

Oracle® Communications
Diameter Signaling Router
DSR Rack Mount Server Installation Guide
Release 7.4
E79015 Revision 01

November 2016

ORACLE®

Oracle ® Communication Diameter Signaling Router DSR Rack Mount Server Installation Guide, Release 7.4

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See more information on MOS in the Appendix section.

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1.0 Introduction

1.1 Purpose and Scope

This document describes methods utilized and procedures executed to configure Oracle Rack Mount Servers (RMS) to be used with Oracle Communication Diameter Signaling Router 7.4 (DSR 7.4). It is assumed that the hardware installation and network cabling were executed beforehand. The audience for this document includes Oracle customers as well as these groups: Software System, Product Verification, Documentation, and Customer Service including Software Operations and First Office Application. Throughout the remainder of this document, the term RMS refers to Oracle Rack Mount Servers.

Oracle X6-2: In scenarios where the DSR installation has already been executed, and system **growth, de-growth, or re-shuffle** is necessary; refer to **Appendix P: Growth/De-Growth/Re-Shuffle** (Oracle X6-2).

[FIPS integrity verification test failed]: Throughout this procedure, an error message of *"FIPS integrity verification test failed"* will be displayed while performing various procedures on the command line (SSH, feature activations, etc.). This error message is harmless, and should be ignored.

1.2 References

Software Centric Customers do not receive firmware upgrades through Oracle. Instead, refer to the Oracle Firmware Upgrade Pack, Software Centric Release Notes on <https://docs.oracle.com> under Platform documentation. The latest version is recommended if an upgrade is performed, otherwise version 3.1.7 is the minimum.

- [1] Oracle Firmware Upgrade Pack Release Notes, Version 3.1.7 (Min 3.1.7),E78477
- [2] Oracle Firmware Upgrade Pack Upgrade Guide, Version 3.1.7, E78476
- [3] Communication Agent User's Guide, E53464
- [4] DSR Communication Agent Configuration Guide, E58922
- [5] DSR Range Based Address Resolution (RBAR) Feature Activation, E58665
- [6] DSR MAP-Diameter IWF Feature Activation Procedure, E58666
- [7] DSR Meta Administration Feature Activation Procedure, E58661
- [8] DSR Full Address Based Resolution (FABR) Feature Activation, E58664
- [9] Gateway Location Application (GLA) Feature Activation, E58659
- [10] DSR PCA Activation and Configuration, E63560
- [11] DSR IPv6 Migration Guide, E57517
- [12] DSR 7.3 Hardware and Software Installation Procedure 1/2, E53488
- [13] DSR DTLs Feature Activation Procedure, E67867
- [14] DSR VM Placement and CPU Socket Pinning Tool,E69626
- [15] DSR RADIUS Shared secret encryption key revocation MOP MO008572
- [16]TPD Initial Product Manufacture Software Installation Procedure, E53017-05

1.3 Acronyms

An alphabetized list of acronyms used in the document:

Table 1. Acronyms

Acronym	Definition
BIOS	Basic Input Output System
CD	Compact Disk
DSR	Diameter Signaling Router
DVD	Digital Versatile Disc
FRU	Field Replaceable Unit
iLO	Integrated Lights Out manager
IPM	Initial Product Manufacture – the process of installing TPD on a hardware platform
MSA	Modular Smart Array
NB	NetBackup
OS	Operating System (e.g. TPD)
RMS	Rack Mounted Server
PMAC	Platform Management & Configuration
SFTP	Secure File Transfer Protocol
SNMP	Simple Network Management Protocol
TPD	Tekelec Platform Distribution
TVOE	Tekelec Virtual Operating Environment
VM	Virtual Machine
PCA	Policy and Charging Application
IDIH	Integrated Diameter Intelligence Hub
SDS	Subscriber Database Server

1.4 Terminology

Multiple server types may be involved with the procedures in this manual. Therefore, most steps in the written procedures begin with the name or type of server to which the step applies. For example:

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.

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

Figure 1. Example of an instruction that indicates the server to which it applies

Management Server	Oracl X6-2 deployed to run TVOE and host a virtualized PMAC application.
PMAC Application	PMAC is an application that provides platform-level management functionality for Oracle X6-2 system, such as the capability to manage and provision platform components of the system so it can host applications.
Site	Applicable for various applications, a Site is type of "Place". A Place is configured object that allows servers to be associated with a physical location. A Site place allows servers to be associated with a physical site. For example, Sites may be configured for Atlanta, Charlotte, and Chicago. Every server is associated with exactly one Site when the server is configured. For the Policy & Charging DRA application, when configuring a Site only put DA-MPs and SBR MP servers in the site. Do not add NOAM, SOAM or IPFE MPs to a Site
Place Association	Applicable for various applications, a "Place Association" is a configured object that allows Places to be grouped together. A Place can be a member of more than one Place Association. The Policy & Charging DRA application defines two Place Association Types: Policy Binding Region and Policy & Charging Mated Sites.

<p>Two Site Redundancy</p>	<p>Two Site Redundancy is a data durability configuration in which Policy and Charging data is unaffected by the loss of one site in a Policy & Charging Mated Sites Place Association containing two sites.</p> <p>Two Site Redundancy is a feature provided by Server Group configuration. This feature provides geographic redundancy. Some Server Groups can be configured with servers located in two geographically separate Sites (locations). This feature will ensure that there is always a functioning Active server in a Server Group even if all the servers in a single site fail.</p>
<p>Policy & Charging SBR Server Group Redundancy</p>	<p>The Policy and Charging application will use SBR Server Groups to store the application data. The SBR Server Groups will support both Two and Three Site Redundancy. The Server Group Function name is "Policy & Charging SBR".</p>
<p>Server Group Primary Site</p>	<p>A Server Group Primary Site is a term used to represent the principle location within a SOAM or SBR Server Group. SOAM and SBR Server groups are intended to span several Sites (Places). For the Policy & Charging DRA application, these Sites (Places) are all configured within a single "Policy and Charging Mated Sites" Place Association.</p> <p>The Primary Site may be in a different Site (Place) for each configured SOAM or SBR Server Group.</p> <p>A Primary Site is described as the location in which the Active and Standby servers to reside, however there cannot be any Preferred Spare servers within this location. All SOAM and SBR Server Groups will have a Primary Site.</p>
<p>Server Group Secondary Site</p>	<p>A Server Group Secondary Site is a term used to represent location in addition to the Primary Site within a SOAM or SBR Server Group. SOAM and SBR Server groups are intended to span several Sites (Places). For the Policy & Charging DRA application, these Sites (Places) are all configured within a single "Policy and Charging Mated Sites" Place Association.</p> <p>The Secondary Site may be in a different Site (Place) for each configured SOAM or SBR Server Group.</p> <p>A Secondary Site is described as the location in which only Preferred Spare servers reside. The Active and Standby servers cannot reside within this location. If Two or Three Site Redundancy is wanted, a Secondary Site is required for all SOAM and SBR Server Groups.</p>

Software Centric	The business practice of delivering an Oracle software product, while relying upon the customer to procure the requisite hardware components. Oracle provides the hardware specifications, but does not provide the hardware, and is not responsible for hardware installation, configuration, or maintenance.
Enablement	The business practice of providing support services (hardware, software, documentation, etc.) that enable a 3rd party entity to install, configuration, and maintain Oracle products for Oracle customers.

Table 2. Terminology

2.0 General Description

This document defines the steps to execute the initial installation of the Diameter Signaling Router 7.4 (DSR 7.4) application.

DSR 7.4 installation paths are shown in the figures below. The general timeline for all processes to perform a software installation/configuration and upgrade is also included below.

This document covers initial installation of the DSR 7.4 application on a Rack mount server system.

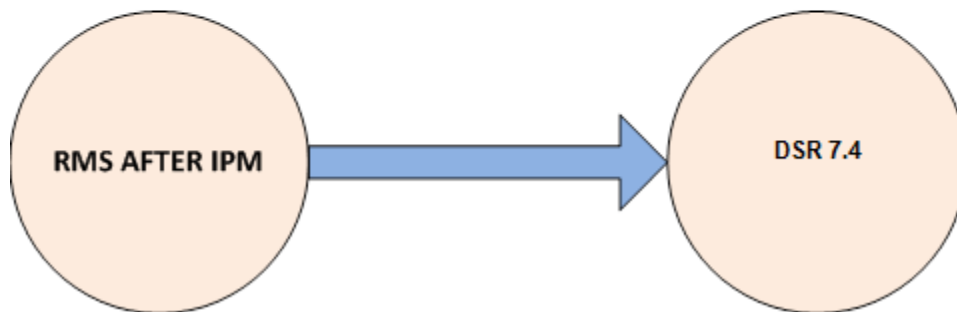


Figure 2. Initial Application Installation Path-Example Shown

2.1 Acquiring Firmware

Several procedures in this document pertain to the upgrading of firmware on various servers and hardware devices.

DSR 7.4 rack mount servers and devices requiring possible firmware updates are:

- Oracle Rack Mount Server

2.1.1 Oracle X6-2

The Oracle Firmware Upgrade Pack (FUP) consists of documentation used to assist in the upgrading of Oracle rack mount servers. The pack consists of an upgrade guide and release notes. The current minimum supported release is 3.1.7. However, if a firmware update is required, it is recommended to use the latest available release. Firmware components can be downloaded from My Oracle Support at <https://support.oracle.com>. Refer to the appropriate FUP release notes for directions on how to acquire the firmware.

3.0 Install Overview

This section provides a brief overview of the recommended method for installing the Target Release software. The basic install process and approximate time required is outlined in **Section 3.2.2**.

3.1 Required Materials

1. One (1) target release DSR Media ISO
2. One (1) target release SDS Media ISO (Oracle X6-2)
3. One (1) target release PMAC Media ISO
4. Three (3) target release IDIH Media ISOs
5. One (1) ISO of TPD release, or later shipping baseline as per Oracle ECO
6. One (1) ISO of TVOE release, or later shipping baseline as per Oracle ECO
7. One (1) TVOE release bootable USB, or later shipping baseline as per Oracle ECO

3.2 Installation Summary

This section lists the procedures required for installation with estimated times. **Section 3.2.2** contains a matrix of deployment features and the required procedures needed to install them. Section 3.2.2 lists the steps required to install a DSR system. These latter sections expand on the information from the matrix and provide a general timeline for the installation.

3.2.1 Installation Matrix

Figure 3 illustrates the overall process that each DSR installation will involve. In summary:

- 1) An overall installation requirement is decided upon. Among the data that should be collected:
 - The Total number of Rack Mount Servers
 - The number of VMs and servers on each Rack Mount Server and their role(s)
 - What time zone should be used across the entire collection of DSR sites?
 - Will SNMP traps be viewed at the NOAM, or will an external NMS be used? (Or both?)

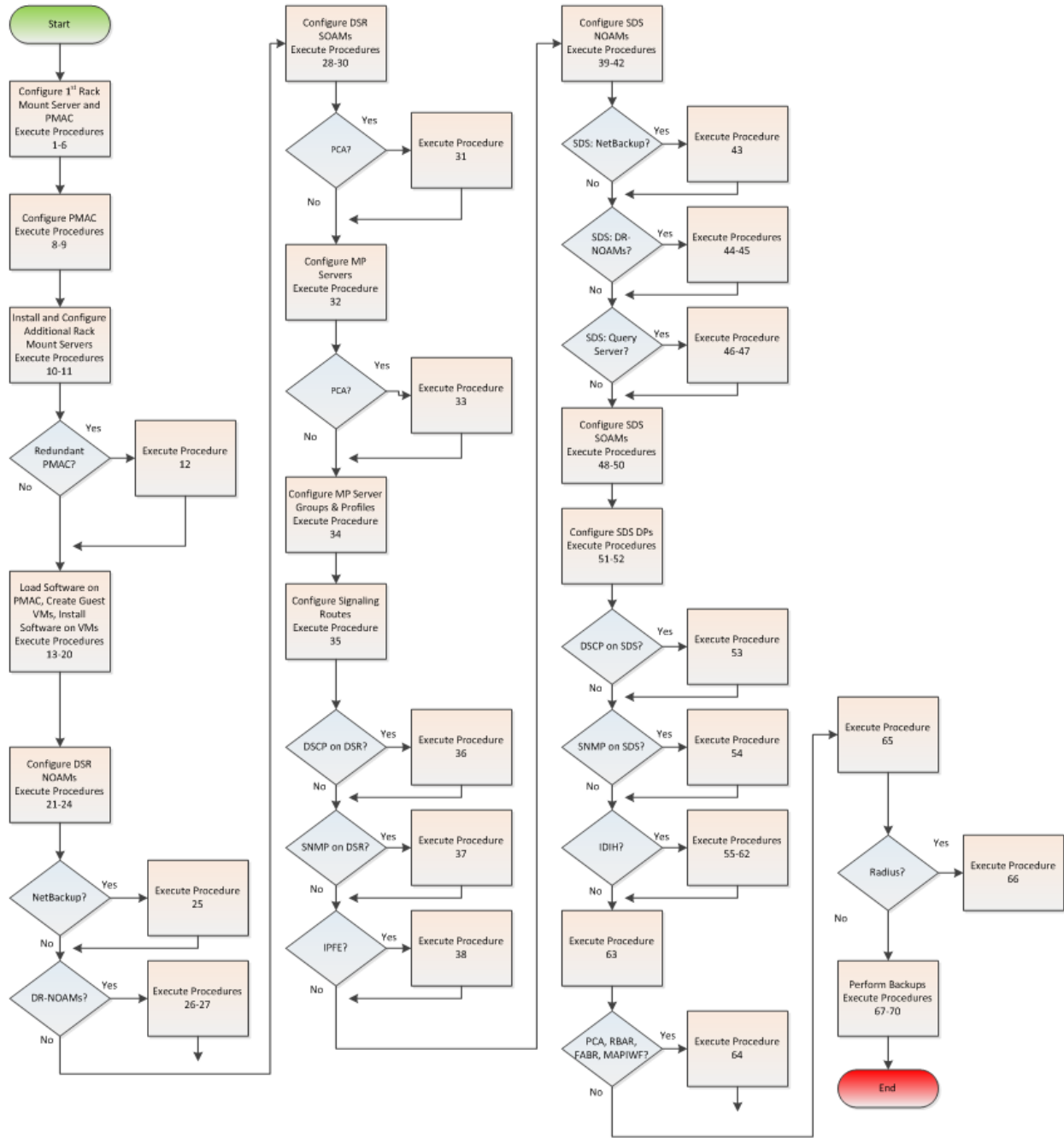


Figure 3. DSR Installation Procedure Map

3.2.2 Installation Procedures

The following table illustrates the progression of the installation process by procedure with estimated times. The estimated times and the phases that must be completed may vary due to differences in typing ability and system configuration. The phases outlined in are to be executed in the order they are listed.

Procedure	Elapsed Time (Minutes)	
	Step	Cum.
Procedure 1. Configure the Oracle X6-2 BIOS settings	30	30
Procedure 2. Upgrade Rack Mount Server Firmware	30	60
Procedure 3. Install and Configure TVOE on First RMS (PMAC Host)	30	90
Procedure 4. Gather and Prepare Configuration files	15	105
Procedure 5. First RMS Configuration	30	135
Procedure 6. PMAC Deployment	30	165
Procedure 7. Initialize the PMAC	20	185
Procedure 8. Configure the PMAC Server	20	325
Procedure 9. Add RMS to the PMAC system Inventory	30	355
Procedure 10. Install TVOE on Additional Rack Mount Servers	45	400
Procedure 11. Configure TVOE on Additional Rack Mount Servers	30	430
Procedure 12. Installing a Redundant PMAC	30	460
Procedure 13. Load DSR, SDS (Oracle X6-2), and TPD ISOs to the PMAC Server	20	480
Procedure 14. Create NOAM Guest VMs	5	485
Procedure 15. Create SOAM Guest VMs	5	490
Procedure 16. Create MP/SBR/DP Guest VMs	5	495
Procedure 17. Create SDS Query Server VMs	5	500
Procedure 18. CPU Pinning (Oracle X6-2)	30	530
Procedure 19. IPM VMs	40	570
Procedure 20. Install the DSR and SDS (Oracle X6-2) Application Software on the VMs	40	610
Procedure 21. Configure First NOAM NE and Server	25	635
Procedure 22. Configure the NOAM Server Group	10	645
Procedure 23. Configure the Second NOAM Server	10	655
Procedure 24. Complete NOAM Server Group Configuration	15	670
Procedure 25. Install NetBackup Client (Optional)	30	700
Procedure 26. NOAM Configuration for DR Site (Optional)	45	745
Procedure 27. Pairing for DR-NOAM Site (Optional)	10	755
Procedure 28. Configure the SOAM NE	5	760
Procedure 29. Configure the SOAM Servers	30	790
Procedure 30. Configure the SOAM Server Group	15	805
Procedure 31. Activate PCA (PCA Only)	20	830

Procedure	Elapsed Time (Minutes)	
	Step	Cum.
Procedure 32. Configure the MP Servers	30	860
Procedure 33. Configure Places and Assign MP Servers to Places (PCA ONLY)	10	870
Procedure 34. Configure the MP Server Group(s) and Profile(s)	20	890
Procedure 35. Configure the Signaling Network Routes	10	900
Procedure 36. Configure DSCP Values for Outgoing Traffic (Optional)	10	910
Procedure 37. Configure SNMP Trap Receiver(s) (Optional)	10	920
Procedure 38. IP Front End (IPFE) Configuration (Optional)	20	940
Procedure 39. Configure First SDS NOAM NE and Server	30	970
Procedure 40. Configure the SDS NOAM Server Group	10	980
Procedure 41. Configure the Second SDS NOAM Server	10	990
Procedure 42. Complete SDS NOAM Server Group Configuration	20	1010
Procedure 43. Install NetBackup Client (Optional)	30	1040
Procedure 44. SDS NOAM Configuration for DR Site (Optional)	45	1085
Procedure 45. Pairing for SDS DR-NOAM Site (Optional)	20	1105
Procedure 46. Configuring SDS Query Servers	20	1125
Procedure 47. Query Server SDS NOAM Pairing	10	1135
Procedure 48. Configure the SDS DP SOAM NE	5	1140
Procedure 49. Configure the SDS DP SOAM Servers	30	1170
Procedure 50. Configure the SDS DP SOAM Server Group	20	1190
Procedure 51. Configure the SDS DP Servers	30	1220
Procedure 52. Configure the SDS DP Server Group(s) and Profile(s)	20	1240
Procedure 53. Configure DSCP Values for Outgoing Traffic (Optional)	10	1250
Procedure 54. Configure SNMP Trap Receiver(s) (Optional)	10	1260
Procedure 55. IDIH Installation (Optional)	60	1320
Procedure 56. Configure DSR Reference Data Synchronization for IDIH (Optional)	20	1340
Procedure 57. IDIH Configuration: Configuring the SSO Domain (Optional)	10	1350
Procedure 58. IDIH Configuration: Configure IDIH in the DSR (Optional)	20	1370
Procedure 59. IDIH Configuration: Configure Mail Server-Optional (Optional)	10	1380
Procedure 60. IDIH Configuration: Configure SNMP Management Server-Optional (Optional)	10	1390
Procedure 61. IDIH Configuration: Change Network Interface-Optional (Optional)	15	1405
Procedure 62. IDIH Configuration: Backup the upgrade and Disaster Recovery FDC File-Optional (Optional)	10	1415
Procedure 63. Optimization Procedure (DSR & Oracle X6-2)	10	1425

Procedure	Elapsed Time (Minutes)	
	Step	Cum.
Procedure 64. Activate Optional Features	30	1455
Procedure 65. Configure ComAgent Connections (DSR + SDS-Oracle X6-2)	30	1485
Procedure 66: Shared secret encryption key revocation (RADIUS Only)	10	1495
Procedure 67. Backup TVOE Configuration	20	1515
Procedure 68. Backup PMAC Application	20	1535
Procedure 69. NOAM Database Backup	10	1545
Procedure 70. SOAM Database Backup	10	1555
Procedure 71. Enable/Disable DTLS (SCTP Diameter Connections Only)		

3.3 Optional Features

When DSR installation is complete, further configuration and/or installation steps will need to be taken for optional features that may be present in this deployment. Please refer to these documents for the post-DSR install configuration steps needed for their components.

Feature	Document
Diameter Mediation	DSR Meta Administration Feature Activation, E58661
Range Based Address Resolution (RBAR)	DSR RBAR Feature Activation, E58665
MAP-Diameter IWF Feature	MAP-Diameter IWF Feature Activation, E58666
Policy and Charging Application (PCA) – (Oracle X6-2)	DSR 7.4PCA Activation and Configuration, E63560
Full Address Based Resolution (FABR) – (Oracle X6-2)	DSR FABR Feature Activation Procedure, E58664

3.4 Rack Mount Server Network Interface Reference

Throughout the installation procedure, configuration steps will reference Ethernet interfaces. Depending on the hardware type, these Ethernet interfaces can vary. The following table describes the Ethernet Interface to <Ethernet_interface_x> variables:

Network Interface	Oracle X6-2 (without 10GigE card)
<ethernet_interface_1>	eth01
<ethernet_interface_2>	eth03
<ethernet_interface_3>	eth02
<ethernet_interface_4>	eth04

4.0 Software Installation Procedure

As mentioned earlier, the hardware installation and network cabling should be done before executing the procedures in this document.

SUDO

As a non-root user (*admusr*), many commands (*when run as admusr*) now require the use of '*sudo*'.

IPv6

IPv6 configuration of XMI and IMI networks has been introduced in DSR 7.1. Standard IPv6 formats for IPv6 and prefix can be used in all IP configuration screens which enable the DSR to be run in an IPv6 only environment. When using IPv6 for XMI and management, you must place the IPv6 address in brackets (highlighted in red below), example as followed:

```
https://[<IPv6 address>]
```

If a dual-stack (IPv4 & IPv6) network is required, it is recommended that you first configure the topology with IPv4, and then "Migrate" to IPv6. Reference [11] for instructions on how to accomplish this migration.


4.1 Prepare Servers for IPM

This section explains the steps needed to configure the BIOS settings and update the firmware (if needed) for the Oracle rack mount servers.

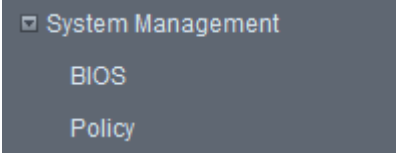

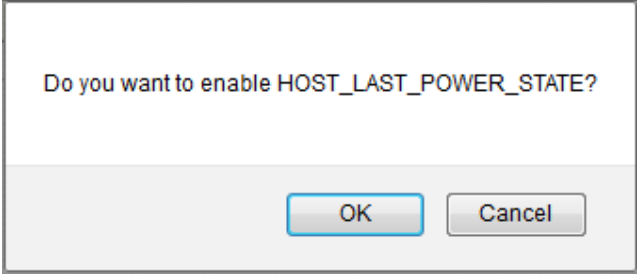
4.1.1 Configure the Oracle X6-2 BIOS Settings

The following procedure explains the steps needed to configure the BIOS settings.

Procedure 1. Configure the Oracle X6-2 BIOS settings

S T E P #	<p>This procedure explains the steps needed to configure Oracle X6-2 and Oracle Server BIOS Settings.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
1 <input type="checkbox"/>	<p>RMS Server: Configure the BIOS Settings</p>	<p>Follow the appropriate Appendix procedure for the corresponding hardware type:</p> <ul style="list-style-type: none"> • Oracle X6-2: Appendix A.2.1 Configure Oracle X6-2 Server
2 <input type="checkbox"/>	<p>Oracle X6-2 Server: Login</p>	<p>Login to the Oracle X6-2 iLOM:</p> <p>Please Log In</p> <div style="border: 1px solid #ccc; padding: 10px; width: fit-content; margin: 10px auto;"> <p>SP Hostname: DSR10307Loc37TVOE</p> <p>User Name: <input type="text"/></p> <p>Password: <input type="password"/></p> <p style="text-align: center;"><input type="button" value="Log In"/></p> </div> <div style="text-align: right; margin-top: 20px;">  </div> <p style="font-size: small; margin-top: 10px;">Copyright © 2015, Oracle and/or its affiliates. All rights reserved. Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.</p>

Procedure 1. Configure the Oracle X6-2 BIOS settings

3	Oracle X6-2 Server: Update Power Settings	Navigate to System Management -> Policy												
□														
		Select <i>“Set host power to last power state on boot”</i>												
		 <table border="1"><thead><tr><th colspan="2">Service Processor Policies</th></tr></thead><tbody><tr><td>— Actions —</td><td></td></tr><tr><td>— Actions —</td><td></td></tr><tr><td>Enable</td><td>Set on boot (enabling this policy disables Set host power to last power state policy)</td></tr><tr><td>Disable</td><td>Set host power to last power state on boot (enabling this policy disables Auto power-on host policy)</td></tr><tr><td></td><td>Set enhanced PCIe cooling mode policy</td></tr></tbody></table>	Service Processor Policies		— Actions —		— Actions —		Enable	Set on boot (enabling this policy disables Set host power to last power state policy)	Disable	Set host power to last power state on boot (enabling this policy disables Auto power-on host policy)		Set enhanced PCIe cooling mode policy
Service Processor Policies														
— Actions —														
— Actions —														
Enable	Set on boot (enabling this policy disables Set host power to last power state policy)													
Disable	Set host power to last power state on boot (enabling this policy disables Auto power-on host policy)													
	Set enhanced PCIe cooling mode policy													
		Select Enable from the Actions drop down box												
		Select Ok to confirm												
														

4.1.2 Upgrade Rack Mount Server Firmware

The following procedure explains the steps needed to upgrade the firmware of the rack mount servers (if needed).

Procedure 2. Upgrade Rack Mount Server Firmware

S T E P #	<p>This procedure explains the steps needed to update the firmware if needed.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>																							
1 <input type="checkbox"/>	RMS Server: Verify Firmware	<p>Verify firmware version of the rack mount server:</p> <p>For Oracle X6-2:</p> <p>From the iLOM, login and verify firmware version under System Information -> Summary:</p> <p>General Information</p> <table border="1"> <tr><td>System Type</td><td>Rack Mount</td></tr> <tr><td>Model</td><td>ORACLE SERVER X6-2</td></tr> <tr><td>QPart ID</td><td>Q11401</td></tr> <tr><td>Part Number</td><td>34233419+1+1</td></tr> <tr><td>Serial Number</td><td>1621NM1035</td></tr> <tr><td>System Identifier</td><td>-</td></tr> <tr><td>System Firmware Version</td><td>3.2.6.46</td></tr> <tr><td>Primary Operating System</td><td>Oracle Linux Server release 6.8</td></tr> <tr><td>Host Primary MAC Address</td><td>00:10:e0:b3:9ffe</td></tr> <tr><td>ILOM Address</td><td>10.75.128.100</td></tr> <tr><td>ILOM MAC Address</td><td>00:10:E0:B3:A0:02</td></tr> </table>	System Type	Rack Mount	Model	ORACLE SERVER X6-2	QPart ID	Q11401	Part Number	34233419+1+1	Serial Number	1621NM1035	System Identifier	-	System Firmware Version	3.2.6.46	Primary Operating System	Oracle Linux Server release 6.8	Host Primary MAC Address	00:10:e0:b3:9ffe	ILOM Address	10.75.128.100	ILOM MAC Address	00:10:E0:B3:A0:02
System Type	Rack Mount																							
Model	ORACLE SERVER X6-2																							
QPart ID	Q11401																							
Part Number	34233419+1+1																							
Serial Number	1621NM1035																							
System Identifier	-																							
System Firmware Version	3.2.6.46																							
Primary Operating System	Oracle Linux Server release 6.8																							
Host Primary MAC Address	00:10:e0:b3:9ffe																							
ILOM Address	10.75.128.100																							
ILOM MAC Address	00:10:E0:B3:A0:02																							
2 <input type="checkbox"/>	RMS Server: Upgrade Firmware	<p>Follow the appropriate Appendix procedure for the corresponding hardware type:</p> <ul style="list-style-type: none"> • Oracle Rack Mount Servers: Appendix B.1: 																						

4.2 Install and Configure TVOE on First RMS (PMAC Host)

This section describes the process of installing TVOE on the first rack mount server. Throughout this section, the first RMS server refers to the server that shall host the PMAC VM.

Note: [Non-HA Lab Node Installations Only-Oracle X6-2]: Before starting Procedure 3, follow procedure **Appendix Q: Non-HA Lab Node Instructions (Oracle X6-2 Non-HA Lab Node Only)** to create vgguests logical volume with RAID10 spanning across multiple HDDs.

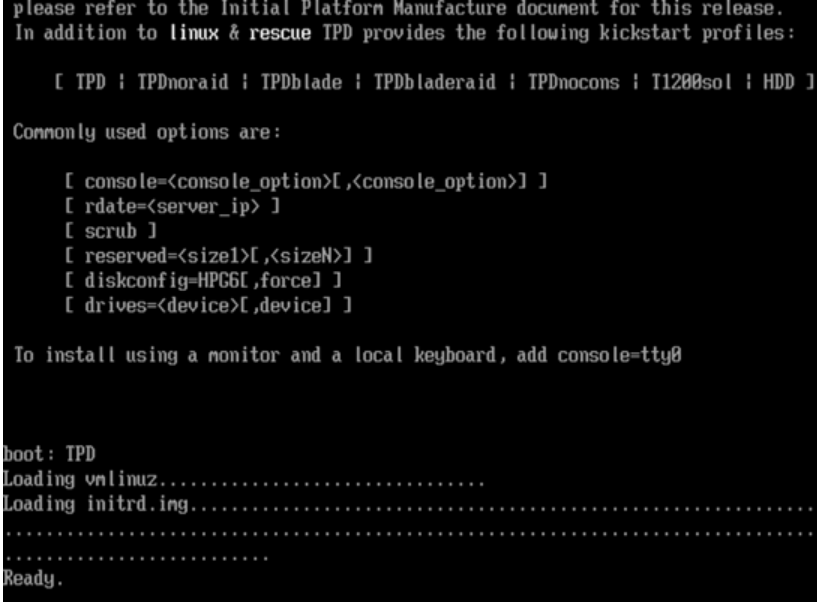
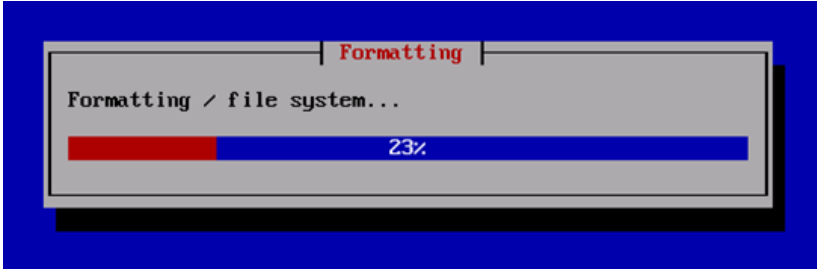
Procedure 3. Install and Configure TVOE on First RMS (PMAC Host)

S T E P #	<p>This procedure explains the steps needed to install TVOE on the first RMS Server.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
1 <input type="checkbox"/>	Connect to the First RMS Server	<p>Connect to the Server using a VGA Display and USB Keyboard, or via the iLO interface using IE.</p> <p>Note: Appendix C: TVOE iLO/iLOM GUI Access and Appendix D: Changing the TVOE iLO/iLOM Address explains how to access the rack mount server iLO and change the address if necessary.</p>
2 <input type="checkbox"/>	RMS Server : Insert TVOE Media into Server	<p>Insert the OS IPM media (USB) into the USB slot of the rack mount server. Refer to Appendix N: Creating a Bootable USB Drive on Linux for creating a bootable USB</p> <p>Alternatively ISO can be mounted using Virtual media as well. Refer to Appendix E: Attaching an ISO Image to a Server using the iLO or iLOM.</p>
3 <input type="checkbox"/>	Power Cycle Server	<p>Power cycle the server:</p> <ul style="list-style-type: none"> For Oracle rack mount servers, hold the power button in until the “OK” LED turns off, and starts a slow blink. Wait 5 seconds and press the power button and release it again to power on the system. In a second or 2 the “OK” LED will start to blink faster as the system powers up.
4 <input type="checkbox"/>	Select Boot Method	<p>For some servers you must select a boot method so that the server does not boot directly from the hard drive.</p> <ul style="list-style-type: none"> For Oracle rack mount servers, hit F8 when prompted to bring up the Boot Pop Up Menu then select the appropriate boot method

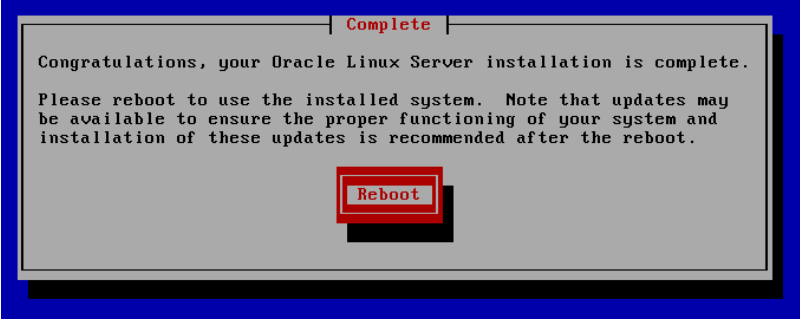
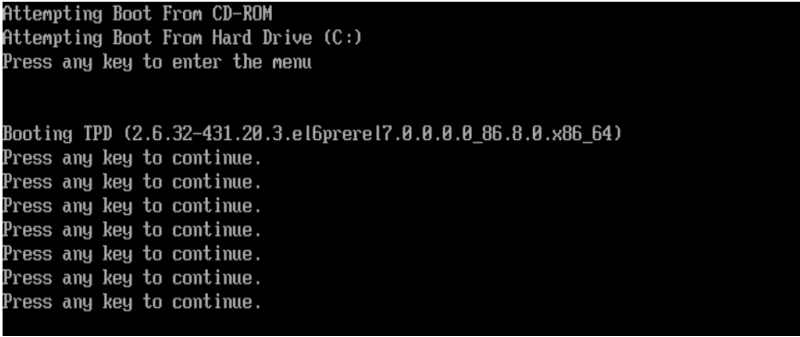
Procedure 3. Install and Configure TVOE on First RMS (PMAC Host)

<p>5</p> <p><input type="checkbox"/></p>	<p>RMS Server : Begin IPM Process</p>	<p>Once the Server reboots, it will reboot from the TVOE media and a boot prompt shall be displayed:</p> <pre> Copyright (C) 2003, 2014, Oracle and/or its affiliates. All rights reserved. Welcome to Tekelec Platform Distribution! Release: 7.0.0.0_086.11.0 Arch: x86_64 For a detailed description of all the supported commands and their options, please refer to the Initial Platform Manufacture document for this release. In addition to linux & rescue TPD provides the following kickstart profiles: [TPD ; TPDnoraaid ; TPDblade ; TPDcompact ; HDD] Commonly used options are: [console=<console_option>[,<console_option>]] [primaryConsole=<console_option>] [rdate=<server_ip>] [scrub] [reserved=<size1>[,<sizeN>]] [diskconfig=HWRAID[,force]] [drives=<device>[,<device>]] [guestArchive] To install using a monitor and a local keyboard, add console=tty0 boot: _ </pre> <p>IPM the server using the following command:</p> <pre>TPDnoraaid diskconfig=HWRAID,force console=tty0</pre> <p>For Non-HA Lab node (Oracle X6-2), execute the following command:</p> <pre>TPDnoraaid drives=<Volume ID recorded in procedure S.1/S.2/S.8/> console=tty0</pre>
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Procedure 3. Install and Configure TVOE on First RMS (PMAC Host)

<p>6</p> <p><input type="checkbox"/></p>	<p>RMS Server : Monitor the IPM Installation</p>	<p>The IPM process takes about 30 minutes, you will see several messages and screens in the process.</p> <p>The following screens will be displayed:</p>  <pre> please refer to the Initial Platform Manufacture document for this release. In addition to linux & rescue TPD provides the following kickstart profiles: [TPD TPDnoraaid TPDblade TPDbladeraaid TPDnocons I1200sol HDD] Commonly used options are: [console=<console_option>[,<console_option>]] [rdate=<server_ip>] [scrub] [reserved=<size1>[,<sizeN>]] [diskconfig=HPC6[,force]] [drives=<device>[,<device>]] To install using a monitor and a local keyboard, add console=tty0 boot: TPD Loading vmlinuz..... Loading initrd.img..... Ready. </pre>  
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Procedure 3. Install and Configure TVOE on First RMS (PMAC Host)

<p>7</p> <p><input type="checkbox"/></p>	<p>RMS Server : Install Complete- Reboot</p>	<p>Once the IPM is complete, you will be prompted to press Enter as shown below. Remove the disk from the drive or unmount the TPD image from the iLO and press Enter to reboot the server.</p>  <p>After a few minutes and multiple reboots, the the server boot sequence will start and eventually display that it is booting the new IPM load.</p>  <p>Note: A successful IPM platform installation process results in a user login prompt.</p>
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Procedure 4. Gather and Prepare Configuration files

S T E P #	<p>This procedure explains the steps needed to gather and prepare the configuration files required to proceed with the DSR 7.4 installation from the DSR ISO.</p> <p>Required Materials:</p> <p>USB containing DSR media.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
1 <input type="checkbox"/>	RMS Server: Insert USB	<p>Insert the USB containing the DSR ISO into an available USB slot on the TVOE Host server and execute the following command to determine its location and the ISO to be mounted:</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo /bin/ls /media/*/*.iso</pre> <p>Example output: /media/sdd1/872-2507-111-7.1.x_41.16.2-DSR-x86_64.iso</p> <p>Note: The DSR application USB device is immediately added to the list of media devices once it is inserted into a USB slot on the TVOE Host server.</p> <p>Note: Note the device directory name under the media directory. This could be sdb1, sdc1, sdd1, or sde1, depending on the USB slot into which the media was inserted.</p>
2 <input type="checkbox"/>	RMS Server: Mount ISO	<p>Using the device directory discovered in step 1, loop mount the ISO to the standard TVOE host mount point (if it is not already in use):</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo /bin/mount -o loop /media/<device directory>/<ISO Name>.iso /mnt/upgrade</pre>
3 <input type="checkbox"/>	RMS Server: Copy Configuration Files	<p>Execute the following commands to copy the required files from the TVOE host mount point:</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo cp /mnt/upgrade/upgrade/overlay/RMS/* /var/TKLC/upgrade/</pre> <pre style="border: 1px solid black; padding: 5px;">\$ sudo cp /mnt/upgrade/upgrade/overlay/*.xml /var/TKLC/upgrade/</pre>
4 <input type="checkbox"/>	RMS Server: Change Permissions	<p>Change the permissions of the configuration files by executing the following command:</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo chmod 777 /var/TKLC/upgrade/*</pre>

Procedure 5. First RMS Configuration

S T E P #	<p>This procedure will configure the First TVOE/Management Server</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>
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Procedure 5. First RMS Configuration

<p>1. <input type="checkbox"/></p>	<p>Determine Bridge Names and Interfaces</p>	<p>Determine the bridge interfaces to be used on the TVOE server and fill in the appropriate values in the table below. If NetBackup is to be used, determine the bridge interface to be used for the NetBackup network and fill in the <TVOE_NetBackup_Bridge_Interface> value.</p> <table border="1"> <thead> <tr> <th>Guest Interface Alias</th> <th>TVOE Bridge Name</th> <th>TVOE Bridge Interface</th> </tr> </thead> <tbody> <tr> <td>control</td> <td>control</td> <td> Fill in the appropriate value (default is bond0): <input style="width: 100px; height: 15px;" type="text"/> <TVOE_Control_Bridge_Interface> </td> </tr> <tr> <td>management</td> <td>management</td> <td> Fill in the appropriate value: <input style="width: 100px; height: 15px;" type="text"/> <TVOE_Management_Bridge_Interface> </td> </tr> <tr> <td>xmi</td> <td>xmi</td> <td> Fill in the appropriate value: <input style="width: 100px; height: 15px;" type="text"/> <TVOE_XMI_Bridge_Interface> </td> </tr> <tr> <td>imi</td> <td>lmi</td> <td> Fill in the appropriate value: <input style="width: 100px; height: 15px;" type="text"/> <TVOE_IMI_Bridge_Interface> </td> </tr> <tr> <td>Int (iDIH Only)</td> <td>Int</td> <td> Fill in the appropriate value: <input style="width: 100px; height: 15px;" type="text"/> <TVOE_INT_Bridge_Interface> </td> </tr> <tr> <td>xsi1</td> <td>xsi1</td> <td> Fill in the appropriate value: <input style="width: 100px; height: 15px;" type="text"/> <TVOE_XS1_Bridge_Interface> </td> </tr> <tr> <td>xsi2</td> <td>xsi2</td> <td> Fill in the appropriate value: <input style="width: 100px; height: 15px;" type="text"/> <TVOE_XSI2_Bridge_Interface> </td> </tr> <tr> <td>replication</td> <td>replication</td> <td> Fill in the appropriate value: <input style="width: 100px; height: 15px;" type="text"/> <TVOE_REPLICATION_Bridge_Interface> </td> </tr> <tr> <td>NetBackup (if applicable)</td> <td>NetBackup</td> <td> Fill in the appropriate value: <input style="width: 100px; height: 15px;" type="text"/> <TVOE_NetBackup_Bridge_Interface> </td> </tr> </tbody> </table>	Guest Interface Alias	TVOE Bridge Name	TVOE Bridge Interface	control	control	Fill in the appropriate value (default is bond0): <input style="width: 100px; height: 15px;" type="text"/> <TVOE_Control_Bridge_Interface>	management	management	Fill in the appropriate value: <input style="width: 100px; height: 15px;" type="text"/> <TVOE_Management_Bridge_Interface>	xmi	xmi	Fill in the appropriate value: <input style="width: 100px; height: 15px;" type="text"/> <TVOE_XMI_Bridge_Interface>	imi	lmi	Fill in the appropriate value: <input style="width: 100px; height: 15px;" type="text"/> <TVOE_IMI_Bridge_Interface>	Int (iDIH Only)	Int	Fill in the appropriate value: <input style="width: 100px; height: 15px;" type="text"/> <TVOE_INT_Bridge_Interface>	xsi1	xsi1	Fill in the appropriate value: <input style="width: 100px; height: 15px;" type="text"/> <TVOE_XS1_Bridge_Interface>	xsi2	xsi2	Fill in the appropriate value: <input style="width: 100px; height: 15px;" type="text"/> <TVOE_XSI2_Bridge_Interface>	replication	replication	Fill in the appropriate value: <input style="width: 100px; height: 15px;" type="text"/> <TVOE_REPLICATION_Bridge_Interface>	NetBackup (if applicable)	NetBackup	Fill in the appropriate value: <input style="width: 100px; height: 15px;" type="text"/> <TVOE_NetBackup_Bridge_Interface>
Guest Interface Alias	TVOE Bridge Name	TVOE Bridge Interface																														
control	control	Fill in the appropriate value (default is bond0): <input style="width: 100px; height: 15px;" type="text"/> <TVOE_Control_Bridge_Interface>																														
management	management	Fill in the appropriate value: <input style="width: 100px; height: 15px;" type="text"/> <TVOE_Management_Bridge_Interface>																														
xmi	xmi	Fill in the appropriate value: <input style="width: 100px; height: 15px;" type="text"/> <TVOE_XMI_Bridge_Interface>																														
imi	lmi	Fill in the appropriate value: <input style="width: 100px; height: 15px;" type="text"/> <TVOE_IMI_Bridge_Interface>																														
Int (iDIH Only)	Int	Fill in the appropriate value: <input style="width: 100px; height: 15px;" type="text"/> <TVOE_INT_Bridge_Interface>																														
xsi1	xsi1	Fill in the appropriate value: <input style="width: 100px; height: 15px;" type="text"/> <TVOE_XS1_Bridge_Interface>																														
xsi2	xsi2	Fill in the appropriate value: <input style="width: 100px; height: 15px;" type="text"/> <TVOE_XSI2_Bridge_Interface>																														
replication	replication	Fill in the appropriate value: <input style="width: 100px; height: 15px;" type="text"/> <TVOE_REPLICATION_Bridge_Interface>																														
NetBackup (if applicable)	NetBackup	Fill in the appropriate value: <input style="width: 100px; height: 15px;" type="text"/> <TVOE_NetBackup_Bridge_Interface>																														

