (with the expected out-of-service periods).
- **Note:** It is recommended that no more than 50% of the MPs be restarted at once.
## 4.2 Perform Health Check

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

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

<table>
<thead>
<tr>
<th>STEP #</th>
<th>Description</th>
</tr>
</thead>
</table>
| 1      | NOAM VIP GUI: Login  
Establish a GUI session on the NOAM server by using the VIP IP address of the NOAM server. Open the web browser and enter a URL of:  

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

Login as the `guiadmin` user: |
Procedure 2: Perform Health Check (Feature Activation Preparation)

2  NOAM VIP GUI: Verify Server Status

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

- Status & Manage
- Network Elements
- Server
- HA
- Database
- KPIs
- Processes
- Tasks
- Files

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

<table>
<thead>
<tr>
<th>App</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>
</tbody>
</table>

Do not proceed to feature activation if any of the above states are not Norm. If any of these are not Norm, corrective action should be taken to restore the non-Norm status to Norm before proceeding with the feature activation.

If the Alarm (Alm) status is not Norm but only Minor alarms are present, it is acceptable to proceed with the feature activation. If there are Major or Critical alarms present, these alarms should be analyzed prior to proceeding with the feature activation. The activation may be able to proceed in the presence of certain Major or Critical alarms. Contact My Oracle Support (MOS) for assistance as necessary.

3  NOAM VIP GUI: Log Current Alarms

Navigate to Main Menu -> Alarms & Events -> View Active.

Click Report.

Export  Report  Clear Selections

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

Procedure 3: Perform Health Check (Pre Feature Activation)

<table>
<thead>
<tr>
<th>STEP</th>
<th>This procedure provides steps to perform needed health checks.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</td>
</tr>
<tr>
<td></td>
<td>If this procedure fails, contact My Oracle Support (MOS) and ask for assistance.</td>
</tr>
</tbody>
</table>
### Procedure 3: Perform Health Check (Pre Feature Activation)

<table>
<thead>
<tr>
<th>Step</th>
<th>NOAM VIP GUI:</th>
<th>Description</th>
</tr>
</thead>
</table>
| 1    | Login         | Establish a GUI session on the NOAM server by using the VIP IP address of the NOAM server. Open the web browser and enter a URL of:  

`http://<Primary_NOAM_VIP_IP_Address>`

Login as the *guiadmin* user: |
| 2    | Verify PCA Folder is not Present | Under *Main Menu*, verify the Policy and Charging folder is NOT present. |
Procedure 3: Perform Health Check (Pre Feature Activation)

3  **NOAM VIP GUI:** Verify Server Status

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

   ![Diagram of NOAM VIP GUI]

   Verify all Server Status is Normal (Norm) for:
   - Alarm (Alm)
   - Database (DB)
   - Reporting Status
   - 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>
</tbody>
</table>

   Do not proceed to feature activation if any of the above states are not Norm. If any of these are not Norm, corrective action should be taken to restore the non-Norm status to Norm before proceeding with the feature activation.

   If the Alarm (Alm) status is not Norm but only Minor alarms are present, it is acceptable to proceed with the feature activation. If there are Major or Critical alarms present, these alarms should be analyzed prior to proceeding with the feature activation. The activation may be able to proceed in the presence of certain Major or Critical alarms. Contact My Oracle Support (MOS) for assistance as necessary.

4  **NOAM VIP GUI:** Verify Server Configuration

   Navigate to **Main Menu -> Configuration -> Server Groups.**

   ![Diagram of NOAM VIP Configuration]

   Verify the configuration data is correct for your network.
### Procedure 3: Perform Health Check (Pre Feature Activation)

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
</table>
| 5    | **NOAM VIP GUI:** Log Current Alarms  
Navigate to Main Menu -> Alarms & Events -> View Active.  
Click Report.  
Save or Print this report, keep copies for future reference. |
| 6    | **NOAM VIP GUI:** Check the software version on all servers.  
Navigate to Main Menu: Administration -> Software Management -> Upgrade.  
Verify that the Upgrade ISO column shows the correct release number for all servers in the DSR network.  
*Note:* All servers in the network must be on the same DSR release when activating PCA. |
| 7    | **NOAM VIP GUI:** Check the Upgrade Acceptance status on all servers.  
Navigate to Main Menu: Administration -> Software Management -> Upgrade.  
Verify that the Upgrade State column does not show ACCEPT OR REJECT.  
*Note:* Upgrade must be accepted on all servers before activating PCA.  
Upgrade State should be Ready. If the Upgrade State is ACCEPT OR REJECT, follow the Installation Guide [6] C-Class Software Installation and Configuration Procedure 2/2, E76181 or Upgrade Guide [9] DSR Software Upgrade Guide (whichever applies) to accept the upgrade on all servers prior to activating PCA. |
5.2 Activation Procedures

This section provides the detailed procedure steps of the feature activation execution.

PCA activation can be performed either

- after all NOAM and SOAM servers are installed and configured. So if the fresh install is for a DSR system with 3 sites, the NOAMs and the SOAMs for all three sites should be installed and configured prior to performing PCA activation or
- install and configure only the NOAMs and SOAMs for the first site and activate PCA using Procedure 4, then use Procedure 5 to activate PCA on additional sites later.

PCA activation should be performed after all NOAM and SOAM servers are installed and configured. So if the fresh install is for a DSR system with 3 sites, the NOAMs and the SOAMs for all three sites should be installed and configured prior to performing PCA activation. Or install and configure only the NOAMs and SOAMs for the first site and activate PCA using Procedure 4, then use Procedure 5 to activate PCA on additional sites later.

These procedures are executed inside a maintenance window.

The procedures in this section need to be executed in the following order:

- For PCA activation on the entire network:
  - Section 5.2.1 Feature Activation
  - Section 5.2.3 Restart Process
  - Section 5.3.2 System Health Check After Application Activation on NOAM Server
  - Section 5.3.3 System Health Check After Application Activation on SOAM Servers
- For PCA activation on a newly added site:
  - Section 5.2.2 PCA Activation on a Newly Added Site
  - Section 5.2.3 Restart Process
  - Section 5.3.2 System Health Check After Application Activation on NOAM Server
  - Section 5.3.3 System Health Check After Application Activation on SOAM Servers

5.2.1 Feature Activation

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

**Procedure 4: PCA Activation on Entire Network**

<table>
<thead>
<tr>
<th>STEP #</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Establish a secure shell Session on the active NOAM</td>
</tr>
</tbody>
</table>

This procedure activates the PCA on complete system.

This procedure does not require a Maintenance Window.

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.

Establish a secure shell session on the active NOAM by using the XMI VIP address. Login as user “admusr”.

