Oracle® Communications Diameter Signaling Router

DSR SCEF Feature Activation Release 8.3

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Oracle Communications Diameter Signaling Router SCEF Feature Activation Procedure, Release 8.3.

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1. Introduction

1.1 Purpose and Scope

This document defines the procedure that is executed to activate the Service Capability Exposure Function (SCEF) feature. 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 SCEF feature is activated during a planned maintenance window to minimize the impact to network traffic.

This document also provides a procedure to deactivate SCEF feature after it has been activated. Refer to Section 6 for a discussion of deactivation.

1.2 References

[1] DSR 8.3 API Gateway installation Guide

1.3 Acronyms

An alphabetized list of acronyms used in the document.

Table 1. Acronyms

Acronym	Definition
BNS	Broadband Networking Solutions
DA-MP	Diameter Agent Message Processor
DB	Database
DP	Data Processor
DSR	Diameter Signaling Router
FOA	First Office Application
GUI	Graphical User Interface
НА	High Availability
IMI	Internal Management Interface
IP	Internet Protocol
MP	Message Processing or Message Processor
NE	Network Element
NOAM	Network OAM
OAM	Operations, Administration and Maintenance
SCEF	Service Capability Exposure Function
SDS	Subscriber Database Server
SOAM	System OAM
SSH	Secure Shell
UI	User Interface
VIP	Virtual IP

Acronym	Definition
VPN	Virtual Private Network
XMI	External Management Interface

1.4 Terminology

Table 2. Terminology

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

1.5 General Procedure Step Format

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

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

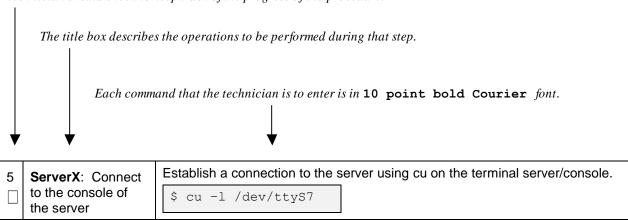


Figure 1. Example of a Procedure Step

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2. Feature Activation Overview

This section lists the required materials and information needed to execute the feature activation. In addition, Table 3 through Table 8 provide estimates of the time required to execute the procedure. These tables can be used to estimate the total time necessary to complete the feature activation. The timing values shown are estimates only – use these tables to plan the timing of the activation, **not** to execute the procedure. The detailed procedure steps to be executed begin in Section 5.

Note: Before activating, refer to DSR API Gateway install guide to create and configure VMs for DSR APIGW.



TCP port **49152** must be open for the communication between DSR APIGW and DA-MP. Refer to Appendix A for more details.

2.1 Pre-Feature Activation Overview

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

Table 3. Pre-Feature Activation Overview

Elapsed Time

	Elapsed Time (Hours: Minutes)			
Procedure	This Step	Cum.	Activity Feature Activation Preparation	Impact
System Topology	0:20	0:20	Verify Network Element Configuration data.	
Check			Verify System Group Configuration data.	None
(Procedure 1)			Analyze and plan DA-MP restart sequence.	
Perform Health	0:05	0.25	Verify SCEF release.	
Check			Verify server status.	None
(Procedure 2)			Log all current alarms.	

2.1.1 Feature Activation Execution Overview

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

Table 4. Feature Activation Execution Overview

	Elapsed Time (Hours: Minutes)			
Procedure	This Step	Cum.	Activity Feature Activation Execution	Impact

Procedure	Elapsed Ti Minu	me (Hours: utes)	Activity Feature Activation Execution	Impact
Perform Health	0:05	0:05	Verify DSR release.	
Check (Procedure 3)			Verify proper SCEF feature state.	None
(1100000100)			Verify server status.	None
			Log all current alarms.	
Feature	0:20	0:25	Log out of NOAM/SOAM GUI.	
Activation (Procedure 4)			SSH to active NOAM.	
(1 100004)			Login as admusr.	
			Change directory to /usr/TKLC/dsr/prod/maint/loaders/.	
			Execute the feature activation script.	0055
			Log into SOAM GUI.	SCEF feature is
			Verify the SBR and IPFE Folders.	activated
			Restart each active DA-MP server.	
			Verify Maintenance screen.	
			Log into NOAM GUI.	
			Verify Maintenance screen.	
			Close SSH connections to NOAM.	

2.1.2 Post-Feature Activation Overview

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

Table 5. Post-Feature Activation Overview

	Elapsed Time (Hours: Minutes)		Activity Feature Activation	
Procedure	This Step	Cum.	Completion	Impact
Perform Health Check	0:05	0:05	Verify server status.Log all current alarms.	SCEF feature has been
(Procedure 5)			Log an ourront diamio.	activated on DSR

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3. Feature Deactivation Overview

3.1 Pre-Feature Deactivation Overview

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

Table 6. Pre-Feature Deactivation Overview

	Elapsed Time (Hours or Minutes)			
Procedure	This Step	Cum.	Activity Deactivation Procedures	Impact
Perform Health	0:05	0:05	Verify DSR release.	
Check (Procedure 6)			Verify proper SCEF feature state.	None
(1 locedule o)			Verify server status.	None
			Log current alarms.	

3.2 Feature Deactivation Execution Overview

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

Table 7. Feature Deactivation Overview

	Elapsed Time (Hours or Minutes)			
Procedure	This Step	Cum.	Activity Deactivation Procedures	Impact
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

	Elapsed Time (Hours or Minutes)			
Procedure	This Step	Cum.	Activity Deactivation Procedures	Impact
Deactivation	0:20	0:50	Log out of active NOAM/SOAM GUI.	
(Procedure 13)			SSH into active NOAM.	
10)			Login as admusr	
			Change directory to /usr/TKLC/dsr/prod/maint/loaders/	
			Execute the feature deactivation script.	SCEF feature is deactivated
			Log into SOAM GUI.	deactivated
			Verify the SBR and IPFE Folders.	
			Restart each active DA-MP server.	
			Log into NOAM GUI	
			Verify Maintenance screen.	