Procedure 5. First RMS Configuration

<p>2.</p> <p><input type="checkbox"/></p>	<p>1st RMS iLO/iLOM: Login and Launch the Integrated Remote Console</p>	<p>Log in to iLO/iLOM, follow Appendix C: TVOE iLO/iLOM GUI Access for instructions on how to access the iLO/iLOM GUI.</p> <pre>https://<management_server_iLO_ip></pre>
<p>3.</p> <p><input type="checkbox"/></p>	<p>1st RMS iLO/iLOM: Create the Management Network</p>	<p>Create the Management network, execute the following command:</p> <p>Note: The output below is for illustrative purposes only. The site information for this system will determine the network interfaces, (network devices, bonds, and bond enslaved devices), to configure.</p> <pre>\$ sudo /usr/TKLC/plat/bin/netAdm add --device=<TVOE_Management_Bridge_Interface> --onboot=yes Interface bond0.2 added</pre> <pre>\$sudo /usr/TKLC/plat/bin/netAdm add --type=Bridge --name=management --bootproto=none --onboot=yes --address=<Management_Server_TVOE_IP> --netmask=<Management_Server_TVOE_Netmask/prefix> --bridgeInterfaces=<TVOE_Management_Bridge_Interface></pre>
<p>4.</p> <p><input type="checkbox"/></p>	<p>1st RMS iLO/iLOM: Configure Default Route</p>	<p>Configure the default route by executing the following commands:</p> <pre>\$ sudo /usr/TKLC/plat/bin/netAdm add --route=default --device=management --gateway=<Management_Gateway_IP_Address></pre>

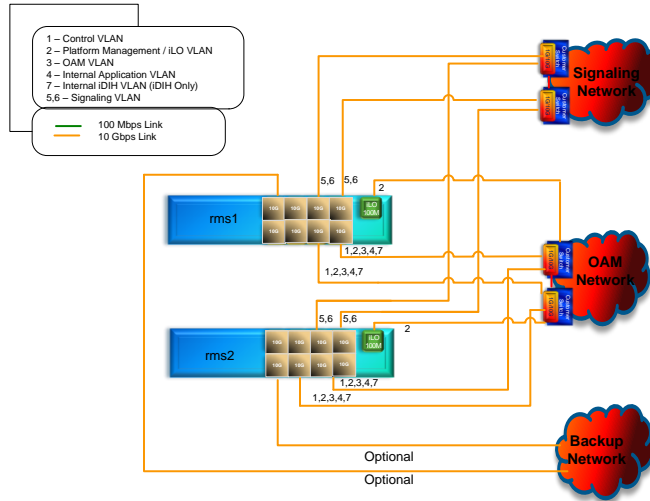
Procedure 5. First RMS Configuration

<p>5.</p> <p><input type="checkbox"/></p>	<p>1st RMS iLO/iLOM: TVOE Bridge Configuration (Non-Segregated Signaling)</p>	<p>If your rack mount solution is designed where the signaling traffic shares the same physical NIC interfaces as the OAM related DSR traffic:</p> <ul style="list-style-type: none"> • Execute the TVOE network config script with the 'segg=no' parameter. • Configuration of up to 4 signaling interfaces are supported but not necessary. • Configuration of the 'intvlan' parameter is to be used when IDIH is being deployed. • Configuration of the 'replicationvlan' parameter is to be used if a dedicated SBR replication network will be defined -PCA Only • Configuration of at least 'xmivlan' and 'imivlan' parameters is required. <p>Example of TVOE script WITHOUT segregated signaling (For illustrative purposes only):</p> <pre style="border: 1px solid black; padding: 5px;"> \$ cd /var/TKLC/upgrade \$ sudo ./TVOEcfg_RMS.sh --xmivlan=<xmi_vlan_ID> --imivlan=<imi_vlan_ID> --xsilvlan=<xsil_vlan_ID> --xsi2vlan=<xsi2_vlan_ID> --intvlan=<int_vlan_ID> --replicationvlan=<replication_vlan_ID> --segg=no </pre> <p>Note: The same VLANs/Bridges configured with this script should be consistent across all rack mount servers being deployed.</p> <p>Note: If for any reason, you entered an incorrect value during the execution of the TVOEcfg_RMS.sh command, you can execute the following command to reset the networking configuration so you can repeat the TVOEcfg_RMS step:</p> <pre style="border: 1px solid black; padding: 5px;"> \$ cd /var/TKLC/upgrade \$ sudo ./TVOEclean_RMS.sh </pre>
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Procedure 5. First RMS Configuration

6. **1st RMS iLO/iLOM: TVOE Bridge Configuration (Segregated Signaling)**

If your rack mount solution is designed where the signaling traffic is segregated from the rest of the DSR OAM related networks and located on separate NICs:



- Execute the TVOE network config script with the 'segg=yes' parameter.
- Configuration of up to 4 signaling interfaces are supported but not necessary.
- Configuration of the 'intvlan' parameter is to be used when iDIH is being deployed.
- Configuration of the 'replicationvlan' parameter is to be used if a dedicated SBR replication network will be defined -PCA Only
- Configuration of at least 'xmivlan' and 'imivlan' parameters is required.

```
SEGIFC1="<ethernet_interface_3>"
SEGIFC2="<ethernet_interface_4>"
```

Example of TVOE script **WITH** segregated signaling (For illustrative purposes only):

```
$ cd /var/TKLC/upgrade

$ sudo ./TVOEcfg_RMS.sh --xmivlan=<xmi_vlan_ID>
--imivlan=<imi_vlan_ID> --xsilvlan=<xsil_vlan_ID>
--xsi2vlan=<xsi2_vlan_ID> --intvlan=<int_vlan_ID>
--replicationvlan=<replication_vlan_ID> --segg=yes
```

Note: If for any reason, you entered an incorrect value during the execution of the TVOEcfg_RMS.sh command, you can execute the following command to reset the networking configuration so you can repeat the TVOEcfg step:

```
$ cd /var/TKLC/upgrade

$ sudo ./TVOEclean_RMS.sh
```

Procedure 5. First RMS Configuration

7.	1st RMS iLO/iLOM: Set Ethernet Interface Ring Buffer Sizes	<p>The following commands will increase the ring buffer sizes on Oracle X6-2 Ethernet Interfaces:</p> <p>Note: Refer to Section 3.4 for network interface server reference table</p> <pre>\$ sudo netAdm set --device=<ethernet_interface_1> --ringBufferRx=4096 --ringBufferTx=4096 \$ sudo netAdm set --device=<ethernet_interface_2> --ringBufferRx=4096 --ringBufferTx=4096</pre> <p>If step 7 was executed, execute the following commands:</p> <pre>\$ sudo netAdm set --device=<ethernet_interface_3> --ringBufferRx=4096 --ringBufferTx=4096 \$ sudo netAdm set --device=<ethernet_interface_4> --ringBufferRx=4096 --ringBufferTx=4096</pre>
8.	1st RMS iLO/iLOM: Install Tuned	<p>Install tuned Profile by executing the following commands:</p> <pre>\$ sudo cp /var/TKLC/upgrade/tuned_tvoe.tar /etc/tune- profiles/;cd /etc/tune-profiles/ \$ sudo tar -xvf tuned_tvoe.tar</pre> <p>Activate the tuned profile for TVOE:</p> <pre>\$ sudo tuned-adm profile tvoe_profile \$ sudo service_conf add tuned rc runlevels=345 \$ sudo service_conf add ktune rc runlevels=345</pre> <p>Verify that tuned is active:</p> <pre>\$ sudo tuned-adm active</pre> <p>Expected output:</p> <pre>Current active profile: tvoe_profile Service tuned: enabled, running Service ktune: enabled, running</pre>

Procedure 5. First RMS Configuration

9.	1st RMS iLO/iLOM: Install and configure IRQ Balance	1) Stop the irqbalance service: <pre>\$ sudo service irqbalance stop</pre> 2) Modify irqbalance: <pre>\$ cd /var/TKLC/upgrade \$ sudo ./irqtune.sh</pre>

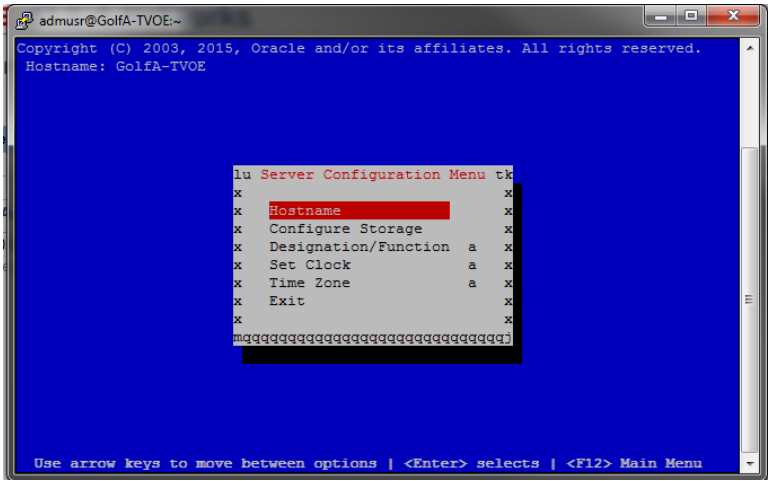
Procedure 5. First RMS Configuration

<p>10. <input type="checkbox"/></p>	<p>1st RMS iLO/iLOM: Add the NetBackup Network-Option 1 (Optional)</p>	<p>If NetBackup is to be used, execute this step, otherwise skip to Step 14.</p> <p>Select only this step or the options listed in steps 11 or 12.</p> <p>NetBackup is a tool that allows the customer to take remote backups of the system.</p> <p>Note: The output below is for illustrative purposes only. The example output below shows the control bridge configured.</p> <p>Note: The example below illustrates a TVOE Management Server configuration with the NetBackup feature enabled. The NetBackup network is configured with a non-default MTU size.</p> <p>Note: The MTU size must be consistent between a network bridge, device, or bond, and associated VLANs.</p> <p>Create NetBackup bridge using a bond containing an untagged interface</p> <pre> \$ sudo /usr/TKLC/plat/bin/netAdm add --device=<TVOE_NetBackup_Bridge_Interface> --onboot=yes --type=Bonding --mode=active-backup -- miimon=100 --MTU=<NetBackup_MTU_size> Interface <TVOE_NetBackup_Bridge_Interface> added \$ sudo /usr/TKLC/plat/bin/netAdm set --device=<ethernet_interface_4> --type=Ethernet --master=<TVOE_NetBackup_Bridge_Interface> --slave=yes --onboot=yes Interface <ethernet_interface_4> updated \$ sudo /usr/TKLC/plat/bin/netAdm add --type=Bridge --name=<TVOE_NetBackup_Bridge> --onboot=yes -- bootproto=none --MTU=<NetBackup_MTU_size> --bridgeInterfaces=<TVOE_NetBackup_Bridge_Interface> --address=<TVOE_NetBackup_IP> --netmask=<TVOE_NetBackup_Netmask/Prefix> </pre>
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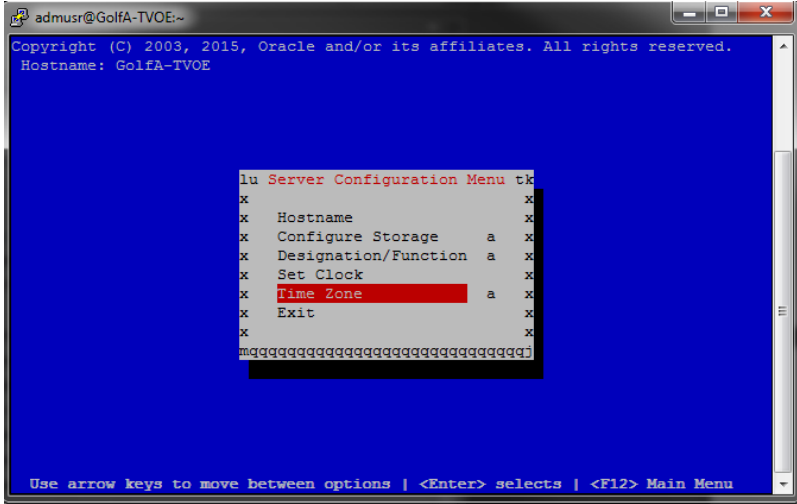
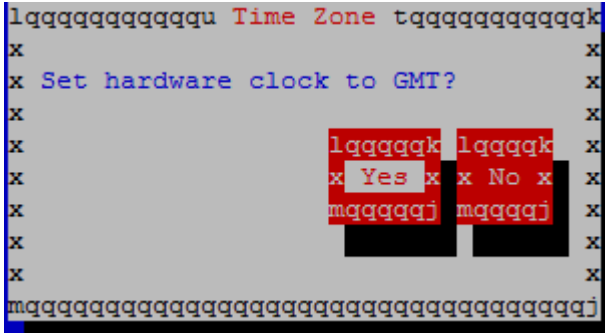
Procedure 5. First RMS Configuration

<p>11.</p> <p><input type="checkbox"/></p>	<p>1st RMS iLO/iLOM: Add the NetBackup Network-Option 2 (Optional)</p>	<p>If NetBackup is to be used, Select only this step or options in Steps 10 or 12</p> <p>Create NetBackup bridge using an untagged native interface:</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo /usr/TKLC/plat/bin/netAdm add --type=Bridge --name=<TVOE_NetBackup_Bridge> --onboot=yes -- bootproto=none --MTU=<NetBackup_MTU_size> --bridgeInterfaces=<Ethernet_Interface_4> --address=<TVOE_NetBackup_IP> --netmask=<TVOE_NetBackup_Netmask/Prefix></pre>
<p>12.</p> <p><input type="checkbox"/></p>	<p>1st RMS iLO/iLOM: Add the NetBackup Network-Option 3 (Optional)</p>	<p>If NetBackup is to be used, Select only this step or options in 10 or 11</p> <p>Create NetBackup bridge using a tagged device:</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo /usr/TKLC/plat/bin/netAdm add --device=<TVOE_NetBackup_Bridge_Interface> --onboot=yes Interface <TVOE_NetBackup_Bridge_Interface> added \$sudo /usr/TKLC/plat/bin/netAdm add --type=Bridge --name=<TVOE_NetBackup_Bridge> --onboot=yes --MTU=<NetBackup_MTU_size> --bridgeInterfaces=<TVOE_NetBackup_Bridge_Interface> --address=<TVOE_NetBackup_IP> --netmask=<TVOE_NetBackup_Netmask/Prefix></pre>
<p>13.</p> <p><input type="checkbox"/></p>	<p>1st RMS iLO/iLOM: Configure Networking for NetBackup Interface (Optional)</p>	<p>Note: If you have configured NetBackup in the previous steps, execute this step; otherwise skip this step.</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo /usr/TKLC/plat/bin/netAdm add --route=net --device=NetBackup --address=<TVOE_NetBackup_Network_ID> --netmask=<TVOE_NetBackup_NetMask/Prefix> --gateway=<TVOE_NetBackup_Gateway_IP_Address></pre>
<p>14.</p> <p><input type="checkbox"/></p>	<p>1st RMS iLO/iLOM: Restart the network interfaces</p>	<p>Restart the network interfaces, execute the following command:</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo service network restart</pre>

Procedure 5. First RMS Configuration

<p>15.</p> <p><input type="checkbox"/></p>	<p>1st RMS iLO/iLOM: Set Hostname</p>	<p>Set the server hostname by running the following:</p> <pre>\$ sudo su - platcfg</pre> <p>Navigate to Server Configuration -> Hostname ->Edit.</p>  <p>Set TVOE Management Server hostname Press OK. Navigate out of Hostname</p>
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Procedure 5. First RMS Configuration

<p>16. <input type="checkbox"/></p>	<p>1st RMS iLO/iLOM: Set the Time Zone and/or Hardware Clock</p>	<p>Navigate to Server Configuration -> Time Zone.</p>  <p>Select Edit. Set the time zone and/or hardware clock to “GMT” (or appropriate time zone value) Select Yes to accept.</p>  <p>Navigate out of Server Configuration</p>
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Procedure 5. First RMS Configuration

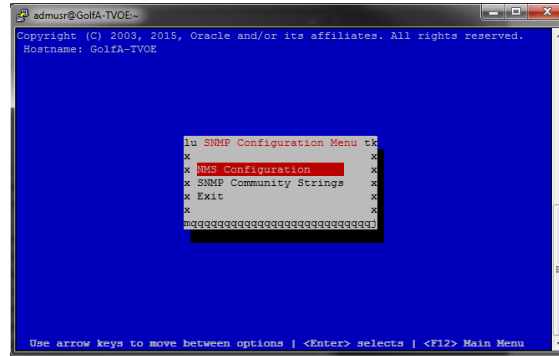
18. 1st RMS iLO/iLOM: Set SNMP

Set SNMP by running the following:

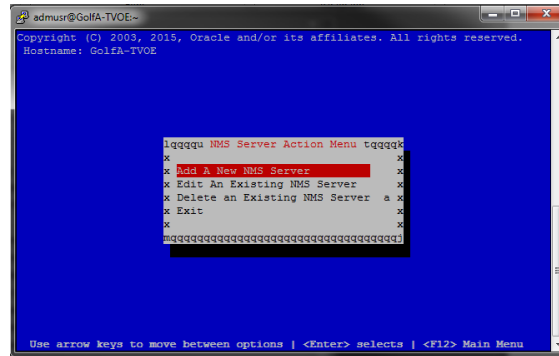
```
$ sudo su - platcfg
```

Note: Refer **Appendix G: SNMP Configuration** to understand the preferred SNMP configuration

Navigate to **Network Configuration -> SNMP Configuration -> NMS Configuration.**

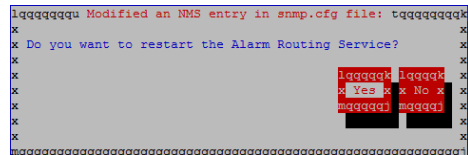


Select **Edit** and then choose **Add a New NMS Server**. The **Add an NMS Server** page will be displayed.



Complete the form by entering NMS server IP, Port (*default port is 162*) and community string provided by the customer about the SNMP trap destination. (for more guidance refer to Appendix G: SNMP Configuration).

Select **OK** to finalize the configuration. The **NMS Server Action Menu** will now be displayed. Select **Exit**. The following dialogue will then be presented.



Select **Yes** and then wait a few seconds while the Alarm Routing Service is restarted. At that time the **SNMP Configuration** menu will be presented.

Exit platcfg.

Procedure 5. First RMS Configuration

<p>19.</p> <p><input type="checkbox"/></p>	<p>1st RMS iLO/iLOM: Restart</p>	<p>Execute the following command to restart the server:</p> <pre style="border: 1px solid black; padding: 5px; width: fit-content;">\$ sudo init 6</pre>
<p>20.</p> <p><input type="checkbox"/></p>	<p>1st RMS iLO/iLOM: Verify Ring Buffer Settings</p>	<p>Verify the ring buffer sizes have been configured correctly (from Step 7) by executing the following command for each Ethernet interface configured above:</p> <pre style="border: 1px solid black; padding: 5px;">\$ ethtool -g <eth interfaces configured above></pre> <p>Example shown below:</p> <pre style="border: 1px solid black; padding: 5px; background-color: #f0f0f0;">[admusr@FJ-TVOE-2 ~]\$ ethtool -g eth01 Ring parameters for eth01: Pre-set maximums: RX: 4096 RX Mini: 0 RX Jumbo: 0 TX: 4096 Current hardware settings: RX: 4096 RX Mini: 0 RX Jumbo: 0 TX: 4096</pre>

Procedure 5. First RMS Configuration

21.	1st RMS iLO/iLOM: Configure NetBackup-Part 1 (Optional)	<p>Execute this step if the NetBackup feature is enabled for this system, otherwise skip to step 23. Configure the appropriate NetBackup client on the PMAC TVOE host.</p> <p>Open firewall ports for NetBackup using the following commands:</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo ln -s /usr/TKLC/plat/share/NetBackup/60NetBackup.ipt /usr/TKLC/plat/etc/iptables/ \$ sudo /usr/TKLC/plat/bin/iptablesAdm reconfig</pre> <p>Enable platcfg to show the NetBackup Menu Items by executing the following commands:</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo platcfgadm --show NBConfig; \$ sudo platcfgadm --show NBInit; \$ sudo platcfgadm --show NBDeInit; \$ sudo platcfgadm --show NBInstall; \$ sudo platcfgadm --show NBVerifyEnv; \$ sudo platcfgadm --show NBVerify;</pre> <p>Create LV and file system for NetBackup client software on the vgguests volume group:</p> <pre style="border: 1px solid black; padding: 5px;">\$sudo /usr/TKLC/plat/sbin/storageMgr /tmp/nb.lvm</pre> <p>This will create the LV, format it with a filesystem, and mount it under /usr/opencv/.</p> <p>Example output is shown below:</p> <pre style="border: 1px solid black; padding: 5px;">Called with options: /tmp/nb.lvm VG vgguests already exists. Creating lv NetBackup_lv. Volume NetBackup_lv will be created. Success: Volume NetBackup_lv was created. Creating filesystem, this may take a while. Updating fstab for lv NetBackup_lv. Configuring existing lv NetBackup_lv. The LV for NetBackup has been created!</pre>
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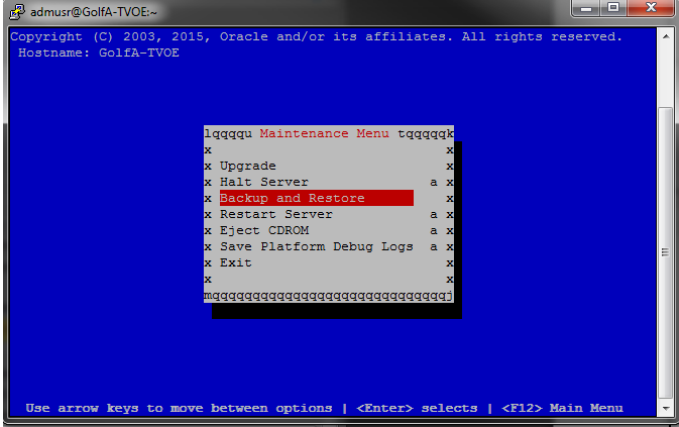
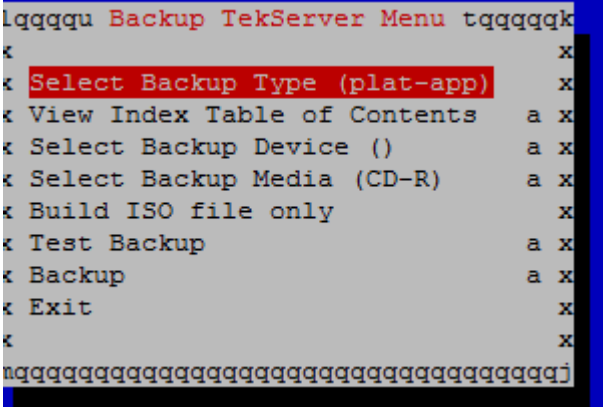
Procedure 5. First RMS Configuration

22. <input type="checkbox"/>	1st RMS iLO/iLOM: Configure NetBackup-Part 2 (Optional)	Install the NetBackup client software: Refer to Appendix H: Application NetBackup Client Installation Procedures for instructions how to install the NetBackup client. Note: Skip any steps relating to copying NetBackup "notify" scripts to /usr/opensv/NetBackup/bin. The TVOE NetBackup notify scripts are taken care of in the next step. Create soft links for TVOE specific NetBackup notify scripts. <pre style="border: 1px solid black; padding: 5px;">\$sudo ln -s /usr/TKLC/plat/sbin/bpstart_notify /usr/opensv/NetBackup/bin/bpstart_notify \$sudo ln -s /usr/TKLC/plat/sbin/bpend_notify /usr/opensv/NetBackup/bin/bpend_notify</pre> Note: Once the NetBackup Client is installed on TVOE, the NetBackup Master should be configured to back up the following files from the TVOE host: <ul style="list-style-type: none"> • /var/TKLC/bkp/*.iso
23. <input type="checkbox"/>	1st RMS iLO/iLOM: Setup syscheck	'syscheck' must be configured to monitor bonded interfaces. Replace "bondedInterfaces" with "bond0" or "bond0,bond1" if segregated networks are used: <pre style="border: 1px solid black; padding: 5px;">\$ sudo /usr/TKLC/plat/bin/syscheckAdm net ipbond --set --var=DEVICES --val=<bondedInterfaces> \$ sudo /usr/TKLC/plat/bin/syscheckAdm net ipbond --enable</pre>
24. <input type="checkbox"/>	1st RMS iLO/iLOM: Verify syscheck	Verify syscheck: <pre style="border: 1px solid black; padding: 5px;">\$ sudo /usr/TKLC/plat/bin/syscheck net ipbond -v</pre> Expected output should look similar to below: <pre>Running modules in class net... ipbond: Bonded interface bond0 is OK OK LOG LOCATION: /var/TKLC/log/syscheck/fail log</pre>

Procedure 5. First RMS Configuration

25. <input type="checkbox"/>	1st RMS iLO/iLOM: Verify Server Health	Execute the following: <pre>\$ alarmMgr --alarmStatus</pre> This command should return no output on a healthy system. If any alarms are reported, contact Appendix R: My Oracle Support (MOS)
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Procedure 5. First RMS Configuration

<p>26.</p> <p><input type="checkbox"/></p>	<p>1st RMS iLO/iLOM: Perform a TVOE backup using TPD platcfg utility</p>	<p>Execute the following:</p> <pre>\$ sudo su - platcfg</pre> <p>Navigate to Maintenance -> Backup and Restore</p>  <p>Select Backup Platform (CD/DVD)</p> <p>Note: If no cdrom device is found by TPD, you will receive an error dialog with the message: "No disk device available. This is normal on systems without a cdrom device." Press Enter to continue.</p> <p>Select Build ISO file only, and press Enter to continue.</p> <p>Exit from TPD platcfg utility.</p>  <p>The TVOE backup can be found in the "/var/TKLC/bkp/" directory, and is prefixed by the server hostname. An example of a TVOE backup ISO follows: /var/TKLC/bkp/RMS503u14-plat-app-201210301505.iso</p> <p>Move the TVOE backup to a customer provided backup server for safe keeping.</p>
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4.3 Install PMAC

Note: [Non-HA Lab Node Installations Only-Oracle X6-2]: Follow procedure Appendix Q.1 instead of Procedure 6 for PMAC deployment.

Procedure 6. PMAC Deployment

S T E P #	<p>This procedure will deploy PMAC on the TVOE Host</p> <p>Prerequisite: First RMS Network Configuration (PMAC Host) has been completed.</p> <p>Needed material:</p> <ul style="list-style-type: none"> - PMAC Media on USB Drive or ISO <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
1 <input type="checkbox"/>	<p>PMAC's TVOE iLO/iLOM: Login and Launch the Integrated Remote Console</p>	<p>Log in to iLO/iLOM; follow Appendix C: TVOE iLO/iLOM GUI Access for instructions on how to access the iLO/iLOM GUI.</p> <pre style="border: 1px solid black; padding: 5px;">https://<management_server_iLO_ip></pre>
2 <input type="checkbox"/>	<p>PMAC's TVOE iLO/iLOM: Mount the PMAC Media to the TVOE Server</p>	<p>Use following option to mount the PMAC Media:</p> <p>If using a USB media, insert the PMAC USB into a USB port and execute the following to mount the ISO:</p> <pre style="border: 1px solid black; padding: 5px;">\$ ls /media/*/*.iso /media/sdd1/872-2586-101-5.7.0_57.3.0-PM&C-x86_64.iso</pre> <p>Use the output of the previous command to populate the next command</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo mount -o loop /media/sdb1/872-2586-101-5.7.0_57.3.0-PM&C-x86_64.iso /mnt/upgrade</pre> <p>Note: If the media validation fails, the media is not valid and should not be used.</p>

Procedure 6. PMAC Deployment

<p>3</p> <p><input type="checkbox"/></p>	<p>PMAC's TVOE iLO/iLOM: Deploy PMAC</p>	<p>Using the pmac-deploy script, deploy the PMAC instance using the configuration captured during the site survey.</p> <pre style="border: 1px solid black; padding: 5px;">\$ cd /mnt/upgrade/upgrade</pre> <p>If deploying PMAC without NetBackup feature, run the following command:</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo ./pmac-deploy --guest=<PMAC_Name> --hostname=<PMAC_Name> --controlBridge=<TVOE_Control_Bridge> --controlIP=<PMAC_Control_ip_address> --controlNM=<PMAC_Control_netmask> --managementBridge=<PMAC_Management_Bridge> --managementIP=<PMAC_Management_ip_address> --managementNM=<PMAC_Management_netmask/prefix> --routeGW=<PMAC_Management_gateway_address> --ntpserver=<TVOE_Management_server_ip_address> --isoimagesVolSizeGB=20</pre> <p>If deploying PMAC with NetBackup feature, run the following command:</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo ./pmac-deploy --guest=<PMAC_Name> --hostname=<PMAC_Name> --controlBridge=<TVOE_Control_Bridge> --controlIP=<PMAC_Control_ip_address> --controlNM=<PMAC_Control_netmask> --managementBridge=<PMAC_Management_Bridge> --managementIP=<PMAC_Management_ip_address> --managementNM=<PMAC_Management_netmask/prefix> --routeGW=<PMAC_Management_gateway_address> --ntpserver=<TVOE_Management_server_ip_address> --NetBackupVol --bridge=<TVOE_NetBackup_Bridge> --nic=NetBackup --isoimagesVolSizeGB=20</pre> <p>The PMAC will deploy and boot. The management and control network will come up based on the settings that were provided to the pmac-deploy script.</p> <p>Note: This step takes between 5 and 10 minutes.</p>
<p>4</p> <p><input type="checkbox"/></p>	<p>PMAC's TVOE iLO/iLOM: Unmount the Media</p>	<p>The media should auto-unmount, if it does not, unmount the media using the following command:</p> <pre style="border: 1px solid black; padding: 5px;">\$ cd / \$ sudo /bin/umount /mnt/upgrade</pre> <p>Remove the media from the drive.</p>

Procedure 6. PMAC Deployment

<p>5</p> <p><input type="checkbox"/></p>	<p>PMAC's TVOE iLO/iLOM: SSH into the Management Server</p>	<p>Using an SSH client such as putty, ssh to the TVOE host as admusr.</p> <p>Login using virsh, and wait until you see the login prompt :</p> <pre>\$ sudo /usr/bin/virsh list</pre> <pre>Id Name State ----- 2 PM&C running</pre> <pre>\$ sudo /usr/bin/virsh console <PM&C></pre> <p>[Output Removed]</p> <pre>Starting ntdMgr: [OK] Starting atd: [OK] 'TPD Up' notification(s) already sent: [OK] upstart: Starting tpdProvd... upstart: tpdProvd started. CentOS release 6.2 (Final) Kernel 2.6.32-220.17.1.el6prere16.0.0_80.14.0.x86_64 on an x86_64 PM&Cdev7 login:</pre>
<p>6</p> <p><input type="checkbox"/></p>	<p>Virtual PMAC: Verify the PMAC is configured correctly on first boot</p>	<p>Establish an SSH session to the PMAC, login as admusr.</p> <p>Run the following command (there should be no output):</p> <pre>\$ sudo /bin/ls /usr/TKLC/plat/etc/deployment.d/</pre>
<p>7</p> <p><input type="checkbox"/></p>	<p>PMAC's TVOE iLO/iLOM: Error doing verification, if error is outputted</p>	<p>If an error was made use the following command to delete the PMAC Guest and then re-deploy the guest again:</p> <pre>\$ sudo guestMgr --remove <PMAC_Name></pre>

Procedure 6. PMAC Deployment

8 <input type="checkbox"/>	Virtual PMAC: Set the PMAC time zone	<p>Determine the Time Zone to be used for the PMAC</p> <p>Note: Valid time zones can be found in Appendix I: List of Frequently used Time Zones</p> <p>Run</p> <pre>\$ sudo set_pmac_tz.pl <time zone></pre> <p>Example:</p> <pre>\$ sudo set_pmac_tz.pl America/New_York</pre> <p>Verify that the time zone has been updated:</p> <pre>\$ sudo date</pre>
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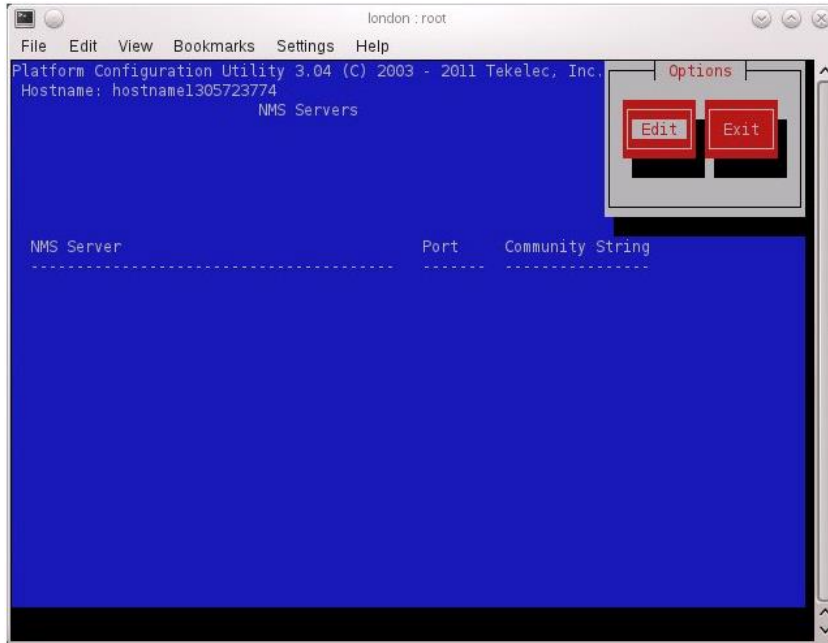
Procedure 6. PMAC Deployment

9 **Virtual PMAC: Set SNMP**

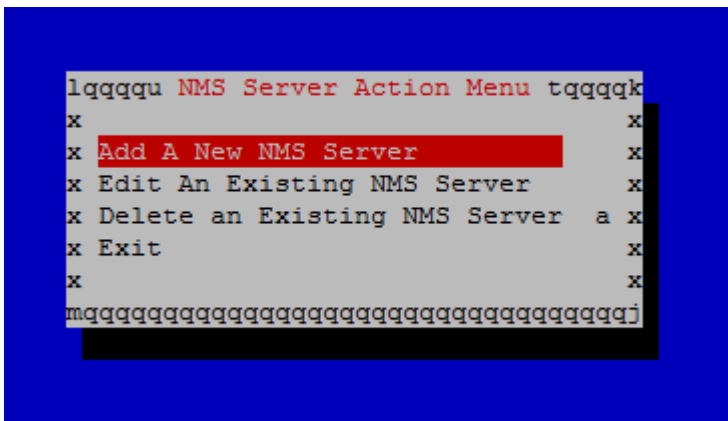
Set SNMP by running the following:

```
$ sudo su - platcfg
```

Navigate to **Network Configuration -> SNMP Configuration -> NMS Configuration.**

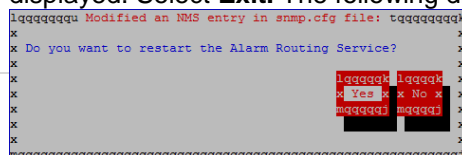


Select **Edit** and then choose **Add a New NMS Server**. The **'Add an NMS Server'** page will be displayed.



Complete the form by entering in all information about the SNMP trap destination. (for more guidance refer to Appendix G: SNMP Configuration).

Select **OK** to finalize the configuration. The **'NMS Server Action Menu'** will now be displayed. Select **Exit**. The following dialogue will then be presented.



Select **Yes** and then wait a few seconds while the Alarm Routing Service is restarted. At that time the SNMP Configuration Menu will be presented.

Procedure 6. PMAC Deployment

10 <input type="checkbox"/>	Virtual PMAC: Reboot the server	Reboot the server by running: <pre>\$ sudo init 6</pre>
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4.4 Initialize the PMAC Application

Procedure 7. Initialize the PMAC

S T E P #	<p>Use this procedure to gather and prepare configuration files that are required to proceed with the DSR installation.</p> <p>Needed material:</p> <ul style="list-style-type: none"> - DSR USB or ISO <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
1 <input type="checkbox"/>	<p>PMAC's TVOE iLO/iLOM: SSH into the Management Server</p>	<p>Using an SSH client such as putty, ssh to the TVOE host as admusr.</p> <p>Login using virsh, and wait until you see the login prompt :</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo /usr/bin/virsh list Id Name State ----- 1 PM&C running</pre> <pre style="border: 1px solid black; padding: 5px;">\$ sudo /usr/bin/virsh console <PM&C> [Output Removed] Starting ntdMgr: [OK] Starting atd: [OK] 'TPD Up' notification(s) already sent: [OK] upstart: Starting tpdProvd... upstart: tpdProvd started. CentOS release 6.2 (Final) Kernel 2.6.32-220.17.1.el6prere16.0.0_80.14.0.x86_64 on an x86_64 PM&Cdev7 login:</pre>
2 <input type="checkbox"/>	<p>Virtual PMAC: Get support files from the TVOE Host</p>	<p>Execute the following commands to copy the required files</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo /usr/bin/scp -r admusr@<TVOE_management_ip_address>: /var/TKLC/upgrade/* /var/TKLC/upgrade/</pre>
3 <input type="checkbox"/>	<p>Virtual PMAC: Change Permissions</p>	<p>Change the permissions of the configuration files by executing the following command:</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo chmod 777 /var/TKLC/upgrade/*</pre>

Procedure 7. Initialize the PMAC

4 <input type="checkbox"/>	Virtual PMAC: Initialize the PMAC Application	Initialize the PMAC Application; run the following commands: <pre> \$ sudo /usr/TKLC/smac/bin/pmacadm applyProfile -- fileName=TVOE Profile successfully applied. \$ sudo /usr/TKLC/smac/bin/pmacadm getPmacFeatureState PMAC Feature State = InProgress IPv4: \$ sudo /usr/TKLC/smac/bin/pmacadm addRoute --gateway=<mgmt_gateway_address> --ip=0.0.0.0 --mask=0.0.0.0 --device=management Successful add of Admin Route IPv6: \$ sudo /usr/TKLC/smac/bin/pmacadm addRoute --gateway=<IPv6mgmt_gateway_address> --ip::: --mask=0 --device=management Successful add of Admin Route \$ sudo /usr/TKLC/smac/bin/pmacadm finishProfileConfig Initialization has been started as a background task </pre>
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Procedure 7. Initialize the PMAC

<p>5</p> <p><input type="checkbox"/></p>	<p>Virtual PMAC: Initialize the PMAC Application</p>	<p>Wait for the background task to successfully complete.</p> <p>The command will show "IN_PROGRESS" for a short time.</p> <p>Run the following command until a "COMPLETE" or "FAILED" response is seen similar to the following:</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo /usr/TKLC/smac/bin/pmaccli getBgTasks</pre> <pre>1: Initialize PMAC COMPLETE - PMAC initialized Step 2: of 2 Started: 2012-07-13 08:23:55 running: 29 sinceUpdate: 47 taskRecordNum: 2 Server Identity: Physical Blade Location: Blade Enclosure: Blade Enclosure Bay: Guest VM Location: Host IP: Guest Name: TPD IP: Rack Mount Server: IP: Name:</pre> <p>Note: Some expected networking alarms may be present</p>
<p>6</p> <p><input type="checkbox"/></p>	<p>Virtual PMAC: Initialize the PMAC Application</p>	<p>Perform a system health check on the PMAC</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo /usr/TKLC/plat/bin/alarmMgr --alarmStatus</pre> <p>This command should return no output on a healthy system.</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo /usr/TKLC/smac/bin/sentry status</pre> <p>All Processes should be running, displaying output similar to the following:</p> <pre>PM&C Sentry Status ----- sentryd started: Mon Jul 23 17:50:49 2012 Current activity mode: ACTIVE Process PID Status StartTS NumR ----- ----- smacTalk 9039 running Tue Jul 24 12:50:29 2012 2 smacMon 9094 running Tue Jul 24 12:50:29 2012 2 hpiPortAudit 9137 running Tue Jul 24 12:50:29 2012 2 snmpEventHandler 9176 running Tue Jul 24 12:50:29 2012 2 Fri Aug 3 13:16:35 2012 Command Complete.</pre>

Procedure 7. Initialize the PMAC


<p>7</p> <p><input type="checkbox"/></p>	<p>Virtual PMAC: Verify the PMAC application release</p>	<p>Verify the PMAC application release</p> <p>Verify that the PMAC application Product Release is as expected.</p> <p>Note: If the PMAC application Product Release is not as expected, STOP and contact Appendix R: My Oracle Support (MOS)</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <pre>\$ sudo /usr/TKLC/plat/bin/appRev Install Time: Fri Sep 28 15:54:04 2012 Product Name: PM&C Product Release: 5.0.0_50.10.0 Part Number ISO: 872-2441-905 Part Number USB: 872-2441-105 Base Distro Product: TPD Base Distro Release: 6.0.0_80.22.0 Base Distro ISO: TPD.install-</pre> </div>
<p>8</p> <p><input type="checkbox"/></p>	<p>Virtual PMAC: Logout of the PMAC</p>	<p>Logout of the virsh console</p> <p>Hold [ctrl] to logout of the PMAC</p>

4.5 Configure PMAC Server (optional)

Procedure 8. Configure the PMAC Server (optional)

<p>S</p> <p>T</p> <p>E</p> <p>P</p> <p>#</p>	<p>This procedure will provide PMAC configuration using the web interface.</p> <p>Note: The installer must be knowledgeable of the network. If you make a mistake, click Cancel and try again. The finish step may take longer time because it reconfigures the network and attempts to connect may fail.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>
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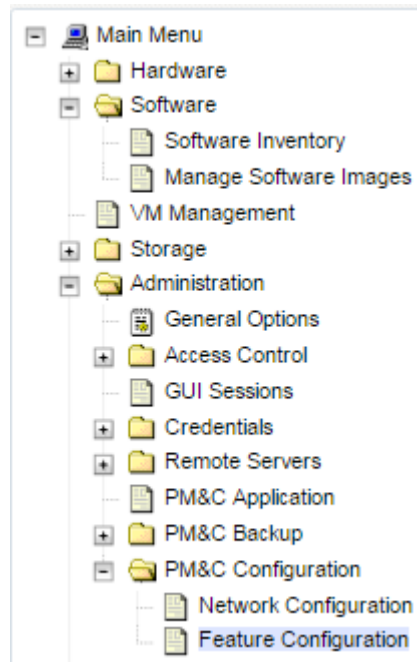
Procedure 8. Configure the PMAC Server (optional)

<p>1</p> <p><input type="checkbox"/></p>	<p>PMAC GUI: Login</p>	<p>Open web browser and navigate to the PMAC GUI, Login as guiadmin user:</p> <p><code>https://<pmac_network_ip></code></p> 
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Procedure 8. Configure the PMAC Server (optional)

2 **PMAC GUI:**
 Configure Optional Features

Navigate to **Main Menu -> Administration -> PM&C Configuration -> Feature Configuration**



If **NetBackup** is to be used, enable the NetBackup feature. Otherwise use the selected features as is. The following image is for reference only:

Main Menu: Administration -> PM&C Configuration -> PM&C Feature Configuration

Thu Sep 29 02:58:41

Features

Feature	Description	Role	Enabled
DEVICE.NETWORK.NETBOOT	Network device PXE initialization	management	<input checked="" type="checkbox"/>
DEVICE.NTP	PM&C as a time server	management	<input checked="" type="checkbox"/>
PMAC.MANAGED	Remote management of PM&C server	management	<input type="checkbox"/>
PMAC.REMOTE.BACKUP	Remote server for backup	management	<input checked="" type="checkbox"/>
PMAC.NETBACKUP	NetBackup client	management	<input type="checkbox"/>
PMAC.IPV6.NOAUTOCONFIG	PMAC IPv6 interface disable autoconfiguration	NULL	<input type="checkbox"/>

Add Role

Make sure that the roles for all the features are set to **management**.