Use your SSH client to connect to the server (ex. Putty)

Note: you must consult your own software client’s documentation to learn how to launch a connection. For example:

```
# ssh <active NO XMI VIP Address>
```
Procedure 4: PCA Activation on Entire Network

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
</table>
| 2 | PCA Application Activation: Change directory | Change to the following directory:  
```
$ cd /usr/TKLC/dsr/prod/maint/loaders/activate
```

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
</table>
| 3 | PCA Activation: Execute the PCA application activation script | Run the feature activation script by executing the following command:  
```
$ ./load.pcaActivationTopLevel
```
*Note:* This command execution starts Activation on NOAM servers and All Active SOAM servers.  
Check log file /var/TKLC/log/pcaActivationTopLevel.log to see if there is any execution failure.  
If the activation fails, then execute the procedure in Section 6.2.3 to restore the system back to state before start of activation.

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
</table>
| 4 | PCA Application Activation (OPTIONAL): Clear the Web Server cache | Delete all GUI cache files on active SOAM and NOAM for quick view of changes or wait for some time so that new changes are reflected.  
```
$ clearCache
```

5.2.2 PCA Activation on a Newly Added Site

Detailed steps are given in the procedure below.

**This procedure needs to be executed only if a new site is added TO AN existing configured system.**

This procedure activates the PCA on newly added site only. This section is only valid if system is already configured and a new site is added to the system at a later stage. **Skip this step if PCA is being activated during fresh install of the system.**

Procedure 5: PCA Activation on Newly Added Site

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
</table>
| 1 | Verify configuration of All SOAM servers for the newly added site | Before continuing, verify that all SOAM servers should be configured in the topology for the newly added site.  
1. Log into the NOAM VIP GUI.  
2. Navigate Main Menu: Status & Manage -> Server. See all required SOAM servers for the newly added site are configured and Application State is enabled. |

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Execute the activation procedure</td>
<td>For PCA activation on new site, the activation procedure needs to be executed from the NOAM. Execute the Procedures in Section 5.2.1.</td>
</tr>
</tbody>
</table>
### 5.2.3 Restart Process

Detailed steps are given in the procedure below.

**Procedure 6: Restart Process**

<table>
<thead>
<tr>
<th>STEP #</th>
<th>Description</th>
</tr>
</thead>
</table>
| **This procedure restarts the DSR and SBR application processes.**  
This procedure needs to be performed in a maintenance window.  
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.  
*Note:* If PCA activation is being performed on a newly added site, this procedure is limited to the servers belonging to that site only. Skip this procedure if PCA is being activated before DA-MP and SBR servers are added to the topology. |
| 1 | NOAM VIP GUI: Login  
Establish a GUI session on the NOAM server by using the VIP IP address of the NOAM server. Open the web browser and enter a URL of:  
http://<Primary_NOAM_VIP_IP_Address>  
Login as the *guiadmin* user: |

![Login Screen](image)
Procedure 6: Restart Process

<table>
<thead>
<tr>
<th></th>
<th>Procedure</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>NOAM VIP: Restart Process on DA-MP Servers</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 Main Menu -&gt; Status &amp; Manage -&gt; Server. Select the desired DA-MPs, you can use ‘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.</td>
</tr>
<tr>
<td></td>
<td>NOAM VIP: Restart Process on SBR Servers</td>
<td>Navigate to Main Menu -&gt; Status &amp; Manage -&gt; Server. Select all the SBR servers, click Restart and OK to confirm.</td>
</tr>
</tbody>
</table>
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.

5.3.2 System Health Check After Application Activation on NOAM Servers
Detailed steps are given in the procedure below.

Procedure 7: Verification of Application Activation on NOAM Server

<table>
<thead>
<tr>
<th>STE #</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>NOAM VIP GUI: Login</td>
</tr>
</tbody>
</table>
Procedure 7: Verification of Application Activation on NOAM Server

2. **NOAM VIP:** Verify that the Resource Domain Profile show the new profile entries.

   Verify that the Resource Domain Profile show the new profile entries.

   ![Image showing Resource Domain Profile]

3. **NOAM VIP:** Verify that the PCA specific KPIs are shown.

   Verify that KPIs filter option shows the KPI Group for PCA, SBR-Binding and SBR-Session.

   ![Image showing KPIs filter options]

4. **NOAM VIP:** Verify that the PCA specific Measurement groups are shown.

   Verify that Measurement groups are shown for OC-DRA, P-DRA, and SBR.

   ![Image showing Measurement groups]

   ![Image showing Measurement groups (continued)]
Procedure 7: Verification of Application Activation on NOAM Server

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>NOAM VIP: Verify that the Main Menu shows the Policy and Charging submenu.</td>
</tr>
<tr>
<td></td>
<td>Verify the Main Menu on Active NOAM shows the Policy and Charging submenu with Configuration and Maintenance screens.</td>
</tr>
</tbody>
</table>

5.3.3 System Health Check After Application Activation on SOAM Servers

Detailed steps are given in the procedure below.

Procedure 8: Verification of Application Activation on SOAM Servers

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1</td>
<td>This procedure verifies the activation of PCA on SOAM servers.</td>
</tr>
<tr>
<td></td>
<td>This procedure does not require a maintenance window.</td>
</tr>
<tr>
<td></td>
<td>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</td>
</tr>
<tr>
<td></td>
<td>If this procedure fails, contact My Oracle Support (MOS) and ask for assistance.</td>
</tr>
</tbody>
</table>
Procedure 8: Verification of Application Activation on SOAM Servers

<table>
<thead>
<tr>
<th></th>
<th>SOAM VIP GUI: Login</th>
<th>Establish a GUI session on the SOAM server by using the VIP IP address of the SOAM server. Open the web browser and enter a URL of: http://&lt;Primary_SOAM_VIP_IP_Address&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Login</td>
<td>Login as the guiadmin user:</td>
</tr>
</tbody>
</table>
Procedure 8: Verification of Application Activation on SOAM Servers

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
<th>Description</th>
</tr>
</thead>
</table>
| 2 | SOAM VIP: Verify that the Policy and Charging folder is visible in the Left Hand Menu | Verify that the Policy and Charging folder appears on the left hand menu:  
- Policy and Charging  
- Configuration  
  - General Options  
  - Access Point Names  
  - Policy DRA  
    - PCRFs  
    - Binding Key Priority  
    - PCRF Pools  
    - PCRF Pool To PRT Mapping  
    - PCRF Sub-Pool Selection Rules  
    - Policy Clients  
    - Suspect Binding Removal Rules  
    - Site Options  
- Online Charging DRA  
  - OCSs  
  - CTFs  
  - OCS Session State  
  - Realms  
  - Error Codes  
  - Alarm Settings  
  - Congestion Options |
| 3 | SOAM VIP: PCA is activated. | PCA is activated, resume the remaining installation/configuration steps. |

6. Feature Deactivation

Execute this section only if there is a problem, and it is required to deactivate PCA application and it is desired to revert back to the pre-activation version of the software.

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 9: Perform Health Check (Pre-Feature Deactivation)

<table>
<thead>
<tr>
<th>Step #</th>
<th>Description</th>
</tr>
</thead>
</table>
| 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. |
### Procedure 9: Perform Health Check (Pre-Feature Deactivation)

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
<th>Description</th>
</tr>
</thead>
</table>
| 1    | **NOAM VIP GUI: Login**       | Establish a GUI session on the NOAM server by using the VIP IP address of the NOAM server. Open the web browser and enter a URL of:  

\[
\text{http://}<\text{Primary\_NOAM\_VIP\_IP\_Address}> 
\]

Login as the `guiadmin` user:

![Oracle System Login](image)

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
<th>Description</th>
</tr>
</thead>
</table>
| 2    | **NOAM VIP GUI: Verify Server Status** | Navigate to **Main Menu -> Status & Manage -> Server**.  