3.3 Post-Feature Deactivation Overview

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

Table 8. Post-Feature Deactivation Overview

	Elapsed Time (Hours or Minutes)		Activity Deactivation	
Procedure	This Step	Cum.	Procedures	Impact
Perform Health Check (Procedure 14)	0:05	0:05	Verify server status.Log all current alarms.	None

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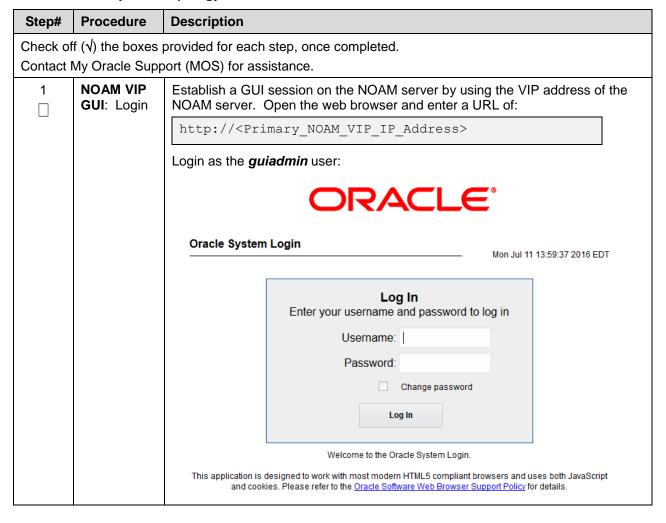
4. Feature Activation Preparation

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

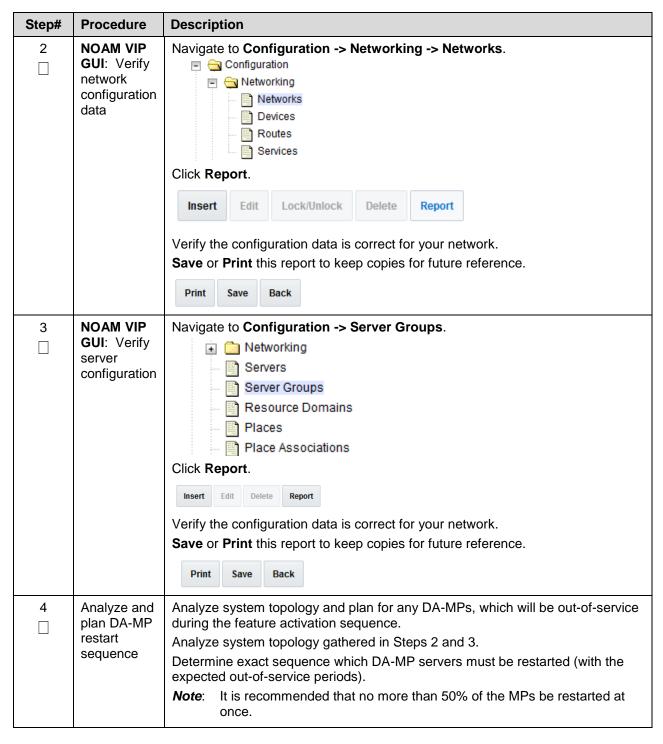
4.1 System Topology Check

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

Procedure 1: System Topology Check



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4.2 Perform Health Check

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

Procedure 2: Perform Health Check (Feature Activation Preparation)

Step#	Procedure	Description				
Check off	(√) the boxes	provided for each	step, once com	pleted.		
Contact M	ly Oracle Supp	oort (MOS) for ass	sistance.			
1	NOAM VIP GUI: Login			NOAM server by rowser and enter		address of the
		http:// <pri< td=""><td>.mary_NOAM_V</td><td>IP_IP_Address</td><td>3></td><td></td></pri<>	.mary_NOAM_V	IP_IP_Address	3>	
		Login as the <i>gu</i>		RACL	.∈ °	
		Oracle System	ı Login		Mon Jul 11 13:	:59:37 2016 EDT
			Fatarious	Log In	and to lone in	
			_	ername and passwo	ord to log in	
				ssword:		
			1 0	Change passy	word	
				Change passy	word	
				Log In		
			Welcom	e to the Oracle System Lo	ogin.	
			designed to work with m	ost modern HTML5 compl Oracle Software Web Brow	liant browsers and uses	
2	NOAM VIP	Navigate to Sta	tus & Manage -	> Server.		
	GUI: Verify	Status 8	Manage			
	server status	- ⊚ Netw	ork Elements			
		- Serv	er			
		🥡 HA				
		- 👰 Data	base			
		₩ ₩ KPIs				
		- Proc	esses			
		Verify all Server	Status is Norm	al (Norm) for:		
		Alarm (Alm), Da	atabase (DB), R	eplication Status	, and Processes	s (Proc).
		Appl State	Alm	DB	Reporting Status	Proc
		Enabled	Norm	Norm	Norm	Norm
		Enabled	Norm	Norm	Norm	Norm
		Enabled	Norm	Norm	Norm	Norm
		Enabled	Norm	Norm	Norm	Norm
		any of these are Norm status to I	not Norm, corr Norm before pro	ation if any of the ective action sho ceeding with the	uld be taken to feature activati	restore the non- on.
		If the Alarm (Alr	n) status is not l	Norm but only Mi	nor alarms are p	present, it is

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Step#	Procedure	Description
		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.
3	NOAM VIP	Navigate to Alarms & Events -> View Active.
	GUI: Log current alarms	Alarms & Events View Active View History View Trap Log
		Click Report.
		Export Clear Selections
		Save or Print this report to keep copies for future reference.
		Print Save Back

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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 the 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 **Appendix B** 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:

- 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 checkbox should be provided. For
 procedures which are executed multiple times, the checkbox 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 the right side).
- Captured data is required for future support reference.

5.1 Pre-Activation Procedures

5.1.1 Perform Health Check

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

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

Procedure 3: Perform Health Check (Pre Feature Activation)

Step#	Procedure	Description	
Check off $()$ the boxes provided for each step, once completed.			
Contact My Oracle Support (MOS) for assistance.			



Step#	Procedure	Description
		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.
3	NOAM VIP	Navigate to Configuration -> Server Groups.
	GUI: Verify	□ 🔄 Configuration
	server	→ Networking
	configuratio n	Servers
		Server Groups Resource Domains
		Places
		Place Associations
		Verify the configuration data is correct for your network.
		DA MP, USBR, Place association and
4	NOAM VIP	Navigate to Alarms & Events -> View Active.
	GUI: Log	🔄 😋 Alarms & Events
	current alarms	View Active
		View History
		View Trap Log
		Click Report.
		Export Report Clear Selections
		Save or Print this report to keep copies for future reference.
		Print Save Back

5.2 Activation Procedures

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

5.2.1 Feature Activation

This procedure provides detailed steps to activate SCEF.