Also make sure that the enabled checkbox is checked for the following:

- DEVICE.NETWORK.NETBOOT
- DEVICE.NTP
- PM&C.REMOTE.BACKUP
- PM&C.NETBACK (only if NetBackup is used)

And click on **Apply**. This foreground task will take a few moments, and then refresh the view with an Info or Error notice to verify the action. To discard changes, just navigate away from the view

Procedure 8. Configure the PMAC Server (optional)

3	<p>PMAC GUI: Settings summary</p>	<p>Go to In the Main Menu -> Administration -> PM&C Configuration</p> <p>The following summary screen will be displayed. This will provide a summary of PMAC configuration</p> <p>IPv4 Example Shown:</p> <p>Main Menu: Administration -> PM&C Configuration -> PM&C Network Configuration Thu Sep 29 03:00:2</p> <hr/> <div style="border: 1px solid #ccc; padding: 5px;"> <p>▼ Network Description</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Network Address</th> <th>Network Mask/Prefix</th> </tr> </thead> <tbody> <tr> <td>192.168.1.0</td> <td>255.255.255.0</td> </tr> <tr> <td>10.240.32.128</td> <td>255.255.255.224</td> </tr> </tbody> </table> <p>▼ Network and Roles Description</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Network Address</th> <th>Network Mask/Prefix</th> <th>Role</th> </tr> </thead> <tbody> <tr> <td>192.168.1.0</td> <td>255.255.255.0</td> <td>control</td> </tr> <tr> <td>10.240.32.128</td> <td>255.255.255.224</td> <td>management</td> </tr> </tbody> </table> <p>▼ Network Interface Description</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Device</th> <th>IP Address</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>control</td> <td>192.168.1.1</td> <td>Control network for managed servers</td> </tr> <tr> <td>management</td> <td>10.240.32.142</td> <td>Management of system devices</td> </tr> </tbody> </table> <p>▼ Route Configuration</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Device</th> <th>Destination Address</th> <th>Network Mask/Prefix</th> <th>Gateway Address</th> </tr> </thead> <tbody> <tr> <td>management</td> <td>0.0.0.0</td> <td>0.0.0.0</td> <td>10.240.32.129</td> </tr> </tbody> </table> <p>▼ IPv4 DHCP Configuration</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Start DHCP</th> <th>End DHCP</th> </tr> </thead> <tbody> <tr> <td>192.168.1.1</td> <td>192.168.1.254</td> </tr> </tbody> </table> </div>	Network Address	Network Mask/Prefix	192.168.1.0	255.255.255.0	10.240.32.128	255.255.255.224	Network Address	Network Mask/Prefix	Role	192.168.1.0	255.255.255.0	control	10.240.32.128	255.255.255.224	management	Device	IP Address	Description	control	192.168.1.1	Control network for managed servers	management	10.240.32.142	Management of system devices	Device	Destination Address	Network Mask/Prefix	Gateway Address	management	0.0.0.0	0.0.0.0	10.240.32.129	Start DHCP	End DHCP	192.168.1.1	192.168.1.254
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Procedure 8. Configure the PMAC Server (optional)

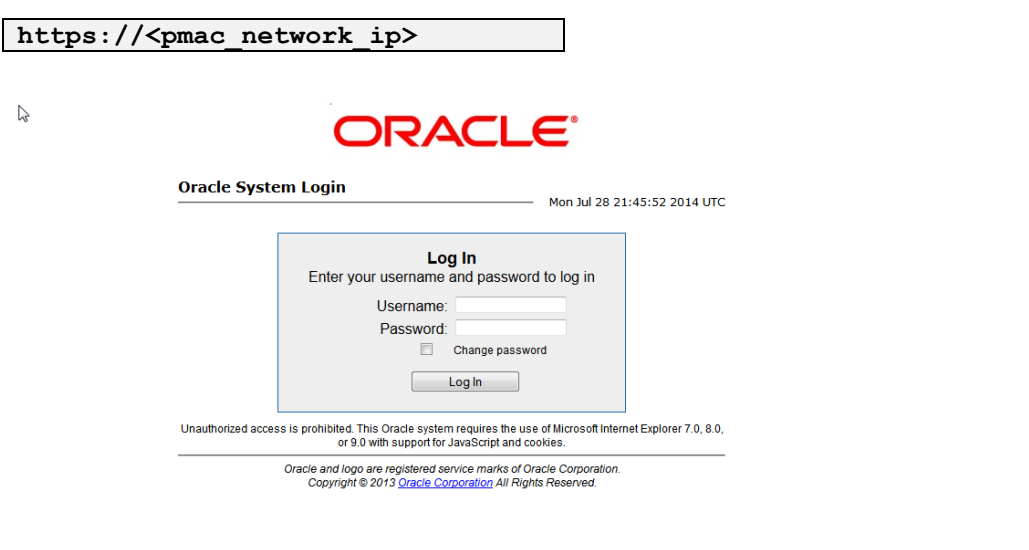
<p>4</p> <p><input type="checkbox"/></p>	<p>PMAC Command Line: Perform a system healthcheck</p>	<p>Execute the following commands:</p> <pre style="border: 1px solid black; padding: 5px;">\$ alarmMgr --alarmStatus</pre> <p>This command should return no output on a healthy system.</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo sentry status</pre> <p>All Processes should be running, displaying output similar to the following:</p> <pre style="border: 1px solid black; padding: 5px;">PM&C Sentry Status ----- sentryd started: Mon Jul 23 17:50:49 2012 Current activity mode: ACTIVE Process PID Status StartTS NumR ----- smacTalk 9039 running Tue Jul 24 12:50:29 2012 2 smacMon 9094 running Tue Jul 24 12:50:29 2012 2 hpiPortAudit 9137 running Tue Jul 24 12:50:29 2012 2 snmpEventHandler 9176 running Tue Jul 24 12:50:29 2012 2 eclipseHelp 9196 running Tue Jul 24 12:50:30 2012 2 Fri Aug 3 13:16:35 2012 Command Complete.</pre>
<p>5</p> <p><input type="checkbox"/></p>	<p>PMAC Command Line: Install NetBackup (Optional)</p>	<ol style="list-style-type: none"> If the NetBackup client installation will rely on the TPD “nbAutoInstall” process to configure the PMAC NetBackup client perform the following at the PMAC Command Line, otherwise continue to sub bullet 2 below. <pre style="border: 1px solid black; padding: 5px;">\$ sudo mkdir -p /usr/opensv/NetBackup/bin/ \$ sudo ln -s /usr/TKLC/smac/sbin/bpstart_notify /usr/opensv/NetBackup/bin/ \$ sudo ln -s /usr/TKLC/smac/sbin/bpend_notify /usr/opensv/NetBackup/bin/</pre> <p>Use TPD platcfg utility to add the NetBackup Server’s alias and IP to the “/etc/hosts” file.</p> Refer to [12], procedure “PM&C NetBackup Client Installation and Configuration” for instructions on installing the NetBackup client on the TVOE Management Server.

Procedure 8. Configure the PMAC Server (optional)

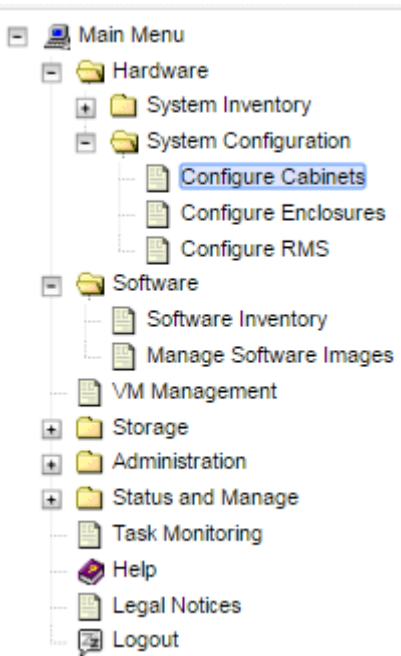
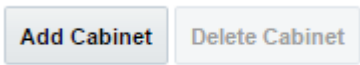
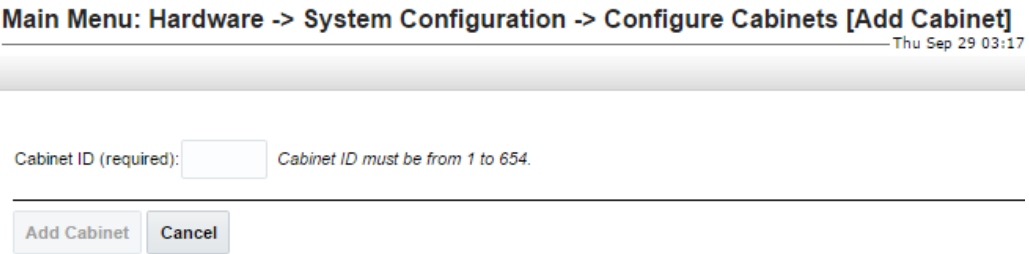
6 <input type="checkbox"/>	PMAC Command Line: Perform a backup	<p>Perform PMAC application backup using the following command:</p> <pre>\$ sudo pmacadm backup</pre> <pre>PM&C backup been successfully initiated as task ID 7 [usradm@pmacDev3 ~]\$</pre> <p>Note: The "pmacadm backup" command uses a naming convention which includes a date/time stamp in the file name (Example file name: backupPmac_20111025_100251.pef). In the example provided, the backup file name indicates that it was created on 10/25/2011 at 10:02:51 am server time.</p> <p>Next Verify that the backup was successful using the following command:</p> <pre>\$ sudo pmaccli getBgTasks</pre> <pre>2: Backup PMAC COMPLETE - PMAC Backup successful Step 2: of 2 Started: 2012-07-05 16:53:10 running: 4 sinceUpdate: 2 taskRecordNum:</pre> <p>Once the backup has been verified that it was successful, copy the backup file to a remote location. The backup file is located under /var/TKLC/smac/backup.</p>
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4.6 Add Rack Mount Server to PMAC

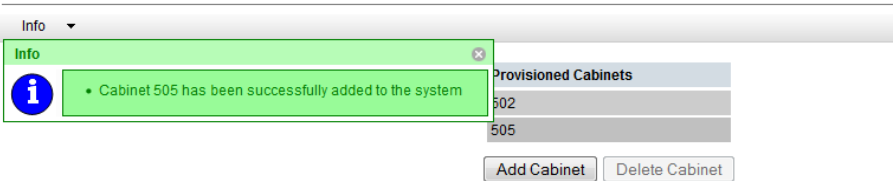
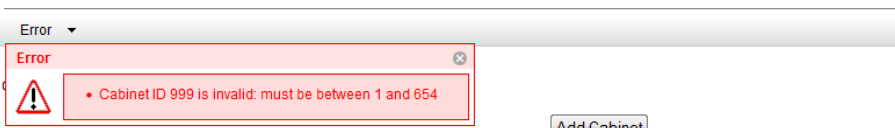
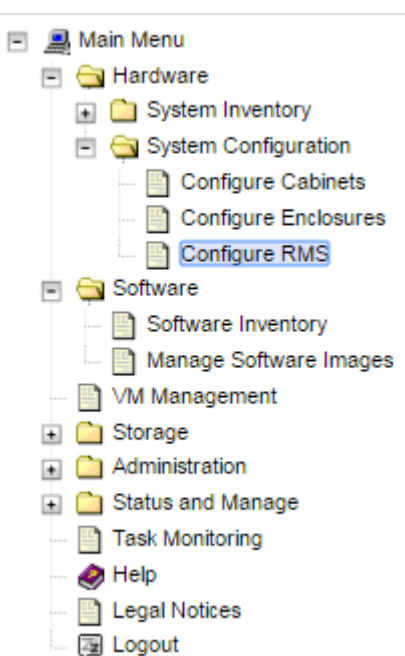
Procedure 9. Add RMS to the PMAC system Inventory

S T E P #	<p>This procedure will add RMS to the PMAC system Inventory.</p> <p>Note: If you make a mistake, click Cancel and try again. The finish step may take longer time because it reconfigures the network and attempts to connect may fail.</p> <p>Check off (√) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
1 <input type="checkbox"/>	<p>PMAC GUI: Login</p>	<p>Open web browser and navigate to the PMAC GUI, Login as guiadmin user:</p> <div style="border: 1px solid black; padding: 2px; margin-bottom: 10px;"> <p><code>https://<pmac_network_ip></code></p> </div> 

Procedure 9. Add RMS to the PMAC system Inventory

<p>2</p> <p><input type="checkbox"/></p>	<p>PMAC GUI: Configure Cabinets</p>	<p>Navigate to Main Menu -> Hardware -> System Configuration -> Configure Cabinets.</p>  <p>Press the Add Cabinet Button</p>  <p>Enter the Cabinet ID, and press the Add Cabinet button:</p> 
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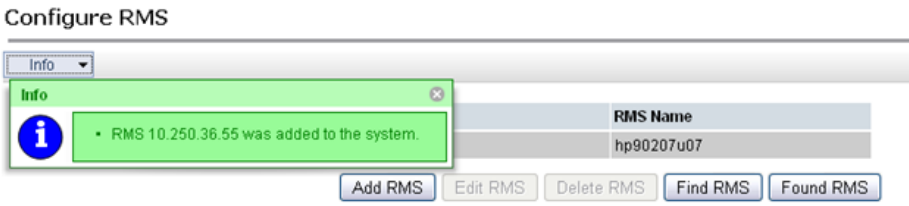
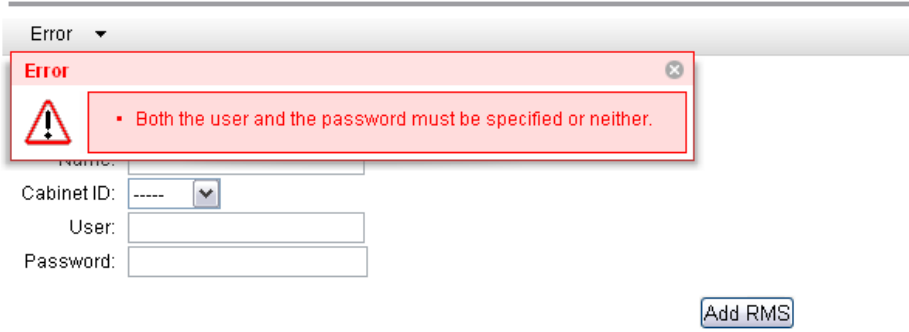
Procedure 9. Add RMS to the PMAC system Inventory

<p>3</p> <p><input type="checkbox"/></p>	<p>PMAC GUI: Check Errors</p>	<p>If no error is reported to the user you will see the following:</p> <p>Configure Cabinets</p>  <p>Or you will see an error message:</p> <p>Add Cabinet</p> 
<p>4</p> <p><input type="checkbox"/></p>	<p>PMAC GUI: Configure RMS</p>	<p>Navigate to Main Menu -> Hardware -> System Configuration -> Configure RMS</p> 

Procedure 9. Add RMS to the PMAC system Inventory

<p>5</p> <p><input type="checkbox"/></p>	<p>PMAC GUI: Add RMS</p>	<p>On the Configure RMS panel, click the Add RMS button.</p> <p>Main Menu: Hardware -> System Configuration -> Configure RMS</p> <hr/> <table border="1"> <thead> <tr> <th>RMS IP Address</th> <th>RMS Name</th> </tr> </thead> <tbody> <tr><td>10.250.50.16</td><td>Yukon_TVOE_1</td></tr> <tr><td>10.250.50.36</td><td>Yukon_TVOE_10</td></tr> <tr><td>10.250.50.28</td><td>Yukon_TVOE_2</td></tr> <tr><td>10.250.50.29</td><td>Yukon_TVOE_3</td></tr> <tr><td>10.250.50.30</td><td>Yukon_TVOE_4</td></tr> <tr><td>10.250.50.32</td><td>Yukon_TVOE_6</td></tr> <tr><td>10.250.50.33</td><td>Yukon_TVOE_7</td></tr> <tr><td>10.250.50.34</td><td>Yukon_TVOE_8</td></tr> <tr><td>10.250.50.35</td><td>Yukon_TVOE_9</td></tr> </tbody> </table> <p style="text-align: right;"> <input type="button" value="Add RMS"/> <input type="button" value="Edit RMS"/> <input type="button" value="Delete RMS"/> <input type="button" value="Find RMS"/> <input type="button" value="Found RMS"/> </p>	RMS IP Address	RMS Name	10.250.50.16	Yukon_TVOE_1	10.250.50.36	Yukon_TVOE_10	10.250.50.28	Yukon_TVOE_2	10.250.50.29	Yukon_TVOE_3	10.250.50.30	Yukon_TVOE_4	10.250.50.32	Yukon_TVOE_6	10.250.50.33	Yukon_TVOE_7	10.250.50.34	Yukon_TVOE_8	10.250.50.35	Yukon_TVOE_9
RMS IP Address	RMS Name																					
10.250.50.16	Yukon_TVOE_1																					
10.250.50.36	Yukon_TVOE_10																					
10.250.50.28	Yukon_TVOE_2																					
10.250.50.29	Yukon_TVOE_3																					
10.250.50.30	Yukon_TVOE_4																					
10.250.50.32	Yukon_TVOE_6																					
10.250.50.33	Yukon_TVOE_7																					
10.250.50.34	Yukon_TVOE_8																					
10.250.50.35	Yukon_TVOE_9																					
<p>6</p> <p><input type="checkbox"/></p>	<p>PMAC GUI: Enter information</p>	<p>Enter the IP Address of the rack mount server management port (iLO/iLOM) and username/password of the iLO/iLOM.</p> <p>Then click on the Add RMS button.</p> <p>Main Menu: Hardware -> System Configuration -> Configure RMS [Add RMS] Thu Sep 2</p> <hr/> <p>IP Address (required): <input type="text"/></p> <p>Name: <input type="text"/></p> <p>Cabinet ID: <input type="text" value="----"/> ▼</p> <p>User: <input type="text"/> Required field when Password is en</p> <p>Password: <input type="password"/> Required field when User is entered</p> <hr/> <p><input type="button" value="Add RMS"/> <input type="button" value="Cancel"/></p> <p>Note: The PMAC contains default credentials for the rack mount server management port (not to be confused with OS or Application credentials), however if you know the default credentials will not work then enter the valid credentials for the rack mount server management port.</p>																				

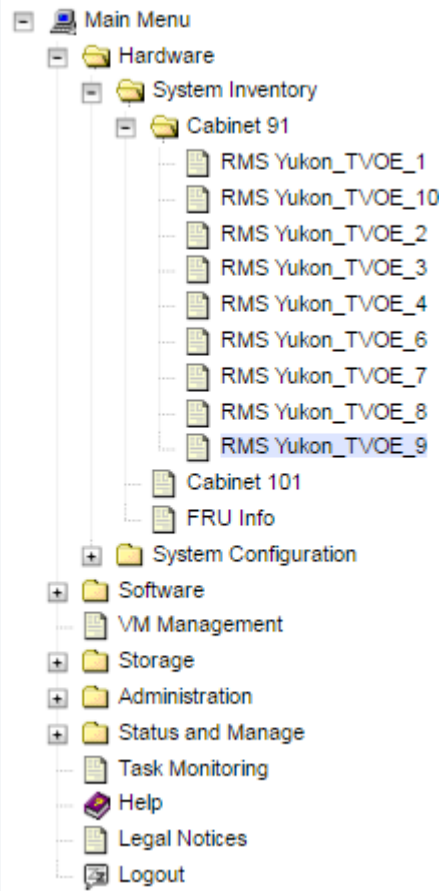
Procedure 9. Add RMS to the PMAC system Inventory

<p>7</p> <p><input type="checkbox"/></p>	<p>PMAC GUI: Check errors</p>	<p>If no error is reported to the user you will see the following</p>  <p>Or you will see an error message:</p> <p>Add RMS</p> 
<p>8</p> <p><input type="checkbox"/></p>	<p>PMAC GUI: Repeat for Additional Rack Mount Servers</p>	<p>Repeat Steps 5-7 for additional Rack Mount Servers.</p>

Procedure 9. Add RMS to the PMAC system Inventory

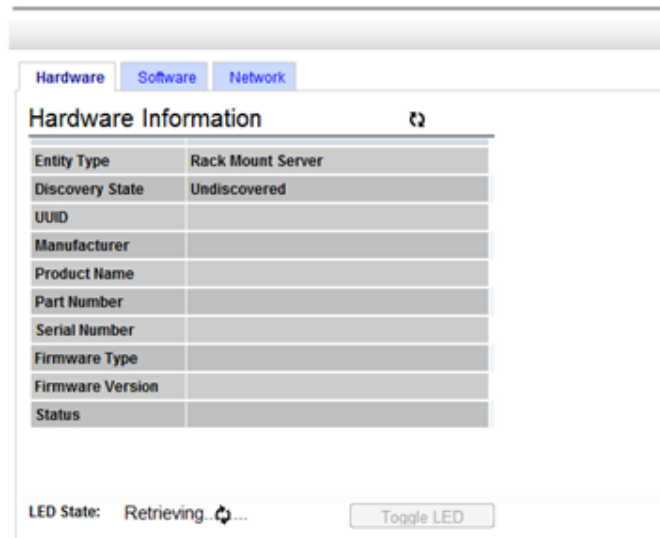
9 **PMAC**
 GUI: Verify RMS discovered

Navigate to **Main Menu -> Hardware -> System Inventory -> Cabinet xxx -> RMS yyy**. Where **xxx** is the cabinet id selected when adding RMS (or "unspecified") and **yyy** is the name of the RMS.



The RMS inventory page is displayed.


RMS rms192.168.176.30 with IP 192.168.176.30



Periodically refresh the hardware information using the double arrow to the right of the title "**Hardware Information**" until the "**Discovery state**" changes from "**Undiscovered**" to "**Discovered**".

4.7 Install TVOE on Additional Rack Mount Servers

Procedure 10. Install TVOE on Additional Rack Mount Servers

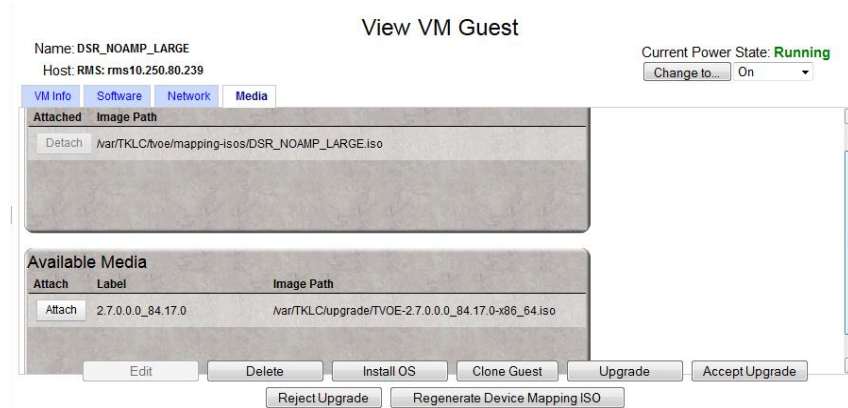
S T E P #	<p>This procedure will install the TVOE operating system on additional Mounted Servers.</p> <p>Prerequisite: PMAC (virtualized) has been installed on the First RMS Server.</p> <p>Important: Once Procedure 10 has been executed on all additional rack mount servers, continue to Procedure 11.</p> <p>Check off (√) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
1 <input type="checkbox"/>	<p>PMAC GUI: Login</p>	<p>Open web browser and navigate to the PMAC GUI, Login as guiadmin user:</p> <div style="border: 1px solid black; padding: 2px; margin: 5px 0;"> <p><code>https://<pmac_network_ip></code></p> </div> 

Procedure 10. Install TVOE on Additional Rack Mount Servers

2 **PMAC's TVOE :**
 Load TVOE ISO

Add the TVOE ISO image to the PMAC, this can be done in one of two ways:

1. Attach the USB device containing the ISO image to a USB port.
 - Login to the PMAC GUI if not already done so (Step 1)
 - In the "**VM Management**" list, select the PMAC guest. On the resulting "**View VM Guest**" page, select the **Media** tab.
 - Under the **Media** tab, find the ISO image in the "**Available Media**" list, and click its **Attach** button. After a pause, the image will appear in the "**Attached Media**" list.



2. Using a TVOE **64 bit** ISO file

Use sftp to transfer the ISO image to the PMAC server in the **/var/TKLC/smac/image/isoimages/home/smacftpsr/** directory as **pmacftpsr** user:

cd into the directory where your ISO image is located on the **TVOE Host** (not on the PMAC server)

Using sftp, connect to the PMAC management server

```
> sftp pmacftpsr@<PM&C_management_network_ip>
> put <image>.iso
```

After the image transfer is 100% complete, close the connection

```
> quit
```

Procedure 10. Install TVOE on Additional Rack Mount Servers

3 PMAC GUI:
Add TVOE image

Navigate to **Main Menu -> Software -> Manage Software Images**

Press **Add Image** button. Use the drop down to select the image.

Main Menu: Software -> Manage Software Images

Tasks ▾

Image Name	Type	Architecture	Description
apps-7.2.0.0.0_72.20.0-x86_64	Upgrade	x86_64	
DSR-7.2.0.0.0_72.18.0-x86_64	Upgrade	x86_64	
DSR-8.0.0.0.0_80.10.0-x86_64	Upgrade	x86_64	
DSR-8.0.0.0.0_80.8.0-x86_64	Upgrade	x86_64	
DSR-8.0.0.0.0_80.9.0-x86_64	Upgrade	x86_64	
mediation-7.2.0.0.0_72.20.0-x86_64	Upgrade	x86_64	
oracle-7.2.0.0.0_72.20.0-x86_64	Upgrade	x86_64	
SDS-8.0.0.0.0_80.10.0-x86_64	Upgrade	x86_64	
SDS-8.0.0.0.0_80.8.0-x86_64	Upgrade	x86_64	
SDS-8.0.0.0.0_80.9.0-x86_64	Upgrade	x86_64	
TPD.install-7.0.2.0.0_86.36.0-OracleLinux6.6-x86_64	Bootable	x86_64	TPD 7.0.2.0.0_86.36.0
TPD.install-7.0.3.0.0_86.44.0-OracleLinux6.7-x86_64	Bootable	x86_64	
TPD.install-7.2.0.0.0_88.22.0-OracleLinux6.7-x86_64	Bootable	x86_64	
TPD.install-7.2.0.0.0_88.23.0-OracleLinux6.7-x86_64	Bootable	x86_64	
TPD.install-7.2.0.0.0_88.24.0-OracleLinux6.7-x86_64	Bootable	x86_64	
TVOE-3.0.3.0.0_86.37.0-x86_64	Bootable	x86_64	
TVOE-3.0.3.0.0_86.44.0-x86_64	Bootable	x86_64	
TVOE-3.2.0.0.0_88.22.0-x86_64	Bootable	x86_64	
TVOE-3.2.0.0.0_88.23.0-x86_64	Bootable	x86_64	

Add Image Edit Image Delete Selected

If the image was supplied on a USB drive, it will appear as a virtual device ("**device://...**"). These devices are assigned in numerical order as USB images become available on the TVOE Management Server. The first virtual device is reserved for internal use by TVOE and PMAC; therefore, the ISO image of interest is normally present on the second device, "**device://dev/sr1**". If one or more USB-based images were already present on the TVOE Management Server before you started this procedure, choose a correspondingly higher device number.

If in **Step 2** the image was transferred to PMAC via sftp it will appear in the list as a local file "**/var/TKLC/...**".

Main Menu: Software -> Manage Software Images [Add Image]

Images may be added from any of these sources:

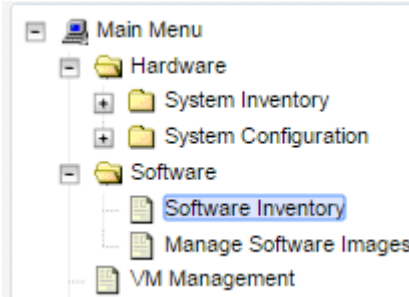
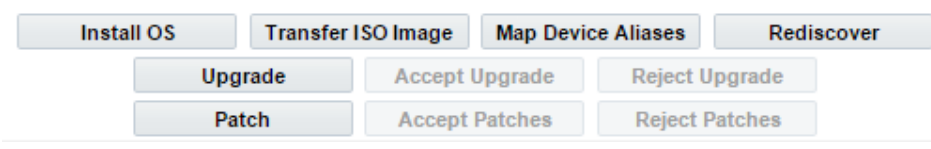
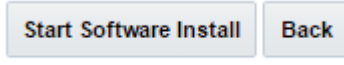
- Oracle-provided media in the PM&C host's CD/DVD drive (Refer to Note)
- USB media attached to the PM&C's host (Refer to Note)
- External mounts. Prefix the directory with "extfile://".
- These local search paths:
 - /var/TKLC/upgrade/*.iso
 - /var/TKLC/smac/image/isoimages/home/smacftpusr/*.iso

Note: CD and USB images mounted on PM&C's VM host must first be made accessible to the PM&C tab of the PM&C guest's View VM Guest page in [VM Management](#).

Path:

Description:

Procedure 10. Install TVOE on Additional Rack Mount Servers

4	<p>PMAC GUI: Select RMS Servers for TVOE OS install</p>	<p>Navigate to Software -> Software Inventory.</p>  <p>Select the RMS servers you want to IPM. If you want to install the same OS image to more than one server, you may select multiple servers by clicking multiple rows individually. Selected rows will be highlighted in green.</p> <table border="1"> <thead> <tr> <th>Ident</th> <th>IP Address</th> <th>Hostname</th> <th>Plat Name</th> <th>Plat Version</th> <th>App Name</th> <th>App Version</th> <th>Desig</th> <th>Function</th> </tr> </thead> <tbody> <tr> <td>RMS: 50207 Lower Blade13</td> <td>192.168.3.3</td> <td>50207-Blade13</td> <td>TPD (x86_64)</td> <td>7.0.1.0.0-86.20.0</td> <td>TVOE</td> <td>3.0.1.0.0_86.20.0</td> <td></td> <td></td> </tr> </tbody> </table> <p>Click on Install OS</p> 	Ident	IP Address	Hostname	Plat Name	Plat Version	App Name	App Version	Desig	Function	RMS: 50207 Lower Blade13	192.168.3.3	50207-Blade13	TPD (x86_64)	7.0.1.0.0-86.20.0	TVOE	3.0.1.0.0_86.20.0								
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5	<p>PMAC GUI: Initiate OS Install on RMS Server(s)</p>	<p>The left side of this screen shows the servers to be affected by this OS installation. From the list of available bootable images on the right side of the screen, select one OS image to install to all of the selected servers.</p> <div style="display: flex; justify-content: space-between;"> <div> <p>Targets</p> <table border="1"> <thead> <tr> <th>Entity</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td>RMS: Yukon TVOE 10</td> <td></td> </tr> </tbody> </table> </div> <div> <p>Select Image</p> <table border="1"> <thead> <tr> <th>Image Name</th> <th>Type</th> <th>Architecture</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>TVOE-3.2.0.0.0_88.24.0-x86_64</td> <td>Bootable</td> <td>x86_64</td> <td></td> </tr> <tr> <td>TVOE-3.2.0.0.0_88.23.0-x86_64</td> <td>Bootable</td> <td>x86_64</td> <td></td> </tr> <tr> <td>TVOE-3.2.0.0.0_88.22.0-x86_64</td> <td>Bootable</td> <td>x86_64</td> <td></td> </tr> <tr> <td>TVOE-3.0.3.0.0 86.44.0-x86 64</td> <td>Bootable</td> <td>x86 64</td> <td></td> </tr> </tbody> </table> </div> </div> <p>Click on Start Install, a confirmation window will pop up, click on Ok to proceed with the install.</p> 	Entity	Status	RMS: Yukon TVOE 10		Image Name	Type	Architecture	Description	TVOE-3.2.0.0.0_88.24.0-x86_64	Bootable	x86_64		TVOE-3.2.0.0.0_88.23.0-x86_64	Bootable	x86_64		TVOE-3.2.0.0.0_88.22.0-x86_64	Bootable	x86_64		TVOE-3.0.3.0.0 86.44.0-x86 64	Bootable	x86 64	
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Procedure 10. Install TVOE on Additional Rack Mount Servers

6	<p>PMAC GUI: Monitor OS Install</p>	<p>Navigate to Main Menu -> Task Monitoring to monitor the progress of the TVOE Installation background task. A separate task will appear for each server affected.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>ID</th> <th>Task</th> <th>Target</th> <th>Status</th> <th>State</th> <th>Task Output</th> <th>Running Time</th> <th>Start Time</th> <th>Progress</th> </tr> </thead> <tbody> <tr> <td>1641</td> <td>Add Image</td> <td></td> <td>Done: TVOE-3.2.0.0.0_88.24.0-x86_64</td> <td>COMPLETE</td> <td>N/A</td> <td>0:00:14</td> <td>2016-08-22 12:56:47</td> <td>100%</td> </tr> <tr> <td>1642</td> <td>Install OS</td> <td>RMS: Yukon TVOE 6</td> <td>Done: TVOE-3.2.0.0.0_88.24.0-x86_64</td> <td>COMPLETE</td> <td>N/A</td> <td>0:26:26</td> <td>2016-08-22 12:58:53</td> <td>100%</td> </tr> <tr> <td>1643</td> <td>Install OS</td> <td>RMS: Yukon TVOE 7</td> <td>Done: TVOE-3.2.0.0.0_88.24.0-x86_64</td> <td>COMPLETE</td> <td>N/A</td> <td>0:26:18</td> <td>2016-08-22 12:58:55</td> <td>100%</td> </tr> <tr> <td>1644</td> <td>Install OS</td> <td>RMS: Yukon TVOE 8</td> <td>Done: TVOE-3.2.0.0.0_88.24.0-x86_64</td> <td>COMPLETE</td> <td>N/A</td> <td>0:26:09</td> <td>2016-08-22 12:58:57</td> <td>100%</td> </tr> <tr> <td>1645</td> <td>Install OS</td> <td>RMS: Yukon TVOE 9</td> <td>Done: TVOE-3.2.0.0.0_88.24.0-x86_64</td> <td>COMPLETE</td> <td>N/A</td> <td>0:25:59</td> <td>2016-08-22 12:59:00</td> <td>100%</td> </tr> </tbody> </table> <p>When the installation is complete, the task will change to green and the Progress bar will indicate "100%".</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <tbody> <tr> <td>1642</td> <td>Install OS</td> <td>RMS: Yukon TVOE 6</td> <td>Done: TVOE-3.2.0.0.0_88.24.0-x86_64</td> <td>COMPLETE</td> <td>N/A</td> <td>0:26:26</td> <td>2016-08-22 12:58:53</td> <td>100%</td> </tr> </tbody> </table>	ID	Task	Target	Status	State	Task Output	Running Time	Start Time	Progress	1641	Add Image		Done: TVOE-3.2.0.0.0_88.24.0-x86_64	COMPLETE	N/A	0:00:14	2016-08-22 12:56:47	100%	1642	Install OS	RMS: Yukon TVOE 6	Done: TVOE-3.2.0.0.0_88.24.0-x86_64	COMPLETE	N/A	0:26:26	2016-08-22 12:58:53	100%	1643	Install OS	RMS: Yukon TVOE 7	Done: TVOE-3.2.0.0.0_88.24.0-x86_64	COMPLETE	N/A	0:26:18	2016-08-22 12:58:55	100%	1644	Install OS	RMS: Yukon TVOE 8	Done: TVOE-3.2.0.0.0_88.24.0-x86_64	COMPLETE	N/A	0:26:09	2016-08-22 12:58:57	100%	1645	Install OS	RMS: Yukon TVOE 9	Done: TVOE-3.2.0.0.0_88.24.0-x86_64	COMPLETE	N/A	0:25:59	2016-08-22 12:59:00	100%	1642	Install OS	RMS: Yukon TVOE 6	Done: TVOE-3.2.0.0.0_88.24.0-x86_64	COMPLETE	N/A	0:26:26	2016-08-22 12:58:53	100%
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4.8 Configure TVOE on Additional Rack Mount Servers

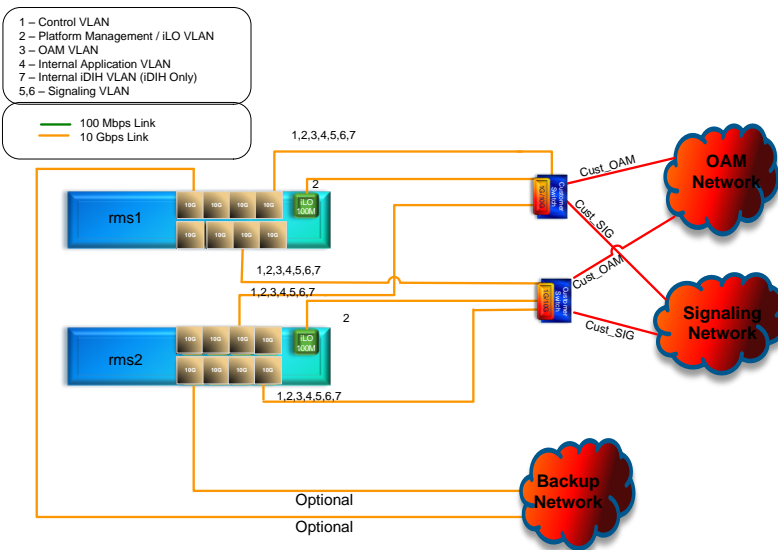
Procedure 11. Configure TVOE on Additional Rack Mount Servers

S T E P #	<p>This procedure will configure TVOE on all remaining RMS Servers.</p> <p>Prerequisite: RMS Server has been IPM'ed with TVOE OS</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
1. <input type="checkbox"/>	Determine Bridge Names and Interfaces	<p>Determine the network bridge names by referring to Procedure 5, step 1. The entries in this table should match the table that was filled out for the first rack mount server.</p>
2. <input type="checkbox"/>	RMS iLO/iLOM: Login and Launch the Integrated Remote Console	<p>Log in to iLO/iLOM; follow Appendix C: TVOE iLO/iLOM GUI Access for instructions on how to access the iLO/iLOM GUI.</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <pre>https://<management_server_iLO_ip></pre> </div>
3. <input type="checkbox"/>	RMS iLO/iLOM: Create the Management Network	<p>Create the Management network, execute the following command:</p> <p>Note: The output below is for illustrative purposes only. The site information for this system will determine the network interfaces, (network devices, bonds, and bond enslaved devices), to configure.</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <pre>\$ sudo /usr/TKLC/plat/bin/netAdm add --device=<TVOE_Management_Bridge_Interface> --onboot=yes</pre> <p style="margin-left: 20px;">Interface bond0.2 added</p> </div> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <pre>\$ sudo /usr/TKLC/plat/bin/netAdm add --type=Bridge --name=management --bootproto=none --onboot=yes --address=<Management_Server_TVOE_IP> --netmask=<Management_Server_TVOE_Netmask> --bridgeInterfaces=<TVOE_Management_Bridge_Interface></pre> </div>
4. <input type="checkbox"/>	RMS iLO/iLOM: Create the Management Network Route	<div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <pre>\$ sudo /usr/TKLC/plat/bin/netAdm add --route=default --device=management --gateway=<Management_Gateway_IP_Address></pre> </div>