Verify all Server Status is Normal (Norm) for:  
Alarm (Alm), Database (DB), Reporting 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>
</tbody>
</table>
Procedure 9: Perform Health Check (Pre-Feature Deactivation)

3. NOAM VIP GUI:
   Log Current Alarms

Navigate to Main Menu -> Alarms & Events -> View Active.

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

Click Report.

Export  Report  Clear Selections

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

| Print | Save | Back |

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 PCA Deactivation procedures.

The procedures in this section need to be executed in the following order:

- For PCA deactivation on the entire network
  - Section 6.2.2 Pre PCA Deactivation Steps
  - Section 6.2.3 PCA Deactivation Procedure
  - Section 6.2.5 Post PCA Deactivation Steps
  - Section 6.2.6 Post PCA Deactivation System Health Check

- For PCA deactivation on a site (in the case when the site is being decommissioned)
  - Section 6.2.4 Site Specific PCA Deactivation Procedure
  - Section 6.2.5 Post PCA Deactivation Steps
  - Section 6.2.6.2 System Health Check after Application Deactivation on SOAM Servers
6.2.2 Pre PCA Deactivation Steps

6.2.2.1 Deactivate the GLA Application
Detailed steps are given in the procedure below.

Procedure 10: Deactivate GLA Application

<table>
<thead>
<tr>
<th>Step #</th>
<th>SOAM VIP GUI: Login on the PCA to be deactivated</th>
<th>Establish a GUI session on the SOAM server by using the VIP IP address of the SOAM server. Open the web browser and enter a URL of:</th>
<th>Login as the guiadmin user:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>[ ]</td>
<td>http://&lt;Primary_SOAM_VIP_IP_Address&gt;</td>
<td><img src="image" alt="Oracle System Login" /></td>
</tr>
<tr>
<td>2</td>
<td>[ ]</td>
<td>Navigate to Main Menu -&gt; Diameter -&gt; Maintenance -&gt; Applications.</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>[ ]</td>
<td>If GLA record is present in the Applications screen. Then execute the steps to deactivate the GLA application as per deactivation procedures defined in [8] DSR GLA Feature Activation Procedure, E78946.</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>[ ]</td>
<td>Repeat Step 1-3 on those Active SOAM servers on which PCA is activated.</td>
<td></td>
</tr>
</tbody>
</table>
6.2.2.2 Unconfigure PCA Functions
Detailed steps are given in the procedure below.

Procedure 11: Unconfigure PCA Functions (PDRA and OCDRA)

<table>
<thead>
<tr>
<th>STEP</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Note:</strong></td>
<td>Execution of this procedure will cause all Diameter requests routed to the PCA application to be rejected using the Diameter result code configured for Error Condition PCA function unavailable. Prior to this step, the network operator should take steps to divert policy client and online charging trigger function signaling away from the PCA DSR.</td>
</tr>
<tr>
<td><strong>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</strong></td>
<td></td>
</tr>
<tr>
<td><strong>If this procedure fails, contact My Oracle Support (MOS) and ask for assistance.</strong></td>
<td></td>
</tr>
</tbody>
</table>

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

       ![Oracle System Login](image)

2. **NOAM VIP:**
   - **Unconfigure Policy DRA**
     - Navigate to **Main Menu: Policy and Charging -> Configuration -> General Options**.

3. **NOAM VIP:**
   - **Unconfigure Online Charging DRA**
     - Navigate to **Main Menu: Policy and Charging -> Configuration -> General Options**.
     - If Online Charging DRA is enabled, execute the steps in reference [7] Policy and Charging Application User's Guide, E73186, Section 4.8, to unconfigure Online Charging DRA.
6.2.2.3 Disable Diameter Connections

Detailed steps are given in the procedure below.

**Procedure 12: Disable Diameter Connections**

<table>
<thead>
<tr>
<th>STEP #</th>
<th>SOAM VIP GUI:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Login</td>
</tr>
</tbody>
</table>

This procedure disables the Diameter connections.

This procedure does not require a maintenance window.

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.

*Note:* Repeat this procedure for all the sites on which PCA deactivation is required.

1. **SOAM VIP GUI:** Establish a GUI session on the SOAM server by using the VIP IP address of the SOAM server. Open the web browser and enter a URL of:

   [http://<Primary_SOAM_VIP_IP_Address>](http://<Primary_SOAM_VIP_IP_Address>)

   Login as the *guiadmin* user:
Procedure 12: Disable Diameter Connections

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>SOAM VIP: Disable DSR connections. Navigate to Main Menu: Diameter -&gt; Maintenance -&gt; Connections. Select all the PCA specific diameter connections and click disable or click Disable All (if applicable). The Admin State of connections should be shown as Disabled.</td>
</tr>
<tr>
<td></td>
<td>Note: PCA specific connection includes connections to PCRFs, PCEFs, AFs, CTFs, and OCSes.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>SOAM VIP: Perform steps on All Active SOAM Servers. Repeat Steps 1 to 2 on All Active SOAM servers on which PCA deactivation is required.</td>
</tr>
</tbody>
</table>

6.2.2.4 Disable Application

Detailed steps are given in the procedure below.

Procedure 13: Disable application

<table>
<thead>
<tr>
<th>Step #</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This procedure disables the PCA application. This procedure does not require a maintenance window. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</td>
</tr>
<tr>
<td></td>
<td>If this procedure fails, contact My Oracle Support (MOS) and ask for assistance.</td>
</tr>
<tr>
<td></td>
<td>Note: Repeat this procedure for all the sites on which PCA deactivation is required.</td>
</tr>
</tbody>
</table>
### Procedure 13: Disable application

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | **SOAM VIP GUI:** Login [Image] Establish a GUI session on the SOAM server by using the VIP IP address of the SOAM server. Open the web browser and enter a URL of:  
  ```
  http://<Primary_SOAM_VIP_IP_Address>
  ```  
  Login as the **guiadmin** user:  
  ![Oracle System Login](image)

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td><strong>SOAM VIP:</strong> Navigate to Applications screen [Image] Navigate to <strong>Main Menu -&gt; Diameter -&gt; Maintenance -&gt; Applications.</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 3    | **SOAM VIP:** Disable the PCA application [Image] Select the PCA row and click **Disable.**  
  If there are multiple DA-MPs under this SOAM then there will be multiple entries of PCA in this screen. Select all the entries and click Disable. |

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 4    | **SOAM VIP:** Verify that the PCA application has been Disabled.  
  ![Table](image)  
  Navigate to **Main Menu -> Diameter -> Maintenance -> Applications.**  
  Verify that the Application status has changed to Disabled. |

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td><strong>SOAM VIP:</strong> Perform steps on All Active SOAM Servers [Image] Repeat Steps 1 to 4 on All Active SOAM servers on which PCA deactivation is required.</td>
</tr>
</tbody>
</table>
6.2.2.5 Remove DSR Configuration Data
Detailed steps are given in the procedure below.