Procedure 4: Feature Activation

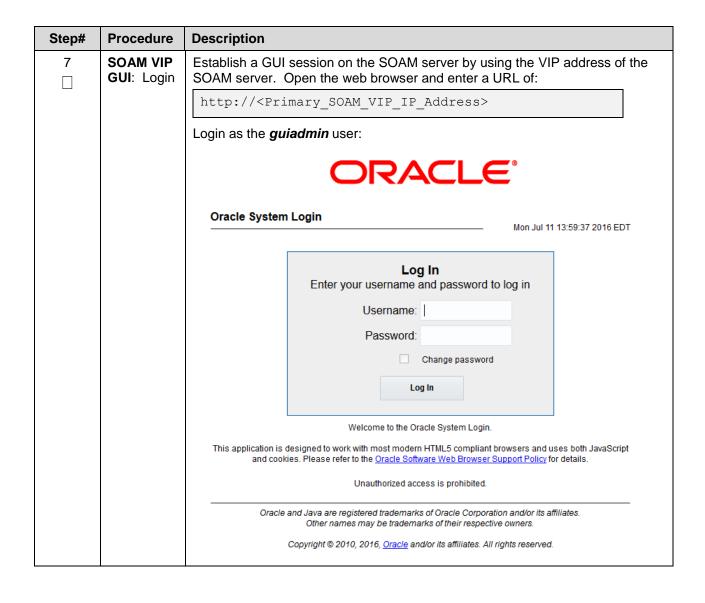
Step#	Procedure	Description			
	Check off (√) the boxes provided for each step, once completed.				
Contact M	ly Oracle Supp	port (MOS) for assistance.			
1	NOAM VIP:	Establish an SSH session to the NOAM VIP. Login as admusr.			
	Establish an SSH				
	session				

Step#	Procedure	Description
2	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/
3	NOAM VIP: Execute the feature activation script	Run the feature activation script by executing the following command: \$./featureActivateDeactivate Enter 1 to Activate the feature. You want to Activate or Deactivate the Feature: 1.Activate 2.Deactivate Enter your choice: Enter 10 to select SCEF. List of Feature you can Activate: 1.RBAR 2.FABR 3.Mediation 4.LoadGen 5.GLA 6.MAP Interworking 7.DTLS 8.DCA Framework 9.DCA Application 10.SCEF Enter the choice: Select the SOAM site for which the application must be activated: Note: As an alternative, you can also activate on all SOAM sites: The Active SO server configured in the Topology are 1. Jetta-SO-2 2. ALL SOS Enter your choice on which SO you want to Activate or Deactivate the Feature: Refer to Section 7.1 for output example.

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Step#	Procedure	Description
4	Active SOAM GUI: Login	Establish a GUI session on the active SOAM server by using the IP address of the SOAM server. Open the web browser and enter a URL of:
		http:// <active_soam_ip_address></active_soam_ip_address>
		Login as the <i>guiadmin</i> user:
		ORACLE°
		Oracle System Login Mon Jul 11 13:59:37 2016 EDT
		Log In Enter your username and password to log in
		Username:
		Password: Change password
		Log In
		Welcome to the Oracle System Login.
		This application is designed to work with most modern HTML5 compliant browsers and uses both JavaScript and cookies. Please refer to the Oracle Software Web Browser Support Policy for details.
		Unauthorized access is prohibited.
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		Copyright © 2010, 2016, <u>Oracle</u> and/or its affiliates. All rights reserved.
5	SOAM VIP GUIS:	In Measurement -> Reports window, SCEF related groups are added.
	Verify the SCEF related folder is visible	In Diameter -> Maintenance -> Application , SCEF application is displayed.
6	Close SSH connectio n to active NOAMs	Log out of the active NOAM login shell and close the SSH connections by executing the following command: # exit
		Close the SSH connection

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Step#	Procedure	Description		
	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.		
		Network Elements Server HA Database KPIs Processes		
		Select the desired DA-MPs, press Ctrl to select multiple DA-MPs at once. Click Restart .		
		Stop Restart Reboot NTP Sync Report		
		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.		
	SOAM VIP GUI: Verify maintenanc e screen	Navigate to Diameter -> Maintenance -> Applications. Diameter Configuration Maintenance Route Lists Route Groups Peer Nodes Connections Egress Throttle Groups Applications DA-MPs Peer Discovery Signaling Firewall Traffic Throttle Groups Traffic Throttle Groups Verify the SCEF application is present.		

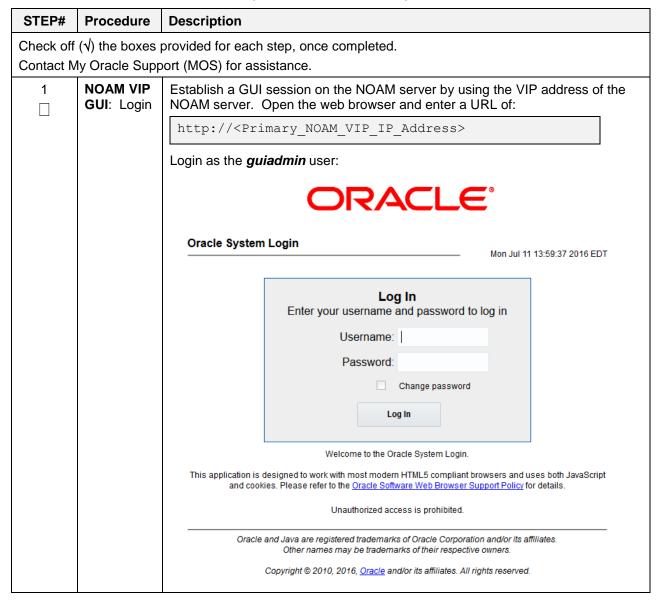
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5.3 Post-Activation Procedures