Procedure 11. Configure TVOE on Additional Rack Mount Servers

5. <input type="checkbox"/>	RMS iLO/iLOM: Get support files from the PMAC	Execute the following commands to copy the required files <pre>\$ sudo /usr/bin/scp -r admusr@<Virtual PMAC>:/var/TKLC/upgrade/* /var/TKLC/upgrade/</pre>
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Procedure 11. Configure TVOE on Additional Rack Mount Servers

<p>6.</p> <p><input type="checkbox"/></p>	<p>RMS iLO/iLOM: TVOE Bridge Configuration (Non-Segregated Signaling)</p>	<p>If your rack mount solution is designed where the signaling traffic shares the same physical NIC interfaces as the OAM related DSR traffic:</p> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p>1 – Control VLAN 2 – Platform Management / iLO VLAN 3 – OAM VLAN 4 – Internal Application VLAN 7 – Internal IDIH VLAN (IDIH Only) 5,6 – Signaling VLAN</p> <p>— 100 Mbps Link — 10 Gbps Link</p> </div>  <ul style="list-style-type: none"> • Execute the TVOE network config script with the 'segg=no' parameter. • Configuration of up to 4 signaling interfaces are supported but not necessary. • Configuration of the 'intvlan' parameter is to be used when iDIH is being deployed. • Configuration of the 'replicationvlan' parameter is to be used if a dedicated SBR replication network will be defined (Procedure 32Step 5)- PCA Only • Configuration of at least 'xmivlan' and 'imivlan' parameters is required. <p>Example of TVOE script WITHOUT segregated signaling (For illustrative purposes only):</p> <pre style="border: 1px solid black; padding: 5px;">\$ cd /var/TKLC/upgrade \$ sudo ./TVOEcfg_RMS.sh --xmivlan=<xmi_vlan_ID> --imivlan=<imi_vlan_ID> --xsilvlan=<xsil_vlan_ID> --xsi2vlan=<xsi2_vlan_ID> --intvlan=<int_vlan_ID> --replicationvlan=<replication_vlan_ID> --segg=no</pre> <p>Note: The same VLANs/Bridges configured with this script should be consistent across all rack mount servers being deployed.</p> <p>Note: If for any reason, you entered an incorrect value during the execution of the TVOEcfg_RMS.sh command, you can execute the following command to reset the networking configuration so you can repeat the TVOEcfg_RMS step:</p> <pre style="border: 1px solid black; padding: 5px;">\$ cd /var/TKLC/upgrade \$ sudo ./TVOEclean_RMS.sh</pre>
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Procedure 11. Configure TVOE on Additional Rack Mount Servers

<p>7.</p> <p><input type="checkbox"/></p>	<p>RMS iLO/iLOM: TVOE Bridge Configuration (Segregated Signaling)</p>	<p>If your rack mount solution is designed where the signaling traffic is segregated from the rest of the DSR OAM related networks and located on separate NICs:</p> <ul style="list-style-type: none"> Execute the TVOE network config script with the 'segg=yes' parameter. Configuration of up to 4 signaling interfaces are supported but not necessary. Configuration of the 'intvlan' parameter is to be used when iDIH is being deployed. Configuration of the 'replicationvlan' parameter is to be used if a dedicated SBR replication network will be defined (Procedure 32Step 5)- PCA Only Configuration of at least 'xmivlan' and 'imivlan' parameters is required. <p>Example of TVOE script WITH segregated signaling (For illustrative purposes only):</p> <pre>\$ cd /var/TKLC/upgrade \$ sudo ./TVOEcfg_RMS.sh --xmivlan=<xmi_vlan_ID> --imivlan=<imi_vlan_ID> --xsilvlan=<xsi1_vlan_ID> --xsi2vlan=<xsi2_vlan_ID> --intvlan=<int_vlan_ID> --replicationvlan=<replication_vlan_ID> --segg=yes</pre> <p>Note: If for any reason, you entered an incorrect value during the execution of the TVOEcfg_RMS.sh command, you can execute the following command to reset the networking configuration so you can repeat the TVOEcfg_RMS step:</p> <pre>\$ cd /var/TKLC/upgrade \$ sudo ./TVOEclean_RMS.sh</pre>
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Procedure 11. Configure TVOE on Additional Rack Mount Servers

<p>8.</p> <p><input type="checkbox"/></p>	<p>RMS iLO/iLOM: Set Ethernet Interface Ring Buffer Sizes (X6-2)</p>	<p>The following commands will increase the ring buffer sizes on Oracle X6-2 Ethernet Interfaces:</p> <p>Note: Refer to Section 3.4 for network interface server reference table</p> <pre>\$ sudo netAdm set --device=<ethernet_interface_1> --ringBufferRx=4096 --ringBufferTx=4096 \$ sudo netAdm set --device=<ethernet_interface_2> --ringBufferRx=4096 --ringBufferTx=4096</pre> <p>If step 6 was executed, execute the following commands:</p> <pre>\$ sudo netAdm set --device=<ethernet_interface_3> --ringBufferRx=4096 --ringBufferTx=4096 \$ sudo netAdm set --device=<ethernet_interface_4> --ringBufferRx=4096 --ringBufferTx=4096</pre>
<p>9.</p> <p><input type="checkbox"/></p>	<p>RMS iLO/iLOM: Install Tuned Profile (Oracle X6-2)</p>	<p>Install tuned Profile by executing the following commands:</p> <pre>\$ sudo cp /var/TKLC/upgrade/tuned_tvov.tar /etc/tune- profiles/;cd /etc/tune-profiles/ \$ sudo tar -xvf tuned_tvov.tar</pre> <p>Activate the tuned profile for TVOE:</p> <pre>\$ sudo tuned-adm profile tvov_profile \$ sudo service_conf add tuned rc runlevels=345 \$ sudo service_conf add ktune rc runlevels=345</pre> <p>Verify that tuned is active:</p> <pre>\$ sudo tuned-adm active</pre> <p>Expected output:</p> <pre>Current active profile: tvov_profile Service tuned: enabled, running Service ktune: enabled, running</pre>

Procedure 11. Configure TVOE on Additional Rack Mount Servers

<p>10.</p> <p><input type="checkbox"/></p>	<p>RMS iLO/iLOM: Install and configure IRQ Balance (Oracle X6-2)</p>	<p>1. Stop the irqbalance service:</p> <pre style="border: 1px solid black; padding: 2px;">\$ sudo service irqbalance stop</pre> <p>2. Modify irqbalance:</p> <pre style="border: 1px solid black; padding: 2px;">\$ cd /var/TKLC/upgrade \$ sudo ./irqtune.sh</pre>

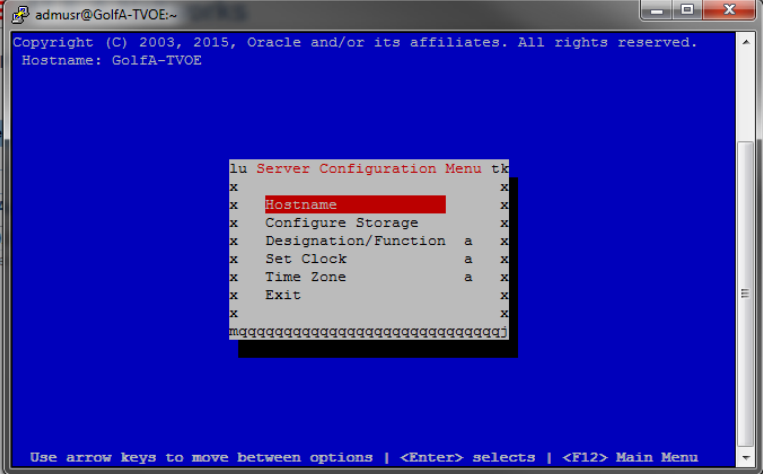
Procedure 11. Configure TVOE on Additional Rack Mount Servers

<p>11.</p> <p><input type="checkbox"/></p>	<p>RMS iLO/iLOM: Add the NetBackup Network-Option 1 (Optional)</p>	<p>If NetBackup is to be used, execute this step, otherwise skip to Step 14.</p> <p>Select only this option or the following options listed in steps 12-13.</p> <p>Before selecting the configuration option, first read the description in each step to determine which configuration is applicable to your installation and network.</p> <p>NetBackup is a tool that allows the customer to take remote backups of the system.</p> <p>Note: The output below is for illustrative purposes only. The example output below shows the control bridge configured.</p> <p>Note: The example below illustrates a TVOE Management Server configuration with the NetBackup feature enabled. The NetBackup network is configured with a non-default MTU size.</p> <p>Note: The MTU size must be consistent between a network bridge, device, or bond, and associated VLANs.</p> <p><u>Create NetBackup bridge using a bond containing an untagged interface</u></p> <pre> \$ sudo /usr/TKLC/plat/bin/netAdm add --device=<TVOE_NetBackup_Bridge_Interface> --onboot=yes -type=Bonding -mode=active-backup - miimon=100 --MTU=<NetBackup_MTU_size> Interface <TVOE_NetBackup_Bridge_Interface> added \$ sudo /usr/TKLC/plat/bin/netAdm set --device=<ethernet_interface_4> --type=Ethernet --master=<TVOE_NetBackup_Bridge_Interface> --slave=yes --onboot=yes Interface <ethernet_interface_4> updated \$ sudo /usr/TKLC/plat/bin/netAdm add -type=Bridge --name=<TVOE_NetBackup_Bridge> --onboot=yes - bootproto=none --MTU=<NetBackup_MTU_size> --bridgeInterfaces=<TVOE_NetBackup_Bridge_Interface> --address=<TVOE_NetBackup_IP> --netmask=<TVOE_NetBackup_Netmask> </pre>
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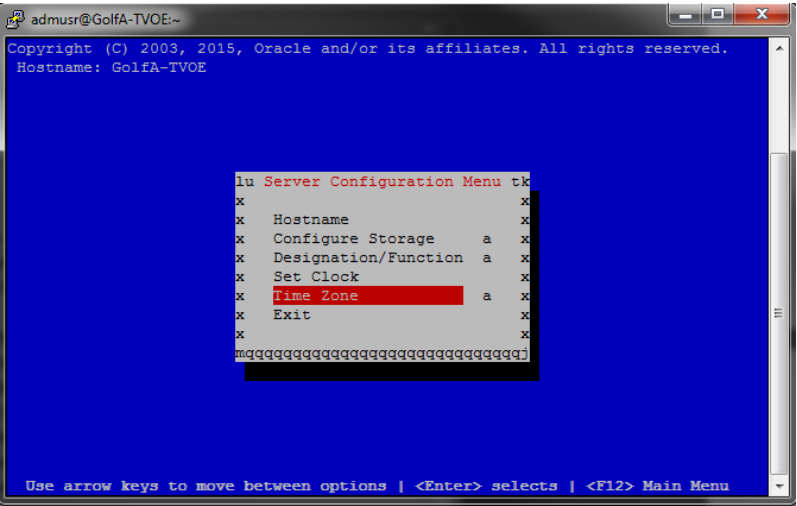
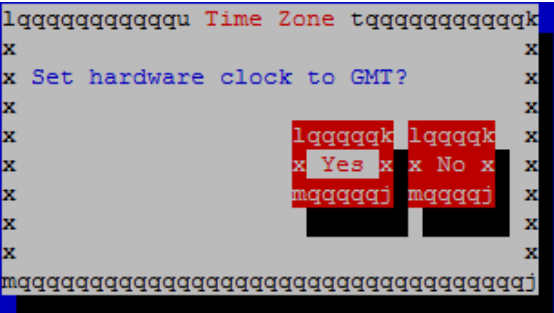
Procedure 11. Configure TVOE on Additional Rack Mount Servers

<p>12. <input type="checkbox"/></p>	<p>RMS iLO/iLOM: Add the NetBackup Network-Option 2 <i>(Optional)</i></p>	<p>Select only this option or options in Steps 11 or 13</p> <p><u>Create NetBackup bridge using an untagged native interface:</u></p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo /usr/TKLC/plat/bin/netAdm add -type=Bridge --name=<TVOE_NetBackup_Bridge> --onboot=yes - bootproto=none -MTU=<NetBackup_MTU_size> --bridgeInterfaces=<Ethernet_Interface_4> --address=<TVOE_NetBackup_IP> --netmask=<TVOE_NetBackup_Netmask></pre>
<p>13. <input type="checkbox"/></p>	<p>RMS iLO/iLOM: Add the NetBackup Network-Option 3 <i>(Optional)</i></p>	<p>Select only this option or options in 11-12</p> <p><u>Create NetBackup bridge using a tagged device:</u></p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo /usr/TKLC/plat/bin/netAdm add --device=<TVOE_NetBackup_Bridge_Interface> --onboot=yes Interface <TVOE_NetBackup_Bridge_Interface> added \$sudo /usr/TKLC/plat/bin/netAdm add -type=Bridge --name=<TVOE_NetBackup_Bridge> --onboot=yes --MTU=<NetBackup_MTU_size> --bridgeInterfaces=<TVOE_NetBackup_Bridge_Interface> --address=<TVOE_NetBackup_IP> --netmask=<TVOE_NetBackup_Netmask></pre>
<p>14. <input type="checkbox"/></p>	<p>RMS iLO/iLOM: Restart the network interfaces</p>	<p>Restart the network interfaces, execute the following command:</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo service network restart</pre>

Procedure 11. Configure TVOE on Additional Rack Mount Servers

<p>15.</p> <p><input type="checkbox"/></p>	<p>RMS iLO/iLOM: Set Hostname</p>	<p>Set the server hostname by running the following:</p> <pre>\$ sudo su - platcfg</pre> <p>Navigate to Server Configuration -> Hostname ->Edit.</p>  <p>Set TVOE Management Server hostname Press OK. Navigate out of Hostname</p>
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Procedure 11. Configure TVOE on Additional Rack Mount Servers

<p>16. <input type="checkbox"/></p>	<p>RMS iLO/iLOM: Set the Time Zone and/or Hardware Clock</p>	<p>Navigate to Server Configuration -> Time Zone.</p>  <p>Select Edit. Set the time zone and/or hardware clock to "GMT" (or appropriate time zone value) Select Yes to accept</p>  <p>Navigate out of Server Configuration</p>
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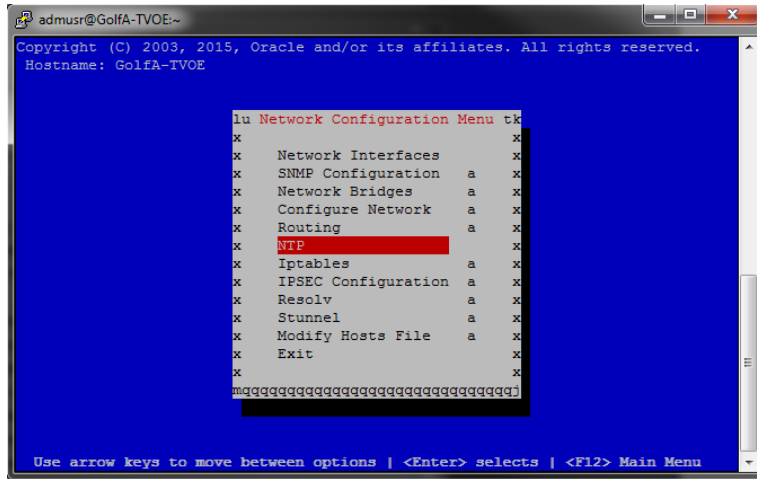
Procedure 11. Configure TVOE on Additional Rack Mount Servers

17.

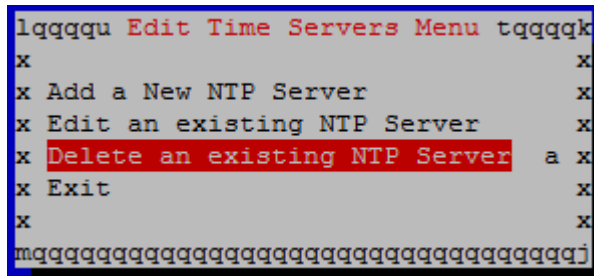


RMS iLO/iLOM:
Delete PMAC VM as NTP Source on RMS

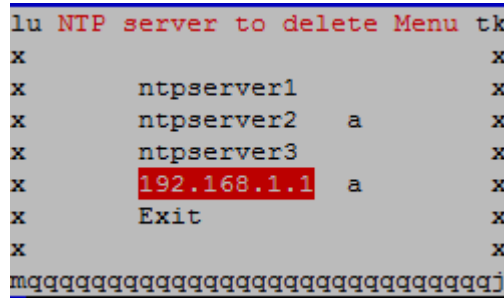
Navigate to **Network Configuration ->NTP**.



Select **Delete an existing NTP Server**

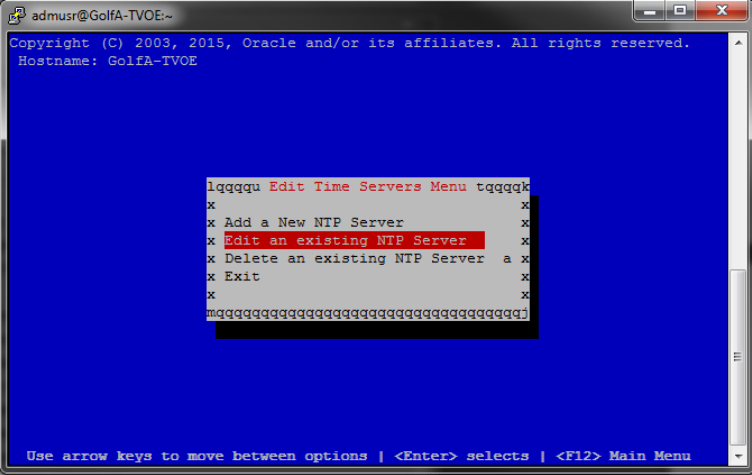


Select the PMAC VM Control IP, Click **[Enter]**

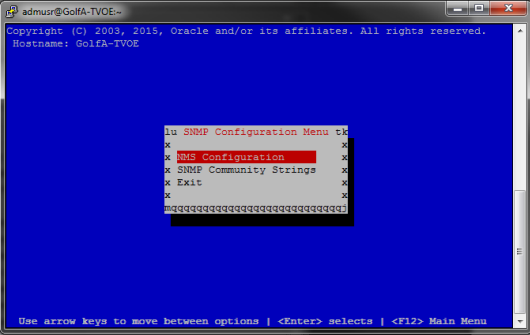
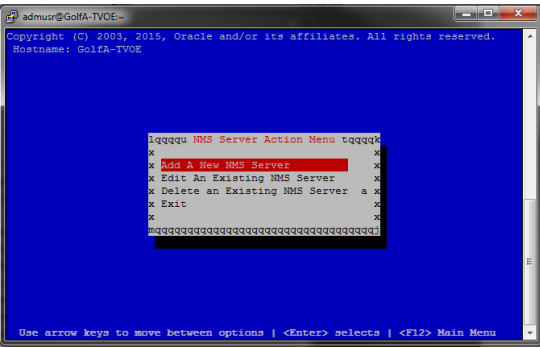
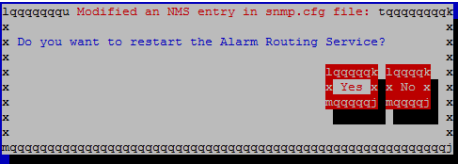


You will be returned to the **NTP Menu**

Procedure 11. Configure TVOE on Additional Rack Mount Servers

<p>18.</p> <p><input type="checkbox"/></p>	<p>RMS iLO/iLOM: Set NTP</p>	<p>From the Network Configuration ->NTP menu</p> <p>Update NTP Information, select Edit. The Edit Time Servers menu is displayed</p>  <p>Select the appropriate Edit Time Servers menu option. You can add new or edit any existing NTP server entry</p> <p>Set NTP server IP address to point to the customer provided NTP server (Remember that 3 distinct NTP sources are required)</p> <p>Press OK.</p> <p>Exit platcfg.</p> <p>Ensure that the time is set correctly by executing the following commands:</p> <pre>\$ sudo service ntpd stop \$ sudo ntpdate ntpserver1 \$ sudo service ntpd start</pre>
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Procedure 11. Configure TVOE on Additional Rack Mount Servers

<p>19.</p> <p><input type="checkbox"/></p>	<p>RMS iLO/iLOM: Set SNMP</p>	<p>Set SNMP by running the following:</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo su - platcfg</pre> <p>Note: Refer to Appendix G: SNMP Configuration to understand the preferred SNMP configuration</p> <p>Navigate to Network Configuration -> SNMP Configuration -> NMS Configuration.</p>  <p>Select Edit and then choose Add a New NMS Server. The Add an NMS Server page will be displayed.</p>  <p>Complete the form by entering NMS server IP, Port (<i>default port is 162</i>) and community string provided by the customer about the SNMP trap destination. (for more guidance refer to Appendix G: SNMP Configuration).</p> <p>Select OK to finalize the configuration. The NMS Server Action Menu will now be displayed. Select Exit. The following dialogue will then be presented.</p>  <p>Select Yes and then wait a few seconds while the Alarm Routing Service is restarted. At that time the SNMP Configuration menu will be presented.</p> <p>Exit platcfg.</p>
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Procedure 11. Configure TVOE on Additional Rack Mount Servers

<p>20.</p> <p><input type="checkbox"/></p>	<p>RMS iLO/iLOM: Restart Server</p>	<p>Execute the following command to restart the server:</p> <pre>\$ sudo init 6</pre>
<p>21.</p> <p><input type="checkbox"/></p>	<p>1st RMS iLO/iLOM: Verify Ring Buffer Settings</p>	<p>Verify the ring buffer sizes have been configured correctly (from Step 8) by executing the following command for each Ethernet interface configured above:</p> <pre>\$ ethtool -g <eth interfaces configured above></pre> <p>Example shown below:</p> <pre>[admusr@FJ-TVOE-2 ~]\$ ethtool -g eth01 Ring parameters for eth01: Pre-set maximums: RX: 4096 RX Mini: 0 RX Jumbo: 0 TX: 4096 Current hardware settings: RX: 4096 RX Mini: 0 RX Jumbo: 0 TX: 4096</pre>

Procedure 11. Configure TVOE on Additional Rack Mount Servers

<p>22.</p> <p><input type="checkbox"/></p>	<p>RMS iLO/iLOM: Configure NetBackup-Part 1 (Optional)</p>	<p>Execute this step if the NetBackup feature is enabled for this system, otherwise skip to step 23. Configure the appropriate NetBackup client on the PMAC TVOE host.</p> <p>Open firewall ports for NetBackup using the following commands:</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo ln -s /usr/TKLC/plat/share/NetBackup/60NetBackup.ipt /usr/TKLC/plat/etc/iptables/ \$ sudo /usr/TKLC/plat/bin/iptablesAdm reconfig</pre> <p>Enable platcfg to show the NetBackup Menu Items by executing the following commands:</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo platcfgadm -show NBConfig; \$ sudo platcfgadm -show NBInit; \$ sudo platcfgadm -show NBDeInit; \$ sudo platcfgadm -show NBInstall; \$ sudo platcfgadm -show NBVerifyEnv; \$ sudo platcfgadm -show NBVerify;</pre> <p>Create LV and file system for NetBackup client software on the vgguests volume group:</p> <pre style="border: 1px solid black; padding: 5px;">\$sudo /usr/TKLC/plat/sbin/storageMgr /tmp/nb.lvm</pre> <p>This will create the LV, format it with a filesystem, and mount it under /usr/openv/.</p> <p>Example output is shown below:</p> <pre style="border: 1px solid black; padding: 5px;">Called with options: /tmp/nb.lvm VG vgguests already exists. Creating lv NetBackup_lv. Volume NetBackup_lv will be created. Success: Volume NetBackup_lv was created. Creating filesystem, this may take a while. Updating fstab for lv NetBackup_lv. Configuring existing lv NetBackup_lv. The LV for NetBackup has been created!</pre>
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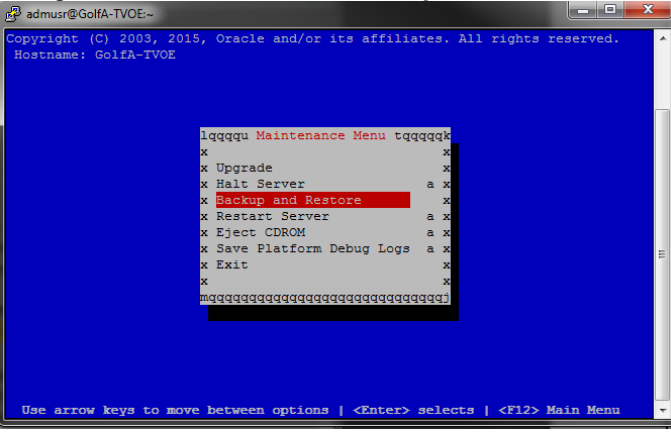
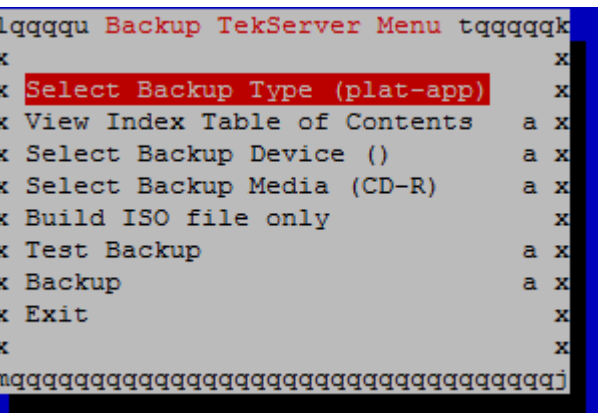
Procedure 11. Configure TVOE on Additional Rack Mount Servers

<p>23. <input type="checkbox"/></p>	<p>RMS iLO/iLOM: Configure NetBackup-Part 2 (Optional)</p>	<p>Install the NetBackup client software:</p> <p>Refer to Appendix H: Application NetBackup Client Installation Procedures on instructions how to install the NetBackup client.</p> <p>Note: Skip any steps relating to copying NetBackup “notify” scripts to /usr/opensv/NetBackup/bin. The TVOE NetBackup notify scripts are taken care of in the next step.</p> <p>Create softlinks for TVOE specific NetBackup notify scripts.</p> <pre style="border: 1px solid black; padding: 5px;">\$sudo ln -s /usr/TKLC/plat/sbin/bpstart_notify /usr/opensv/NetBackup/bin/bpstart_notify \$sudo ln -s /usr/TKLC/plat/sbin/bpend_notify /usr/opensv/NetBackup/bin/bpend_notify</pre> <p>Note: Once the NetBackup Client is installed on TVOE, the NetBackup Master should be configured to back up the following files form the TVOE host:</p> <ul style="list-style-type: none"> • /var/TKLC/bkp/*.iso
<p>24. <input type="checkbox"/></p>	<p>RMS iLO/iLOM: Setup syscheck</p>	<p>Syscheck must be configured to monitor bonded interfaces.</p> <p>Replace “bondedInterfaces” with “bond0” or “bond0,bond1” if segregated networks are used:</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo /usr/TKLC/plat/bin/syscheckAdm net ipbond -set --var=DEVICES -val=<bondedInterfaces> \$ sudo /usr/TKLC/plat/bin/syscheckAdm net ipbond -enable</pre>
<p>25. <input type="checkbox"/></p>	<p>RMS iLO/iLOM: Verify syscheck</p>	<p>Verify syscheck:</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo /usr/TKLC/plat/bin/syscheck net ipbond -v</pre> <p>Expected output should look similar to below:</p> <pre style="border: 1px solid black; padding: 5px;">Running modules in class net... ipbond: Bonded interface bond0 is OK OK LOG LOCATION: /var/TKLC/log/syscheck/fail log</pre>

Procedure 11. Configure TVOE on Additional Rack Mount Servers

26. <input type="checkbox"/>	RMS iLO/iLOM: Verify Server Health	Execute the following: <pre>\$ alarmMgr -alarmStatus</pre> This command should return no output on a healthy system. If any alarms are reported, contact Appendix R: My Oracle Support (MOS)
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Procedure 11. Configure TVOE on Additional Rack Mount Servers

<p>27.</p> <p><input type="checkbox"/></p>	<p>RMS iLO/iLOM: Perform a TVOE backup using TPD platcfg utility</p>	<p>Execute the following:</p> <pre>\$ sudo su - platcfg</pre> <p>Navigate to Maintenance -> Backup and Restore</p>  <p>Select Backup Platform (CD/DVD)</p> <p>Note: If no cdrom device is found by TPD, you will receive an error dialog with the message: "No disk device available. This is normal on systems without a cdrom device." Press Enter to continue.</p> <p>Select Build ISO file only, and press Enter to continue. Exit from TPD platcfg utility.</p>  <p>The TVOE backup can be found in the "/var/TKLC/bkp/" directory, and is prefixed by the server hostname. An example of a TVOE backup ISO follows: /var/TKLC/bkp/RMS503u14-plat-app-201210301505.iso</p> <p>Move the TVOE backup to a customer provided backup server for safe keeping.</p>
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Procedure 11. Configure TVOE on Additional Rack Mount Servers

28. <input type="checkbox"/>	Additional RMS: Repeat	Repeat this procedure for additional Rack Mount Servers.
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4.9 Determine VM Placement and Socket Pinning (Oracle X6-2)

In order to maximize performance efficiency, customers who are deploying DSR on Oracle X6-2 servers may obtain the DSR VM placement and CPU pinning information document. This recommended document can be obtained from an Oracle representative for implementation. If the DSR VM placement and CPU pinning information is NOT available, the customer may use [14] (VM Placement and CPU Socket Pinning Tool)

Note: VM placement and CPU pinning will need to be determined for all components of the DSR installation (PMAC, IDIH, DSR, and SDS)

Note: [Non-HA Lab Node Installations of Oracle X6-2]: Skip this Section

4.10 Deploy Redundant PMAC (Optional)

This procedure is optional and required only if the redundant PMAC Server feature is to be deployed. This procedure will provide the instructions for deploying a redundant PMAC, as well as creating the first backup from the primary PMAC.

Note: [Non-HA Lab Node Installations of Oracle X6-2]: Skip this Section

Procedure 12. Installing a Redundant PMAC

S T E P #	This procedure is optional and required only if the redundant PMAC Server feature is to be deployed. This procedure will provide steps for deploying a redundant PMAC, as well as creating the first backup from the primary PMAC. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. If this procedure fails, contact Appendix R: My Oracle Support (MOS) , and ask for assistance.	
1 <input type="checkbox"/>	Primary PMAC: Establish SSH Session	Establish an SSH session to the primary PMAC, login as <i>admusr</i> .

Procedure 12. Installing a Redundant PMAC

<p>2</p> <p><input type="checkbox"/></p>	<p>Primary PMAC: Exchange SSH keys between the Primary PMAC and the Redundant PMAC's TVOE Host</p>	<p>Use the PMAC GUI to determine the Control Network IP address of the redundant PMAC's TVOE host server. From the PMAC GUI, navigate to Main Menu -> Software -> Software Inventory.</p> <table border="1"> <thead> <tr> <th>Identity</th> <th>IP Address</th> <th>Hostname</th> <th>Platform Name</th> <th>Platform Version</th> <th>Application Name</th> <th>Application Version</th> </tr> </thead> <tbody> <tr> <td>RMS_Yukon_TVOE_1</td> <td>192.168.1.12</td> <td>Yukon-TVOE-1</td> <td>TPD (x86_64)</td> <td>7.2.0.0.0-88.24.0</td> <td>TVOE</td> <td>3.2.0.0.0_88.24.0</td> </tr> </tbody> </table> <p>Note the IP address for the redundant PMAC's TVOE Host server.</p> <p>Login to the PMAC terminal as the admusr.</p> <p>From a terminal window connection on the PMAC as the admusr user, exchange SSH keys for admusr between the primary PMAC and the redundant PMAC's TVOE Host server using the keyexchange utility, using the Control network IP address for the redundant PMAC's TVOE Host server. When prompted for the password, enter the password for the admusr user of the redundant PMAC's TVOE Host server.</p> <pre>\$ keyexchange admusr@<redundant PMAC's TVOE Host server control IP></pre>	Identity	IP Address	Hostname	Platform Name	Platform Version	Application Name	Application Version	RMS_Yukon_TVOE_1	192.168.1.12	Yukon-TVOE-1	TPD (x86_64)	7.2.0.0.0-88.24.0	TVOE	3.2.0.0.0_88.24.0
Identity	IP Address	Hostname	Platform Name	Platform Version	Application Name	Application Version										
RMS_Yukon_TVOE_1	192.168.1.12	Yukon-TVOE-1	TPD (x86_64)	7.2.0.0.0-88.24.0	TVOE	3.2.0.0.0_88.24.0										
<p>3</p> <p><input type="checkbox"/></p>	<p>Primary PMAC: Export the PMAC ISO image to the Redundant PMAC's TVOE Host</p>	<p>Execute the following command to export the PMAC ISO image to the redundant PMAC's TVOE host Server:</p> <pre>\$ sudo /usr/sbin/exportfs <redundant PMAC TVOE Host Control IP>:/usr/TKLC/smac/html/TPD/<PMAC_Image_Name></pre>														
<p>4</p> <p><input type="checkbox"/></p>	<p>Primary PMAC: SSH to the Redundant PMAC's TVOE Host</p>	<p>Establish an SSH session to the redundant PMAC's TVOE host server, login as admusr.</p> <pre>\$ sudo ssh admusr@<redundant PMAC's TVOE Host server control IP></pre>														
<p>5</p> <p><input type="checkbox"/></p>	<p>Redundant PMAC's TVOE Host: Mount the PMAC media</p>	<p>Mount the PMAC upgrade media from the primary PMAC server:</p> <pre>\$ sudo /bin/mount <primary_pmac_control_IP>:/usr/TKLC/smac/html/TPD/<PMAC_Image_Name> /mnt/upgrade</pre>														

Procedure 12. Installing a Redundant PMAC

<p>6</p> <p><input type="checkbox"/></p>	<p>Redundant PMAC's TVOE Host: Deploy PMAC</p>	<p>Using the pmac-deploy script; deploy the PMAC instance using the configuration detailed by the completed NAPD. All configuration options (<i>NetBackup or isoimagesVolSizeGB</i>) should match the configuration of the primary PMAC.</p> <p>Reference Procedure 6 (step 3)</p> <p>For this example, deploy a PMAC without NetBackup feature:</p> <pre style="border: 1px solid black; padding: 5px;">\$ cd /mnt/upgrade/upgrade \$ sudo ./pmac-deploy -guest=<Redundant_PMAC_Name> --hostname=<Redundant_PMAC_Name> --controlBridge=<TVOE_Control_Bridge> --controlIP=<Redundant_PMAC_Control_ip_address> --controlNM=<PMAC_Control_netmask> --managementBridge=<PMAC_Management_Bridge> --managementIP=<Redundant_PMAC_Management_ip_address> --managementNM=<PMAC_Management_netmask_or_prefix> --routeGW=<PMAC_Management_gateway_address> --ntpserver=<Redundant_TVOE_Management_server_ip_address></pre> <p>The PMAC will deploy and boot. The management and control network will come up based on the settings that were provided to the pmac-deploy script.</p>
<p>7</p> <p><input type="checkbox"/></p>	<p>Redundant PMAC's TVOE Host: Unmount Media</p>	<p>Unmount the media by executing the following command:</p> <pre style="border: 1px solid black; padding: 5px;">\$ cd / \$ sudo /bin/umount /mnt/upgrade</pre>


Procedure 12. Installing a Redundant PMAC

<p>8 <input type="checkbox"/></p>	<p>Redundant PMAC's TVOE Host: SSH into the Redundant PMAC Server</p>	<p>Using an SSH client such as putty, ssh to the TVOE host as admusr.</p> <p>Login using virsh, and wait until you see the login prompt :</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo /usr/bin/virsh list</pre> <pre style="border: 1px solid black; padding: 5px;"> Id Name State ----- 1 myTPD running 2 PM&C running 3 Redundant PM&C running </pre> <pre style="border: 1px solid black; padding: 5px;">\$ sudo /usr/bin/virsh console <Redundant PM&C></pre> <p>[Output Removed]</p> <pre style="border: 1px solid black; padding: 5px;"> Starting ntdMgr: [OK] Starting atd: [OK] 'TPD Up' notification(s) already sent: [OK] upstart: Starting tpdProvd... upstart: tpdProvd started. CentOS release 6.2 (Final) Kernel 2.6.32-220.17.1.el6prere16.0.0_80.14.0.x86_64 on an x86_64 PM&Cdev7 login: </pre>
<p>9 <input type="checkbox"/></p>	<p>Redundant PMAC: Verify the Redundant PMAC is configured correctly on first boot</p>	<p>Establish an SSH session to the redundant PMAC, login as admusr.</p> <p>Run the following command (there should be no output):</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo /bin/ls /usr/TKLC/plat/etc/deployment.d/</pre>
<p>10 <input type="checkbox"/></p>	<p>Redundant PMAC's TVOE Host: Error doing verification, if error is outputted</p>	<p>If an error was made use the following command to delete the redundant PMAC Guest and then re-deploy the guest again:</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo guestMgr -remove < Redundant PMAC_Name></pre>

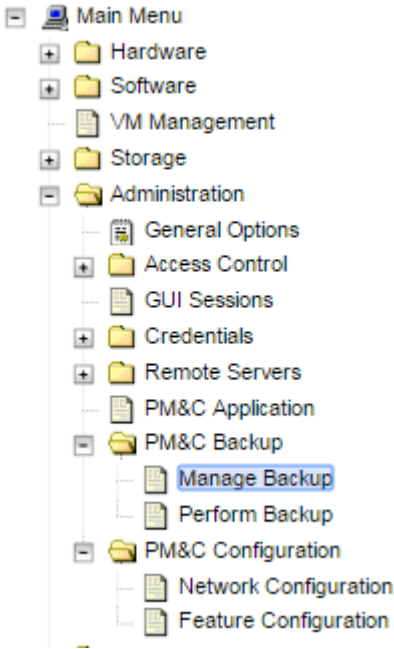
Procedure 12. Installing a Redundant PMAC

11 <input type="checkbox"/>	Redundant PMAC: Set the PMAC time zone	<p>Determine the Time Zone to be used for the redundant PMAC</p> <p>Note: Valid time zones can be found in Appendix I: List of Frequently used Time Zones</p> <p>Run</p> <pre>\$ sudo set_pmac_tz.pl <time zone></pre> <p>Example:</p> <pre>\$ sudo set_pmac_tz.pl America/New_York</pre> <p>Verify that the time zone has been updated:</p> <pre>\$ sudo date</pre>
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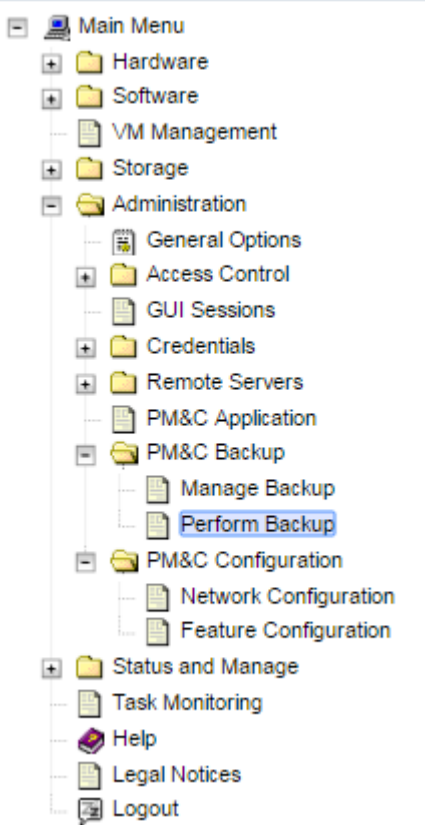
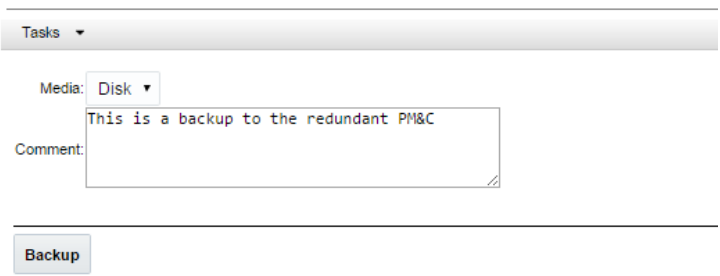
Procedure 12. Installing a Redundant PMAC

14 <input type="checkbox"/>	PMAC GUI: Login	Open web browser and navigate to the PMAC GUI, Login as guiadmin user: <div style="border: 1px solid black; padding: 2px;"><code>https://<pmac_network_ip></code></div> 
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Procedure 12. Installing a Redundant PMAC

<p>15</p> <p><input type="checkbox"/></p>	<p>PMAC GUI: Configure Backups</p>	<p>Navigate to Main Menu -> Administration -> PM&C Backup -> Manage Backup</p>  <p>Configure the primary PMAC to send backups to the redundant PMAC:</p> <p>On the Remote IP Address field, enter the management IP of the redundant PMAC server.</p> <p>Main Menu: Administration -> PM&C Backup -> Manage Backup</p> <hr/> <p>Tasks ▾</p> <p>Backup Settings</p> <p>Backup Frequency: <input type="text" value="Daily"/> ▾ Backup Time: <input type="text" value="05:00"/> ▾</p> <p>Remote Backup Settings</p> <p>Remote IP Address: <input type="text"/></p> <hr/> <p><input type="button" value="Update Settings"/></p>
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Procedure 12. Installing a Redundant PMAC

<p>16</p> <p><input type="checkbox"/></p>	<p>PMAC GUI: Perform Initial Backup</p>	<p>Navigate to Main Menu -> Administration -> PM&C Backup -> Perform Backup</p>  <p>Select the <i>Remote Server</i> from the drop down Media Box, enter any desired comment and click Backup</p> <p>Main Menu: Administration -> PM&C Backup -> Perform Backup</p>  <p>Verify the Backup was successful by clicking on the Task Monitoring Link to monitor the Backup PMAC status.</p> <p>Note: This backup function copies existing PMAC backup files and all of the images added to the PMAC image repository from the primary PMAC server to the redundant PMAC Server.</p>
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Procedure 12. Installing a Redundant PMAC