Procedure 14: Remove DSR Configuration Data

<table>
<thead>
<tr>
<th>STEP #</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This procedure removes the DSR configuration data. 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. Note: Please do not execute this step if you are going to activate PCA again on this system and you want to re-use the configuration data after re-activation.</td>
</tr>
<tr>
<td>1</td>
<td>SOAM VIP GUI: Login Establish a GUI session on the SOAM server by using the VIP IP address of the SOAM server. Open the web browser and enter a URL of: http://&lt;Primary_SOAM_VIP_IP_Address&gt; Login as the guiadmin user:</td>
</tr>
<tr>
<td></td>
<td>Main Menu: Diameter -&gt; Configuration -&gt; Application Route Tables. Select PCA specific Application Route Table Name. Either click Delete to delete the entire table or click View/Edit Rules, select PCA specific Application Route Rules and click Delete.</td>
</tr>
</tbody>
</table>
## Procedure 14: Remove DSR Configuration Data

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
<th>Main Menu</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>SOAM VIP: Remove Peer Routing Rules.</td>
<td>Diameter -&gt; Configuration -&gt; Peer Route Tables.</td>
<td>Select PCA specific Peer Route Table Name. Either click <strong>Delete</strong> to delete the entire table or click <strong>View/Edit Rules</strong>, select PCA specific Peer Route Rules and click <strong>Delete</strong>.</td>
</tr>
<tr>
<td>4</td>
<td>SOAM VIP: Remove Route Lists</td>
<td>Diameter -&gt; Configuration -&gt; Route Lists.</td>
<td>Select and delete the PCA specific or the complete configuration data (as applicable) from this screen.</td>
</tr>
<tr>
<td>5</td>
<td>SOAM VIP: Remove Route Groups</td>
<td>Diameter -&gt; Configuration -&gt; Route Groups.</td>
<td>Select and delete the PCA specific or the complete configuration data (as applicable) from this screen.</td>
</tr>
<tr>
<td>6</td>
<td>SOAM VIP: Remove Connections.</td>
<td>Diameter -&gt; Configuration -&gt; Connections.</td>
<td>Select and delete the PCA specific connection or the complete configuration data (as applicable) from this screen. PCA specific connection includes connections to PCRFs, PCEFs, AFs, CTFs, and OCSes.</td>
</tr>
<tr>
<td>7</td>
<td>SOAM VIP: Remove Peer Nodes.</td>
<td>Diameter -&gt; Configuration -&gt; Peer Nodes.</td>
<td>Select and delete the PCA specific or the complete configuration data (as applicable) from this screen.</td>
</tr>
<tr>
<td>8</td>
<td>SOAM VIP: Remove Local Nodes.</td>
<td>Diameter -&gt; Configuration -&gt; Local Nodes.</td>
<td>Select and delete the PCA specific or the complete configuration data (as applicable) from this screen.</td>
</tr>
<tr>
<td>9</td>
<td>SOAM VIP: Remove CEX Configuration Sets</td>
<td>Diameter -&gt; Configuration -&gt; Configuration Sets -&gt; CEX Configuration Sets.</td>
<td>Select and delete the PCA specific or the complete configuration data (as applicable) from this screen.</td>
</tr>
<tr>
<td>10</td>
<td>SOAM VIP: Remove CEX Parameters.</td>
<td>Diameter -&gt; Configuration -&gt; CEX Parameters.</td>
<td>Select and delete the PCA specific or the complete configuration data (as applicable) from this screen.</td>
</tr>
<tr>
<td>11</td>
<td>SOAM VIP: Remove Application IDs</td>
<td>Diameter -&gt; Configuration -&gt; Application IDs.</td>
<td>Select and delete the PCA specific or the complete configuration data (as applicable) from this screen.</td>
</tr>
<tr>
<td>12</td>
<td>SOAM VIP: Perform steps on All Active SOAM Servers</td>
<td>Repeat Steps 1 to 11 on All Active SOAM servers.</td>
<td></td>
</tr>
</tbody>
</table>
6.2.2.6 Remove Resource Domain Configuration Data

Detailed steps are given in the procedure below.

**Procedure 15: Remove Resource Domain Configuration Data**

<table>
<thead>
<tr>
<th>STEP #</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Establish GUI Session on the NOAM VIP. Establish a GUI session on the NOAM by using the XMI VIP address. Login as user guiadmin.</td>
</tr>
<tr>
<td>2</td>
<td>NOAM VIP: Remove all the data from Place screen as mentioned. Main Menu: Configuration -&gt; Resource Domains. Delete the Resource Domain of type ‘Policy Binding’ and ‘Policy Session’ and ‘Policy and Charging DRA’ from this screen.</td>
</tr>
</tbody>
</table>

6.2.2.7 Remove Place Associations Configuration Data

Detailed steps are given in the procedure below.

**Procedure 16: Remove Place Associations Configuration Data**

<table>
<thead>
<tr>
<th>STEP #</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Establish GUI Session on the NOAM VIP. Establish a GUI session on the NOAM by using the XMI VIP address. Login as user guiadmin.</td>
</tr>
<tr>
<td>2</td>
<td>NOAM VIP: Unconfigure the associated Places from the Place Associations as mentioned. Main Menu: Configuration -&gt; Place Associations. Select the Place Associations of type ‘Policy and Charging Mated Sites’. Click Edit. Insert Edit Delete Report. Uncheck all the Places, associated with this Place Associations. Click Ok. Ok Apply Cancel. Repeat this step for all other Place Associations of type ‘Policy and Charging Mated Sites’ and ‘Policy Binding Region’ from this screen.</td>
</tr>
<tr>
<td>3</td>
<td>NOAM VIP: Remove all the data from Place Associations screen as mentioned. Main Menu: Configuration -&gt; Place Associations. Delete the Place Associations of type ‘Policy and Charging Mated Sites’, ‘Policy Binding Region’ from this screen.</td>
</tr>
</tbody>
</table>
6.2.2.8 Remove Place Configuration Data

Detailed steps are given in the procedure below.

Procedure 17: Remove Place Configuration Data

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Establish GUI Session on the NOAM VIP</td>
</tr>
<tr>
<td>2</td>
<td>NOAM VIP: Remove all the data from Place screen as mentioned.</td>
</tr>
</tbody>
</table>

This procedure removes the Place configuration data. Skip this step if places are being used by DCA application.

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.

6.2.3 PCA Deactivation Procedure

Detailed steps are given in the procedure below.

Procedure 18: PCA Application Deactivation

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Establish a secure shell Session on the active NOAM</td>
</tr>
<tr>
<td>2</td>
<td>PCA Deactivation: Change directory</td>
</tr>
<tr>
<td>3</td>
<td>PCA Deactivation: Execute the PCA application deactivation script</td>
</tr>
<tr>
<td>4</td>
<td>PCA Deactivation [OPTIONAL]: Clear the Web Server cache</td>
</tr>
</tbody>
</table>

This procedure deactivates the PCA application.