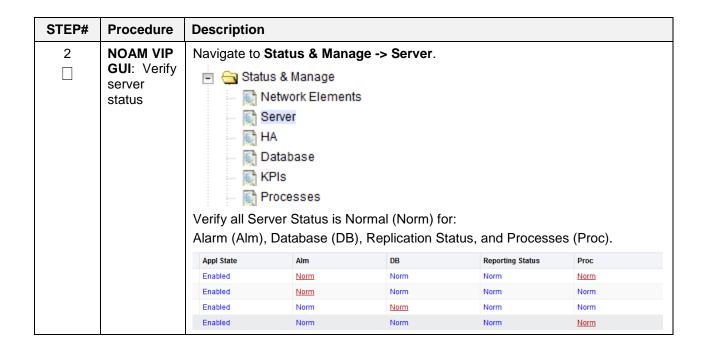
5.3.1 Perform Health Check

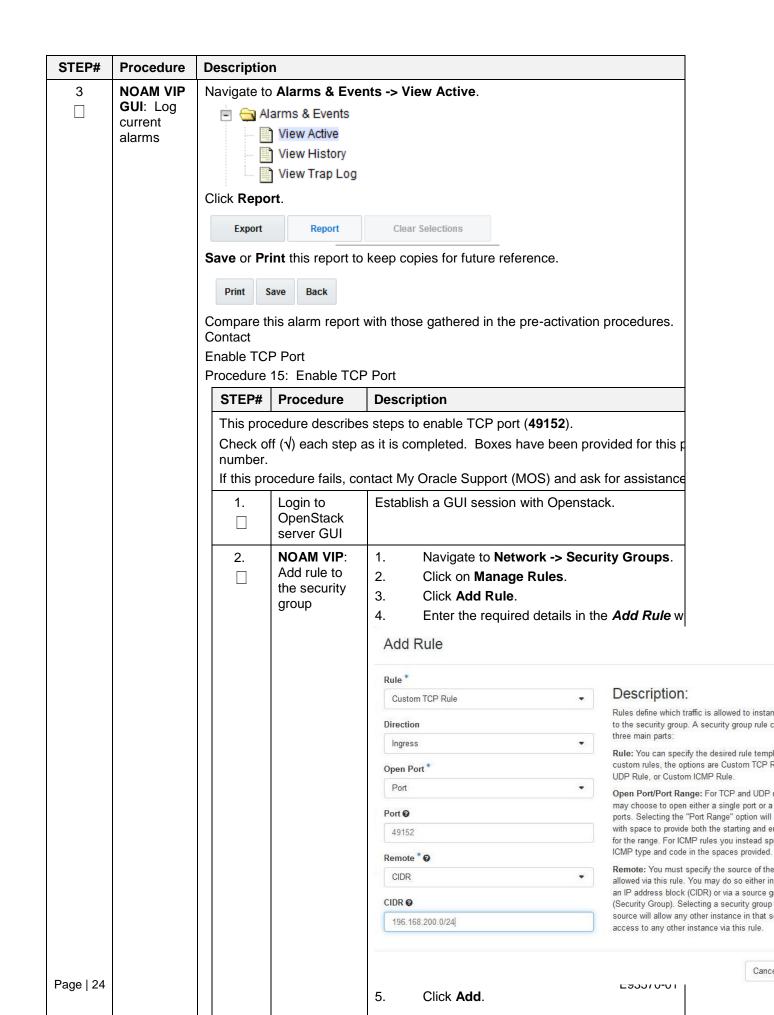
This procedure is used to determine the health and status of the SCEF release network and servers.

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



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6. Feature Deactivation

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

6.1 Pre-Deactivation Procedures

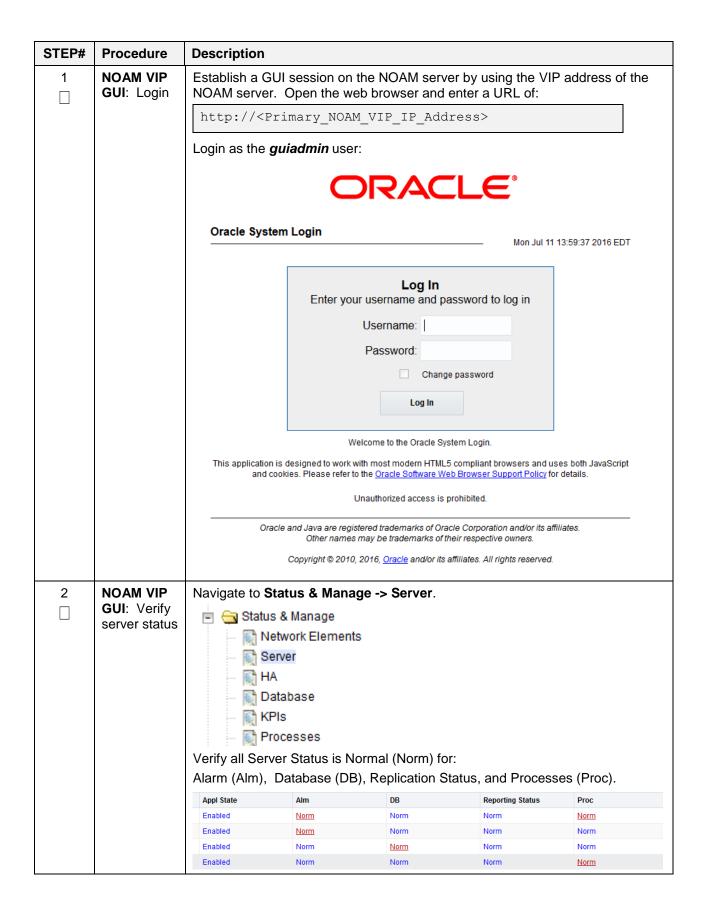
Before beginning the feature deactivation, complete the pre-deactivation procedure below.

6.1.1 Perform Health Check

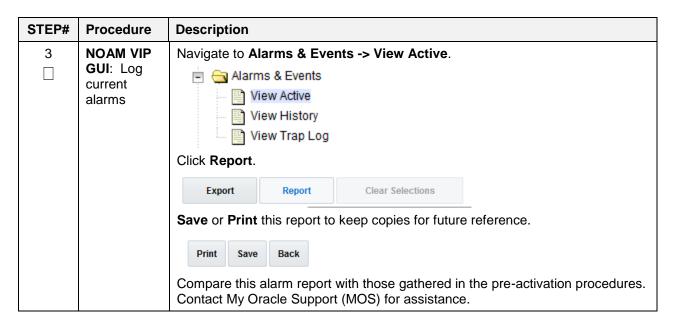
This procedure is used to determine the health and status of the SCEF network and servers.

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

STEP#	Procedure	Description	
Check off $()$ the boxes provided for each step, once completed.			
Contact My Oracle Support (MOS) for assistance.			



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6.1.2 Pre SCEF Deactivation Steps

6.2.2.3 Disable Diameter Connections

Procedure 7: Disable Diameter Connections

STEP#	Procedure	Description				
This prod	This procedure disables the Diameter connections.					
This prod	cedure does not	require a maintenance window.				
Check of number.	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 proce	edure for all the sites on which SCEF deactivation is required.				

STEP#	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></primary_soam_vip_ip_address>		
		Login as the guiadmin user:		
		ORACLE		
		Oracle System Login Mon Jul 11 13:59:37 2016 EDT		
		Log In Enter your username and password to log in Username: Password: Change password Log In		
2.	SOAM VIP: Disable DSR	Navigate to Diameter -> Maintenance -> Connections.		
	connections	Select all the SCEF-specific diameter connections and click Disable or click Disable All (if applicable). The Admin State of connections should displays as Disabled.		
3.	SOAM VIP: Perform steps on all active SOAM servers	Repeat Steps 1 to 2 on all active SOAM servers on which SCEF deactivation is required.		