17 <input type="checkbox"/>	<p>Primary PMAC: Un-Export the PMAC ISO image</p>	<p>Execute the following command to Un-export the PMAC ISO image to the redundant PMAC's TVOE host Server:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <pre>\$ sudo /usr/sbin/exportfs -u <redundant PMAC TVOE Host Control IP>:/usr/TKLC/smac/html/TPD/<PMAC_Image_Name></pre> </div>
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4.11 Create Virtual Machines for Applications


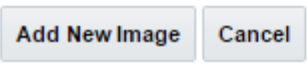
Procedure 13. Load DSR, SDS (Oracle X6-2), and TPD ISOs to the PMAC Server

S T E P #	<p>This procedure will load the DSR, SDS (Oracle X6-2), and TPD ISOs into the PMAC Server.</p> <p>Note: If deploying IDIH, the IDIH ISOs can also be loaded here as well.</p> <p>Needed material:</p> <ul style="list-style-type: none"> - Application Media <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
1 <input type="checkbox"/>	<p>PMAC's TVOE: Load Application ISO</p>	<p>Add the TPD ISO image to the PMAC, this can be done in one of two ways:</p> <ol style="list-style-type: none"> 1. Attach the USB device containing the ISO image to a USB port. 2. Copy the Application ISO file to the PMAC server into the "/var/TKLC/smac/image/isoimages/home/smacftpusr/" directory as pmacftpusr user: <p>cd into the directory where your ISO image is located on the TVOE Host (not on the PMAC server)</p> <p>Using sftp, connect to the PMAC server</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <pre>\$ sftp pmacftpusr@<pmac_management_network_ip> \$ put <image>.iso</pre> </div> <p>After the image transfer is 100% complete, close the connection:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <pre>\$ quit</pre> </div>

Procedure 13. Load DSR, SDS (Oracle X6-2), and TPD ISOs to the PMAC Server

<p>2</p> <p><input type="checkbox"/></p>	<p>PMAC GUI: Login</p>	<p>Open web browser and enter:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>https://<PMAC Mgmt Network IP></p> </div> <p>Login as <i>guiadmin</i> user:</p> 													
<p>3</p> <p><input type="checkbox"/></p>	<p>PMAC GUI:</p> <p>Attach the software Image to the PMAC Guest</p>	<p>If in Step 1 the ISO image was transferred directly to the PMAC guest via sftp, skip the rest of this step and continue with step 4. If the image is on a USB device, continue with this step.</p> <p>In the PMAC GUI, navigate to Main Menu -> VM Management. In the “<i>VM Entities</i>” list, select the PMAC guest. On the resulting “<i>View VM Guest</i>” page, select the Media tab.</p> <p>Under the Media tab, find the ISO image in the “<i>Available Media</i>” list, and click its Attach button. After a pause, the image will appear in the “<i>Attached Media</i>” list.</p> <p>View guest MultiApp3_DSRDAMP1</p> <p>VM Info Software Network Media</p> <p>Attached Media Available Media</p> <table border="1"> <thead> <tr> <th>Attach</th> <th>Label</th> <th>Image Path</th> </tr> </thead> <tbody> <tr> <td><input type="button" value="Attach"/></td> <td>3.2.0.0_88.24.0</td> <td>/var/TKLC/upgrade/MultiApp3_DSRDAMP1.iso</td> </tr> <tr> <td><input type="button" value="Attach"/></td> <td>7.2.0.0_88.24.0</td> <td>/var/TKLC/upgrade/TPD.install-7.2.0.0_88.24.0-OracleLinux6.7-x86_64.iso</td> </tr> </tbody> </table> <p>View guest MultiApp3_DSRDAMP1</p> <p>VM Info Software Network Media</p> <p>Attached Media Available Media</p> <table border="1"> <thead> <tr> <th>Attached</th> <th>Image Path</th> </tr> </thead> <tbody> <tr> <td><input type="button" value="Detach"/></td> <td>/var/TKLC/tvoe/mapping-isos/MultiApp3_DSRDAMP1.iso</td> </tr> </tbody> </table>	Attach	Label	Image Path	<input type="button" value="Attach"/>	3.2.0.0_88.24.0	/var/TKLC/upgrade/MultiApp3_DSRDAMP1.iso	<input type="button" value="Attach"/>	7.2.0.0_88.24.0	/var/TKLC/upgrade/TPD.install-7.2.0.0_88.24.0-OracleLinux6.7-x86_64.iso	Attached	Image Path	<input type="button" value="Detach"/>	/var/TKLC/tvoe/mapping-isos/MultiApp3_DSRDAMP1.iso
Attach	Label	Image Path													
<input type="button" value="Attach"/>	3.2.0.0_88.24.0	/var/TKLC/upgrade/MultiApp3_DSRDAMP1.iso													
<input type="button" value="Attach"/>	7.2.0.0_88.24.0	/var/TKLC/upgrade/TPD.install-7.2.0.0_88.24.0-OracleLinux6.7-x86_64.iso													
Attached	Image Path														
<input type="button" value="Detach"/>	/var/TKLC/tvoe/mapping-isos/MultiApp3_DSRDAMP1.iso														

Procedure 13. Load DSR, SDS (Oracle X6-2), and TPD ISOs to the PMAC Server


<p>4</p> <p><input type="checkbox"/></p>	<p>PMAC GUI : Add TPD Image</p>	<p>Navigate to Main Menu -> Software -> Manage Software Images</p> <p>Press Add Image button. Use the drop down to select the image.</p> <div style="text-align: center;">  </div> <p>If the image was supplied on a USB drive, it will appear as a virtual device ("device://..."). These devices are assigned in numerical order as USB images become available on the Management Server. The first virtual device is reserved for internal use by TVOE and PMAC; therefore, the ISO image of interest is normally present on the second device, "device://dev/sr1". If one or more USB-based images were already present on the Management Server before you started this procedure, choose a correspondingly higher device number.</p> <p>If in Step 1 the image was transferred to PMAC via sftp it will appear in the list as a local file "/var/TKLC/...".</p> <p>Main Menu: Software -> Manage Software Images [Add Image]</p> <hr/> <p>Images may be added from any of these sources:</p> <ul style="list-style-type: none"> • Oracle-provided media in the PM&C host's CD/DVD drive (Refer to Note) • USB media attached to the PM&C's host (Refer to Note) • External mounts. Prefix the directory with "extfile://". • These local search paths: <ul style="list-style-type: none"> ◦ /var/TKLC/upgrade/* .iso ◦ /var/TKLC/smac/image/isoimages/home/smacftpusr/* .iso <p>Note: CD and USB images mounted on PM&C's VM host must first be made accessible to the PM&C</p> <div style="border: 1px solid gray; padding: 5px; margin: 10px 0;"> <p>Path: <input type="text" value="/var/TKLC/upgrade/PMAC-6.2.0.0.0_62.24.0-x86_64.iso"/></p> <p>Description: <input type="text"/></p> </div> <hr/> <div style="text-align: center;">  </div> <p>Select the appropriate path and Press Add New Image button.</p> <p>You may check the progress using the Task Monitoring link. Observe the green bar indicating success.</p> <p>Once the green bar is displayed, remove the TPD Media from the optical drive of the management server.</p>
<p>5</p> <p><input type="checkbox"/></p>	<p>PMAC GUI: Load DSR ISO</p>	<p>If the DSR ISO hasn't been loaded onto the PMAC already, repeat steps 1 through 4 to load it using the DSR media or ISO.</p>

Procedure 13. Load DSR, SDS (Oracle X6-2), and TPD ISOs to the PMAC Server

6	PMAC GUI: Load SDS ISO (Oracle X6-2)	If the SDS ISO hasn't been loaded onto the PMAC already, repeat steps 1 through 4 to load it using the SDS media or ISO.
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Note: [Non-HA Lab Node Installations of Oracle X6-2]: Follow procedure Appendix Q.2 instead of Procedure 14 for NOAM Guest VM creation.

Procedure 14. Create NOAM Guest VMs

S T E P #		<p>This procedure will provide the steps needed to create a DSR/SDS NOAM virtual machine (referred to as a "guest") on a TVOE RMS. It must be repeated for every DSR and SDS NOAM server you wish to install.</p> <p>Prerequisite: TVOE has been installed and configured on the target RMS</p> <p>Note: Refer to Section 4.9 for VM placement</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>
1	PMAC GUI: Login	<p>Open web browser and enter:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>https://<PMAC Mgmt Network IP></p> </div> <p>Login as <i>guiadmin</i> user:</p> 

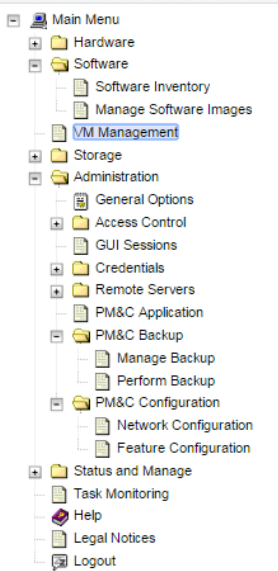
Procedure 14. Create NOAM Guest VMs

2

□

PMAC GUI:
Navigate to VM Management of the Target Server

Navigate to Main Menu -> VM Management



Select the TVOE rack mounted server from the **VM Entities** listing on the left side of the screen. The selected server's guest machine configuration will then be displayed in the remaining area of the window.

Main Menu: VM Management

Tasks ▾

VM Entities

Refresh ↻

- ▶ RMS: Yukon_TV0E_1
- ▶ RMS: Yukon_TV0E_10
- ▶ RMS: Yukon_TV0E_2
- ▶ RMS: Yukon_TV0E_4
- ▶ RMS: Yukon_TV0E_6
- ▶ RMS: Yukon_TV0E_7
- ▶ RMS: Yukon_TV0E_8
- ▶ RMS: Yukon_TV0E_9
- ▶ Yukon-TV0E-3

View host on RMS Yukon_TV0E_1

VM Info Software Network Media

Summary Bridges Storage Pools Memory

Host Name: **Yukon-TV0E-1**
Location: **RMS Yukon_TV0E_1**

Name	Status
MultiApp3-PMAC	Running
MultiApp3_DSRD AMP1	Running
MultiApp3_DSRN OAM1	Running
MultiApp3_DSRS BRB1	Running
MultiApp3_DSRS BRS1	Running
MultiApp3_DSRS OAM1	Running
MultiApp3_DSRS OAM2	Running
MultiApp3_DSRS S7MP1	Running
MultiApp3_SDSS OAM1	Running

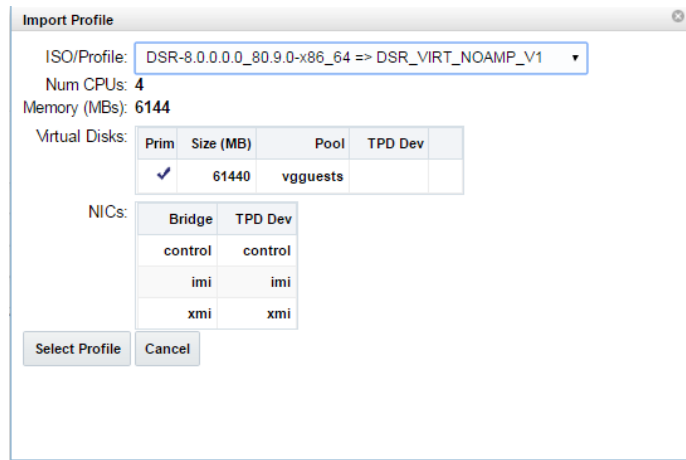
Create Guest

Click **Create Guest**

Procedure 14. Create NOAM Guest VMs

3
 PMAC GUI:
 Configure VM Guest Parameters (Part 1)

Select **Import Profile**



From the **“ISO/Profile”** drop-down box, select the entry that matches depending on the hardware that your NOAM VM TVOE server is running:

DSR or SDS?	NOAM VM TVOE Hardware Type(s)	Choose Profile (<Application ISO NAME>→)
DSR	Oracle X6-2	DSR_VIRT_NOAMP_V1
SDS	Oracle X6-2	SDS_VIRT_NOAM_V1

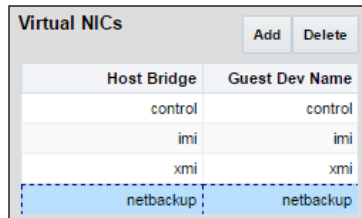
Note: Application_ISO_NAME is the name of the DSR Application ISO to be installed on this NOAM

Press **Select Profile**.

The Guest Name (Required) field may be edited (this will not become the ultimate hostname, rather an internal tag for the VM host manager:

Guest Name (Required):

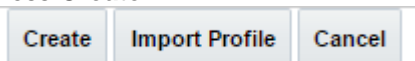
For **NetBackup**, Add the virtual NIC by clicking **Add** on the following screen:



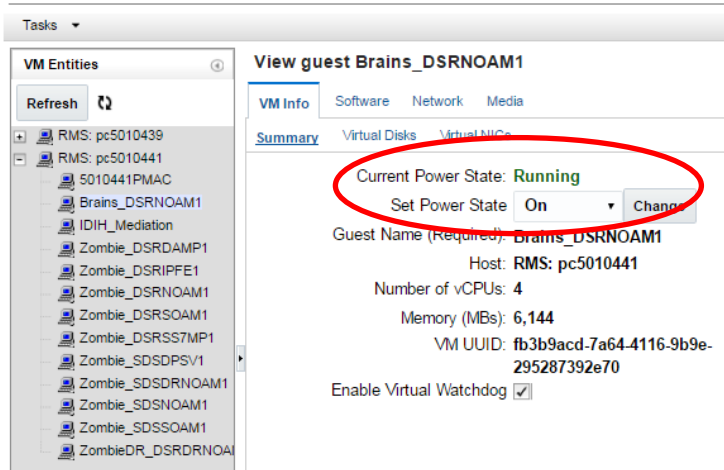
Click the column (Guest Dev Name) beside the *NetBackup* Host Bridge:

Enter *NetBackup*

Press **Create**




Procedure 14. Create NOAM Guest VMs

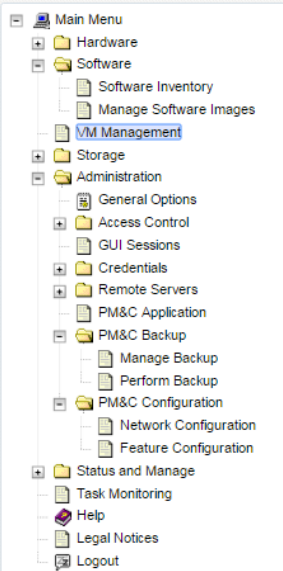
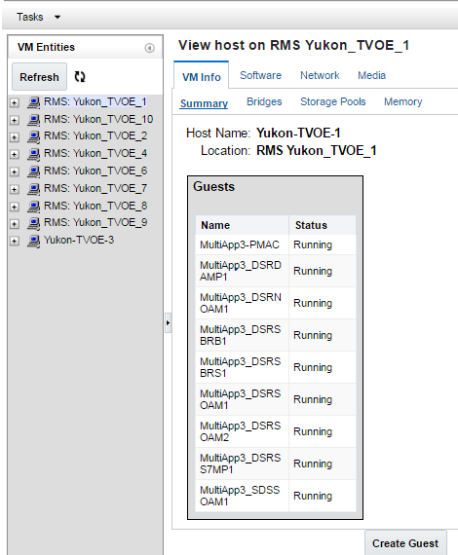
<p>4</p> <p>☐</p>	<p>PMAC GUI: Wait for Guest Creation to Complete</p>	<p>Navigate to Main Menu -> Task Monitoring to monitor the progress of the guest creation task. A separate task will appear for each guest creation that you have launched.</p> <p>Wait or refresh the screen until you see that the guest creation task has completed successfully.</p> <table border="1"> <thead> <tr> <th>ID</th> <th>Task</th> <th>Target</th> <th>Status</th> <th>State</th> <th>Task Output</th> <th>Running Time</th> <th>Start Time</th> <th>Progress</th> </tr> </thead> <tbody> <tr> <td>1539</td> <td>Create Guest</td> <td>RMS: pc5010441 Guest: Brains_DSRNOAM1</td> <td>Guest creation completed (Brains_DSRNOAM1)</td> <td>COMPLETE</td> <td></td> <td>0:00:19</td> <td>2016-09-15 13:48:56</td> <td>100%</td> </tr> </tbody> </table>	ID	Task	Target	Status	State	Task Output	Running Time	Start Time	Progress	1539	Create Guest	RMS: pc5010441 Guest: Brains_DSRNOAM1	Guest creation completed (Brains_DSRNOAM1)	COMPLETE		0:00:19	2016-09-15 13:48:56	100%
ID	Task	Target	Status	State	Task Output	Running Time	Start Time	Progress												
1539	Create Guest	RMS: pc5010441 Guest: Brains_DSRNOAM1	Guest creation completed (Brains_DSRNOAM1)	COMPLETE		0:00:19	2016-09-15 13:48:56	100%												
<p>5</p> <p>☐</p>	<p>PMAC GUI: Verify Guest Machine is Running</p>	<p>Navigate to Main Menu -> VM Management</p> <p>Select the TVOE server on which the guest machine was just created.</p> <p>Look at the list of guests present on the and verify that you see a guest that matches the name you configured and that its status is “Running”.</p> <p>Main Menu: VM Management</p>  <p>VM Creation for this guest is complete.</p>																		
<p>6</p> <p>☐</p>	<p>PMAC GUI: Repeat for remaining NOAM VMs</p>	<p>Repeat from Steps 2-5 for any remaining NOAM VMs for DSR and SDS-if equipped (for instance, the standby NOAM, and DR-NOAMs) that must be created.</p>																		

Note: [Non-HA Lab Node Installations of Oracle X6-2]: Follow procedure Appendix Q.3 instead of Procedure 15 for SOAM Guest VM creation.

Procedure 15. Create SOAM Guest VMs

<p>S T E P #</p>	<p>This procedure will provide the steps needed to create a DSR SOAM virtual machine (referred to as a “guest”) on a TVOE RMS. It must be repeated for every SOAM server you wish to install.</p> <p>Prerequisite: TVOE has been installed and configured on the target RMS</p> <p>Note: Refer to Section 4.9 for VM placement</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>
<p>1</p> <p><input type="checkbox"/></p>	<p>PMAC GUI: Login</p> <p>Open web browser and enter:</p> <div style="border: 1px solid black; padding: 2px; margin: 5px 0;"> <p><a href="https://<PMAC_Mgmt_Network_IP>">https://<PMAC_Mgmt_Network_IP></p> </div> <p>Login as <i>guiadmin</i> user:</p> 

Procedure 15. Create SOAM Guest VMs

2	<p>PMAC GUI: Navigate to VM Management of the Target Server</p>	<p>Navigate to Main Menu -> VM Management</p>  <p>Select the TVOE rack mounted server from the VM Entities listing on the left side of the screen. The selected server's guest machine configuration will then be displayed in the remaining area of the window.</p> <p>Main Menu: VM Management</p>  <p style="text-align: center;">Click Create Guest</p>
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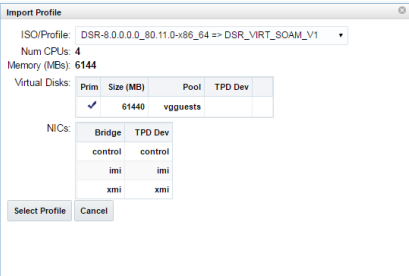
Procedure 15. Create SOAM Guest VMs

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PMAC GUI:
Configure VM Guest Parameters (Part 1)

Select Import Profile



From the **“ISO/Profile”** drop-down box, select the entry that matches depending on the hardware that your NOAM VM TVOE server is running:

DSR or SDS?	NOAM VM TVOE Hardware Type(s)	Choose Profile (<Application ISO NAME>) ➔
DSR	Oracle X6-2	DSR_VIRT_SOAM_V1
SDS	Oracle X6-2	SDS_VIRT_DP-SOAM_V1

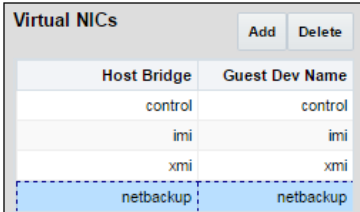
Note: Application_ISO_NAME is the name of the DSR/SDS Application ISO to be installed on this SOAM

Press **Select Profile**.

The Guest Name (Required) field may be edited (this will not become the ultimate hostname, rather an internal tag for the VM host manager):

Guest Name (Required):

For **NetBackup(DSR ONLY)**, Add the virtual NIC by clicking **Add** on the following screen:



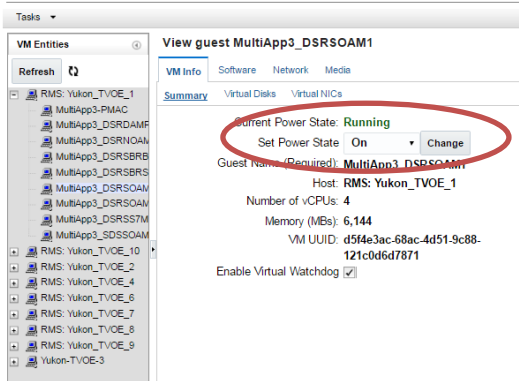
Click the column (Guest Dev Name) beside the *NetBackup* Host Bridge:

Enter *NetBackup*

Press **Create**


Create
Import Profile
Cancel

Procedure 15. Create SOAM Guest VMs

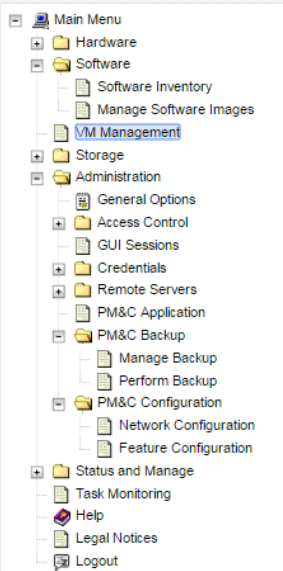
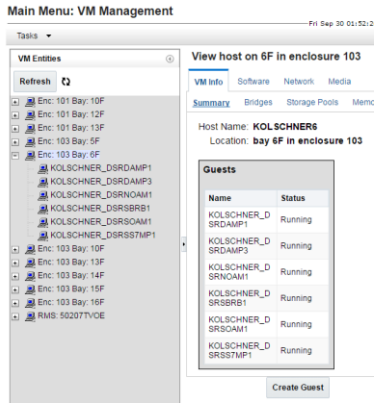
<p>4</p> <p><input type="checkbox"/></p>	<p>PMAC GUI: Wait for Guest Creation to Complete</p>	<p>Navigate to Main Menu -> Task Monitoring to monitor the progress of the guest creation task. A separate task will appear for each guest creation that you have launched.</p> <p>Wait or refresh the screen until you see that the guest creation task has completed successfully.</p> <table border="1"> <thead> <tr> <th>ID</th> <th>Task</th> <th>Target</th> <th>Status</th> <th>State</th> <th>Task Output</th> <th>Running Time</th> <th>Start Time</th> <th>Progress</th> </tr> </thead> <tbody> <tr> <td>1987</td> <td>Create Guest</td> <td>RMS: Yukon_TVOE_1 Guest: MultiApp3_SDSSOAM1</td> <td>Guest creation completed (MultiApp3_SDSSOAM1)</td> <td>COMPLETE</td> <td></td> <td>0:01:02</td> <td>2016-08-24 13:24:22</td> <td>100%</td> </tr> </tbody> </table>	ID	Task	Target	Status	State	Task Output	Running Time	Start Time	Progress	1987	Create Guest	RMS: Yukon_TVOE_1 Guest: MultiApp3_SDSSOAM1	Guest creation completed (MultiApp3_SDSSOAM1)	COMPLETE		0:01:02	2016-08-24 13:24:22	100%
ID	Task	Target	Status	State	Task Output	Running Time	Start Time	Progress												
1987	Create Guest	RMS: Yukon_TVOE_1 Guest: MultiApp3_SDSSOAM1	Guest creation completed (MultiApp3_SDSSOAM1)	COMPLETE		0:01:02	2016-08-24 13:24:22	100%												
<p>5</p> <p><input type="checkbox"/></p>	<p>PMAC GUI: Verify Guest Machine is Running</p>	<p>Navigate to Main Menu -> VM Management</p> <p>Select the TVOE server on which the guest machine was just created.</p> <p>Look at the list of guests present on the rack mount server and verify that you see a guest that matches the name you configured and that its status is “Running”.</p> <p>Main Menu: VM Management</p>  <p>VM Creation for this guest is complete.</p>																		
<p>6</p> <p><input type="checkbox"/></p>	<p>PMAC GUI: Repeat for remaining SOAM VMs</p>	<p>Repeat from Steps 2-5 for any remaining DSR or SDS DP SOAM VMs (for instance, the standby SOAM-DSR Only) that must be created.</p>																		

Note: [Non-HA Lab Node Installations of Oracle X6-2]: Follow procedure Appendix Q.4 instead of Procedure 16 for MP/SBR/DP Guest VM creation.

Procedure 16. Create MP/SBR/DP Guest VMs

<p>S T E P #</p>	<p>This procedure will provide the steps needed to create a DA-MP, SS7-MP, SBR, or SDS DP virtual machine (referred to as a “guest”) on a TVOE server. It must be repeated for every server you wish to install.</p> <p>Prerequisite: TVOE has been installed and configured on the target RMS.</p> <p>Note: Refer to Section 4.9 for VM placement</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>
<p>1 <input type="checkbox"/></p>	<p>PMAC GUI: Login</p> <p>Open web browser and enter:</p> <div style="border: 1px solid black; padding: 2px; margin: 5px 0;"> <p>https://<https://<PMAC Mgmt Network IP></p> </div> <p>Login as guiadmin user:</p> <div style="text-align: center;">  <p>The screenshot shows the Oracle System Login interface. At the top is the Oracle logo. Below it, the text 'Oracle System Login' is displayed with a timestamp 'Mon Jul 28 21:45:52 2014 UTC'. A central box titled 'Log In' contains the instruction 'Enter your username and password to log in'. Below this are input fields for 'Username:' and 'Password:', a 'Change password' checkbox, and a 'Log In' button. At the bottom, there is a disclaimer: 'Unauthorized access is prohibited. This Oracle system requires the use of Microsoft Internet Explorer 7.0, 8.0, or 9.0 with support for JavaScript and cookies.' and a copyright notice: 'Oracle and logo are registered service marks of Oracle Corporation. Copyright © 2013 Oracle Corporation All Rights Reserved.'</p> </div>

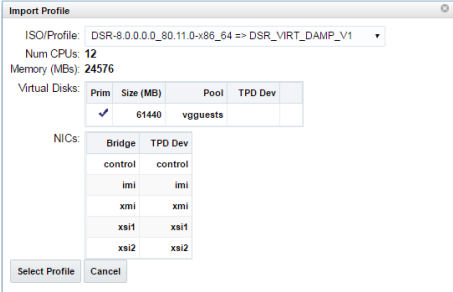
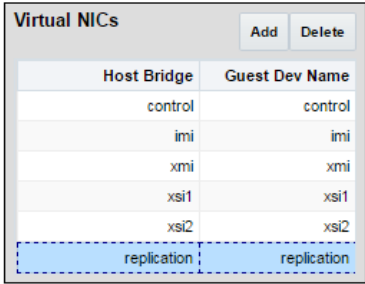
Procedure 16. Create MP/SBR/DP Guest VMs

<p>2</p> <p>☐</p>	<p>PMAC GUI: Navigate to VM Management of the Target Rack Mount Server</p>	<p>Navigate to Main Menu -> VM Management</p>  <p>Select the rack mount server from the VM Entities listing on the left side of the screen. The selected server's guest machine configuration will then be displayed in the remaining area of the window.</p>  <p>Click Create Guest</p>
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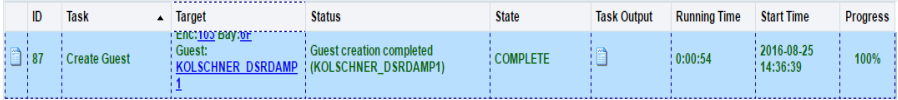
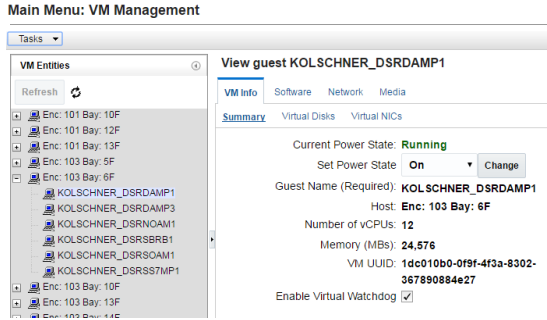
Procedure 16. Create MP/SBR/DP Guest VMs

<p>3 □</p>	<p>PMAC GUI: Configure VM Guest Parameters (Part 1)</p>	<p>For the next step, the DSR/SDS VM profile will need to be configured, use the table below to determine the VM profile based on application, hardware type, and server type.</p> <p>From the “ISO/Profile” drop-down box, select the entry that matches depending on the hardware and function that your MP/ DP VM TVOE server is running</p>																												
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #f2f2f2;"> <th style="padding: 5px;">DSR or SDS?</th> <th style="padding: 5px;">NOAM VM TVOE Hardware Type(s)</th> <th style="padding: 5px;">Function</th> <th style="padding: 5px;">Choose Profile (<Application ISO NAME>→)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center; padding: 5px;">DSR</td> <td style="text-align: center; padding: 5px;">Oracle X6-2</td> <td style="text-align: center; padding: 5px;">DA-MP</td> <td style="text-align: center; padding: 5px;">DSR_VIRT_DAMP_V1</td> </tr> <tr> <td style="text-align: center; padding: 5px;">DSR</td> <td style="text-align: center; padding: 5px;">Oracle X6-2</td> <td style="text-align: center; padding: 5px;">SS7-MP</td> <td style="text-align: center; padding: 5px;">DSR_VIRT_SS7MP_V1</td> </tr> <tr> <td style="text-align: center; padding: 5px;">DSR</td> <td style="text-align: center; padding: 5px;">Oracle X6-2</td> <td style="text-align: center; padding: 5px;">IPFE</td> <td style="text-align: center; padding: 5px;">DSR_VIRT_IPFE_V1</td> </tr> <tr> <td style="text-align: center; padding: 5px;">DSR</td> <td style="text-align: center; padding: 5px;">Oracle X6-2</td> <td style="text-align: center; padding: 5px;">Session SBR (PCA Only)</td> <td style="text-align: center; padding: 5px;">DSR_VIRT_SBR_SESSSION_V1</td> </tr> <tr> <td style="text-align: center; padding: 5px;">DSR</td> <td style="text-align: center; padding: 5px;">Oracle X6-2</td> <td style="text-align: center; padding: 5px;">Binding SBR (PCA Only)</td> <td style="text-align: center; padding: 5px;">DSR_VIRT_SBR_BINDING_V1</td> </tr> <tr> <td style="text-align: center; padding: 5px;">SDS</td> <td style="text-align: center; padding: 5px;">Oracle X6-2</td> <td style="text-align: center; padding: 5px;">DP</td> <td style="text-align: center; padding: 5px;">SDS_VIRT_DP_V1</td> </tr> </tbody> </table>			DSR or SDS?	NOAM VM TVOE Hardware Type(s)	Function	Choose Profile (<Application ISO NAME>→)	DSR	Oracle X6-2	DA-MP	DSR_VIRT_DAMP_V1	DSR	Oracle X6-2	SS7-MP	DSR_VIRT_SS7MP_V1	DSR	Oracle X6-2	IPFE	DSR_VIRT_IPFE_V1	DSR	Oracle X6-2	Session SBR (PCA Only)	DSR_VIRT_SBR_SESSSION_V1	DSR	Oracle X6-2	Binding SBR (PCA Only)	DSR_VIRT_SBR_BINDING_V1	SDS	Oracle X6-2	DP	SDS_VIRT_DP_V1
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SDS	Oracle X6-2	DP	SDS_VIRT_DP_V1																											
<p>Note: Application_ISO_NAME is the name of the DSR or SDS Application ISO to be installed on this MP, DP, or SBR</p>																														

Procedure 16. Create MP/SBR/DP Guest VMs


4	<p>PMAC GUI: Configure VM Guest Parameters (Part 2)</p>	<p>Select Import Profile</p> <p>Chose the profile based on the information from Step 3</p>  <p>Press Select Profile.</p> <p>The Guest Name (Required) field may be edited (this will not become the ultimate hostname, rather an internal tag for the VM host manager:</p> <p>Guest Name (Required): <input type="text" value="DSR_VIRT_DAMP_V1"/></p> <p>If an SBR replication interface (DSR ONLY), or additional XSI (xsi3 and/or xsi4) interfaces have been configured, add the virtual NIC by clicking Add on the following screen:</p> <p>Note: If an SBR replication network has been defined, and if there are SS7-MPs present, SS7-MPs will also need to be configured with this replication network for ComAgent replication.</p>  <p>You can edit the name, if you wish. For instance: “DSR_MP_A,” or DSR_MP_B”. (This will not become the ultimate hostname. It is just an internal tag for the VM host manager.)</p> <p>Press Create</p>
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Procedure 16. Create MP/SBR/DP Guest VMs

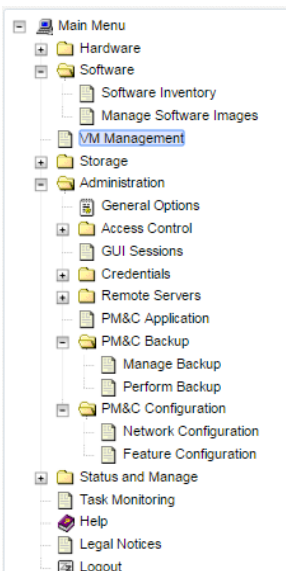
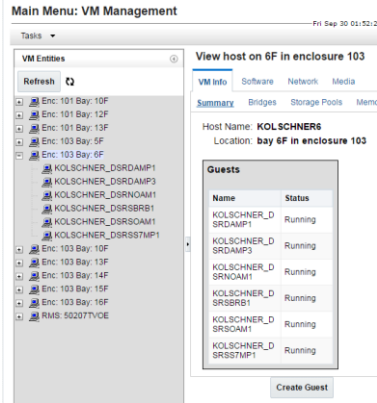
<p>5</p> <p><input type="checkbox"/></p>	<p>PMAC GUI: Wait for Guest Creation to Complete</p>	<p>Navigate to Main Menu -> Task Monitoring to monitor the progress of the guest creation task. A separate task will appear for each guest creation that you have launched.</p> <p>Wait or refresh the screen until you see that the guest creation task has completed successfully.</p>  <table border="1"> <thead> <tr> <th>ID</th> <th>Task</th> <th>Target</th> <th>Status</th> <th>State</th> <th>Task Output</th> <th>Running Time</th> <th>Start Time</th> <th>Progress</th> </tr> </thead> <tbody> <tr> <td>87</td> <td>Create Guest</td> <td>Enc: 103 Bay: 6F Guest: KOLSCHNER_DSRDAMP1</td> <td>Guest creation completed (KOLSCHNER_DSRDAMP1)</td> <td>COMPLETE</td> <td></td> <td>0:00:54</td> <td>2016-08-25 14:36:39</td> <td>100%</td> </tr> </tbody> </table>	ID	Task	Target	Status	State	Task Output	Running Time	Start Time	Progress	87	Create Guest	Enc: 103 Bay: 6F Guest: KOLSCHNER_DSRDAMP1	Guest creation completed (KOLSCHNER_DSRDAMP1)	COMPLETE		0:00:54	2016-08-25 14:36:39	100%
ID	Task	Target	Status	State	Task Output	Running Time	Start Time	Progress												
87	Create Guest	Enc: 103 Bay: 6F Guest: KOLSCHNER_DSRDAMP1	Guest creation completed (KOLSCHNER_DSRDAMP1)	COMPLETE		0:00:54	2016-08-25 14:36:39	100%												
<p>6</p> <p><input type="checkbox"/></p>	<p>PMAC GUI: Verify Guest Machine is Running</p>	<p>Navigate to Main Menu -> VM Management</p> <p>Select the TVOE server on which the guest machine was just created.</p> <p>Look at the list of guests present on the rack mount server and verify that you see a guest that matches the name you configured and that its status is “Running”.</p>  <p>Main Menu: VM Management</p> <p>View guest KOLSCHNER_DSRDAMP1</p> <p>Current Power State: Running</p> <p>Set Power State: On Change</p> <p>Guest Name (Required): KOLSCHNER_DSRDAMP1</p> <p>Host: Enc: 103 Bay: 6F</p> <p>Number of vCPUs: 12</p> <p>Memory (MBs): 24,576</p> <p>VM UUID: 1dc010b0-0f9f-4f3a-8302-367890884e27</p> <p>Enable Virtual Watchdog <input checked="" type="checkbox"/></p> <p>VM Creation for this guest is complete.</p>																		
<p>7</p> <p><input type="checkbox"/></p>	<p>PMAC GUI: Repeat for remaining MP VMs</p>	<p>Repeat from Step 2-6 for any remaining MP VMs that must be created.</p>																		

Note: [Non-HA Lab Node Installations of Oracle X6-2]: Follow procedure Appendix Q.5 instead of Procedure 17 for SDS Query Server Guest VM creation.

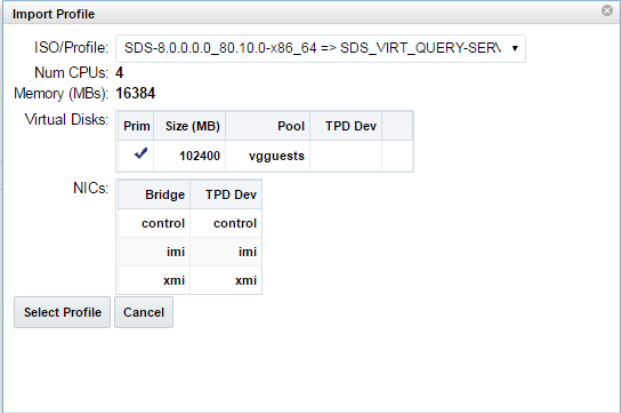
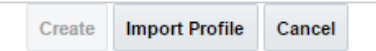
Procedure 17. Create SDS Query Server VMs

<p>S T E P #</p>	<p>This procedure will provide the steps needed to create an SDS Query Server virtual machine (referred to as a “guest”) on a TVOE server. It must be repeated for every server you wish to install.</p> <p>Prerequisite: TVOE has been installed and configured on the target RMS.</p> <p>Note: Refer to Section 4.9 for VM placement</p> <p>Check off (√) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
<p>1</p> <p><input type="checkbox"/></p>	<p>PMAC GUI: Login</p>	<p>Open web browser and enter:</p> <div style="border: 1px solid black; padding: 2px; margin: 5px 0;"> <p>https://<PMAC_Mgmt_Network_IP></p> </div> <p>Login as <i>guiadmin</i> user:</p> 

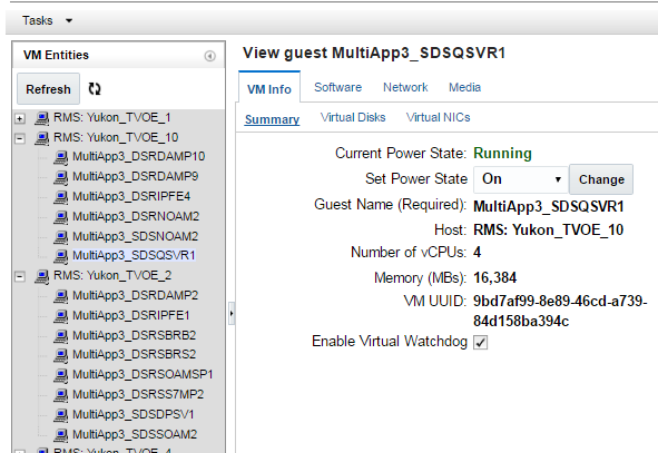
Procedure 17. Create SDS Query Server VMs

2	<p>PMAC GUI: Navigate to VM Management of the Target Rack Mount Server</p>	<p>Navigate to Main Menu -> VM Management</p>  <p>Select the rack mount server from the VM Entities listing on the left side of the screen. The selected server's guest machine configuration will then be displayed in the remaining area of the window.</p>  <p>Click Create Guest</p>
---	--	--

Procedure 17. Create SDS Query Server VMs

3	<p>PMAC GUI: Configure VM Guest Parameters</p>	<p>Select Import Profile</p>  <p>From the “ISO/Profile” drop-down box, select the entry that matches depending on the hardware and function that your MP/ DP VM TVOE server is running</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="width: 15%;">DSR or SDS?</th> <th style="width: 25%;">NOAM VM TVOE Hardware Type(s)</th> <th style="width: 25%;">Function</th> <th style="width: 35%;">Choose Profile (<Application ISO NAME>➔)</th> </tr> </thead> <tbody> <tr> <td>SDS</td> <td>Oracle X6-2</td> <td>Query Server</td> <td>SDS_VIRT_QUERY-SERVER_V1</td> </tr> </tbody> </table> <p>Note: Application_ISO_NAME is the name of the SDS Application ISO to be installed on this Query Server</p> <p>Press Select Profile.</p> <p>The Guest Name (Required) field may be edited (this will not become the ultimate hostname, rather an internal tag for the VM host manager):</p> <p>Guest Name (Required): <input style="border: 1px solid gray;" type="text" value="SDS_VIRT_QUERY-SERVER_V1"/></p> <p>You can edit the name, if you wish. For instance: “Query_Server_A,” or Query_Server_B”. (This will not become the ultimate hostname. It is just an internal tag for the VM host manager.)</p> <p>Press Create</p> 	DSR or SDS?	NOAM VM TVOE Hardware Type(s)	Function	Choose Profile (<Application ISO NAME>➔)	SDS	Oracle X6-2	Query Server	SDS_VIRT_QUERY-SERVER_V1
DSR or SDS?	NOAM VM TVOE Hardware Type(s)	Function	Choose Profile (<Application ISO NAME>➔)							
SDS	Oracle X6-2	Query Server	SDS_VIRT_QUERY-SERVER_V1							

Procedure 17. Create SDS Query Server VMs

<p>4</p> <p><input type="checkbox"/></p>	<p>PMAC GUI: Wait for Guest Creation to Complete</p>	<p>Navigate to Main Menu -> Task Monitoring to monitor the progress of the guest creation task. A separate task will appear for each guest creation that you have launched.</p> <p>Wait or refresh the screen until you see that the guest creation task has completed successfully.</p> <table border="1"> <thead> <tr> <th>ID</th> <th>Task</th> <th>Target</th> <th>Status</th> <th>State</th> <th>Task Output</th> <th>Running Time</th> <th>Start Time</th> <th>Progress</th> </tr> </thead> <tbody> <tr> <td>1890</td> <td>Create Guest</td> <td>RMS: Yukon_TVOE_10 Guest: MultiApp3_SDSQSVR1</td> <td>Guest creation completed (MultiApp3_SDSQSVR1)</td> <td>COMPLETE</td> <td></td> <td>0:00:12</td> <td>2016-08-24 06:11:02</td> <td>100%</td> </tr> </tbody> </table>	ID	Task	Target	Status	State	Task Output	Running Time	Start Time	Progress	1890	Create Guest	RMS: Yukon_TVOE_10 Guest: MultiApp3_SDSQSVR1	Guest creation completed (MultiApp3_SDSQSVR1)	COMPLETE		0:00:12	2016-08-24 06:11:02	100%
ID	Task	Target	Status	State	Task Output	Running Time	Start Time	Progress												
1890	Create Guest	RMS: Yukon_TVOE_10 Guest: MultiApp3_SDSQSVR1	Guest creation completed (MultiApp3_SDSQSVR1)	COMPLETE		0:00:12	2016-08-24 06:11:02	100%												
<p>5</p> <p><input type="checkbox"/></p>	<p>PMAC GUI: Verify Guest Machine is Running</p>	<p>Navigate to Main Menu -> VM Management</p> <p>Select the TVOE server on which the guest machine was just created.</p> <p>Look at the list of guests present on the rack mount server and verify that you see a guest that matches the name you configured and that its status is “Running”.</p> <p>Main Menu: VM Management</p>  <p>VM Creation for this guest is complete.</p>																		
<p>6</p> <p><input type="checkbox"/></p>	<p>PMAC GUI: Repeat for remaining Query Server VMs</p>	<p>Repeat from Step 2 for any remaining Query Server VMs that must be created.</p>																		

4.12 CPU Pinning (Oracle X6-2)

Note: [Non-HA Lab Node Installations of Oracle X6-2]: Skip this Section

Procedure 18. CPU Pinning (Oracle X6-2)

S T E P #	<p>This procedure describes steps needed to configure VM CPU socket pinning on each TVOE host to optimize performance.</p> <p>Prerequisite: VM Guests creation has been completed.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
1 <input type="checkbox"/>	Obtain CPU Socket Pinning Information	Obtain CPU socket pinning information by referring to the data gathered in Section 4.9
2 <input type="checkbox"/>	TVOE Host: Login	Establish an SSH session to the TVOE host, login as <i>admusr</i> .