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.

Note: Skip this step if PCA is to be activated on a particular site. Execute Procedure 19 instead.

Establish a GUI session on the NOAM by using the XMI VIP address. Login as user guiadmin.

Main Menu: Configuration -> Places.

Edit the Places and Remove Servers from it.

Main Menu: Configuration -> Places.

Edit the Places and Remove Servers from it.

Establish an SSH session to the NOAM VIP. Login as admusr.

Change to the following directory:

$ cd /usr/TKLC/dsr/prod/maint/loaders/deactivate

Note: This command execution will starts Deactivation on Active NOAM and All Active SOAM servers.

Check log file /var/TKLC/log/pcaDeactivationTopLevel.log to see if there is any execution failure.

Delete all GUI cache files on active SOAM and NOAM for quick view of changes or wait for some time so that new changes can reflect.

$ clearCache
6.2.4 Site Specific PCA Deactivation Procedure

This section needs to be executed when PCA needs to be deactivated from a particular site.

Detailed steps are given below.

Procedure 19: PCA Application Deactivation on a particular site.

<table>
<thead>
<tr>
<th>STEP</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Establish a secure shell Session on the active SOAM or on which deactivation is required. Establish an SSH session to the SOAM VIP. Login as admusr.</td>
</tr>
<tr>
<td>2</td>
<td>PCA Deactivation: Change directory</td>
</tr>
<tr>
<td></td>
<td>Change to the following directory:</td>
</tr>
<tr>
<td></td>
<td>$ cd /usr/TKLC/dsr/prod/maint/loaders/deactivate</td>
</tr>
<tr>
<td>3</td>
<td>PCA Deactivation: Execute the PCA application deactivation script</td>
</tr>
<tr>
<td></td>
<td>$ ./load.pcaDeactivateBscoped</td>
</tr>
<tr>
<td></td>
<td>Note: This command execution will start Deactivation on selected active SOAM server. Check log file /var/TKLC/log/pcaDeactivateBscoped.log to see if there is any execution failure.</td>
</tr>
<tr>
<td>4</td>
<td>PCA Deactivation [OPTIONAL]: Clear the Web Server cache</td>
</tr>
<tr>
<td></td>
<td>Delete all GUI cache files on active SOAM and NOAM for quick view of changes or wait for some time so that new changes can reflect.</td>
</tr>
<tr>
<td></td>
<td>$ clearCache</td>
</tr>
</tbody>
</table>

6.2.5 Post PCA Deactivation Steps

If PCA Deactivation is being performed on a single site, the procedures in this section apply to the servers belonging to that site only.

6.2.5.1 Move SBR Servers to OOS State

Detailed steps are given in the procedure below.

Procedure 20: Move SBR Servers to OOS State

<table>
<thead>
<tr>
<th>STEP</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>This procedure puts all the MP Servers in SBR Server Groups in OOS. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</td>
</tr>
<tr>
<td></td>
<td>If this procedure fails, contact My Oracle Support (MOS) and ask for assistance.</td>
</tr>
<tr>
<td></td>
<td>Note: Please do not execute this step if you are going to activate PCA again on this system and you want to re-use the configuration data after re-activation.</td>
</tr>
</tbody>
</table>
### Procedure 20: Move SBR Servers to OOS State

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
<th>Description</th>
</tr>
</thead>
</table>
| 1 | **NOAM VIP GUI:** Login | Establish a GUI session on the NOAM server by using the VIP IP address of the NOAM server. Open the web browser and enter a URL of: \[http://<Primary_NOAM_VIP_IP_Address>\]
Login as the **guiadmin** user: |
| 2 | **NOAM VIP:** Navigate to Server Groups screen | Navigate to Main Menu: Configuration -> Server Groups. |
| 3 | **NOAM VIP:** Find the Server List | Find the Servers with Function as “SBR”.  
**Note:** SBR can be used for DCA application as well, skip SBR Servers being used for DCA application. |
| 2 | **NOAM VIP:** Navigate to HA screen | Navigate to Main Menu: Status & Manage -> HA.  
Edit the Servers from list created in Step 3. Change the value of “Max Allowed HA Role” to **OOS**. |
### 6.2.5.2 Remove SBR Servers from Server Groups

Detailed steps are given in the procedure below.

**Procedure 21: Remove SBR Servers from Server Groups**

<table>
<thead>
<tr>
<th>Step #</th>
<th>Description</th>
</tr>
</thead>
</table>
| 1      | **NOAM VIP GUI:** Login Establish a GUI session on the NOAM server by using the VIP IP address of the NOAM server. Open the web browser and enter a URL of: `<http://<Primary_NOAM_VIP_IP_Address>`
|         | Login as the `guiadmin` user: |
| 2      | **NOAM VIP:** Navigate to Server Groups screen Navigate to Main Menu: Configuration -> Server Groups. |
| 3      | **NOAM VIP:** Find the Server List Find the Servers with Function as “SBR” which were configured for PCA. NOTE: SBR can be used for DCA application as well, skip SBR Server Group being used for DCA application. |
| 4      | **NOAM VIP:** Edit the Server Groups. Navigate to Main Menu: Configuration -> Server Groups. Edit the Server Group with “SBR” function and remove the servers from it. Repeat the steps with all server groups with “SBR” function, which are listed in step 3 of this procedure. |
6.2.5.3 Delete Server Groups related to SBR

Detailed steps are given in the procedure below.

**Procedure 22: Delete Server Groups related to SBR**

<table>
<thead>
<tr>
<th>Step #</th>
<th>NOAM VIP GUI: Login</th>
<th>Detailed steps</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This procedure removes the Server Groups related to SBR. 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. <strong>Prerequisite:</strong> Previous procedure has been executed.</td>
<td></td>
</tr>
</tbody>
</table>

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

   ![Login Screen](image)

2. **NOAM VIP:** Navigate to Server Groups Screen
   - Navigate to Main Menu: Configuration -> Server Groups.

3. **NOAM VIP:** Remove Server Groups Resource Domains
   - Remove the Server Groups which has Function value “SBR”.


6.2.5.4 Reboot the Servers

Rebooting SBR, DA-MPs, SOAM and NOAM servers. Caution should be taken while selecting SBR and DA-MP servers. Select SBR and DA-MP servers which were being used for PCA. Detailed steps are given in the procedure below.

**Procedure 23: Reboot SBR Servers**

<table>
<thead>
<tr>
<th>STEP #</th>
<th>Detail</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This procedure removes the merge data from Servers by rebooting them.</td>
</tr>
<tr>
<td></td>
<td>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</td>
</tr>
<tr>
<td></td>
<td>If this procedure fails, contact My Oracle Support (MOS) and ask for assistance.</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> Select SBR servers being used for PCA application and for which deactivation done. Skip SBR servers being used for DCA application.</td>
</tr>
</tbody>
</table>

1  NOAM VIP GUI: Login
   Establish a GUI session on the NOAM server by using the VIP IP address of the NOAM server. Open the web browser and enter a URL of:

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

   Login as the *guiadmin* user:
Policy and Charging DRA Feature Activation Procedure

Procedure 23: Reboot SBR Servers

2

NOAM VIP: Navigate to Server Groups Screen

Navigate to **Main Menu: Status & Manage -> Server.**

- Status & Manage
- Network Elements
- Server
- HA
- Database
- KPIs
- Processes
- Tasks
- Files

3

NOAM VIP: Reboot the Servers.