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6.2.2.4 Disable Application

Procedure 8: Disable Application

STEP#	Procedure	Description					
This proce	edure disables	s the SCEF application.					
-		require a maintenance window.					
Check off number.	Check off $()$ each step as it is completed. Boxes have been provided for this purpose under each step number.						
<i>Note</i> : R	Note: Repeat this procedure for all the sites on which SCEF deactivation is required.						
If this prod	If this procedure fails, contact My Oracle Support (MOS) and ask for assistance.						
4.	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></primary_soam_vip_ip_address>					
		Login as the guiadmin user:					
		Oracle System Login Mon Jul 11 13:59:37 2016 EDT					
		Log In Enter your username and password to log in					
		Username:					
		Password:					
		☐ Change password					
		Log In					
		Welcome to the Oracle System Login.					
		This application is designed to work with most modern HTML5 compliant browsers and uses both JavaScript and cookies. Please refer to the Oracle Software Web Browser Support Policy for details.					
		Unauthorized access is prohibited.					
		Oracle and Java are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.					
5.	SOAM VIP: Navigate to Applications screen	Navigate to Diameter -> Maintenance -> Applications .					
6.	SOAM VIP:	Select the SCEF row and click Disable .					
	Disable the SCEF application	If there are multiple DA-MPs under this SOAM, then there are multiple entries of SCEF in this screen. Select all the entries and click Disable .					

STEP#	Procedure	Description						
7.	SOAM VIP: Verify the SCEF application has been disabled	Navigate to Diameter -> Maintenance -> Applications . Verify the Application status has changed to Disabled .						
		Application Name	MP Server Hostname	Admin State	Operational Status	Operational Reason	Congestion Level	Time of Last Update
		SCEF	Mon860new- mp1	Enabled	Available	Normal	Normal	2018-Jul-08 14:36:24 EDT
		SCEF	Mon860new- mp2	Enabled	Available	Normal	Normal	2018-Jul-06 04:26:02 EDT
8.	SOAM VIP: Perform steps on all active SOAM servers	Repeat Steps is required.	1 to 4 o	n all activ	e SOAM	servers on w	/hich SCI	EF deactivation

6.2.2.5 Remove DSR Configuration Data

Procedure 9: Remove DSR Configuration Data

STEP#	Procedure	Description			
This proce	This procedure removes the DSR configuration data.				
Check off number.	Check off $()$ each step as it is completed. Boxes have been provided for this purpose under each step number.				
If this prod	cedure fails, co	ntact My Oracle Support (MOS) and ask for assistance.			
		his step if you are going to activate SCEF again on this system and you want in data after re-activation.			
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></primary_soam_vip_ip_address>			
		Login as the guiadmin user:			
		Oracle System Login Mon Jul 11 13:59:37 2016 EDT			
		Log In Enter your username and password to log in Username: Password: Change password Log In Welcome to the Oracle System Login.			
		Welcome to the Oracle System Login.			

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STEP#	Procedure	Description
2.	SOAM VIP: Remove Application Routing Rules	Navigate to Diameter -> Configuration -> Application Route Tables . Select SCEF-specific Application Route Table Name. Either click Delete to delete the entire table or click View/Edit Rules , select SCEF-specific Application Route Rules and click Delete .
3.	SOAM VIP: Remove Peer Routing Rules	Navigate to Diameter -> Configuration -> Peer Route Tables . Select SCEF-specific Peer Route Table Name. Either click Delete to delete the entire table or click View/Edit Rules , select SCEF-specific Peer Route Rules and click Delete .
4.	SOAM VIP: Remove Route Lists	Navigate to Diameter -> Configuration -> Route Lists . Select and delete the SCEF-specific or the complete configuration data (as applicable) from this screen.
5.	SOAM VIP: Remove Route Groups	Navigate to Diameter -> Configuration -> Route Groups . Select and delete the SCEF-specific or the complete configuration data (as applicable) from this screen.
6.	SOAM VIP: Remove Connections	Navigate to Diameter -> Configuration -> Connections . Select and delete the SCEF-specific or the complete configuration data (as applicable) from this screen. SCEF-specific connection includes connections to HSS and MMEs.
7.	SOAM VIP: Remove Peer Nodes	Navigate to Diameter -> Configuration -> Peer Nodes . Select and delete the SCEF-specific or the complete configuration data (as applicable) from this screen.
8.	SOAM VIP: Remove Local Nodes	Navigate to Diameter -> Configuration -> Local Nodes . Select and delete the SCEF-specific or the complete configuration data (as applicable) from this screen.
9.	SOAM VIP: Remove CEX Configuratio n Sets	Navigate to Diameter -> Configuration -> Configuration Sets -> CEX Configuration Sets. Select and delete the SCEF-specific or the complete configuration data (as applicable) from this screen.
10.	SOAM VIP: Remove CEX parameters	Navigate to Diameter -> Configuration -> CEX Parameters . Select and delete the SCEF-specific or the complete configuration data (as applicable) from this screen.
11.	SOAM VIP: Remove application IDs	Navigate to Diameter -> Configuration -> Application IDs . Select and delete the SCEF-specific or the complete configuration data (as applicable) from this screen.
12.	SOAM VIP: Perform steps on all active SOAM servers	Repeat Steps 1 to 11 on all active SOAM servers.

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6.2.2.5 Remove Resource Domain Configuration Data

Procedure 10: Remove Resource Domain Configuration Data

STEP#	Procedure	Description			
This prod	This procedure removes the Resource Domain configuration data.				
number.	Check off $()$ each step as it is completed. Boxes have been provided for this purpose under each step number.				
If this pro	cedure fails, cor	ntact My Oracle Support (MOS) and ask for assistance.			
1.	Establish GUI Session on the NOAM VIP	Establish a GUI session on the NOAM by using the XMI VIP address. Login as the guiadmin user.			
2.	NOAM VIP: Remove all the data from Place screen as mentioned	Navigate to Configuration -> Resource Domains . Delete the Resource Domain of type 'SCEF' from this screen.			