Procedure 18. CPU Pinning (Oracle X6-2)


<p>3</p> <p>□</p>	<p>TVOE Host: Execute the CPU Pinning Script</p>	<p>Execute the following commands to allocate CPU sets for EACH (including the PMAC(s)) VM configured:</p> <pre style="border: 1px solid black; padding: 5px;">\$ cd /var/TKLC/upgrade</pre> <p>Print the current CPU pinning allocations:</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo ./cpuset.py --show</pre> <p>Expected output:</p> <pre style="border: 1px solid black; padding: 5px;">[admsr@Discovery-TVOE-4 ~]\$ sudo ./cpuset.py --show VM Domain Name vcpus cpuset numa state ----- Discovery-IPFEA2 4 None None running Discovery-DAMP9 12 None None running Discovery-DAMP8 12 None None running Discovery-DAMP12 12 None None running Discovery-DAMP11 12 None None running NUMA node 0 Free CPUs: count = 32 [2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53] NUMA node 1 Free CPUs: count = 36 [18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71]</pre> <p>Execute the following to allocate CPU pinning on EACH VM:</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo ./cpuset.py --set=<VM Name> --numa=<0/1></pre> <p>Example:</p> <pre style="border: 1px solid black; padding: 5px;">[admsr@Discovery-TVOE-4 ~]\$ sudo ./cpuset.py -set=Discovery-IPFEA2 -numa=0 Successful. Domain Discovery-IPFEA2 must be restarted for changes to take affect [admsr@Discovery-TVOE-4 ~]\$ sudo ./cpuset.py --show VM Domain Name vcpus cpuset numa state ----- Discovery-IPFEA2 4 2-3,38-39 0 running Discovery-DAMP9 12 None None running Discovery-DAMP8 12 None None running Discovery-DAMP12 12 None None running Discovery-DAMP11 12 None None running NUMA node 0 Free CPUs: count = 28 [4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53] NUMA node 1 Free CPUs: count = 36 [18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71]</pre> <p>Note: If deploying IDIH, make note of the CPU pinning allocations, as the CPU pinning will be done as part of IDIH configuration (Section 4.16)</p> <p>Note: To clear CPU pinning, execute the following guest on EACH VM as necessary:</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo ./cpuset.py --clear=<VM NAME></pre> <p>Example:</p> <pre style="border: 1px solid black; padding: 5px;">[admsr@Sterling-TVOE-4 admsr]# sudo ./cpuset.py -clear= Sterling2So-DA-MP4</pre>
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Procedure 18. CPU Pinning (Oracle X6-2)

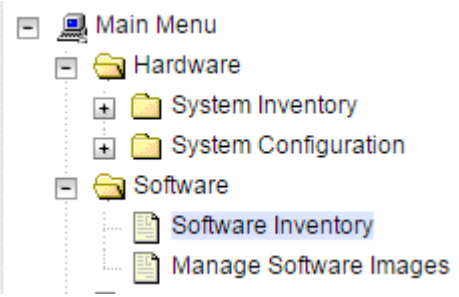
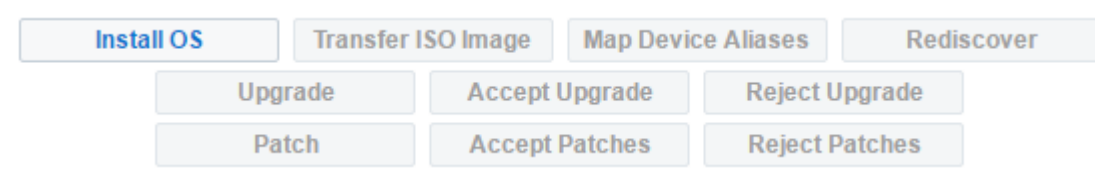
<p>4 <input type="checkbox"/></p>	<p>TVOE Host: Restart</p>	<p>Restart the TVOE host by executing the following command:</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo init 6</pre>
<p>5 <input type="checkbox"/></p>	<p>TVOE Host: Verify CPU Pinning</p>	<p>Once the TVOE host is restarted, establish an SSH session to the TVOE Host, login as admusr.</p> <p>Verify the CPU pinning is allocated by executing the following commands:</p> <pre style="border: 1px solid black; padding: 5px;">\$ cd /var/TKLC/upgrade</pre> <p>Print the current CPU pinning allocations:</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo ./cpuset.py -show</pre> <p>Expected output:</p> <pre style="border: 1px solid black; padding: 5px;">[admusr@Discovery-TVOE-4 ~]\$ sudo ./cpuset.py -set=Discovery-DAMP8 -cpuset=4-9,40-45 Successful. Domain Discovery-DAMP8 must be restarted for changes to take affect [admusr@Discovery-TVOE-4 ~]\$ sudo ./cpuset.py --show VM Domain Name vcpus cpuset numa state ----- Discovery-IPFEA2 4 2-3,38-39 0 running Discovery-DAMP9 12 18-23,54-59 1 running Discovery-DAMP8 12 4-9,40-45 0 running Discovery-DAMP12 12 None None running Discovery-DAMP11 12 None None running NUMA node 0 Free CPUs: count = 16 [10, 11, 12, 13, 14, 15, 16, 17, 46, 47, 48, 49, 50, 51, 52, 53] NUMA node 1 Free CPUs: count = 24 [24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71]</pre>
<p>6 <input type="checkbox"/></p>	<p>Repeat for Each TVOE HOST</p>	<p>Repeat this procedure for each TVOE host.</p>

4.13 Install Software on Virtual Machines

Procedure 19. IPM VMs

S T E P #	<p>This procedure will provide the steps to install TPD on rack mount server guest VMs.</p> <p>Prerequisite: VM Guests creation has been completed.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>
1 <input type="checkbox"/>	<p>PMAC GUI: Login</p> <p>Open web browser and enter:</p> <div style="border: 1px solid black; padding: 2px; margin: 5px 0;"> <p><a href="https://<PMAC Mgmt Network IP>">https://<PMAC Mgmt Network IP></p> </div> <p>Login as <i>guiadmin</i> user:</p> 


Procedure 19. IPM VMs

<p>2</p> <p>PMAC GUI:</p> <p>Select Servers for OS install</p>	<p>Navigate to Software -> Software Inventory.</p>  <p>Select the VM servers (<i>DSR/SDS NOAMs, SOAMs, SBRS, IPFEs, MPs, Etc.</i>) you want to IPM. If you want to install the same OS image to more than one server, you may select multiple servers by clicking multiple rows individually. Selected rows will be highlighted in green.</p> <p>Note: VM's will have the text "Guest: <VM_GUEST_NAME>" underneath the physical RMS that hosts them.</p> <p>Enc:101 Bay:4E</p> <p>Click on Install OS</p> 																																										
<p>3</p> <p>PMAC GUI:</p> <p>Initiate OS Install</p>	<p>The left side of this screen shows the servers to be affected by this TPD OS installation. From the list of available bootable images on the right side of the screen, select one OS image to install to all of the selected servers.</p> <p>Software Install - Select Image Fri Sep 30 04:32:24 2016</p> <p>Tasks ▾</p> <table border="1"> <thead> <tr> <th colspan="2">Targets</th> <th colspan="4">Select Image</th> </tr> <tr> <th>Entity</th> <th>Status</th> <th>Image Name</th> <th>Type</th> <th>Architecture</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Enc:101 Bay:4E</td> <td></td> <td>TPD.Install-6.7.1.0.0_84.28.0-OracleLinux6.6-x86_64</td> <td>Bootable</td> <td>x86_64</td> <td>TPD 84.28 for mutant build sanity</td> </tr> <tr> <td></td> <td></td> <td>TPD.Install-7.2.0.0.0_88.23.0-OracleLinux6.7-x86_64</td> <td>Bootable</td> <td>x86_64</td> <td></td> </tr> <tr> <td></td> <td></td> <td>TPD.Install-7.2.0.0.0_88.24.0-OracleLinux6.7-x86_64</td> <td>Bootable</td> <td>x86_64</td> <td></td> </tr> <tr> <td></td> <td></td> <td>TPD.Install-7.2.0.0.0_88.25.0-OracleLinux6.7-x86_64</td> <td>Bootable</td> <td>x86_64</td> <td>TPD 88.25</td> </tr> <tr> <td></td> <td></td> <td>TVOE-3.2.0.0.0_88.24.0-x86_64</td> <td>Bootable</td> <td>x86_64</td> <td></td> </tr> </tbody> </table> <p style="text-align: center;">Supply Software Install Arguments (Optional)</p> <div style="border: 1px solid #ccc; height: 20px; width: 100%;"></div> <p style="text-align: right;"> <input type="button" value="Start Software Install"/> <input type="button" value="Back"/> </p> <p>Click on Start Software Install, a confirmation window will pop up, click on Ok to proceed with the install.</p>	Targets		Select Image				Entity	Status	Image Name	Type	Architecture	Description	Enc:101 Bay:4E		TPD.Install-6.7.1.0.0_84.28.0-OracleLinux6.6-x86_64	Bootable	x86_64	TPD 84.28 for mutant build sanity			TPD.Install-7.2.0.0.0_88.23.0-OracleLinux6.7-x86_64	Bootable	x86_64				TPD.Install-7.2.0.0.0_88.24.0-OracleLinux6.7-x86_64	Bootable	x86_64				TPD.Install-7.2.0.0.0_88.25.0-OracleLinux6.7-x86_64	Bootable	x86_64	TPD 88.25			TVOE-3.2.0.0.0_88.24.0-x86_64	Bootable	x86_64	
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Entity	Status	Image Name	Type	Architecture	Description																																						
Enc:101 Bay:4E		TPD.Install-6.7.1.0.0_84.28.0-OracleLinux6.6-x86_64	Bootable	x86_64	TPD 84.28 for mutant build sanity																																						
		TPD.Install-7.2.0.0.0_88.23.0-OracleLinux6.7-x86_64	Bootable	x86_64																																							
		TPD.Install-7.2.0.0.0_88.24.0-OracleLinux6.7-x86_64	Bootable	x86_64																																							
		TPD.Install-7.2.0.0.0_88.25.0-OracleLinux6.7-x86_64	Bootable	x86_64	TPD 88.25																																						
		TVOE-3.2.0.0.0_88.24.0-x86_64	Bootable	x86_64																																							

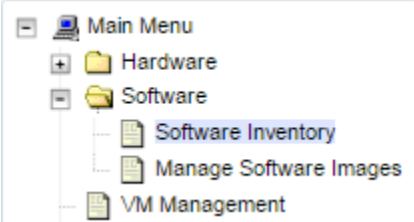

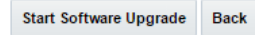
Procedure 19. IPM VMs

<p>4</p> <p><input type="checkbox"/></p>	<p>PMAC GUI:</p> <p>Monitor OS Install</p>	<p>Navigate to Main Menu -> Task Monitoring to monitor the progress of the OS Installation background task. A separate task will appear for each VM affected.</p> <table border="1"> <tr> <td></td> <td>1566</td> <td>Install OS</td> <td>RMS: pc5010441 Guest: Brains_DSRNOAM1</td> <td>Done: TPD.install-7.3.0.0.0_88.27.0-OracleLinux6.8-x86_64</td> <td>COMPLETE</td> <td>N/A</td> <td>0:14:00</td> <td>2016-09-15 15:21:48</td> <td>100%</td> </tr> <tr> <td></td> <td>1565</td> <td>Install OS</td> <td>RMS: pc5010439 Guest: Brains_DSRNOAM2</td> <td>Done: TPD.install-7.3.0.0.0_88.27.0-OracleLinux6.8-x86_64</td> <td>COMPLETE</td> <td>N/A</td> <td>0:14:13</td> <td>2016-09-15 15:21:38</td> <td>100%</td> </tr> <tr> <td></td> <td>1541</td> <td>Install OS</td> <td>RMS: pc5010441 Guest: Brains_DSRNOAM1</td> <td>Done: TPD.install-7.3.0.0.0_88.27.0-OracleLinux6.8-x86_64</td> <td>COMPLETE</td> <td>N/A</td> <td>0:13:59</td> <td>2016-09-15 13:49:25</td> <td>100%</td> </tr> <tr> <td></td> <td>1540</td> <td>Install OS</td> <td>RMS: pc5010439 Guest: Brains_DSRNOAM2</td> <td>Done: TPD.install-7.3.0.0.0_88.27.0-OracleLinux6.8-x86_64</td> <td>COMPLETE</td> <td>N/A</td> <td>0:14:28</td> <td>2016-09-15 13:49:05</td> <td>100%</td> </tr> </table> <p>When the installation is complete, the task will change to green and the Progress bar will indicate "100%".</p>		1566	Install OS	RMS: pc5010441 Guest: Brains_DSRNOAM1	Done: TPD.install-7.3.0.0.0_88.27.0-OracleLinux6.8-x86_64	COMPLETE	N/A	0:14:00	2016-09-15 15:21:48	100%		1565	Install OS	RMS: pc5010439 Guest: Brains_DSRNOAM2	Done: TPD.install-7.3.0.0.0_88.27.0-OracleLinux6.8-x86_64	COMPLETE	N/A	0:14:13	2016-09-15 15:21:38	100%		1541	Install OS	RMS: pc5010441 Guest: Brains_DSRNOAM1	Done: TPD.install-7.3.0.0.0_88.27.0-OracleLinux6.8-x86_64	COMPLETE	N/A	0:13:59	2016-09-15 13:49:25	100%		1540	Install OS	RMS: pc5010439 Guest: Brains_DSRNOAM2	Done: TPD.install-7.3.0.0.0_88.27.0-OracleLinux6.8-x86_64	COMPLETE	N/A	0:14:28	2016-09-15 13:49:05	100%
	1566	Install OS	RMS: pc5010441 Guest: Brains_DSRNOAM1	Done: TPD.install-7.3.0.0.0_88.27.0-OracleLinux6.8-x86_64	COMPLETE	N/A	0:14:00	2016-09-15 15:21:48	100%																																	
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Procedure 20. Install the DSR and SDS (Oracle X6-2) Application Software on the VMs

<p>S T E P #</p>	<p>This procedure will provide the steps to install DSR and SDS (Oracle X6-2) on rack mount server guest VMs.</p> <p>Prerequisite: Servers have been IPM'ed with TPD.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>
<p>1 <input type="checkbox"/></p>	<p>PMAC GUI: Login</p> <p>Open web browser and enter:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>https://<PMAC Mgmt Network IP></p> </div> <p>Login as guiadmin user:</p> 

Procedure 20. Install the DSR and SDS (Oracle X6-2) Application Software on the VMs

<p>2</p> <p><input type="checkbox"/></p>	<p>PMAC GUI: Select Servers for DSR/SDS Application Install</p>	<p>Navigate to Software -> Software Inventory.</p>  <p>Select the VM servers (<i>DSR/SDS NOAMs, SOAMs, SBRS, IPFEs, MPs, Etc.</i>) you want to install with DSR and SDS (Oracle X6-2). If you want to install the same DSR/SDS image to more than one server, you may select multiple servers by clicking multiple rows individually. Selected rows will be highlighted in green.</p> <p>Note: VM's will have the text "Guest: <VM_GUEST_NAME>" underneath the RMS that hosts them.</p> <table border="1"> <thead> <tr> <th>Identity</th> <th>IP Address</th> <th>Hostname</th> <th>Platform Name</th> <th>Platform Version</th> <th>Application Name</th> <th>Application Version</th> <th>Designation</th> <th>Function</th> </tr> </thead> <tbody> <tr> <td>RMS: pc5010439</td> <td>192.168.1.32</td> <td>5010439-TV0E</td> <td>TPD (x86_64)</td> <td>7.2.0.0.0-88.23.0</td> <td>TV0E</td> <td>3.2.0.0.0_88.23.0</td> <td></td> <td></td> </tr> </tbody> </table> <p>Click on Upgrade</p> 	Identity	IP Address	Hostname	Platform Name	Platform Version	Application Name	Application Version	Designation	Function	RMS: pc5010439	192.168.1.32	5010439-TV0E	TPD (x86_64)	7.2.0.0.0-88.23.0	TV0E	3.2.0.0.0_88.23.0																				
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<p>3</p> <p><input type="checkbox"/></p>	<p>PMAC GUI: Initiate DSR/SDS Application Install</p>	<p>The left side of this screen shows the servers to be affected by this DSR/SDS application installation. Select the DSR/SDS image to install to all of the selected servers.</p> <div style="display: flex; justify-content: space-between;"> <div> <p>Targets</p> <table border="1"> <thead> <tr> <th>Entity</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td>RMS: pc5010439</td> <td></td> </tr> </tbody> </table> </div> <div> <p>Select Image</p> <table border="1"> <thead> <tr> <th>Image Name</th> <th>Type</th> <th>Architecture</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>DSR-8.0.0.0.0_80.0.1-x86_64</td> <td>Upgrade</td> <td>x86_64</td> <td></td> </tr> <tr> <td>DSR-8.0.0.0.0_80.10.0-x86_64</td> <td>Upgrade</td> <td>x86_64</td> <td></td> </tr> <tr> <td>DSR-8.0.0.0.0_80.11.0-x86_64</td> <td>Upgrade</td> <td>x86_64</td> <td></td> </tr> <tr> <td>DSR-8.0.0.0.0_80.11.1-x86_64</td> <td>Upgrade</td> <td>x86_64</td> <td></td> </tr> <tr> <td>SDS-8.0.0.0.0_80.5.0-x86_64</td> <td>Upgrade</td> <td>x86_64</td> <td></td> </tr> <tr> <td>TPD install-7.2.0.0.0_88.23.0-OracleLinux6.7-x86_64</td> <td>Bootable</td> <td>x86_64</td> <td></td> </tr> <tr> <td>TPD install.7.3.0.0.0_88.27.0-OracleLinux6.8</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> </div> </div> <p>Click on Start Software Upgrade, a confirmation window will pop up, click on Ok to proceed with the install.</p> 	Entity	Status	RMS: pc5010439		Image Name	Type	Architecture	Description	DSR-8.0.0.0.0_80.0.1-x86_64	Upgrade	x86_64		DSR-8.0.0.0.0_80.10.0-x86_64	Upgrade	x86_64		DSR-8.0.0.0.0_80.11.0-x86_64	Upgrade	x86_64		DSR-8.0.0.0.0_80.11.1-x86_64	Upgrade	x86_64		SDS-8.0.0.0.0_80.5.0-x86_64	Upgrade	x86_64		TPD install-7.2.0.0.0_88.23.0-OracleLinux6.7-x86_64	Bootable	x86_64		TPD install.7.3.0.0.0_88.27.0-OracleLinux6.8			
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<p>4</p> <p><input type="checkbox"/></p>	<p>PMAC GUI: Monitor DSR/SDS Application Install</p>	<p>Navigate to Main Menu -> Task Monitoring to monitor the progress of the OS Installation background task. A separate task will appear for each VM affected.</p> <table border="1"> <thead> <tr> <th>ID</th> <th>Task</th> <th>Target</th> <th>Status</th> <th>State</th> <th>Task Output</th> <th>Running Time</th> <th>Start Time</th> <th>Progress</th> </tr> </thead> <tbody> <tr> <td>1568</td> <td>Upgrade</td> <td>RMS: pc5010439 Guest: Brains_DSRNOAM2</td> <td>Success</td> <td>COMPLETE</td> <td></td> <td>0:10:05</td> <td>2016-09-15 15:37:26</td> <td>100%</td> </tr> </tbody> </table> <p>When the installation is complete, the task will change to green and the Progress bar will indicate "100%".</p>	ID	Task	Target	Status	State	Task Output	Running Time	Start Time	Progress	1568	Upgrade	RMS: pc5010439 Guest: Brains_DSRNOAM2	Success	COMPLETE		0:10:05	2016-09-15 15:37:26	100%																		
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1568	Upgrade	RMS: pc5010439 Guest: Brains_DSRNOAM2	Success	COMPLETE		0:10:05	2016-09-15 15:37:26	100%																														

Procedure 20. Install the DSR and SDS (Oracle X6-2) Application Software on the VMs

<p>5</p> <p><input type="checkbox"/></p>	<p>PMAC GUI: Accept/Reject Upgrade</p>	<p>Navigate to Software -> Software Inventory to accept the software installation. Select all the servers on which the application has been installed in the previous steps and click on Accept Upgrade as shown below.</p> <table border="1"> <thead> <tr> <th>Identity</th> <th>IP Address</th> <th>Hostname</th> <th>Platform Name</th> <th>Platform Version</th> <th>Application Name</th> <th>Application Version</th> <th>Designation</th> <th>Function</th> </tr> </thead> <tbody> <tr> <td>RMS: pc5010439</td> <td>192.168.1.194</td> <td>ZombieSDSSOAM2</td> <td>TPD (x86_64)</td> <td>7.2.0.0.0-88.21.0</td> <td>SDS</td> <td>8.0.0.0.0-80.11.1 Pending Upgrade Acc/Rej</td> <td></td> <td></td> </tr> <tr> <td>RMS: pc5010441</td> <td>192.168.1.2</td> <td>5010441-TV0E</td> <td>TPD (x86_64)</td> <td>7.2.0.0.0-88.23.0</td> <td>TV0E</td> <td>3.2.0.0.0_88.23.0</td> <td></td> <td></td> </tr> </tbody> </table> <p>Note: To accept upgrade on multiple servers at once, hold the Ctrl button while selecting the servers.</p> <div style="border: 1px solid gray; padding: 5px; text-align: center;"> Install OS Transfer ISO Image Map Device Aliases Rediscover Upgrade Accept Upgrade Reject Upgrade </div> <p>Note: On some Rack mount servers, the GUI may not provide the option to accept upgrade. So first verify in “task monitoring” that the upgrade is not in progress, then manually accept or reject the upgrade by ssh’ing into the server and execute:</p> <ul style="list-style-type: none"> To accept: <div style="border: 1px solid gray; padding: 2px;"> <pre>\$ sudo /var/TKLC/backout/accept</pre> </div> <p>Note: To accept upgrade on multiple servers at once, hold the Ctrl button while selecting the servers.</p> <p>Note: Once the upgrade has been accepted, the App version will change from “Pending Acc/Rej” to the version number of the application.</p>	Identity	IP Address	Hostname	Platform Name	Platform Version	Application Name	Application Version	Designation	Function	RMS: pc5010439	192.168.1.194	ZombieSDSSOAM2	TPD (x86_64)	7.2.0.0.0-88.21.0	SDS	8.0.0.0.0-80.11.1 Pending Upgrade Acc/Rej			RMS: pc5010441	192.168.1.2	5010441-TV0E	TPD (x86_64)	7.2.0.0.0-88.23.0	TV0E	3.2.0.0.0_88.23.0		
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<p>6</p> <p><input type="checkbox"/></p>	<p>PMAC GUI: Repeat</p>	<p>If steps 2-5 were used to install DSR, repeat these steps for SDS.</p>																											


4.14 Application Configuration: DSR

4.15.1 DSR Configuration: NOAMs

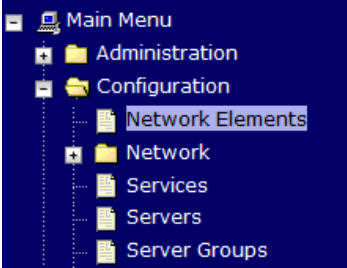
Procedure 21. Configure First NOAM NE and Server

S T E P #	<p>This procedure will provide the steps to configure the First NOAM server.</p> <p>Note: SDS NOAM configuration only applicable on Oracle X6-2</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>																												
1 <input type="checkbox"/>	<p>Save the NOAM Network Data to an XML file</p>	<p>Using a text editor, create a NOAM Network Element file that describes the networking of the target install environment of your first NOAM server.</p> <p>Select an appropriate file name and save the file to a known location on your computer.</p> <p>A suggested filename format is “Appname_Nename_NetworkElement.XML”, so for example a DSR2 NOAM network element XML file would have a filename “DSR2_NOAM_NetworkElement.xml”.</p> <p>Alternatively, you can update the sample DSR Network Element file. It can be found on the management server at:</p> <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 10px auto;"> <p><code>/usr/TKLC/smac/etc/SAMPLE-NetworkElement.xml</code></p> </div> <p>A sample XML file can also be found in Appendix J: Sample Network Element.</p> <p>Note: The following limitations apply when specifying a Network Element name: A 1-32-character string. Valid characters are alphanumeric and underscore. Must contain at least one alpha and must not start with a digit.</p>																											
2 <input type="checkbox"/>	<p>Exchange SSH keys between PMAC and first NOAM server</p>	<p>Use the PMAC GUI to determine the Control Network IP address of the server that is to be the first NOAM server. From the PMAC GUI, navigate to Main Menu -> Software -> Software Inventory.</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: left;"> <thead> <tr> <th>Identity</th> <th>IP Address</th> <th>Hostname</th> <th>Platform Name</th> <th>Platform Version</th> <th>Application Name</th> <th>Application Version</th> <th>Designation</th> <th>Function</th> </tr> </thead> <tbody> <tr> <td>RMS: ps5010439</td> <td>192.168.1.56</td> <td>hostname0b42b7c4eb5a</td> <td>TPD (x86_64)</td> <td>7.3.0.0.0-88.27.0</td> <td>DSR</td> <td>8.0.0.0.0-80.11.1</td> <td></td> <td></td> </tr> <tr> <td>Guest: Brans DSRNOAM</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>Note the IP address for the first NOAM server.</p> <p>Login to the PMAC terminal as the admusr.</p> <p>From a terminal window connection on the PMAC as the admusr user, exchange SSH keys for admusr between the PMAC and the 1st NOAM server using the keyexchange utility, using the Control network IP address for the NOAM server. When prompted for the password, enter the password for the admusr user of the NOAM server.</p> <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 10px auto;"> <p><code>\$ keyexchange admusr@<NO1_Control_IP Address></code></p> </div>	Identity	IP Address	Hostname	Platform Name	Platform Version	Application Name	Application Version	Designation	Function	RMS: ps5010439	192.168.1.56	hostname0b42b7c4eb5a	TPD (x86_64)	7.3.0.0.0-88.27.0	DSR	8.0.0.0.0-80.11.1			Guest: Brans DSRNOAM								
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Guest: Brans DSRNOAM																													

Procedure 21. Configure First NOAM NE and Server

<p>3 <input type="checkbox"/></p>	<p>Connect a Web Browser to the NOAM GUI</p>	<p>Use SSH Tunneling through the PMAC to connect the laptop to the NOAM server.</p> <p>If you are using tunneling, then you can skip the rest of this step and instead complete the instructions in Appendix K: Accessing the NOAM GUI using SSH Tunneling with Putty (for using Putty) Appendix L: Accessing the NOAM GUI using SSH Tunneling with OpenSSH for Windows (for OpenSSH). OpenSSH is recommended if you are using a Windows 7 PC.</p> <p>Enable that laptop Ethernet port to acquire a DHCP address and then access the NOAM-“A” GUI via its control IP address.</p>
<p>4 <input type="checkbox"/></p>	<p>NOAM GUI: Login</p>	<p>Login to the NOAM GUI as the <i>guiadmin</i> user:</p> 

Procedure 21. Configure First NOAM NE and Server

5	<p>Create the NOAM Network Element using the XML File</p>	<p>Navigate to Main Menu->Configuration->Network Elements</p>  <p>Select the Browse button, and enter the pathname of the NOAM network XML file.</p> <p>Select the Upload File button to upload the XML file and configure the NOAM Network Element.</p> <p>To create a new Network Element, upload a valid configuration file:</p> <p><input type="button" value="Browse..."/> No file selected. <input type="button" value="Upload File"/></p> <p><input type="button" value="Insert"/> <input type="button" value="Delete"/> <input type="button" value="Export"/> <input type="button" value="Report"/></p> <p>Once the data has been uploaded, you should see a folder appear with the name of your network element. Click on this folder and you will get a drop-down which describes the individual networks that are now configured:</p> <table border="1"> <thead> <tr> <th colspan="5">Network Element</th> </tr> <tr> <td colspan="5">NO_9006005</td> </tr> <tr> <th>Network Name</th> <th>Network Address</th> <th>Netmask</th> <th>VLAN ID</th> <th>Gateway IP Address</th> </tr> </thead> <tbody> <tr> <td>INTERNALXMI</td> <td>10.240.10.32</td> <td>255.255.255.224</td> <td>3</td> <td>10.240.10.35</td> </tr> <tr> <td>INTERNALIMI</td> <td>10.240.10.0</td> <td>255.255.255.224</td> <td>4</td> <td>10.240.10.3</td> </tr> </tbody> </table>	Network Element					NO_9006005					Network Name	Network Address	Netmask	VLAN ID	Gateway IP Address	INTERNALXMI	10.240.10.32	255.255.255.224	3	10.240.10.35	INTERNALIMI	10.240.10.0	255.255.255.224	4	10.240.10.3
Network Element																											
NO_9006005																											
Network Name	Network Address	Netmask	VLAN ID	Gateway IP Address																							
INTERNALXMI	10.240.10.32	255.255.255.224	3	10.240.10.35																							
INTERNALIMI	10.240.10.0	255.255.255.224	4	10.240.10.3																							

Procedure 21. Configure First NOAM NE and Server

6	<p>Map Services to Networks</p>	<p>Navigate to Main Menu ->Configuration-> Services.</p> <p>Select the Edit button and set the Services as shown in the table below:</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="width: 33%;">Name</th> <th style="width: 33%;">Intra-NE Network</th> <th style="width: 33%;">Inter-NE Network</th> </tr> </thead> <tbody> <tr> <td>OAM</td> <td><IMI Network></td> <td><XMI Network></td> </tr> <tr> <td>Replication</td> <td><IMI Network></td> <td><XMI Network></td> </tr> <tr> <td>Signaling</td> <td>Unspecified</td> <td>Unspecified</td> </tr> <tr> <td>HA_Secondary</td> <td>Unspecified</td> <td>Unspecified</td> </tr> <tr> <td>HA_MP_Secondary</td> <td>Unspecified</td> <td>Unspecified</td> </tr> <tr> <td>Replication_MP</td> <td><IMI Network></td> <td>Unspecified</td> </tr> <tr> <td>ComAgent</td> <td><IMI Network></td> <td>Unspecified</td> </tr> </tbody> </table> <p>For example, if your IMI network is named IMI and your XMI network is named XMI, then your services should config should look like the following:</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="width: 33%;">Name</th> <th style="width: 33%;">Intra-NE Network</th> <th style="width: 33%;">Inter-NE Network</th> </tr> </thead> <tbody> <tr> <td>OAM</td> <td>IMI ▾</td> <td>XMI ▾</td> </tr> <tr> <td>Replication</td> <td>IMI ▾</td> <td>XMI ▾</td> </tr> <tr> <td>Signaling</td> <td>Unspecified ▾</td> <td>Unspecified ▾</td> </tr> <tr> <td>HA_Secondary</td> <td>Unspecified ▾</td> <td>Unspecified ▾</td> </tr> <tr> <td>HA_MP_Secondary</td> <td>Unspecified ▾</td> <td>Unspecified ▾</td> </tr> <tr> <td>Replication_MP</td> <td>IMI ▾</td> <td>Unspecified ▾</td> </tr> <tr> <td>ComAgent</td> <td>IMI ▾</td> <td>Unspecified ▾</td> </tr> </tbody> </table> <p>Select the Ok button to apply the Service-to-Network selections.</p>	Name	Intra-NE Network	Inter-NE Network	OAM	<IMI Network>	<XMI Network>	Replication	<IMI Network>	<XMI Network>	Signaling	Unspecified	Unspecified	HA_Secondary	Unspecified	Unspecified	HA_MP_Secondary	Unspecified	Unspecified	Replication_MP	<IMI Network>	Unspecified	ComAgent	<IMI Network>	Unspecified	Name	Intra-NE Network	Inter-NE Network	OAM	IMI ▾	XMI ▾	Replication	IMI ▾	XMI ▾	Signaling	Unspecified ▾	Unspecified ▾	HA_Secondary	Unspecified ▾	Unspecified ▾	HA_MP_Secondary	Unspecified ▾	Unspecified ▾	Replication_MP	IMI ▾	Unspecified ▾	ComAgent	IMI ▾	Unspecified ▾
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Procedure 21. Configure First NOAM NE and Server

<p>7</p> <p><input type="checkbox"/></p>	<p>Insert the 1st NOAM server</p>	<p>Navigate to Main Menu -> Configuration -> Servers.</p> <p>Select the Insert button to insert the new NOAM server into servers table.</p> <table border="1"> <thead> <tr> <th>Attribute</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Hostname</td> <td>NO-Server1 *</td> <td>Unique name for the server. [Default string. Valid characters are alphanumeric with an alphanumeric and end with a period]</td> </tr> <tr> <td>Role</td> <td>NETWORK OAM&P *</td> <td>Select the function of the server</td> </tr> <tr> <td>System ID</td> <td>NO-Server1</td> <td>System ID for the NOAMP or SOA. 64-character string. Valid value is alphanumeric</td> </tr> <tr> <td>Hardware Profile</td> <td>DSR TVOE Guest</td> <td>Hardware profile of the server</td> </tr> <tr> <td>Network Element Name</td> <td>NOAMMEMORYTEST *</td> <td>Select the network element</td> </tr> <tr> <td>Location</td> <td></td> <td>Location description [Default = "", value is any text string.]</td> </tr> </tbody> </table> <p>Fill in the fields as follows:</p> <p>Hostname: <Hostname></p> <p>Role: NETWORK OAM&P</p> <p>System ID: <Site System ID></p> <p>Hardware Profile: DSR TVOE Guest</p> <p>Network Element Name: [Choose NE from Drop Down Box]</p> <p>The network interface fields will now become available with selection choices based on the chosen hardware profile and network element</p> <table border="1"> <thead> <tr> <th colspan="3">Interfaces:</th> </tr> <tr> <th>Network</th> <th>IP Address</th> <th>Interface</th> </tr> </thead> <tbody> <tr> <td>INTERNALXMI (10.240.84.128/25)</td> <td>10.240.84.155</td> <td>xmi <input type="checkbox"/> VLAN (3)</td> </tr> <tr> <td>INTERNALIMI (10.240.85.0/26)</td> <td>10.240.85.10</td> <td>imi <input type="checkbox"/> VLAN (4)</td> </tr> </tbody> </table> <p>Ok Apply Cancel</p> <p>Fill in the server IP addresses for the XMI network. Select xmi for the interface. Leave the "VLAN" checkbox unchecked.</p> <p>Fill in the server IP addresses for the IMI network. Select imi for the interface. Leave the "VLAN" checkbox unchecked.</p> <p>Next, add the following NTP servers:</p> <table border="1"> <thead> <tr> <th>NTP Server</th> <th>Preferred?</th> </tr> </thead> <tbody> <tr> <td><1st-NOAM-TVOE-IP-Address></td> <td>Yes</td> </tr> </tbody> </table> <p>Select the Ok button when you have completed entering all the server data.</p>	Attribute	Value	Description	Hostname	NO-Server1 *	Unique name for the server. [Default string. Valid characters are alphanumeric with an alphanumeric and end with a period]	Role	NETWORK OAM&P *	Select the function of the server	System ID	NO-Server1	System ID for the NOAMP or SOA. 64-character string. Valid value is alphanumeric	Hardware Profile	DSR TVOE Guest	Hardware profile of the server	Network Element Name	NOAMMEMORYTEST *	Select the network element	Location		Location description [Default = "", value is any text string.]	Interfaces:			Network	IP Address	Interface	INTERNALXMI (10.240.84.128/25)	10.240.84.155	xmi <input type="checkbox"/> VLAN (3)	INTERNALIMI (10.240.85.0/26)	10.240.85.10	imi <input type="checkbox"/> VLAN (4)	NTP Server	Preferred?	<1st-NOAM-TVOE-IP-Address>	Yes
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<p>8</p> <p><input type="checkbox"/></p>	<p>Export the Initial Configuration</p>	<p>Navigate to Main Menu -> Configuration -> Servers.</p> <p>From the GUI screen, select the NOAM server and then select Export to generate the initial configuration data for that server.</p> <p>Insert Edit Delete Export Report</p>																																					

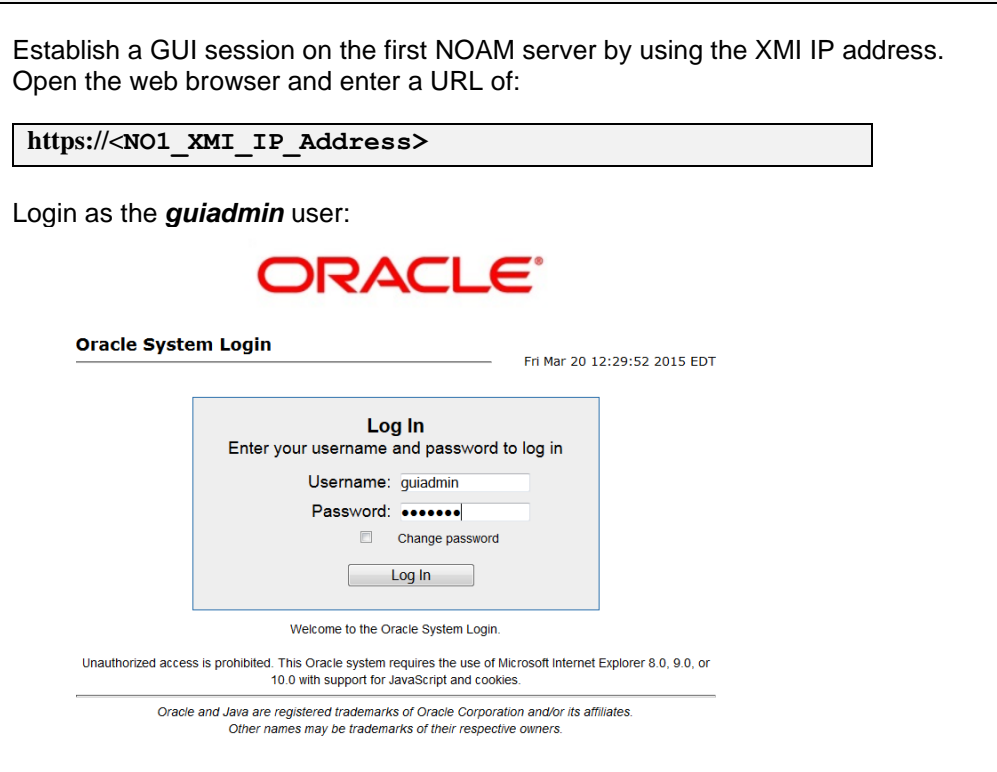
Procedure 21. Configure First NOAM NE and Server

<p>9</p> <p><input type="checkbox"/></p>	<p>NOAM iLO: Copy Configuration File to 1st NOAM Server</p>	<p>Obtain a terminal window to the 1st NOAM server, logging in as the admusr user. (See Appendix C: TVOE iLO/iLOM GUI Access for instructions on how to access the NOAM from iLO)</p> <p>Copy the configuration file created in the previous step from the <code>/var/TKLC/db/filemgmt</code> directory on the 1st NOAM to the <code>/var/tmp</code> directory.</p> <p>The configuration file will have a filename like <code>TKLCConfigData.<hostname>.sh</code>. The following is an example:</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo cp /var/TKLC/db/filemgmt/TKLCConfigData.<RMS01>.sh /var/tmp/TKLCConfigData.sh</pre> <p>Note: The file in <code>/var/tmp/</code> directory MUST be <code>TKLCConfigData.sh</code></p>
<p>10</p> <p><input type="checkbox"/></p>	<p>NOAM iLO: Wait for Configuration to Complete</p>	<p>The automatic configuration daemon will look for the file named “TKLCConfigData.sh” in the <code>/var/tmp</code> directory, implement the configuration in the file, and then prompt the user to reboot the server.</p> <p>Wait to be prompted to reboot the server, but DO NOT reboot the server, it will be rebooted later on in this procedure.</p> <p>Note: Ignore the warning about removing the USB key, since no USB key is present.</p>
<p>11</p> <p><input type="checkbox"/></p>	<p>NOAM iLO: Set the Time zone and Reboot the Server</p>	<p>From the command line prompt, execute set_ini_tz.pl. This will set the system time zone. The following command example uses the <code>America/New_York</code> time zone.</p> <p>Replace as appropriate with the time zone you have selected for this installation. For a full list of valid time zones, see Appendix I: List of Frequently used Time Zones.</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo /usr/TKLC/appworks/bin/set_ini_tz.pl "America/New_York" >/dev/null 2>&1</pre> <pre style="border: 1px solid black; padding: 5px;">\$ sudo init 6</pre>