Reboots all the relevant SBR servers.

Select all the MP servers having Function “SBR” which were being used for PCA application and click **Reboot.**

- Stop
- Restart
- Reboot
- NTP Sync
- Report

**Note:** Skip SBR servers being used for DCA applications.

Verify the server changes to the Err state and wait until it returns to the Enabled/Norm state.

Procedure 24: Reboot DA-MP Servers

**STEP #**

This procedure removes the merge data from servers by rebooting them.

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.

**Note:** Select DA-MP servers being used for PCA application and for which deactivation done.
## Procedure 24: Reboot DA-MP Servers

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

   ![Oracle System Login](image)

2. **NOAM VIP: Navigate to Server Groups Screen**
   - Navigate to **Main Menu: Status & Manage -> Server**.

   ![Server Groups Screen](image)
Procedure 24: Reboot DA-MP Servers

<table>
<thead>
<tr>
<th>NOAM VIP: Reboot the Servers.</th>
</tr>
</thead>
<tbody>
<tr>
<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.</td>
</tr>
<tr>
<td>Select DA-MP servers running PCA, you can use ‘Ctrl’ to select multiple DA-MPs at once.</td>
</tr>
<tr>
<td>Click Reboot.</td>
</tr>
<tr>
<td>Stop</td>
</tr>
<tr>
<td>---------------------------------------------------------------</td>
</tr>
<tr>
<td>Verify the Server changes to the Err state and wait until it returns to the Enabled/Norm state.</td>
</tr>
<tr>
<td>Repeat for the additional DA-MPs.</td>
</tr>
</tbody>
</table>

Procedure 25: Reboot SOAM Servers

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

Note: Select SOAM servers belonging to the sites running PCA.

If this procedure fails, contact My Oracle Support (MOS) and ask for assistance.
Procedure 25: Reboot SOAM Servers

2

NOAM VIP: Navigate to Server Groups Screen

Navigate to Main Menu: Status & Manage -> Server

- Status & Manage
- Network Elements
- Server
- HA
- Database
- KPIs
- Processes
- Tasks
- Files

3

NOAM VIP: Reboot the Servers.

Reboots all the relevant SOAM servers.
Select all the SOAM Servers belonging to sites running PCA and click reboot.

- Stop
- Restart
- Reboot
- NTP Sync
- Report

Verify the Server changes to the Err state and wait until it returns to the Enabled/Norm state.

Procedure 26: Reboot NOAM Servers

This procedure removes the merge data from Servers by rebooting them.

Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.

If this procedure fails, contact My Oracle Support (MOS) and ask for assistance.
Procedure 26: Reboot NOAM Servers

1. NOAM VIP GUI: Login
   Establish a GUI session on the NOAM server by using the VIP IP address of the NOAM server. Open the web browser and enter a URL of:
   \[ http://<Primary_NOAM_VIP_IP_Address> \]
   Login as the \textit{guiadmin} user:

   ![Oracle System Login]

   Enter your username and password to log in:
   
   \begin{align*}
   \text{Username:} & \quad \text{[Enter username]} \\
   \text{Password:} & \quad \text{[Enter password]}
   \end{align*}

   \[ \text{Log In} \]

2. NOAM VIP: Navigate to Server Groups Screen
   Navigate to \textbf{Main Menu: Status & Manage -> Server}.
   
   ![Server Navigation]

   - Status & Manage
   - Network Elements
   - Server
   - HA
   - Database
   - KPIs
   - Processes
   - Tasks
   - Files
Policy and Charging DRA Feature Activation Procedure

Procedure 26: Reboot NOAM Servers

3

**NOAM VIP:**
Reboot the Servers.

Select all NOAM servers except the Active NOAM and click reboot.

[Stop, Restart, Reboot, NTP Sync, Report]

Verify the Server changes to the Err state and wait until it returns to the Enabled/Norm state.

Select the Active NOAM server and click Reboot.

[Stop, Restart, Reboot, NTP Sync, Report]

After rebooting the Active NOAM Server the GUI will go away. Please Establish a GUI session on the NOAM by using the XMI VIP address. Login as user “guiadmin” after some time.

6.2.6 Post PCA Deactivation System Health Check

6.2.6.1 System Health Check after PCA Deactivation on NOAM Server

Detailed steps are given in the procedure below.

Procedure 27: Verification of Application Deactivation on NOAM Server

<table>
<thead>
<tr>
<th>STEP #</th>
<th>This procedure verifies the PCA application deactivation on NOAM Server.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Check off (√) each step as it is completed. Boxes have been provided for this purpose under each step number.</td>
</tr>
<tr>
<td></td>
<td>If this procedure fails, contact My Oracle Support (MOS) and ask for assistance.</td>
</tr>
<tr>
<td><strong>Note:</strong></td>
<td>Execute this procedure only when PCA is deactivated on entire network. If PCA is deactivated on a particular site, skip this procedure.</td>
</tr>
</tbody>
</table>
### Procedure 27: Verification of Application Deactivation on NOAM Server

| 1 | NOAM VIP GUI: Login | Establish a GUI session on the NOAM server by using the VIP IP address of the NOAM server. Open the web browser and enter a URL of:

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

Login as the *guiadmin* user:

![Oracle System Login](image)

| 2 | NOAM VIP: Verify that the Resource Domain Profile doesn’t show the profile entries of Binding and Session Profiles. | Verify the Resource Domain Profile list does not show the profile entries of **Policy and Charging DRA**, **Policy Session**, and **Policy Binding**.

![Resource Domain Profile](image)
### Procedure 27: Verification of Application Deactivation on NOAM Server

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td><strong>NOAM VIP:</strong> Verify</td>
<td>Verify that KPIs filter option do not show the KPI groups for PCA, SBR-Binding and SBR-Session.</td>
</tr>
<tr>
<td></td>
<td>that the KPIs are not shown for PCA, SBR-Binding and SBR-Session.</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td><strong>NOAM VIP:</strong> Verify</td>
<td>Verify that Measurement groups are not shown for OC-DRA, P-DRA, SBR-Binding and SBR-Session.</td>
</tr>
<tr>
<td></td>
<td>that the Measurement groups are not shown for OC-DRA, P-DRA and SBR-Binding and SBR-Session.</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td><strong>NOAM VIP:</strong> Verify</td>
<td>Verify that Main Menu on Active NOAM doesn’t show the Policy and Charging submenu.</td>
</tr>
<tr>
<td></td>
<td>that the Main Menu don’t show the Policy and Charging submenu.</td>
<td></td>
</tr>
</tbody>
</table>
6.2.6.2 System Health Check after Application Deactivation on SOAM Servers

Detailed steps are given in the procedure below.