6.2.2.6 Remove Place Associations Configuration Data

Procedure 11: Remove Place Associations Configuration Data

STEP#	Procedure	Description			
Check off (number.	This procedure removes the Place Association 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.				
1.	Establish GUI Session on the NOAM VIP	Establish a GUI session on the NOAM by using the XMI VIP address. Login as the guiadmin user.			
2.	NOAM VIP: Unconfigure the associated Places from the Place Associations as mentioned	Navigate to Configuration -> Place Associations. Select the Place Associations of type SBR_ASSOC. Click Edit. Insert Edit Delete Report Uncheck all the Places associated with this Place Associations and click OK. Ok Apply Cancel			

6.2.2.7 Remove Place Configuration Data

Procedure 12: Remove Place Configuration Data

STEP#	Procedure	Description			
This prod	cedure removes	the Place configuration data.			
Check of number.	Check off $()$ each step as it is completed. Boxes have been provided for this purpose under each step number.				
If this pro	ocedure fails, cor	ntact My Oracle Support (MOS) and ask for assistance.			
3.	Establish GUI Session on the NOAM VIP	Establish a GUI session on the NOAM by using the XMI VIP address. Login as the guiadmin user.			
4 .	NOAM VIP: Remove all the data from the Places screen as mentioned	Navigate to Configuration -> Places . Edit the Places and remove servers from it.			

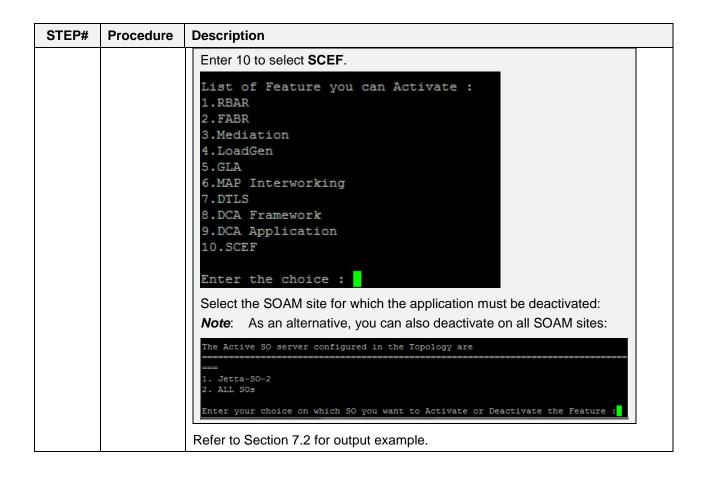
6.2 Deactivation Procedures

6.2.1 Feature Deactivation

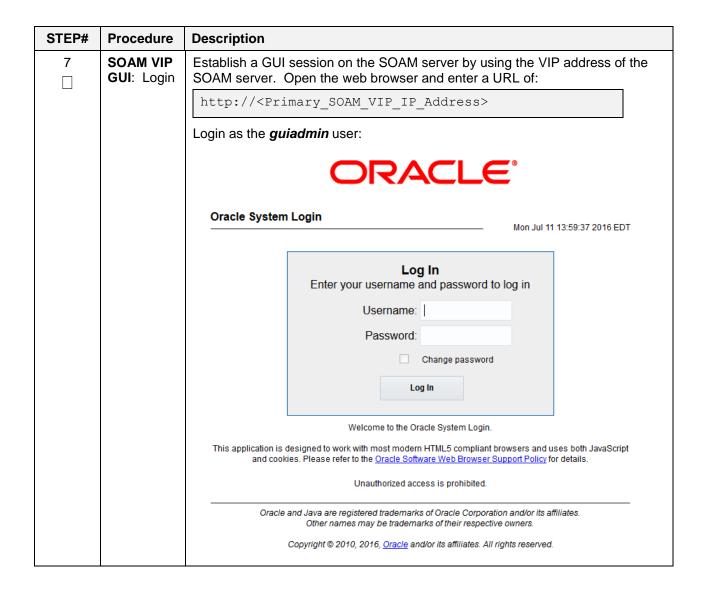
This section provides the detailed steps of the SCEF de-activation procedures.

Procedure 13: Feature Deactivate

STEP#	Procedure	Description			
	Check off $()$ the boxes provided for each step, once completed. Contact My Oracle Support (MOS) for assistance.				
1	NOAM VIP: Establish an SSH session	Establish an SSH session to the NOAM VIP. Login as admusr.			
2	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/			
3	NOAM VIP: Execute the feature activation script	Run the feature activation script by executing the following command: \$./featureActivateDeactivate Enter 2 to Deactivate. You want to Activate or Deactivate the Feature: 1.Activate 2.Deactivate Enter your choice:			



STEP#	Procedure	Description
4	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></active_soam_ip_address>
		Login as the <i>guiadmin</i> user:
		Oracle System Login Mon Jul 11 13:59:37 2016 EDT
		Log In Enter your username and password to log in Username: Password: Change password Log In
		Welcome to the Oracle System Login. This application is designed to work with most modern HTML5 compliant browsers and uses both JavaScript and cookies. Please refer to the Oracle Software Web Browser Support Policy for details. Unauthorized access is prohibited.
		Oracle and Java are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners. Copyright © 2010, 2016, Oracle and/or its affiliates. All rights reserved.
5	Active SOAM GUI: Verify the SCEF related folders are not visible	In Measurement -> Reports window, SCEF related groups are removed. In Diameter -> Maintenance -> Application , SCEF application is not displayed.
6	Standby SOAM GUI: Repeat verification steps	Repeat Steps 7-8 for the standby SOAM Note: If the verifications for the standby SOAM differ from the Active SOAM, stop. Contact My Oracle Support (MOS) for assistance.



Procedure	Description
SOAM VIP SUI: 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 .
	Network Elements Server HA KPIS Processes
	Select the desired DA-MPs, press Ctrl to select multiple DA-MPs at once. Click Restart .
	Stop Restart Reboot NTP Sync Report
	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.
SOAM VIP GUI: Verify naintenance screen	Navigate to Diameter -> Maintenance -> Applications. Diameter Configuration Maintenance -> Application Maintenance Maintenance -> Applications Maintenance -> Main

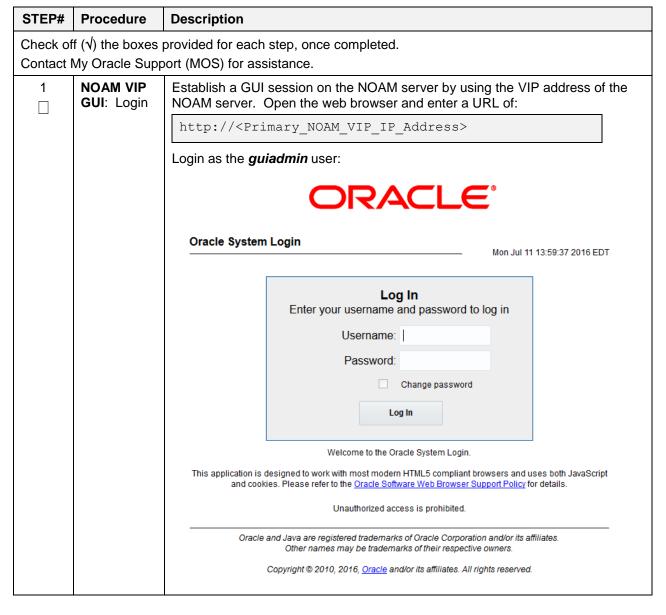
6.3 Post-Deactivation Procedures

This chapter provides post deactivation steps to be followed.