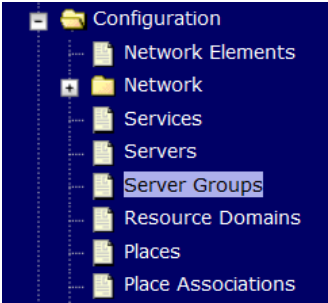
Procedure 21. Configure First NOAM NE and Server

<p>12</p> <p><input type="checkbox"/></p>	<p>1st NOAM: Configure Networking for Dedicated NetBackup Interface (Optional)</p>	<p>Note: You will only execute this step if your NOAM is using a dedicated Ethernet interface for NetBackup.</p> <p>Obtain a terminal window to the 1st NOAM server, logging in as the <i>admusr</i> user.</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo /usr/TKLC/plat/bin/netAdm set --device=NetBackup --type=Ethernet --onboot=yes --address=<NO1_NetBackup_IP_Address> --netmask=<NO1_NetBackup_NetMask></pre> <pre style="border: 1px solid black; padding: 5px;">\$ sudo /usr/TKLC/plat/bin/netAdm add --route=net --device=NetBackup --address=<NO1_NetBackup_Network_ID> --netmask=<NO1_NetBackup_NetMask> --gateway=<NO1_NetBackup_Gateway_IP_Address></pre>
<p>13</p> <p><input type="checkbox"/></p>	<p>1st NOAM Server: Install Tuned (Oracle X6-2)</p>	<p style="text-align: center;">ORACLE X6-2</p> <p>Activate the tuned profile for the Guest Virtual Machine:</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo tuned-adm profile virtual-guest \$ sudo service_conf add tuned rc runlevels=345 \$ sudo service_conf add ktune rc runlevels=345</pre> <p>Verify that tuned is active:</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo tuned-adm active</pre> <p>Expected output:</p> <pre>Current active profile: virtual-guest Service tuned: enabled, running Service ktune: enabled, running</pre>
<p>14</p> <p><input type="checkbox"/></p>	<p>1st NOAM Server: Verify Server Health</p>	<p>Execute the following command on the 1st NOAM server and make sure that no errors are returned:</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo syscheck Running modules in class hardware...OK Running modules in class disk...OK Running modules in class net...OK Running modules in class system...OK Running modules in class proc...OK LOG LOCATION: /var/TKLC/log/syscheck/fail_log</pre>

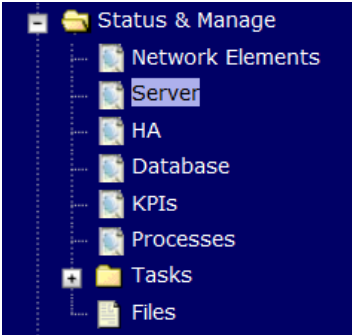
Procedure 22. Configure the NOAM Server Group

S T E P #	<p>This procedure will provide the steps to configure the NOAM server group.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
<p>1</p> <p><input type="checkbox"/></p>	<p>NOAM GUI: Login</p>	<p>Establish a GUI session on the first NOAM server by using the XMI IP address. Open the web browser and enter a URL of:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>https://<NO1_XMI_IP_Address></p> </div> <p>Login as the <i>guiadmin</i> user:</p> 

Procedure 22. Configure the NOAM Server Group

<p>2</p> <p><input type="checkbox"/></p>	<p>NOAM GUI: Enter NOAM Server Group Data</p>	<p>Navigate to Main Menu -> Configuration -> Server Groups</p>  <p>Select Insert and fill the following fields:</p> <p><input type="button" value="Insert"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/> <input type="button" value="Report"/></p> <ul style="list-style-type: none"> • Server Group Name: <Enter Server Group Name> • Level: A • Parent : None • Function: DSR (Active/Standby Pair) • WAN Replication Connection Count: Use Default Value <p>Select OK when all fields are filled in.</p>									
<p>3</p> <p><input type="checkbox"/></p>	<p>NOAM GUI: Edit the NOAM Server Group</p>	<p>From the GUI Main Menu -> Configuration -> Server Groups.</p> <p>Select the new server group, and then select Edit</p> <p><input type="button" value="Insert"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/> <input type="button" value="Report"/></p> <p>Select the Network Element that represents the NOAM.</p> <table border="1"> <thead> <tr> <th colspan="3">NO_900060103</th> </tr> <tr> <th>Server</th> <th>SG Inclusion</th> <th>Preferred HA Role</th> </tr> </thead> <tbody> <tr> <td>HPC6NO</td> <td><input checked="" type="checkbox"/> Include in SG</td> <td><input type="checkbox"/> Preferred Spare</td> </tr> </tbody> </table> <p>In the portion of the screen that lists the servers for the server group, find the NOAM server being configured.</p> <p>Click the Include in SG checkbox.</p> <p>Leave other boxes blank.</p> <p>Press OK</p>	NO_900060103			Server	SG Inclusion	Preferred HA Role	HPC6NO	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare
NO_900060103											
Server	SG Inclusion	Preferred HA Role									
HPC6NO	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare									

Procedure 22. Configure the NOAM Server Group

<p>4</p> <p><input type="checkbox"/></p>	<p>NOAM: Verify NOAM server role</p>	<p>From terminal window of the first NOAM server, execute the following command:</p> <pre style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;">\$ha.mystate</pre> <p>Verify that the DbReplication and VIP item under the resourceId column has a value of Active under the role column.</p> <p>You might have to wait a few minutes for it to become in that state.</p> <p>Example:</p> <pre style="background-color: #2e3436; color: #eeeeec; padding: 10px; width: fit-content; margin: 10px auto;">[admusr@CM01-NO1 ~]\$ ha.mystate resourceId role node subResources lastUpdate DbReplication Active A1588.201 0 0923:105604.649 VIP Active A1588.201 0 0923:105604.650 CaadProcessRes Active A1588.201 0 0923:105610.351 CAPM_HELP_Proc OOS A1588.201 0 0923:105558.364 DSROAM_Proc Active A1588.201 0 0923:105610.361 CAPM_PSFS_Proc OOS A1588.201 0 0923:105558.365 [admusr@CM01-NO1 ~]\$</pre>
<p>5</p> <p><input type="checkbox"/></p>	<p>NOAM GUI: Restart 1st NOAM Server</p>	<p>From the NOAM GUI, select the Main menu -> Status & Manage -> Server menu.</p>  <p>Select the first NOAM server. Select the Restart button.</p> <div style="border: 1px solid #ccc; padding: 5px; width: fit-content; margin: 10px auto;"> Stop Restart Reboot NTP Sync Report </div> <p>Answer OK to the confirmation popup.</p> <div style="border: 1px solid #ccc; padding: 10px; width: fit-content; margin: 10px auto;"> <p>Are you sure you wish to restart application software on the following server(s)? Jetta-NO-1</p> <div style="text-align: center; margin-top: 10px;"> OK Cancel </div> </div> <p>Wait for restart to complete.</p>

Procedure 23. Configure the Second NOAM Server

S T E P #	<p>This procedure will provide the steps to configure the Second NOAM server.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
1 <input type="checkbox"/>	<p>Exchange SSH keys between PMAC and Second NOAM server</p>	<p>Use the PMAC GUI to determine the Control Network IP address of the server that is to be the second NOAM server. From the PMAC GUI, navigate to Main Menu -> Software -> Software Inventory.</p> <p>Note the IP address for the Second NOAM server.</p> <p>Login to the PMAC terminal as the <i>admusr</i>.</p> <p>From a terminal window connection on the PMAC as the <i>admusr</i> user, exchange SSH keys for <i>admusr</i> between the PMAC and the 2nd NOAM server using the keyexchange utility, using the Control network IP address for the NOAM server. When prompted for the password, enter the password for the <i>admusr</i> user of the NOAM server.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <pre>\$ keyexchange admusr@<NO2_Control_IP_Address></pre> </div> <p>Note: if keyexchange fails, edit /home/admusr/.ssh/known_hosts and remove blank lines, and retry the keyexchange commands.</p>
2 <input type="checkbox"/>	<p>NOAM GUI: Login</p>	<p>If not already done, establish a GUI session on the first NOAM server by using the XMI IP address. Open the web browser and enter a URL of:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <pre>https://<NO1_XMI_IP_Address></pre> </div> <p>Login to the NOAM GUI as the <i>guiadmin</i> user:</p> <div style="text-align: center; margin: 20px 0;"> </div>

Procedure 23. Configure the Second NOAM Server

<p>3</p> <p><input type="checkbox"/></p>	<p>NOAM GUI: Insert the 2nd NOAM server</p>	<p>Navigate to Main Menu -> Configuration -> Servers.</p> <p>Select the Insert button to insert the 2nd NOAM server into servers table (the first or server).</p> <p>Adding a new server</p> <table border="1"> <thead> <tr> <th>Attribute</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>Hostname</td> <td>NO-Server2 *</td> </tr> <tr> <td>Role</td> <td>NETWORK OAM&P *</td> </tr> <tr> <td>System ID</td> <td>NO-Server2</td> </tr> <tr> <td>Hardware Profile</td> <td>DSR TVOE Guest</td> </tr> <tr> <td>Network Element Name</td> <td>JETTA *</td> </tr> <tr> <td>Location</td> <td></td> </tr> </tbody> </table> <p>Fill in the fields as follows:</p> <p>Hostname: <Hostname></p> <p>Role: NETWORK OAM&P</p> <p>System ID: <Site System ID></p> <p>Hardware Profile: DSR TVOE Guest</p> <p>Network Element Name: [Choose NE from Drop Down Box]</p> <p>The network interface fields will now become available with selection choices based on the chosen hardware profile and network element</p> <table border="1"> <thead> <tr> <th colspan="3">Interfaces:</th> </tr> <tr> <th>Network</th> <th>IP Address</th> <th>Interface</th> </tr> </thead> <tbody> <tr> <td>INTERNALXMI (10.240.84.128/25)</td> <td>10.240.84.155</td> <td>xmi <input type="checkbox"/> VLAN (3)</td> </tr> <tr> <td>INTERNALIMI (10.240.85.0/26)</td> <td>10.240.85.10</td> <td>imi <input type="checkbox"/> VLAN (4)</td> </tr> </tbody> </table> <p>Fill in the server IP addresses for the XMI network. Select xmi for the interface. Leave the "VLAN" checkbox unchecked.</p> <p>Fill in the server IP addresses for the IMI network. Select imi for the interface. Leave the "VLAN" checkbox unchecked.</p> <p>Next, add the following NTP servers:</p> <table border="1"> <thead> <tr> <th>NTP Server</th> <th>Preferred?</th> </tr> </thead> <tbody> <tr> <td><2nd NOAM-TVOE-IP-Address></td> <td>Yes</td> </tr> </tbody> </table> <p>Select the Ok button when you have completed entering all the server data.</p>	Attribute	Value	Hostname	NO-Server2 *	Role	NETWORK OAM&P *	System ID	NO-Server2	Hardware Profile	DSR TVOE Guest	Network Element Name	JETTA *	Location		Interfaces:			Network	IP Address	Interface	INTERNALXMI (10.240.84.128/25)	10.240.84.155	xmi <input type="checkbox"/> VLAN (3)	INTERNALIMI (10.240.85.0/26)	10.240.85.10	imi <input type="checkbox"/> VLAN (4)	NTP Server	Preferred?	<2nd NOAM-TVOE-IP-Address>	Yes
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NTP Server	Preferred?																															
<2nd NOAM-TVOE-IP-Address>	Yes																															
<p>4</p> <p><input type="checkbox"/></p>	<p>NOAM GUI: Export the Initial Configuration</p>	<p>Navigate to Main Menu -> Configuration -> Servers.</p> <p>From the GUI screen, select the 2nd NOAM server and then select Export to generate the initial configuration data for that server.</p> <p><input type="button" value="Insert"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/> <input type="button" value="Export"/> <input type="button" value="Report"/></p>																														

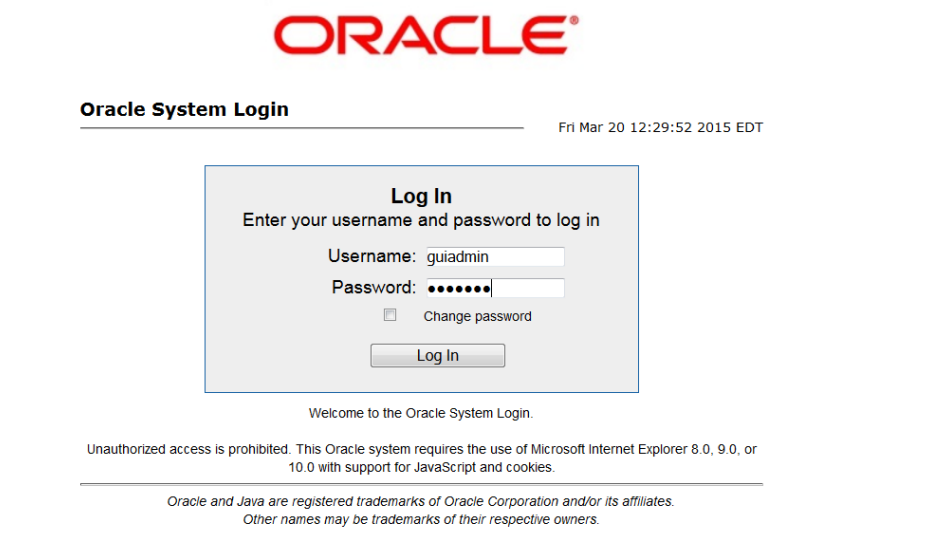
Procedure 23. Configure the Second NOAM Server

<p>5</p> <p><input type="checkbox"/></p>	<p>1st NOAM Server: Copy Configuration File to 2nd NOAM Server</p>	<p>Obtain a terminal session to the 1st NOAM as the admusr user.</p> <p>Use the awpushcfg utility to copy the configuration file created in the previous step from the /var/TKLC/db/filemgmt directory on the 1st NOAM to the 2nd NOAM server, using the Control network IP address for the 2nd NOAM server.</p> <p>The configuration file will have a filename like “TKLCConfigData.<hostname>.sh”.</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo awpushcfg</pre> <p>The awpushcfg utility is interactive, so the user will be prompted for the following:</p> <ul style="list-style-type: none"> • IP address of the local PMAC server: Use the management network address from the PMAC. • Username: Use admusr • Control network IP address for the target server: In this case, enter the control IP for the 2nd NOAM server). • Hostname of the target server: Enter the server name configured in step 3
<p>6</p> <p><input type="checkbox"/></p>	<p>PMAC: Verify awpushcfg was called and Reboot the Server</p>	<p>Obtain a terminal window connection on the 2nd NOAM.</p> <p>SSH from the 1st NOAM to the 2nd NOAM server by executing the following command:</p> <pre style="border: 1px solid black; padding: 5px;">\$ ssh admusr@<NO2_Control_IP_Address></pre> <p>Login as the admusr user.</p> <p>The automatic configuration daemon will look for the file named “TKLCConfigData.sh” in the /var/tmp directory, implement the configuration in the file, and then prompt the user to reboot the server.</p> <p>Verify awpushcfg was called by checking the following file</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo cat /var/TKLC/appw/logs/Process/install.log</pre> <p>Verify no errors are present and that the following message is displayed:</p> <pre style="border: 1px solid black; padding: 5px;">[SUCCESS] script completed successfully!</pre> <p>Now Reboot the Server:</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo init 6</pre> <p>Wait for the server to reboot</p>
<p>7</p> <p><input type="checkbox"/></p>	<p>2nd NOAM Server: Establish an SSH session and Login</p>	<p>Obtain a terminal window to the 2nd NOAM server, logging in as the admusr user.</p>

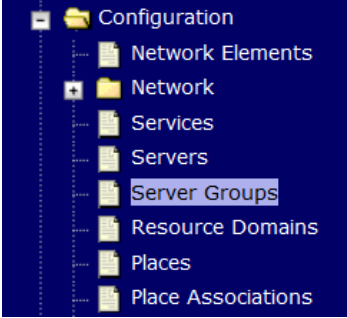
Procedure 23. Configure the Second NOAM Server

<p>8</p> <p><input type="checkbox"/></p>	<p>2nd NOAM Server: Configure Networking for Dedicated NetBackup Interface (Optional)</p>	<p>Note: You will only execute this step if your NOAM is using a dedicated Ethernet interface for NetBackup.</p> <pre>\$ sudo /usr/TKLC/plat/bin/netAdm set -device=NetBackup --type=Ethernet -onboot=yes --address=<NO2_NetBackup_IP_Address> --netmask=<NO2_NetBackup_NetMask></pre> <pre>\$ sudo /usr/TKLC/plat/bin/netAdm add -route=net --device=NetBackup -address=<NO1_NetBackup_Network_ID> --netmask=<NO2_NetBackup_NetMask> --gateway=<NO2_NetBackup_Gateway_IP_Address></pre>
<p>9</p> <p><input type="checkbox"/></p>	<p>2nd NOAM Server: Install Tuned (Oracle X6-2)</p>	<p style="text-align: center;">ORACLE X6-2</p> <p>Activate the tuned profile for the Guest Virtual Machine:</p> <pre>\$ sudo tuned-adm profile virtual-guest \$ sudo service_conf add tuned rc runlevels=345 \$ sudo service_conf add ktune rc runlevels=345</pre> <p>Verify that tuned is active:</p> <pre>\$ sudo tuned-adm active</pre> <p>Expected output:</p> <pre>Current active profile: virtual-guest Service tuned: enabled, running Service ktune: enabled, running</pre>
<p>10</p> <p><input type="checkbox"/></p>	<p>2nd NOAM Server: Verify Server Health</p>	<p>Execute the following command on the 2nd NOAM server and make sure that no errors are returned:</p> <pre>\$ sudo syscheck Running modules in class hardware...OK Running modules in class disk...OK Running modules in class net...OK Running modules in class system...OK Running modules in class proc...OK LOG LOCATION: /var/TKLC/log/syscheck/fail_log</pre>

Procedure 24. Complete NOAM Server Group Configuration

S T E P #	<p>This procedure will provide the steps to finish configuring the NOAM server group.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
<p>1</p> <p><input type="checkbox"/></p>	<p>NOAM GUI: Login</p>	<p>Establish a GUI session on the 1st NOAM server by using the XMI IP address. Open the web browser and enter a URL of:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>https://<NO1_XMI_IP_Address></p> </div> <p>Login as the <i>guiadmin</i> user:</p> <div style="text-align: center;">  <p>The screenshot shows the Oracle System Login interface. At the top is the Oracle logo. Below it is the text 'Oracle System Login' and the date 'Fri Mar 20 12:29:52 2015 EDT'. A central box titled 'Log In' contains the prompt 'Enter your username and password to log in'. It has two input fields: 'Username: guiadmin' and 'Password: ●●●●●●'. Below the password field is a checkbox for 'Change password' and a 'Log In' button. At the bottom of the page, there is a welcome message and a disclaimer: 'Unauthorized access is prohibited. This Oracle system requires the use of Microsoft Internet Explorer 8.0, 9.0, or 10.0 with support for JavaScript and cookies. Oracle and Java are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.'</p> </div>

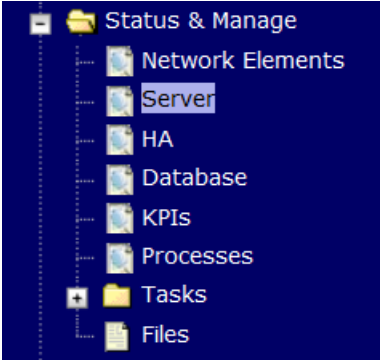
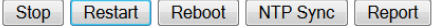
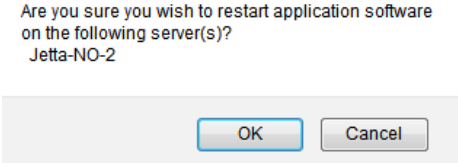
Procedure 24. Complete NOAM Server Group Configuration

<p>2</p> <p><input type="checkbox"/></p>	<p>NOAM GUI: Edit the NOAM Server Group Data</p>	<p>Navigate to Main Menu->Configuration->Server Groups.</p>  <p>Select the NOAM Server group and click on Edit</p> <p style="text-align: center;"> <input type="button" value="Insert"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/> <input type="button" value="Report"/> </p> <p>Add the 2nd NOAM server to the Server Group by clicking the Include in SG checkbox for the 2nd NOAM server.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3">RMSNO_900060102</th> </tr> <tr> <th>Server</th> <th>SG Inclusion</th> <th>Preferred HA Role</th> </tr> </thead> <tbody> <tr> <td>RMSNOA</td> <td><input checked="" type="checkbox"/> Include in SG</td> <td><input type="checkbox"/> Preferred Spare</td> </tr> <tr> <td>RMSNOB</td> <td><input checked="" type="checkbox"/> Include in SG</td> <td><input type="checkbox"/> Preferred Spare</td> </tr> </tbody> </table> <p>Click Apply.</p> <p>Add a NOAM VIP by click on Add. Fill in the VIP Address and press Ok as shown below</p> <div style="border: 1px solid gray; padding: 5px; margin: 10px 0;"> <p style="text-align: center;">VIP Address <input type="button" value="Add"/></p> <p><input style="width: 100%;" type="text"/> <input type="button" value="Remove"/></p> <p style="text-align: right;"><input type="button" value="Ok"/> <input type="button" value="Apply"/> <input type="button" value="Cancel"/></p> </div>	RMSNO_900060102			Server	SG Inclusion	Preferred HA Role	RMSNOA	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare	RMSNOB	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare
RMSNO_900060102														
Server	SG Inclusion	Preferred HA Role												
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RMSNOB	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare												

Procedure 24. Complete NOAM Server Group Configuration

<p>3</p> <p><input type="checkbox"/></p>	<p>NOAM VIP: Establish GUI Session</p>	<p>Establish a GUI session on the NOAM by using the XMI VIP address:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>https://<NOAM_VIP_IP_Address></p> </div> <p>Login as user guiadmin.</p> 																																																						
<p>4</p> <p><input type="checkbox"/></p>	<p>NOAM VIP: Wait for Remote Database Alarm to Clear</p>	<p>Wait for the alarm Remote Database re-initialization in progress to be cleared before proceeding.</p> <p>Navigate to Main menu->Alarms & Events->View Active</p> <p>Main Menu: Alarms & Events -> View History (Filtered) Fri Mar 20</p> <div style="border: 1px solid gray; padding: 5px;"> <p>Filter Tasks</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Seq #</th> <th>Event ID</th> <th>Timestamp</th> <th>Severity</th> <th>Product</th> <th>Process</th> <th>NE</th> <th>Server</th> <th>Type</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> <td colspan="5">Additional Info</td> </tr> <tr> <td>414</td> <td>10200</td> <td>2015-03-20 09:30:00.090 EDT</td> <td style="color: green;">CLEAR</td> <td>...</td> <td>apwSoapServer</td> <td>Compass_NO</td> <td>Compass-NOA</td> <td>CFG</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td colspan="5">Remote Database re-initialization in progress Cleared because DB Re-Init Completed</td> </tr> <tr> <td>413</td> <td>10200</td> <td>2015-03-20 09:28:16.411 EDT</td> <td style="color: orange;">MINOR</td> <td>...</td> <td>apwSoapServer</td> <td>Compass_NO</td> <td>Compass-NOA</td> <td>CFG</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td colspan="5">Remote Database re-initialization in progress Remote Database re-initialization in progress</td> </tr> </tbody> </table> </div>	Seq #	Event ID	Timestamp	Severity	Product	Process	NE	Server	Type					Additional Info					414	10200	2015-03-20 09:30:00.090 EDT	CLEAR	...	apwSoapServer	Compass_NO	Compass-NOA	CFG					Remote Database re-initialization in progress Cleared because DB Re-Init Completed					413	10200	2015-03-20 09:28:16.411 EDT	MINOR	...	apwSoapServer	Compass_NO	Compass-NOA	CFG					Remote Database re-initialization in progress Remote Database re-initialization in progress				
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				Remote Database re-initialization in progress Remote Database re-initialization in progress																																																				

Procedure 24. Complete NOAM Server Group Configuration

5 <input type="checkbox"/>	NOAM GUI: Restart 2 nd NOAM Server	<p>From the NOAM GUI, select the Main menu -> Status & Manage -> Server menu.</p>  <p>Select the 2nd NOAM server. Select the Restart button.</p>  <p>Answer OK to the confirmation popup.</p>  <p>Wait for restart to complete. Wait approximately 3-5 minutes before proceeding.</p>
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4.15.2 DSR Configuration: NetBackup Client Installation (Optional)

Procedure 25. Install NetBackup Client (Optional)

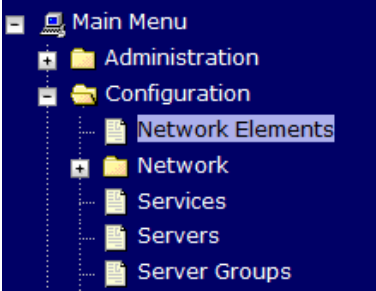
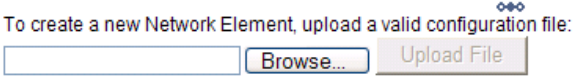

S T E P #	<p>This procedure will download and install NetBackup Client software on the server.</p> <p>Location of the bpstart_notify and bpend_notify scripts is required for the execution of this procedure. For Appworks based applications the scripts are located as follows:</p> <ul style="list-style-type: none"> - /usr/TKLC/appworks/sbin/bpstart_notify - /usr/TKLC/appworks/sbin/bpend_notify <p>Check off (√) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
1 <input type="checkbox"/>	Install NetBackup Client Software	<p>If a customer has a way of transferring and installing the net Backup client without the aid of TPD tools (push configuration) then use Appendix H.2: NETBACKUP CLIENT INSTALL/UPGRADE WITH NBAUTOINSTALL</p> <p>Note: This is not common. If the answer to the previous question is not known then use Appendix H.1: NetBackup Client Install using PLATCFG</p>
2 <input type="checkbox"/>	Install NetBackup Client Software	<p>Choose the same method used in step 1 to install NetBackup on the 2nd NOAM.</p>

4.15.3 DSR Configuration: Disaster Recovery NOAM (Optional)

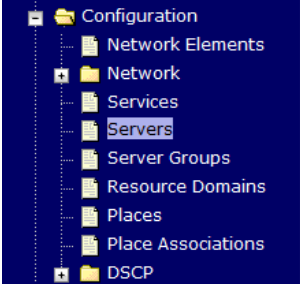
Procedure 26. NOAM Configuration for DR Site (Optional)

S T E P #	<p>This procedure will provide the steps to configure the First DR NOAM server.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
1 <input type="checkbox"/>	<p>PRIMARY NOAM VIP GUI: Login</p>	<p>Establish a GUI session on the NOAM server by using the XMI VIP IP address. Open the web browser and enter a URL of:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>https://<NOAM_XMI_VIP_IP_Address></p> </div> <p>Login as the <i>guiadmin</i> user:</p> <div style="text-align: center;">  <p>The screenshot shows the Oracle System Login interface. At the top is the Oracle logo. Below it, the text 'Oracle System Login' is followed by a horizontal line and the date 'Fri Mar 20 12:29:52 2015 EDT'. In the center is a 'Log In' box with the prompt 'Enter your username and password to log in'. It contains fields for 'Username: guiadmin' and 'Password: ●●●●●●', a 'Change password' checkbox, and a 'Log In' button. Below the box, it says 'Welcome to the Oracle System Login.' At the bottom, there is a disclaimer: 'Unauthorized access is prohibited. This Oracle system requires the use of Microsoft Internet Explorer 8.0, 9.0, or 10.0 with support for JavaScript and cookies.' and 'Oracle and Java are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.'</p> </div>

Procedure 26. NOAM Configuration for DR Site (Optional)

2	<p>PRIMARY NOAM VIP GUI: Insert the DR NOAM Network Element</p>	<p>Navigate to Main Menu->Configuration->Network Elements</p>  <p>The Network Elements screen will display select the Browse (scroll to bottom left corner of screen).</p> <p>To create a new Network Element, upload a valid configuration file:</p>  <p>Insert Edit Delete Lock/Unlock Report Export</p> <p>A dialogue will pop up, browse to the location of the DSR DR NOAM Site Element XML File and click the Open button.</p> <p>Then click Upload File as shown below</p> <p>To create a new Network Element, upload a valid configuration file:</p>  <p>Insert Edit Delete Lock/Unlock Report Export</p> <p>Once the data has been uploaded, you should see a folder appear with the name of your network element. Click on this folder and you will get a drop-down which describes the individual networks that are now configured:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="5">Network Element</th> </tr> <tr> <td colspan="5">NO_9006005</td> </tr> <tr> <th>Network Name</th> <th>Network Address</th> <th>Netmask</th> <th>VLAN ID</th> <th>Gateway IP Address</th> </tr> </thead> <tbody> <tr> <td>INTERNALXMI</td> <td>10.240.10.32</td> <td>255.255.255.224</td> <td>3</td> <td>10.240.10.35</td> </tr> <tr> <td>INTERNALIMI</td> <td>10.240.10.0</td> <td>255.255.255.224</td> <td>4</td> <td>10.240.10.3</td> </tr> </tbody> </table>	Network Element					NO_9006005					Network Name	Network Address	Netmask	VLAN ID	Gateway IP Address	INTERNALXMI	10.240.10.32	255.255.255.224	3	10.240.10.35	INTERNALIMI	10.240.10.0	255.255.255.224	4	10.240.10.3
Network Element																											
NO_9006005																											
Network Name	Network Address	Netmask	VLAN ID	Gateway IP Address																							
INTERNALXMI	10.240.10.32	255.255.255.224	3	10.240.10.35																							
INTERNALIMI	10.240.10.0	255.255.255.224	4	10.240.10.3																							

Procedure 26. NOAM Configuration for DR Site (Optional)

3	<p>PRIMARY NOAM VIP GUI: Insert the 1st DR-NOAM server</p>	<p>Navigate to Main Menu -> Configuration -> Servers.</p>  <p>Select the Insert button to insert the new DR-NOAM server into servers table.</p> <p>Adding a new server</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Attribute</th> <th style="text-align: left;">Value</th> </tr> </thead> <tbody> <tr> <td>Hostname</td> <td>DR-NOAM-A *</td> </tr> <tr> <td>Role</td> <td>NETWORK OAM&P *</td> </tr> <tr> <td>System ID</td> <td>DR-NOAM-A</td> </tr> <tr> <td>Hardware Profile</td> <td>DSR TVOE Guest</td> </tr> <tr> <td>Network Element Name</td> <td>- Unassigned - *</td> </tr> <tr> <td>Location</td> <td></td> </tr> </tbody> </table> <p>Fill in the fields as follows:</p> <p>Hostname: <Hostname></p> <p>Role: NETWORK OAM&P</p> <p>System ID: <Site System ID></p> <p>Hardware Profile: DSR TVOE Guest</p> <p>Network Element Name: [Choose NE from Drop Down Box]</p> <p>The network interface fields will now become available with selection choices based on the chosen hardware profile and network element</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3">Interfaces:</th> </tr> <tr> <th>Network</th> <th>IP Address</th> <th>Interface</th> </tr> </thead> <tbody> <tr> <td>INTERNALXMI (10.240.84.128/25)</td> <td>10.240.84.155</td> <td>xmi <input type="checkbox"/> VLAN (3)</td> </tr> <tr> <td>INTERNALIMI (10.240.85.0/26)</td> <td>10.240.85.10</td> <td>imi <input type="checkbox"/> VLAN (4)</td> </tr> </tbody> </table> <p style="text-align: center;"> <input type="button" value="Ok"/> <input type="button" value="Apply"/> <input type="button" value="Cancel"/> </p> <p>Fill in the server IP addresses for the XMI network. Select xmi for the interface. Leave the "VLAN" checkbox unchecked.</p> <p>Fill in the server IP addresses for the IMI network. Select imi for the interface. Leave the "VLAN" checkbox unchecked.</p> <p>Next, add the following NTP servers:</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="width: 60%;">NTP Server</th> <th style="width: 40%;">Preferred?</th> </tr> </thead> <tbody> <tr> <td><1st DR-NOAM -RMS-TVOE-IP-Address></td> <td>Yes</td> </tr> </tbody> </table> <p>Select the Ok button when you have completed entering all the server data.</p>	Attribute	Value	Hostname	DR-NOAM-A *	Role	NETWORK OAM&P *	System ID	DR-NOAM-A	Hardware Profile	DSR TVOE Guest	Network Element Name	- Unassigned - *	Location		Interfaces:			Network	IP Address	Interface	INTERNALXMI (10.240.84.128/25)	10.240.84.155	xmi <input type="checkbox"/> VLAN (3)	INTERNALIMI (10.240.85.0/26)	10.240.85.10	imi <input type="checkbox"/> VLAN (4)	NTP Server	Preferred?	<1st DR-NOAM -RMS-TVOE-IP-Address>	Yes
Attribute	Value																															
Hostname	DR-NOAM-A *																															
Role	NETWORK OAM&P *																															
System ID	DR-NOAM-A																															
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Network Element Name	- Unassigned - *																															
Location																																
Interfaces:																																
Network	IP Address	Interface																														
INTERNALXMI (10.240.84.128/25)	10.240.84.155	xmi <input type="checkbox"/> VLAN (3)																														
INTERNALIMI (10.240.85.0/26)	10.240.85.10	imi <input type="checkbox"/> VLAN (4)																														
NTP Server	Preferred?																															
<1st DR-NOAM -RMS-TVOE-IP-Address>	Yes																															

Procedure 26. NOAM Configuration for DR Site (Optional)

<p>4</p> <p><input type="checkbox"/></p>	<p>PRIMARY NOAM VIP GUI: Export the Initial Configuration</p>	<p>Navigate to Main Menu -> Configuration -> Servers.</p> <p>From the GUI screen, select the DR-NOAM server and then select Export to generate the initial configuration data for that server.</p> <div style="border: 1px solid gray; padding: 5px; width: fit-content; margin: 10px auto;"> Insert Edit Delete Export Report </div>																		
<p>5</p> <p><input type="checkbox"/></p>	<p>PMAC: Exchange SSH keys between PMAC and DR-NOAM server</p>	<p>Use the PMAC GUI to determine the Control Network IP address of the server that is to be the first NOAM server. From the PMAC GUI, navigate to Main Menu -> Software -> Software Inventory.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Identity</th> <th>IP Address</th> <th>Hostname</th> <th>Platform Name</th> <th>Platform Version</th> <th>Application Name</th> <th>Application Version</th> <th>Designation</th> <th>Function</th> </tr> </thead> <tbody> <tr> <td>RMS: ps5010439</td> <td>192.168.1.56</td> <td>hostname0b42b7c4eb5a</td> <td>TPD (x86_64)</td> <td>7.3.0.0.0-88.27.0</td> <td>DSR</td> <td>8.0.0.0.0-80.11.1</td> <td></td> <td></td> </tr> </tbody> </table> <p>Note the IP address for the first DR-NOAM server.</p> <p>Login to the PMAC terminal as the admusr.</p> <p>From a terminal window connection on the PMAC as the admusr user, exchange SSH keys for admusr between the PMAC and the 1st DR-NOAM server using the keyexchange utility, using the Control network IP address for the NOAM server. When prompted for the password, enter the password for the admusr user of the NOAM server.</p> <div style="border: 1px solid gray; padding: 5px; width: fit-content; margin: 10px auto;"> <pre>\$ keyexchange admusr@<DR-NO1_Control_IP Address></pre> </div>	Identity	IP Address	Hostname	Platform Name	Platform Version	Application Name	Application Version	Designation	Function	RMS: ps5010439	192.168.1.56	hostname0b42b7c4eb5a	TPD (x86_64)	7.3.0.0.0-88.27.0	DSR	8.0.0.0.0-80.11.1		
Identity	IP Address	Hostname	Platform Name	Platform Version	Application Name	Application Version	Designation	Function												
RMS: ps5010439	192.168.1.56	hostname0b42b7c4eb5a	TPD (x86_64)	7.3.0.0.0-88.27.0	DSR	8.0.0.0.0-80.11.1														
<p>6</p> <p><input type="checkbox"/></p>	<p>NOAM VIP: Exchange SSH keys between NOAM and PMAC at the DR site.</p>	<p>From a terminal window connection on the NOAMP VIP as the admusr.</p> <p>Exchange SSH keys for admusr between the NOAM and the DR NO's PMAC using the keyexchange utility.</p> <div style="border: 1px solid gray; padding: 5px; width: fit-content; margin: 10px auto;"> <pre>\$ keyexchange admusr@<DR-NO1_Site_PMAC_Mgmt_IP Address></pre> </div> <p>When prompted for the password, enter the appropriate password for admusr on the PMAC server.</p>																		

Procedure 26. NOAM Configuration for DR Site (Optional)

7 <input type="checkbox"/>	Primary NOAM: Copy Configuration File to 1 st DR-NOAM Server	<p>Obtain a terminal session to the primary NOAM as the admusr user.</p> <p>Use the awpushcfg utility to copy the configuration file created in the previous step from the <code>/var/TKLC/db/filemgmt</code> directory on the primary NOAM to the 1st DR-NOAM server, using the Control network IP address for the DR-NOAM server.</p> <p>The configuration file will have a filename like “TKLCConfigData.<Hostname>.sh”.</p> <pre>\$ sudo awpushcfg</pre> <p>The awpushcfg utility is interactive, so the user will be prompted for the following:</p> <ul style="list-style-type: none"> • IP address of the local PMAC server of the DR NOAM: Use the management network address from the PMAC. • Username: Use admusr • Control network IP address for the target server: In this case, enter the control IP for the 1st DR-NOAM server). • Hostname of the target server: Enter the server name configured in step 3
8 <input type="checkbox"/>	1st DR-NOAM Server: Verify awpushcfg was called and Reboot the Server	<p>Obtain a terminal window connection on the 1st DR-NOAM iLO from the OA. (Use the procedure in Appendix C: TVOE iLO/iLOM GUI Access).</p> <p>Login as the admusr user.</p> <p>The automatic configuration daemon will look for the file named “TKLCConfigData.sh” in the <code>/var/tmp</code> directory, implement the configuration in the file, and then prompt the user to reboot the server.</p> <p>Verify awpushcfg was called by checking the following file</p> <pre>\$ sudo cat /var/TKLC/appw/logs/Process/install.log</pre> <p>Verify no errors are present and that the following message is displayed:</p> <pre>[SUCCESS] script completed successfully!</pre> <p>Now Reboot the Server:</p> <pre>\$ sudo init 6</pre> <p>Wait for the server to reboot</p>

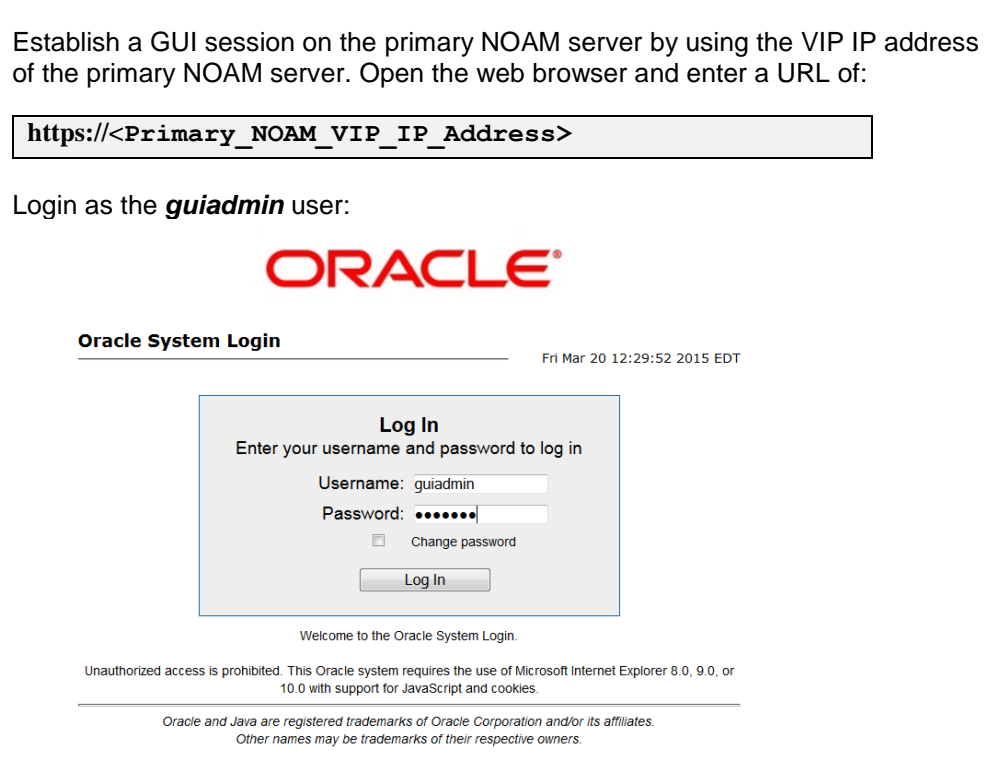
Procedure 26. NOAM Configuration for DR Site (Optional)