Procedure 28: Verification of Application Deactivation on SOAM Servers

<table>
<thead>
<tr>
<th>STEP</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S01</td>
<td>SOAM VIP GUI: Establish a GUI session on the SOAM server by using the VIP IP address of the SOAM server. Open the web browser and enter a URL of: http://&lt;Primary_SOAM_VIP_IP_Address&gt; Login as the guiadmin user:</td>
</tr>
</tbody>
</table>

If this procedure fails, contact My Oracle Support (MOS) and ask for assistance.
### Procedure 28: Verification of Application Deactivation on SOAM Servers

<table>
<thead>
<tr>
<th>Step</th>
<th>Task Description</th>
<th>Details</th>
</tr>
</thead>
</table>
| 2    | SOAM VIP: Verify that the Policy and Charging folder is not visible in the Left Hand Menu | Verify that the Policy and Charging folder does not appear on the left hand menu:  
- **Main Menu**  
  - Administration  
  - Configuration  
  - Alarms & Events  
  - Security Log  
  - Status & Manage  
  - Measurements  
  - Communication Agent  
  - Diameter Common  
  - Diameter  
  - RADIUS  
  - SBR  
  - IPFE  
  - Help  
  - Legal Notices  
  - Logout |
| 3    | SOAM VIP: Verify that the Diameter maintenance application menu do not show the entry of PCA application | Verify that the Diameter maintenance application menu do not show the entry of PCA application  
**Main Menu:** Diameter -> Maintenance -> Applications  
**Table Description:** Applications Table  
| | | |
| 4    | SOAM VIP: Verify PCA application on All Active SOAM servers | Repeat Steps 1 to 3 on All Active SOAM servers for which PCA has been deactivated. |

### 6.3 Post-Deactivation Procedures

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

#### 6.3.1 Perform Health Check

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

**Procedure 29: Perform Health Check (Post-Feature Deactivation)**

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
</table>
| This procedure performs a post activation health check.  
Check off (√) each step as it is completed. Boxes have been provided for this purpose under each step number.  
If this procedure fails, contact My Oracle Support (MOS) and ask for assistance. |
### Procedure 29: Perform Health Check (Post-Feature Deactivation)

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

![Oracle System Login](image-url)
Procedure 29: Perform Health Check (Post-Feature Deactivation)

2. **NOAM VIP GUI: Verify Server Status**  
   - Navigate to `Main Menu -> Status & Manage -> Server`.  
     - Verify all Server Status is Normal (Norm) for:  
       - Alarm (Alm), Database (DB), Reporting Status, and Processes (Proc).  

3. **NOAM VIP GUI: Log Current Alarms**  
   - Navigate to `Main Menu -> Alarms & Events -> View Active`.  
   - Click `Report`.  
   - Save or Print this report, keep copies for future reference.  
   - Compare this alarm report with those gathered in the pre-Deactivation procedures. Contact My Oracle Support (MOS) if needed.
7. 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)

```bash
[admusr@DsrSetup03Noam1 activate]$ ./load.pcaActivationTopLevel

================== Start of Log Data in file /var/TKLC/log/pcaActivationTopLevel.log ==================

Log file location: /var/TKLC/log/pcaActivationTopLevel.log

Note:-
In case of any failure please execute /usr/TKLC/dsr/prod/maint/loaders/deactivate/load.pcaDeactivationTopLevel script to revert the changes.

Execution of Activation Process Starts

Executing /usr/TKLC/dsr/prod/maint/loaders/activate/load.pcaActivateAscoped script on DsrSetup03Noam1

================== Start of Log Data in file /var/TKLC/log/pcaActivateAscoped.log ==================

Server Name  : DsrSetup03Noam1
Server Role  : NETWORK_OAMP
Node Id      : DsrSetup03Noam1
HA State     : Active
Cluster Role : Primary

Add PCA to DsrApplication.

Verify that PCA is in the table

id=6
   name=PCA
   unavailableAction=SendAnswer
   avpInsertion=Yes
   shutdownMode=Graceful
   shutdownTimer=5
   resultCode=3002
   vendorId=0
   errorString=Policy and Charging Application Unavailable Or Degraded
   resExhResultCode=3004
   resExhVendorId=0
   resExhErrorString=PCA Resource Exhausted
   routeListId=65535
   realm=
   fqdn=
   mcl=0

Add PCA KPI group

Add PDRA Measurement groups

Add Permission Group headers for PCA

Add Resource Domain Profiles

Add Place Association Types

Add mapping between ResourceDomainName to ComAgentResourceId

RdName2ComAgentResId do not have any data. So, adding placeholders for comAgentResId reserved for PCA

Taking backup of current system values of ComAgent HA Service timeout configuration.
Setting the ComAgent HA Service timeout configuration values.
```
Policy and Charging DRA Feature Activation Procedure

Execution status of activation script on DsrSetup03Noam1: PASSED
Please check /var/TKLC/log/pcaActivateAscoped.log for more details.

Starting Activation on StandBy NOAMP Server if it exists in the topology.

DsrSetup03Noam1 is Active and Primary NOAMP Server. So, proceeding with next NOAMP Server.

FIPS integrity verification test failed.
Executing /usr/TKLC/dsr/prod/maint/loaders/activate/load.pcaActivateStandByAscoped script on DsrSetup03Noam2
FIPS integrity verification test failed.

============= Start of Log Data in file /var/TKLC/log/pcaActivateStandbyAscoped.log ===============

Server Name : DsrSetup03Noam2
Server Role: NETWORK_OAMP
Add PCA to DsrApplication.
Verify that PCA is in the table
id=6
name=PCA
unavailableAction=SendAnswer
avpInsertion=Yes
shutdownMode=Graceful
shutdownTimer=5
resultCode=3002
vendorId=0
errorString=Policy and Charging Application Unavailable Or Degraded
resExhResultCode=3004
resExhVendorId=0
resExhErrorString=PCA Resource Exhausted
routeListId=65535
realm=
fqdn=
mcl=0
Add Permission Group headers for PCA

===================================================================================
DsrSetup03Noam1 is Active. So, proceeding with Activation.
FIPS integrity verification test failed.
Executing /usr/TKLC/dsr/prod/maint/loaders/activate/load.pcaActivateBscoped script on DsrSetup03Soam1
FIPS integrity verification test failed.

Execution status of activation script on DsrSetup03Soam1: PASSED
Please check /var/TKLC/log/pcaActivateBscoped.log.DsrSetup03Noam2 for more details.
FIPS integrity verification test failed.
FIPS integrity verification test failed.
pcActivateBscoped.log
100% 2218 2.2KB/s 00:00
Activation done on all Network OAMP Servers

Starting Activation on System OAM servers

DsrSetup03Soam1 is Active. So, proceeding with Activation.
FIPS integrity verification test failed.
Executing /usr/TKLC/dsr/prod/maint/loaders/activate/load.pcaActivateBscoped script on DsrSetup03Soam1
FIPS integrity verification test failed.