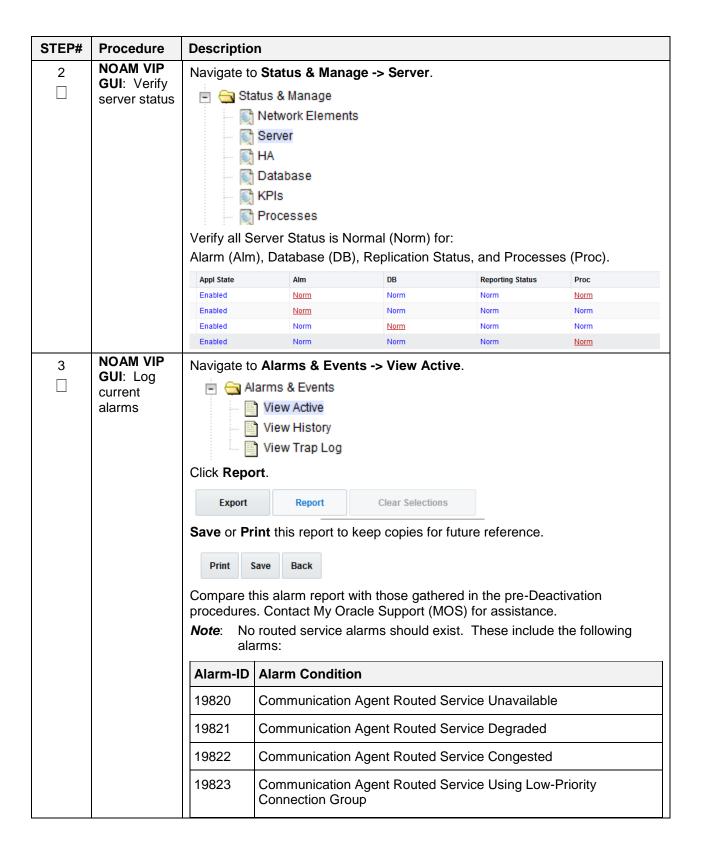
6.3.1 Perform Health Check

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

Procedure 14: Perform Health Check (Post-Feature Deactivation)



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7. Engineering Notes

<u>FIPS integrity verification test failed</u>: In SCEF 8.3, you may see 'FIPs integrity verification test failed' message displayed during the activation/Deactivation output, this message is expected and harmless.

7.1 Sample Output of Activation (Active NOAM)

Run script to activate SCEF feature:			
======================================			
Execution of Activation/Deactivation Process Starts			
Starting Activation/Deactivation process			
Executing /usr/TKLC/dsr/prod/maint/loaders/activate/load.scefActivateAsourced script on E1B180NOAM1			
Add COM Agent Routed service Configuration.			
=======================================			
id=14			
name=DPService			
preDefined=No			
editableOnGui=Yes			
birthTime=12/31/1969 19:00:00.000			
=======================================			
=======================================			
Add COM Agent connection group for the DP service.			
id=1			
name=DPSvcGroup			
preDefined=No			
=======================================			
Add DP Service and Connection group mapping.			
routedServiceId=14			
connGroupId=1			
priority=10			
=======================================			

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```
Add SCEF KPI group
______
KPI Group=SCEF
Visibility=VIS SO
______
______
Add SCEF Measurement groups
______
______
Add SCEF Measurement groups
______
Meas Group=Full Address Resolution Performance
Visibility=VIS SO
_____
Meas_Group=Full Address Resolution Exception
Visibility=VIS SO
_____
______
Add SCEF GUI Configuration Permissions.
______
_appid=17
group_id=7051
group_name=SCEF Configuration Permissions
_____
______
Starting to Execute the Loaders on Mate server
______
Executing /usr/TKLC/dsr/prod/maint/loaders/activate/load.scefActivateAsourced script
on E1B280NOAM2
______
FIPS integrity verification test failed.
id=14
name=DPService
preDefined=No
editableOnGui=Yes
birthTime=12/31/1969 19:00:00.000
_____
name=DPSvcGroup
preDefined=No
```

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```
_____
routedServiceId=14
connGroupId=1
priority=10
KPI Group=SCEF
Visibility=VIS SO
______
Meas Group=Full Address Resolution Performance
Visibility=VIS SO
_____
Meas Group=Full Address Resolution Exception
Visibility=VIS SO
_____
______
Add SCEF GUI Configuration Permissions.
______
_appid=17
group id=7051
group name=SCEF Configuration Permissions
_____
FIPS integrity verification test failed.
______
The Active SO server configured in the Topology are
______
1. E1B380SOAM1
2. ALL SOs
Enter your choice on which SO you want to Activate or Deactivate the Feature :2
Activate/Deactivate scef on all SOs configured in the Topology
______
This is a 3 Tier Setup , So run the B sourced loaders on SO server : E1B380SOAM1
Executing /usr/TKLC/dsr/prod/maint/loaders/activate/load.scefActivateBsourced script
on E1B380SOAM1
FIPS integrity verification test failed.
______
Current server is HA ACTIVE
______
______
```

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```
Add SCEF to DsrApplication.
______
id=4
name=SCEF
unavailableAction=ContinueRouting
avpInsertion=Yes
shutdownMode=Forced
shutdownTimer=0
resultCode=3002
vendorId=0
errorString=SCEF Unavailable
resExhResultCode=3004
resExhVendorId=0
resExhErrorString=SCEF Resource Exhausted
routeListId=-1
realm=
fqdn=
mcl=0
_____
______
Add SCEF GUI Configuration Permissions.
_appid=17
group id=7051
group_name=SCEF Configuration Permissions
_____
FIPS integrity verification test failed.
______
Executing the Loaders and Clearing Cache on Standby SO servers.
There is no Standby/Spare SOAMP server configured in the Topology
______
[admusr@Jetta-NO-2 loaders]$
```

7.2 Sample Output of Deactivation (Active NOAM)

Run script to deactivate SCEF feature:

```
______
Execution of Activation/Deactivation Process Starts
______
Starting Activation/Deactivation process....
_____
The Active SO server configured in the Topology are
______
1. Jetta-SO-2
2. ALL SOs
Enter your choice on which SO you want to Activate or Deactivate the Feature :1
Verifying feature is activated or not on Jetta-SO-2
FIPS integrity verification test failed.
_____
SCEF is activated on Jetta-SO-2
_____
Executing /usr/TKLC/dsr/prod/maint/loaders/deactivate/load.scefDeactivateAsourced
script on Jetta-NO-2
_____
Hiding SCEF KPI group and Measurement Groups
______
=== deleted 1 records ===
______
Hiding SCEF measurement groups
______
=== deleted 1 records ===
=== deleted 1 records ===
______
Removing DP Service COM Agent Loader Entries
______
Log path: /var/TKLC/db/filemgmt/dpservice deactivate.log
______
Since remote servers are not deleted on SCEF Deactivation, operator should
manually delete all the remote server entries from configuration.
______
Removing SCEF GUI permissions.
```

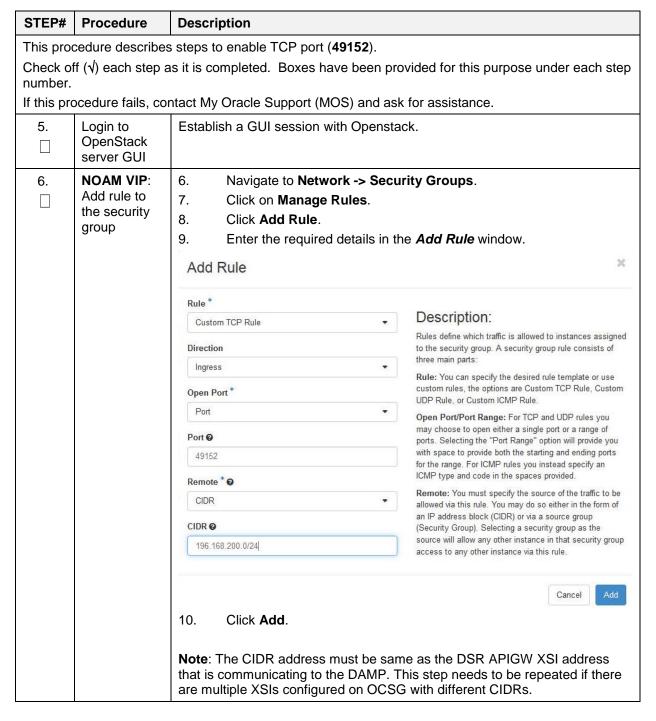
```
______
=== deleted 1 records ===
______
Starting to Execute the Loaders on Mate server
______
Executing /usr/TKLC/dsr/prod/maint/loaders/deactivate/load.scefDeactivateAsourced
script on Jetta-NO-1
______
FIPS integrity verification test failed.
______
Removing SCEF GUI permissions.
______
=== deleted 1 records ===
FIPS integrity verification test failed.
______
This is a 3 Tier Setup , So run the B sourced loaders on SO server : Jetta-SO-2
Executing /usr/TKLC/dsr/prod/maint/loaders/deactivate/load.scefDeactivateBsourced
script on Jetta-SO-2
FIPS integrity verification test failed.
______
Current server is HA ACTIVE
______
Removing all ART rules pointing to SCEF
______
=== deleted 0 records ===
______
Removing applicationId=4(SCEF) from the DSR Application Per Mp Table
______
=== deleted 3 records ===
______
Removing SCEF from the DSR Application Table
______
=== deleted 1 records ===
______
Removing common DSR Application measurements for SCEF
______
=== deleted 1 records ===
```

```
=== deleted 1 records ===
 === deleted 1 records ===
 === deleted 1 records ===
______
Removing SCEF GUI permissions.
______
=== deleted 1 records ===
FIPS integrity verification test failed.
______
Executing the Loaders and Clearing Cache on Standby SO servers.
______
Starting to Execute the Loaders on Mate server
______
Executing /usr/TKLC/dsr/prod/maint/loaders/deactivate/load.scefDeactivateBsourced
script on Jetta-SO-1
______
FIPS integrity verification test failed.
______
Current server is HA STANDBY
______
______
Removing common DSR Application measurements for SCEF
______
 === deleted 1 records ===
 === deleted 1 records ===
______
Removing SCEF GUI permissions.
______
=== deleted 1 records ===
FIPS integrity verification test failed.
______
Do you want to activate/deactivate this feature on another System OAM Server[Y/N] : n
```

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Appendix A. Enable TCP Port

Procedure 15: Enable TCP Port



Appendix B. 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.

Appendix C. Emergency Response

In the event of a critical service situation, emergency response is offered by the CAS main number at 1-800-223-1711 (toll-free in the US), or by calling the Oracle Support hotline for your local country from the list at http://www.oracle.com/us/support/contact/index.html. The emergency response provides immediate coverage, automatic escalation, and other features to ensure that the critical situation is resolved as rapidly as possible.

A critical situation is defined as a problem with the installed equipment that severely affects service, traffic, or maintenance capabilities, and requires immediate corrective action. Critical situations affect service and/or system operation resulting in one or several of these situations:

- A total system failure that results in loss of all transaction processing capability
- Significant reduction in system capacity or traffic handling capability
- Loss of the system's ability to perform automatic system reconfiguration
- Inability to restart a processor or the system
- Corruption of system databases that requires service affecting corrective actions
- Loss of access for maintenance or recovery operations
- Loss of the system ability to provide any required critical or major trouble notification

Any other problem severely affecting service, capacity/traffic, billing, and maintenance capabilities may be defined as critical by prior discussion and agreement with Oracle.

Appendix D. Locate Product Documentation on the Oracle Help Center

Oracle Communications customer documentation is available on the web at the Oracle Help Center (OHC) site, http://docs.oracle.com. You do not have to register to access these documents. Viewing these files requires Adobe Acrobat Reader, which can be downloaded at http://www.adobe.com.

- 1. Access the Oracle Help Center site at http://docs.oracle.com.
- 2. Click Industries.
- 3. Under the Oracle Communications subheading, click the **Oracle Communications documentation** link. The Communications Documentation page appears. Most products covered by these documentation sets will appear under the headings "Network Session Delivery and Control Infrastructure" or "Platforms."
- 4. Click on your Product and then the Release Number. A list of the entire documentation set for the selected product and release appears.
- 5. To download a file to your location, right-click the PDF link, select Save target as (or similar command based on your browser), and save to a local folder.