============= Start of Log Data in file /var/TKLC/log/pcaActivateBscoped.log ===============

Server Name : DsrSetup03Soam1
Server Role: SYSTEM_OAM
Node Id : DsrSetup03Soam1
HA State : Active
Add PCA to DsrApplication. If already present then skip.
Policy and Charging DRA Feature Activation Procedure

---

Verification that PCA is in the table
id=6
name=PCA
unavailableAction=SendAnswer
avpInsertion=Yes
shutdownMode=Graceful
shutdownTimer=5
resultCode=3002
vendorId=0
errorString=Policy and Charging Application Unavailable Or Degraded
resExhResultCode=3004
resExhVendorId=0
resExhErrorString=PCA Resource Exhausted
routeListId=65535
realm= fqdn= mcl=0
---

Add Permission Group headers for PCA
---

FIPS integrity verification test failed.
---

Start of Log Data in file /var/TKLC/log/pcaActivateStandbyBscoped.log

Server Name : DsrSetup03Soam2
Server Role: SYSTEM_OAM
Node Id    : DsrSetup03Soam2
---

Add Permission Group headers for PCA
---

End of Log Data

Execution status of activation script on DsrSetup03Soam2: PASSED
Please check /var/TKLC/log/pcaActivateStandbyBscoped.log.DsrSetup03Soam2 for more details.
FIPS integrity verification test failed.
---

End of Log Data

Execution status of activation script on DsrSetup03Soam1: PASSED
Please check /var/TKLC/log/pcaActivateBscoped.log.DsrSetup03Soam1 for more details.
FIPS integrity verification test failed.
---

End of Log Data

---

DsrSetup03Soam1 is not Active. Proceeding with next system oam server for activation process.
---

Execution of PCA Activation Script complete.
---

End of Log Data

[admusr@DsrSetup03Noam1 activate]$ 7.2 Sample Output of Deactivation (Active NOAM)

[admusr@DsrSetup03Noam1 deactivate]$ ./load.pcaDeactivationTopLevel

---

Start of log pcaDeactivationTopLevel.log

Log file location: /var/TKLC/log/pcaDeactivationTopLevel.log
---

Execution of Deactivation Process Starts
---

All policy binding and session data is clean, proceed ahead with PCA deactivation
---

DsrSetup03Soami is Active. So, proceeding with Deactivation.
FIPS integrity verification test failed.
---

End of Log Data

Executing /usr/TKLC/dsr/prod/maint/loaders/deactivate/load.pcaDeactivateBscoped script on DsrSetup03Soami
FIPS integrity verification test failed.
---

[admusr@DsrSetup03Noamiactivate]$
Policy and Charging DRA Feature Activation Procedure

Start of Log Data in file /var/TKLC/log/pcaDeactivateBscoped.log

Server Name: DsrSetup03Soam1
Server Role: SYSTEM_OAM
Node Id: DsrSetup03Soam1
HA State: Active
GLA is not activated, proceed ahead with PCA deactivation

Remove PCA Application from DsrApplicationPerMp table
=== deleted 3 records ===
Remove PCA Application from DsrApplication table
=== deleted 1 records ===
Remove permission group headers for PCA on SOAM server
=== deleted 1 records ===
=== deleted 1 records ===
FIPS integrity verification test failed.

Start of Log Data in file /var/TKLC/log/pcaDeactivateStandbyBscoped.log

Server Name: DsrSetup03Soam2
Server Role: SYSTEM_OAM
Node Id: DsrSetup03Soam2

Remove permission group headers for PCA on SOAM server
=== deleted 1 records ===
=== deleted 1 records ===

FIPS integrity verification test failed.

End

Execution status of deactivation script on DsrSetup03Soam2: PASSED
Please check /var/TKLC/log/pcaDeactivateStandbyBscoped.log.DsrSetup03Soam2 for more details.
FIPS integrity verification test failed.

FIPS integrity verification test failed.

Start of Log Data in file /var/TKLC/log/pcaDeactivateStandByBscoped.log

Server Name: DsrSetup03Soam1
Server Role: NETWORK_OAMP

Remove permission group headers for PCA on NOAMP server
=== deleted 1 records ===
=== deleted 1 records ===

FIPS integrity verification test failed.
FIPS integrity verification test failed.

Execution status of deactivation script on DsrSetup03Noam2: PASSED
Please check /var/TKLC/log/pcaDeactivateStandByBscoped.log.DsrSetup03Noam1 for more details.
FIPS integrity verification test failed.
FIPS integrity verification test failed.

Server Name: DsrSetup03Noam1
Server Role: NETWORK_OAMP

FIPS integrity verification test failed.
Executing /usr/TKLC/dsr/prod/maint/loaders/deactivate/load.pcaDeactivateStandByAscopep script on
DsrSetup03Noam2
FIPS integrity verification test failed.

Execution status of deactivation script on DsrSetup03Noam2: PASSED
Please check /var/TKLC/log/pcaDeactivateStandByBscoped.log.DsrSetup03Noam1 for more details.
FIPS integrity verification test failed.
FIPS integrity verification test failed.

Server Name: DsrSetup03Noam2
Server Role: NETWORK_OAMP

FIPS integrity verification test failed.
Execution status of deactivation script on DsrSetup03Noam2: PASSED
Please check /var/TKLC/log/pcaDeactivateAscoped.log.DsrSetup03Noam2 for more details.

FIPS integrity verification test failed.

```
FIPS integrity verification test failed.
pcaDeactivateAscoped.log
100%  963  0.9KB/s  00:00
```

Starting Deactivation on Active NOAMP server.

```
Starting Deactivation on Active NOAMP server.
```

Executing /usr/TKLC/dsr/prod/maint/loaders/deactivate/load.pcaDeactivateAscoped script on DsrSetup03Noam1

```
Server Name : DsrSetup03Noam1
Server Role : NETWORK OAMP
Node Id      : DsrSetup03Noam1
HA State     : Active
Cluster Role : Primary
GLA is not activated, proceed ahead with PCA deactivation
All policy binding and session data is clean, proceed ahead with PCA deactivation
```

```
Remove PCA and pSBR KPI groups
```

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

```
Remove PDRA and PSBR Measurement groups
```

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

```
Remove permission group headers for PCA
```

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

```
Remove PCA from DsrApplicationPerMp table
```

```
=== deleted 0 records ===
```

```
Remove PCA Application from DsrApplication table
```

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

```
Remove routing profile data
```

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

```
Remove Psbr capacity constraints
```

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

```
Remove data for mapping between ResourceDomainName to ComAgentResourceId
reserved for policy binding and session profiles
```

```
=== deleted 66 records ===
```

```
Remove Resource Domain Profiles
```

```
=== deleted 1 records ===
== deleted 1 records ===
== deleted 1 records ===
```
Remove Place Association data

Remove Place Association Types

Set HandleProtocolErrorAnswers flag in LongParam to default(No)

/var/TKLC/db/filemgmt/TempPcaActivationDataFile.log exists. Reading ComAgent Configuration data from it.

Execution status of deactivation script on DsrSetup03Noam1: PASSED

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.