9 <input type="checkbox"/>	1st DR-NOAM: Configure Networking for Dedicated NetBackup Interface (Optional)	<p>Note: You will only execute this step if your DR-NOAM is using a dedicated Ethernet interface for NetBackup.</p> <pre>\$ sudo /usr/TKLC/plat/bin/netAdm set -device=NetBackup --type=Ethernet -onboot=yes --address=<NO1_NetBackup_IP_Address> --netmask=<NO1_NetBackup_NetMask></pre> <pre>\$ sudo /usr/TKLC/plat/bin/netAdm add -route=net --device=NetBackup -address=<NO1_NetBackup_Network_ID> --netmask=<NO1_NetBackup_NetMask> --gateway=<NO1_NetBackup_Gateway_IP_Address></pre>
10 <input type="checkbox"/>	1st DR-NOAM: Establish an SSH session and Login	Obtain a terminal window to the 1 st DR-NOAM server, logging in as the <i>admusr</i> user.
11 <input type="checkbox"/>	1st NOAM Server: Install Tuned (Oracle X6-2)	<p>Activate the tuned profile for the Guest Virtual Machine:</p> <pre>\$ sudo tuned-adm profile virtual-guest</pre> <p>Verify that tuned is active:</p> <pre>\$ sudo tuned-adm active</pre> <p>Expected output:</p> <pre>Current active profile: virtual-guest Service tuned: enabled, running Service ktune: enabled, running</pre>
12 <input type="checkbox"/>	1st DR-NOAM Server: Verify Server Health	<p>Execute the following command on the 1st DR-NOAM server and make sure that no errors are returned:</p> <pre>\$ sudo syscheck</pre> <pre>Running modules in class hardware...OK Running modules in class disk...OK Running modules in class net...OK Running modules in class system...OK Running modules in class proc...OK LOG LOCATION: /var/TKLC/log/syscheck/fail_log</pre>

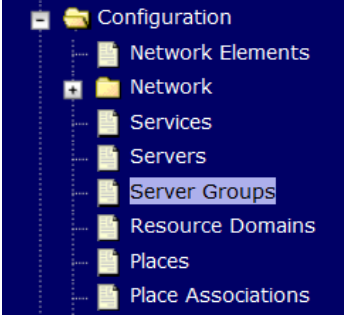
Procedure 26. NOAM Configuration for DR Site (Optional)

13 <input type="checkbox"/>	Repeat for 2nd DR NOAM Server	<p>Repeat Steps 3 through 12 to configure 2nd DR-NOAM Server. When inserting the 2nd DR-NOAM server, change the NTP server address to the following:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: center;">NTP Server</th> <th style="text-align: center;">Preferred?</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;"><i><2nd DR-NOAM-RMS-TVOE-IP-Address></i></td> <td style="text-align: center;">Yes</td> </tr> </tbody> </table>	NTP Server	Preferred?	<i><2nd DR-NOAM-RMS-TVOE-IP-Address></i>	Yes
NTP Server	Preferred?					
<i><2nd DR-NOAM-RMS-TVOE-IP-Address></i>	Yes					

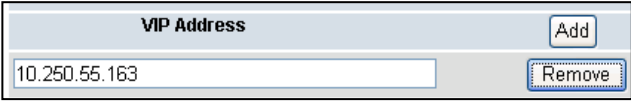

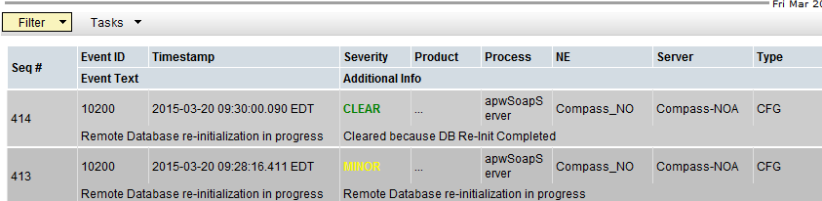
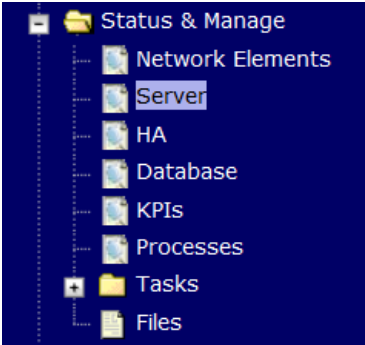
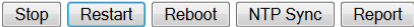
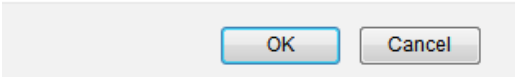
Procedure 27. Pairing for DR-NOAM Site (Optional)

<p>S T E P #</p>	<p>This procedure will provide the steps to pair the DR-NOAM site.</p> <p>Prerequisite: Installation for DR-NOAM Site complete</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
<p>1</p> <p><input type="checkbox"/></p>	<p>Primary NOAM VIP GUI: Login</p>	<p>Establish a GUI session on the primary NOAM server by using the VIP IP address of the primary NOAM server. Open the web browser and enter a URL of:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>https://<Primary_NOAM_VIP_IP_Address></p> </div> <p>Login as the <i>guiadmin</i> user:</p> 

Procedure 27. Pairing for DR-NOAM Site (Optional)

<p>2</p> <p><input type="checkbox"/></p>	<p>Primary NOAM VIP GUI: Enter DR-NOAM Server Group Data</p>	<p>Navigate to Main Menu -> Configuration -> Server Groups</p>  <p>Select Insert and fill the following fields:</p> <p><input type="button" value="Insert"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/> <input type="button" value="Report"/></p> <ul style="list-style-type: none"> • Server Group Name: <Enter Server Group Name> • Level: A • Parent : None • Function: DSR (Active/Standby Pair) • WAN Replication Connection Count: Use Default Value <p>Select OK when all fields are filled in.</p>												
<p>3</p> <p><input type="checkbox"/></p>	<p>Primary NOAM VIP GUI: Update Server Group</p>	<p>Select the Server Group that was created in the previous step, and click on Edit.</p> <p><input type="button" value="Insert"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/> <input type="button" value="Report"/></p> <p>The user will be presented with the Server Groups [Edit] screen</p> <p>Check the checkbox labeled Include in SG for both DR-NOAM Servers as shown below and click on Apply</p> <table border="1"> <thead> <tr> <th colspan="3">deaDR_CSLAB_ATT</th> </tr> <tr> <th>Server</th> <th>SG Inclusion</th> <th>Preferred HA Role</th> </tr> </thead> <tbody> <tr> <td>deaNO-ChaNC-A</td> <td><input checked="" type="checkbox"/> Include in SG</td> <td><input type="checkbox"/> Preferred Spare</td> </tr> <tr> <td>deaNO-ChaNC-B</td> <td><input checked="" type="checkbox"/> Include in SG</td> <td><input type="checkbox"/> Preferred Spare</td> </tr> </tbody> </table>	deaDR_CSLAB_ATT			Server	SG Inclusion	Preferred HA Role	deaNO-ChaNC-A	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare	deaNO-ChaNC-B	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare
deaDR_CSLAB_ATT														
Server	SG Inclusion	Preferred HA Role												
deaNO-ChaNC-A	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare												
deaNO-ChaNC-B	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare												

Procedure 27. Pairing for DR-NOAM Site (Optional)

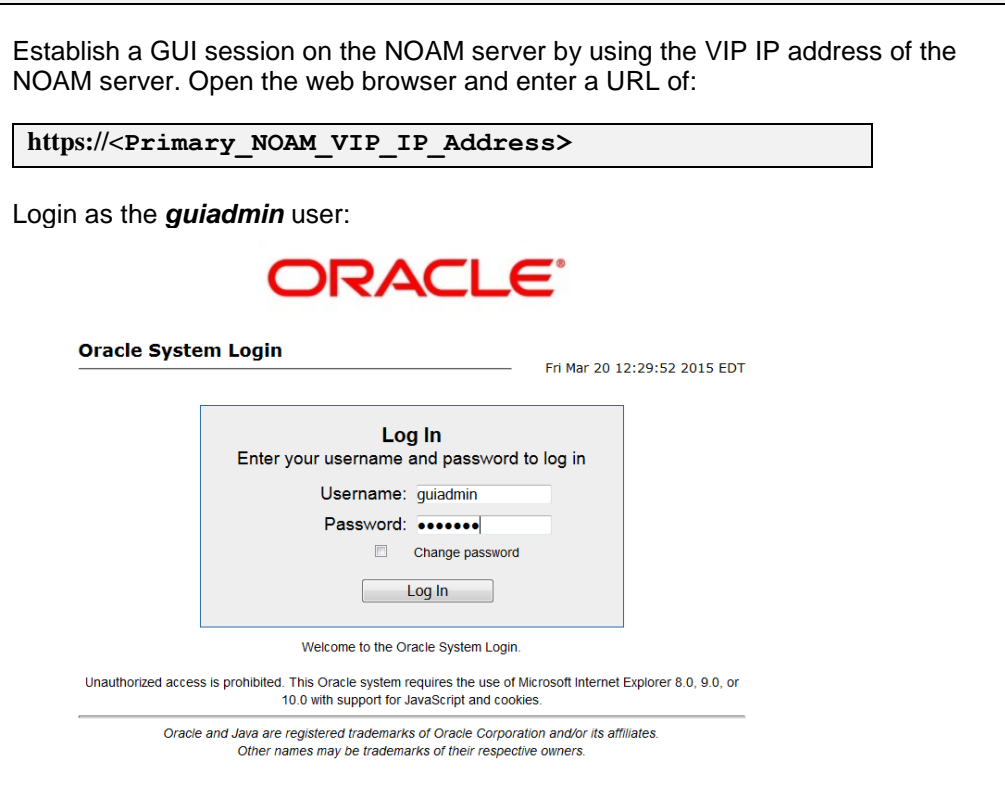
<p>4</p> <p><input type="checkbox"/></p>	<p>Primary NOAM VIP GUI: Add DR-NOAM VIP</p>	<p>Click the Add dialogue button for the VIP Address and enter an IP Address for the VIP as shown below</p>  <p>Then click the Apply dialogue button. Verify that the banner information message states Data committed.</p> 
<p>5</p> <p><input type="checkbox"/></p>	<p>Primary NOAM VIP GUI: Wait for Remote Database Alarm to Clear</p>	<p>Wait for the alarm Remote Database re-initialization in progress to be cleared before proceeding.</p> <p>Navigate to Main menu->Alarms & Events->View Active</p> <p>Main Menu: Alarms & Events -> View History (Filtered)</p> 
<p>6</p> <p><input type="checkbox"/></p>	<p>Primary NOAM VIP GUI: Restart 1st DR-NOAM Server</p>	<p>From the NOAM GUI, select the Main menu -> Status & Manage -> Server menu.</p>  <p>Select the 1st DR-NOAM server. Select the Restart button.</p>  <p>Answer OK to the confirmation popup.</p> <p>Are you sure you wish to restart application software on the following server(s) Jetta-NO-2</p>  <p>Wait for restart to complete. Wait approximately 3-5 minutes before proceeding.</p>

Procedure 27. Pairing for DR-NOAM Site (Optional)

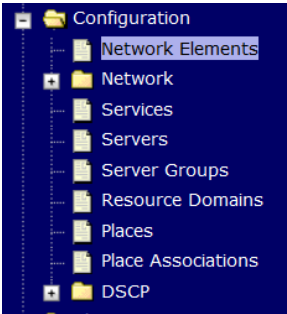
7 <input type="checkbox"/>	Primary NOAM VIP GUI :Restart the application on the 2 nd DR-NOAM Server	Repeat Steps 6, this time select the 2 nd DR-NOAM Server.
8 <input type="checkbox"/>	Primary NOAM: Modify DSR OAM process	<p>Establish an SSH session to the primary NOAM, login as <i>admusr</i>.</p> <p>Execute the following commands:</p> <div style="border: 1px solid black; padding: 5px;"> <p>Retrieve the cluster ID of the DR-NOAM:</p> <pre>\$ sudo iqt -fClusterID TopologyMapping where "NodeID='<DR_NOAM_Host_Name>' " Server_ID NodeID ClusterID 1 Oahu-DSR-DR-NOAM-2 A1055</pre> <p>Execute the following command to start the DSR OAM process on the DR-NOAM:</p> <pre>\$ echo "<clusterID> DSROAM_Proc Yes" iload -ha -xun - fcluster -fresource -foptional HaClusterResourceCfg</pre> </div>

4.15.4 DSR Configuration: SOAMs

Procedure 28. Configure the SOAM NE

S T E P #	<p>This procedure will provide the steps to configure the SOAM Network Element</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
<p>1</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Login</p>	<p>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:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>https://<Primary_NOAM_VIP_IP_Address></p> </div> <p>Login as the <i>guiadmin</i> user:</p> <div style="text-align: center;">  </div>

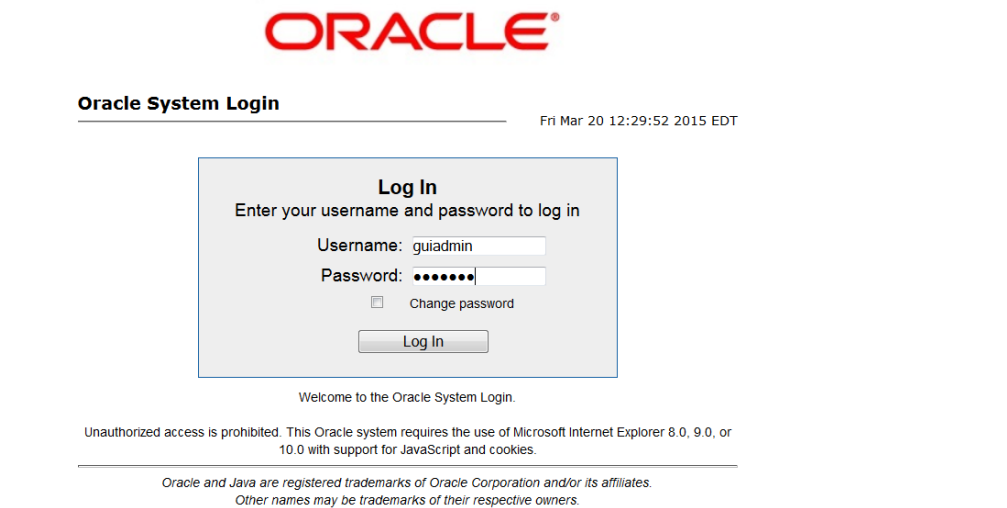
Procedure 28. Configure the SOAM NE

<p>2</p> <p>☐</p>	<p>NOAM VIP GUI: Create the SOAM Network Element using an XML File</p>	<p>Make sure to have an SOAM Network Element XML file available on the PC that is running the web browser. The SOAM Network Element XML file is similar to what was created and used in Procedure 21, but defines the SOAM “Network Element”.</p> <p>Refer to Appendix J: Sample Network Element for a sample Network Element xml file</p> <p>Navigate to Main Menu->Configuration->Network Elements</p>  <p>Select the Browse button, and enter the path and name of the SOAM network XML file.</p> <p>Select the Upload File button to upload the XML file and configure the SOAM Network Element.</p> <p>To create a new Network Element, upload a valid configuration file:</p> <p><input type="button" value="Browse..."/> No file selected. <input type="button" value="Upload File"/></p> <p><input type="button" value="Insert"/> <input type="button" value="Delete"/> <input type="button" value="Export"/> <input type="button" value="Report"/></p>
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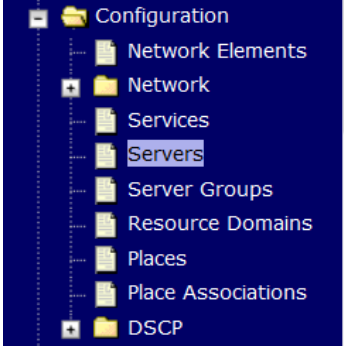
Procedure 29. Configure the SOAM Servers

S T E P #	<p>This procedure will provide the steps to configure the SOAM servers.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>																												
1 <input type="checkbox"/>	<p>Exchange SSH keys between SOAM site's local PMAC and the SOAM Server</p>	<p>Use the PMAC GUI to determine the Control Network IP address of the server that is to be the SOAM server. From the PMAC GUI, navigate to Main Menu -> Software -> Software Inventory.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Identity</th> <th>IP Address</th> <th>Hostname</th> <th>Platform Name</th> <th>Platform Version</th> <th>Application Name</th> <th>Application Version</th> <th>Designation</th> <th>Function</th> </tr> </thead> <tbody> <tr> <td>RMS: pc5010439</td> <td style="border: 2px solid red;">192.168.1.56</td> <td>hostname0b42b7c4eb5a</td> <td>TPD (x86_64)</td> <td>7.3.0.0-88.27.0</td> <td>DSR</td> <td>8.0.0.0-80.11.1</td> <td></td> <td></td> </tr> <tr> <td>Guest: Brains_DSRNOAM</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>Note the IP address for the SOAM server.</p> <p>Login to the PMAC terminal as the admusr.</p> <p>From a terminal window connection on the PMAC as the admusr user, exchange SSH keys for admusr between the PMAC and the SOAM server using the keyexchange utility, using the Control network IP address for the SOAM server. When prompted for the password, enter the password for the admusr user of the NOAM server.</p> <pre style="border: 1px solid black; padding: 5px; width: fit-content;">\$ keyexchange admusr@<SO1_Control_IP Address></pre>	Identity	IP Address	Hostname	Platform Name	Platform Version	Application Name	Application Version	Designation	Function	RMS: pc5010439	192.168.1.56	hostname0b42b7c4eb5a	TPD (x86_64)	7.3.0.0-88.27.0	DSR	8.0.0.0-80.11.1			Guest: Brains_DSRNOAM								
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Guest: Brains_DSRNOAM																													
2 <input type="checkbox"/>	<p>Exchange SSH keys between NOAM and PMAC at the SOAM site (If necessary)</p>	<p>Note: If this SOAM shares the same PMAC as the NOAM, then you can skip this step.</p> <p>From a terminal window connection on the NOAM VIP, as the admusr, exchange SSH keys for admusr between the NOAM and the PMAC for this SOAM site using the keyexchange utility.</p> <p>When prompted for the password, enter the admusr password for the PMAC server.</p> <pre style="border: 1px solid black; padding: 5px; width: fit-content;">\$ keyexchange admusr@<SO1_Site_PMAC_Mgmt_IP_Address></pre> <p>Repeat this step for the standby SOAM Server</p>																											

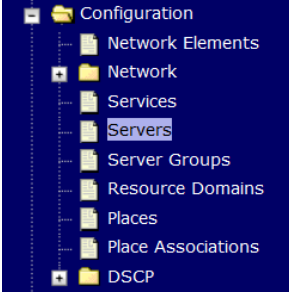
Procedure 29. Configure the SOAM Servers

3 <input type="checkbox"/>	NOAM VIP GUI: Login	<p>If not already done, establish a GUI session on the NOAM server by using the XMI IP address of the first NOAM server. Open the web browser and enter a URL of:</p> <div style="border: 1px solid black; padding: 2px;"><code>https://<Primary_NOAM_VIP_IP_Address></code></div> <p>Login to the NOAM GUI as the <i>guiadmin</i> user:</p> <div style="text-align: center;"></div>
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Procedure 29. Configure the SOAM Servers

4	<p>NOAM VIP GUI: Insert the 1st SOAM server</p>	<p>Navigate to Main Menu -> Configuration -> Servers.</p>  <p>Select the Insert button to insert the 1st SOAM server into servers table (the first or server).</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Attribute</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Hostname</td> <td>SOAM-A *</td> <td>Unique name fr 20-character sb minus sign. Mu alphanumeric.]</td> </tr> <tr> <td>Role</td> <td>SYSTEM OAM *</td> <td>Select the funct</td> </tr> <tr> <td>Hardware Profile</td> <td>DSR TVOE Guest</td> <td>Hardware profil</td> </tr> <tr> <td>Network Element Name</td> <td>HPC6_90006 *</td> <td>Select the netw</td> </tr> <tr> <td>Location</td> <td></td> <td>Location descri string. Valid val</td> </tr> </tbody> </table> <p>Fill in the fields as follows:</p> <p>Hostname: <Hostname></p> <p>Role: SYSTEM OAM</p> <p>System ID: <Site System ID></p> <p>Hardware Profile: DSR TVOE Guest</p> <p>Network Element Name: [Choose NE from Drop Down Box]</p> <p>The network interface fields will now become available with selection choices based on the chosen hardware profile and network element</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3">Interfaces:</th> </tr> <tr> <th>Network</th> <th>IP Address</th> <th>Interface</th> </tr> </thead> <tbody> <tr> <td>INTERNALXMI (10.240.84.128/25)</td> <td>10.240.84.155</td> <td>xmi <input type="checkbox"/> VLAN (3)</td> </tr> <tr> <td>INTERNALIMI (10.240.85.0/26)</td> <td>10.240.85.10</td> <td>imi <input type="checkbox"/> VLAN (4)</td> </tr> </tbody> </table> <p style="text-align: center;"> <input type="button" value="Ok"/> <input type="button" value="Apply"/> <input type="button" value="Cancel"/> </p> <p>Fill in the server IP addresses for the XMI network. Select xmi for the interface. Leave the "VLAN" checkbox unchecked.</p> <p>Fill in the server IP addresses for the IMI network. Select imi for the interface. Leave the "VLAN" checkbox unchecked.</p> <p>Next, add the following NTP servers:</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>NTP Server</th> <th>Preferred?</th> </tr> </thead> <tbody> <tr> <td><1st SOAM-TVOE-IP-Address></td> <td>Yes</td> </tr> </tbody> </table> <p>Select the Ok button when you have completed entering all the server data.</p>	Attribute	Value	Description	Hostname	SOAM-A *	Unique name fr 20-character sb minus sign. Mu alphanumeric.]	Role	SYSTEM OAM *	Select the funct	Hardware Profile	DSR TVOE Guest	Hardware profil	Network Element Name	HPC6_90006 *	Select the netw	Location		Location descri string. Valid val	Interfaces:			Network	IP Address	Interface	INTERNALXMI (10.240.84.128/25)	10.240.84.155	xmi <input type="checkbox"/> VLAN (3)	INTERNALIMI (10.240.85.0/26)	10.240.85.10	imi <input type="checkbox"/> VLAN (4)	NTP Server	Preferred?	<1st SOAM-TVOE-IP-Address>	Yes
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INTERNALXMI (10.240.84.128/25)	10.240.84.155	xmi <input type="checkbox"/> VLAN (3)																																		
INTERNALIMI (10.240.85.0/26)	10.240.85.10	imi <input type="checkbox"/> VLAN (4)																																		
NTP Server	Preferred?																																			
<1st SOAM-TVOE-IP-Address>	Yes																																			

Procedure 29. Configure the SOAM Servers

5 <input type="checkbox"/>	NOAM VIP GUI: Export the Initial Configuration	<p>Navigate to Main Menu -> Configuration -> Servers.</p>  <p>From the GUI screen, select the SOAM server and then select Export to generate the initial configuration data for that server.</p> <p><input type="button" value="Insert"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/> <input type="button" value="Export"/> <input type="button" value="Report"/></p>
6 <input type="checkbox"/>	NOAM VIP: Copy Configuration File to 1 st SOAM Server	<p>Obtain a terminal session to the NOAM VIP as the admusr user.</p> <p>Use the awpushcfg utility to copy the configuration file created in the previous step from the <code>/var/TKLC/db/filemgmt</code> directory on the NOAM to the 1st SOAM server, using the Control network IP address for the 1st SOAM server.</p> <p>The configuration file will have a filename like <code>TKLCConfigData.<hostname>.sh</code>.</p> <pre>\$ sudo awpushcfg</pre> <p>The awpushcfg utility is interactive, so the user will be prompted for the following:</p> <ul style="list-style-type: none"> • IP address of the local PMAC server: Use the management network address from the PMAC. • Username: Use admusr • Control network IP address for the target server: In this case, enter the control IP for the 1st SOAM server). • Hostname of the target server: Enter the server name configured in step 4


Procedure 29. Configure the SOAM Servers

7 <input type="checkbox"/>	1st SOAM Server: Verify awpushcfg was called and Reboot the Server	<p>Obtain a terminal window connection on the 1st SOAM server console by establishing an ssh session from the NOAM VIP terminal console.</p> <pre>\$ ssh admusr@<SO1_Control_IP></pre> <p>Login as the <i>admusr</i> user.</p> <p>The automatic configuration daemon will look for the file named "TKLCConfigData.sh" in the /var/tmp directory, implement the configuration in the file, and then prompt the user to reboot the server.</p> <p>Verify awpushcfg was called by checking the following file</p> <pre>\$ sudo cat /var/TKLC/appw/logs/Process/install.log</pre> <p>Verify no errors are present and that the following message is displayed:</p> <pre>[SUCCESS] script completed successfully!</pre> <p>Now Reboot the Server:</p> <pre>\$ sudo init 6</pre> <p>Wait for the server to reboot</p>
8 <input type="checkbox"/>	1st SOAM Server: Login	<p>Obtain a terminal window connection on the 1st SOAM server console by establishing an ssh session from the NOAM VIP terminal console.</p> <pre>\$ ssh admusr@<SO1_Control_IP></pre>
9 <input type="checkbox"/>	1st SOAM Server: Install Tuned (Oracle X6-2)	<p>Activate the tuned profile for the Guest Virtual Machine:</p> <pre>\$ sudo tuned-adm profile virtual-guest</pre> <pre>\$ sudo service_conf add tuned rc runlevels=345</pre> <pre>\$ sudo service_conf add ktune rc runlevels=345</pre> <p>Verify that tuned is active:</p> <pre>\$ sudo tuned-adm active</pre> <p>Expected output:</p> <pre>Current active profile: virtual-guest Service tuned: enabled, running Service ktune: enabled, running</pre>

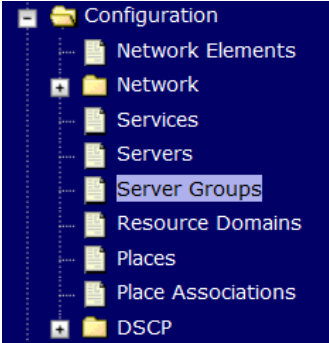
Procedure 29. Configure the SOAM Servers

<p>10</p> <p><input type="checkbox"/></p>	<p>1st SOAM Server: Verify Server Health</p>	<p>Execute the following command on the 1st SOAM server and make sure that no errors are returned:</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo syscheck Running modules in class hardware...OK Running modules in class disk...OK Running modules in class net...OK Running modules in class system...OK Running modules in class proc...OK LOG LOCATION: /var/TKLC/log/syscheck/fail_log</pre>				
<p>11</p> <p><input type="checkbox"/></p>	<p>Insert and Configure the 2nd SOAM server</p>	<p>Repeat this procedure to insert and configure the 2nd SOAM server, with the exception of the NTP server, which should be configured as so:</p> <table border="1"> <thead> <tr> <th>NTP Server</th> <th>Preferred?</th> </tr> </thead> <tbody> <tr> <td><RMS2-TVOE-IP-Address></td> <td>Yes</td> </tr> </tbody> </table> <p>Instead of data for the 1st SOAM Server, insert the network data for the 2nd SOAM server, transfer the <i>TKLCConfigData</i> file to the 2nd SOAM server, and reboot the 2nd SOAM server when prompted at a terminal window.</p>	NTP Server	Preferred?	<RMS2-TVOE-IP-Address>	Yes
NTP Server	Preferred?					
<RMS2-TVOE-IP-Address>	Yes					
<p>12</p> <p><input type="checkbox"/></p>	<p>Install NetBackup Client Software on SOAMs (Optional)</p>	<p>If you are using NetBackup at this site, then execute Appendix H: Application NetBackup Client Installation Procedures again to install the NetBackup Client on all SOAM servers.</p>				

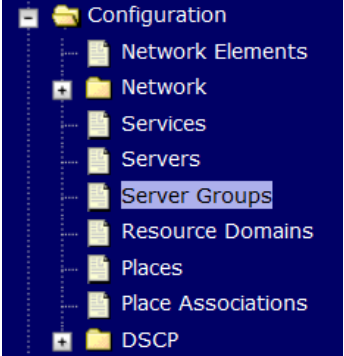
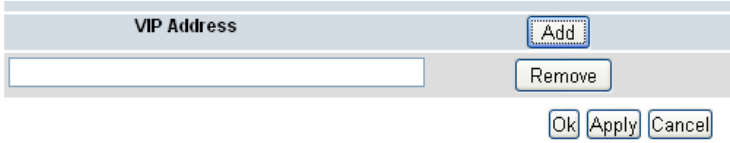
Procedure 30. Configure the SOAM Server Group

S T E P #	<p>This procedure will provide the steps to configure the SOAM Server Group</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
1 <input type="checkbox"/>	<p>NOAM VIP GUI: Login</p>	<p>If not already done, establish a GUI session on the NOAM server by using the XMI VIP address. Open the web browser and enter a URL of:</p> <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 5px 0;"> <p><code>https://<Primary_NOAM_VIP_IP_Address></code></p> </div> <p>Login to the NOAM GUI as the <i>guiadmin</i> user:</p> <div style="text-align: center;">  <p>The screenshot shows the Oracle System Login interface. At the top is the Oracle logo in red. Below it is the text 'Oracle System Login' and the date 'Fri Mar 20 12:29:52 2015 EDT'. A central box titled 'Log In' contains the instruction 'Enter your username and password to log in'. There are two input fields: 'Username' with 'guiadmin' entered and 'Password' with masked characters. A 'Change password' checkbox is below the password field. A 'Log In' button is at the bottom of the box. Below the box, it says 'Welcome to the Oracle System Login.' At the bottom of the page, there is a disclaimer: 'Unauthorized access is prohibited. This Oracle system requires the use of Microsoft Internet Explorer 8.0, 9.0, or 10.0 with support for JavaScript and cookies.' and 'Oracle and Java are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.'</p> </div>

Procedure 30. Configure the SOAM Server Group

<p>2</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Enter SOAM Server Group Data</p>	<p>After waiting approximately 5 minutes for the 2nd SOAM server to reboot,</p> <p>Navigate to the GUI Main Menu->Configuration->Server Groups</p>  <p>Select Insert</p> <p><input type="button" value="Insert"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/> <input type="button" value="Report"/></p> <p>Add the SOAM Server Group name along with the values for the following fields:</p> <ul style="list-style-type: none"> • Name: <Hostname> • Level: B • Parent [Select the NOAM Server Group] • Function: DSR (Active/Standby Pair) • WAN Replication Connection Count: Use Default Value <p>Select OK when all fields are filled.</p> <p>Note: For DSR mated sites, repeat this step for additional SOAM server groups where the preferred SOAM spares may be entered prior to the active/Standby SOAMs.</p>
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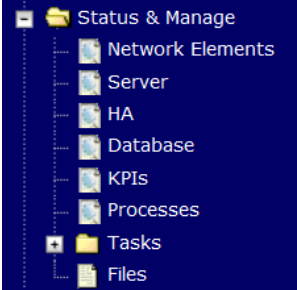
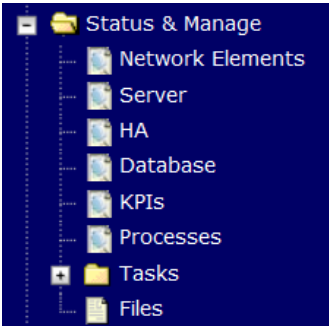
Procedure 30. Configure the SOAM Server Group

<p>3</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Edit the SOAM Server Group and add VIP</p>	<p>From the GUI Main Menu->Configuration->Server Groups</p>  <p>Select the new SOAM server group, and then select Edit.</p> <p><input type="button" value="Insert"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/> <input type="button" value="Report"/></p> <p>Add both SOAM servers to the Server Group Primary Site by clicking the Include in SG checkbox.</p> <p>Do not check any of the Preferred Spare checkboxes.</p> <table border="1"> <thead> <tr> <th colspan="3">SO_900060102</th> </tr> <tr> <th>Server</th> <th>SG Inclusion</th> <th>Preferred HA Role</th> </tr> </thead> <tbody> <tr> <td>RMSSOA</td> <td><input checked="" type="checkbox"/> Include in SG</td> <td><input type="checkbox"/> Preferred Spare</td> </tr> <tr> <td>RMSSOB</td> <td><input checked="" type="checkbox"/> Include in SG</td> <td><input type="checkbox"/> Preferred Spare</td> </tr> </tbody> </table> <p>Click Apply.</p> <p>Add a SOAM VIP by click on Add. Fill in the VIP Address and press Ok as shown below:</p> 	SO_900060102			Server	SG Inclusion	Preferred HA Role	RMSSOA	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare	RMSSOB	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare
SO_900060102														
Server	SG Inclusion	Preferred HA Role												
RMSSOA	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare												
RMSSOB	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare												

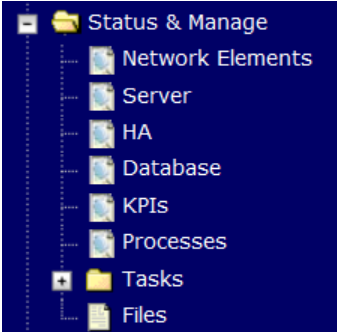
Procedure 30. Configure the SOAM Server Group

<p>4</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Edit the SOAM Server Group and add Preferred Spares for Site Redundancy (Optional)</p>	<p>If the Two Site Redundancy feature is wanted for the SOAM Server Group, add a SOAM server that is located in its Server Group Secondary Site by clicking the Include in SG checkbox. Also check the Preferred Spare checkbox.</p> <table border="1"> <thead> <tr> <th>Server</th> <th>SG Inclusion</th> <th>Preferred HA Role</th> </tr> </thead> <tbody> <tr> <td>LabF123SOsp1</td> <td><input checked="" type="checkbox"/> Include in SG</td> <td><input checked="" type="checkbox"/> Preferred Spare</td> </tr> </tbody> </table> <p>For more information about Server Group Secondary Site, Tertiary Site or Site Redundancy, see Terminology section.</p>	Server	SG Inclusion	Preferred HA Role	LabF123SOsp1	<input checked="" type="checkbox"/> Include in SG	<input checked="" type="checkbox"/> Preferred Spare																																																
Server	SG Inclusion	Preferred HA Role																																																						
LabF123SOsp1	<input checked="" type="checkbox"/> Include in SG	<input checked="" type="checkbox"/> Preferred Spare																																																						
<p>5</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Edit the SOAM Server Group and add additional SOAM VIPs (Optional)</p>	<p>Add additional SOAM VIPs by click on Add. Fill in the “VIP Address” and press Ok as shown below.</p> <p>Note: Additional SOAM VIPs only apply to SOAM Server Groups with Preferred Spare SOAMs.</p> <div> <table border="1"> <thead> <tr> <th>VIP Address</th> <th>Add</th> </tr> </thead> <tbody> <tr> <td><input type="text"/></td> <td><input type="button" value="Add"/></td> </tr> <tr> <td><input type="button" value="Remove"/></td> <td></td> </tr> </tbody> </table> <p style="text-align: right;"><input type="button" value="Ok"/> <input type="button" value="Apply"/> <input type="button" value="Cancel"/></p> </div>	VIP Address	Add	<input type="text"/>	<input type="button" value="Add"/>	<input type="button" value="Remove"/>																																																	
VIP Address	Add																																																							
<input type="text"/>	<input type="button" value="Add"/>																																																							
<input type="button" value="Remove"/>																																																								
<p>6</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Wait for Remote Database Alarm to Clear</p>	<p>Wait for the alarm Remote Database re-initialization in progress to be cleared before proceeding.</p> <p>Navigate to Main menu->Alarms & Events->View Active</p> <p>Main Menu: Alarms & Events -> View History (Filtered)</p> <div> <p style="text-align: right;">Fri Mar 20 10:20:00 EDT 2015</p> <p>Filter <input type="button" value="Tasks"/></p> <table border="1"> <thead> <tr> <th>Seq #</th> <th>Event ID</th> <th>Timestamp</th> <th>Severity</th> <th>Product</th> <th>Process</th> <th>NE</th> <th>Server</th> <th>Type</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> <td colspan="5">Additional Info</td> </tr> <tr> <td>414</td> <td>10200</td> <td>2015-03-20 09:30:00.090 EDT</td> <td>CLEAR</td> <td>...</td> <td>apwSoapServer</td> <td>Compass_NO</td> <td>Compass-NOA</td> <td>CFG</td> </tr> <tr> <td></td> <td></td> <td>Remote Database re-initialization in progress</td> <td></td> <td colspan="5">Cleared because DB Re-Init Completed</td> </tr> <tr> <td>413</td> <td>10200</td> <td>2015-03-20 09:28:16.411 EDT</td> <td>MINOR</td> <td>...</td> <td>apwSoapServer</td> <td>Compass_NO</td> <td>Compass-NOA</td> <td>CFG</td> </tr> <tr> <td></td> <td></td> <td>Remote Database re-initialization in progress</td> <td></td> <td colspan="5">Remote Database re-initialization in progress</td> </tr> </tbody> </table> </div>	Seq #	Event ID	Timestamp	Severity	Product	Process	NE	Server	Type					Additional Info					414	10200	2015-03-20 09:30:00.090 EDT	CLEAR	...	apwSoapServer	Compass_NO	Compass-NOA	CFG			Remote Database re-initialization in progress		Cleared because DB Re-Init Completed					413	10200	2015-03-20 09:28:16.411 EDT	MINOR	...	apwSoapServer	Compass_NO	Compass-NOA	CFG			Remote Database re-initialization in progress		Remote Database re-initialization in progress				
Seq #	Event ID	Timestamp	Severity	Product	Process	NE	Server	Type																																																
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		Remote Database re-initialization in progress		Remote Database re-initialization in progress																																																				

Procedure 30. Configure the SOAM Server Group

<p>7</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Restart 1st SOAM server</p>	<p>From the NOAMP GUI, select Main menu->Status & Manage->Server.</p>  <p>Select the 1st SOAM server.</p> <p>Select the Restart button. Answer OK to the confirmation popup. Wait for restart to complete.</p> <p><input type="button" value="Stop"/> <input type="button" value="Restart"/> <input type="button" value="Reboot"/> <input type="button" value="NTP Sync"/> <input type="button" value="Report"/></p>
<p>8</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Restart 2nd SOAM server</p>	<p>From the NOAMP GUI, select Main menu->Status & Manage->Server.</p>  <p>Select the 2nd SOAM server.</p> <p>Select the Restart button. Answer OK to the confirmation popup. Wait for restart to complete.</p> <p><input type="button" value="Stop"/> <input type="button" value="Restart"/> <input type="button" value="Reboot"/> <input type="button" value="NTP Sync"/> <input type="button" value="Report"/></p>

Procedure 30. Configure the SOAM Server Group

9	<input type="checkbox"/> <p>NOAM VIP GUI: Restart all Preferred Spare SOAM Servers</p>	<p>If additional Preferred Spare servers are not configured for <i>Secondary or Tertiary Sites</i>, this step can be skipped.</p> <p>If additional Preferred Spare servers are configured for <i>Secondary and/or Tertiary Sites</i>, continuing in the Main menu->Status & Manage->Server</p>  <p>Select the all Preferred Spare SOAM servers.</p> <p>Select the Restart button. Answer OK to the confirmation popup.</p> <div style="text-align: center;"> <input type="button" value="Stop"/> <input type="button" value="Restart"/> <input type="button" value="Reboot"/> <input type="button" value="NTP Sync"/> <input type="button" value="Report"/> </div>
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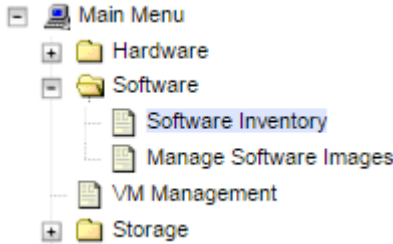
4.15.5 DSR Configuration: Activate PCA (Oracle X6-2)

Procedure 31. Activate PCA (PCA Only)


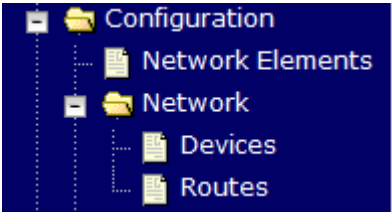
S T E P #		<p>This procedure will provide the steps to activate PCA</p> <p>Note: PCA should only be activated on Oracle X6-2 Rack mount Servers</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>
1	<input type="checkbox"/> <p>(PCA Only) Activate PCA Feature</p>	<p>If you are installing PCA, execute procedures “(PCA Activation or PCA Activation on a newly added site)” within Appendix A of the PCA activation and configuration guide [10] to activate PCA.</p> <p>Note: If not all SOAM sites are ready at this point, then you should repeat activation for each *new* SOAM site that comes online.</p>

4.15.5 DSR Configuration: MPs

Procedure 32. Configure the MP Servers

S T E P #	<p>This procedure will provide the steps to configure an MP Servers (IPFE, SBR, SS7-MP, DA-MP)</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>																
<p>1.</p> <p><input type="checkbox"/></p>	<p>PMAC: Exchange SSH keys between MP site's local PMAC and the MP server</p>	<p>Use the MP site's PMAC GUI to determine the Control Network IP address of the server that is to be an MP server. From the MP site's PMAC GUI, navigate to Main Menu -> Software -> Software Inventory.</p>  <table border="1"> <thead> <tr> <th>Identity</th> <th>IP Address</th> <th>Hostname</th> </tr> </thead> <tbody> <tr> <td>RMS: Yukon_TVOE_1 Guest: MultiApp3_DSRDAMP1</td> <td>192.168.1.24</td> <td>MultiApp3-DA-MP1</td> </tr> <tr> <td>RMS: Yukon_TVOE_10 Guest: MultiApp3_DSRDAMP10</td> <td>192.168.1.161</td> <td>MultiApp3-DA-MP10</td> </tr> <tr> <td>RMS: Yukon_TVOE_2 Guest: MultiApp3_DSRDAMP2</td> <td>192.168.1.107</td> <td>MultiApp3-DA-MP2</td> </tr> <tr> <td>Host: Yukon-TVOE-3 Guest: MultiApp3_DSRDAMP3</td> <td>192.168.1.118</td> <td>MultiApp3-DA-MP3</td> </tr> </tbody> </table> <p>Note the IP address for an MP server.</p> <p>Login to the MP site's PMAC terminal as the admusr.</p> <p>From a terminal window connection on the MP site's PMAC as the admusr.</p> <p>Exchange SSH keys for admusr between the PMAC and the MP server using the keyexchange utility, using the Control network IP address for the MP server.</p> <pre style="border: 1px solid black; padding: 5px;">\$ keyexchange admusr@<MP_Control_IP Address></pre> <p>When prompted for the password, enter the password for the admusr user of the MP server.</p>	Identity	IP Address	Hostname	RMS: Yukon_TVOE_1 Guest: MultiApp3_DSRDAMP1	192.168.1.24	MultiApp3-DA-MP1	RMS: Yukon_TVOE_10 Guest: MultiApp3_DSRDAMP10	192.168.1.161	MultiApp3-DA-MP10	RMS: Yukon_TVOE_2 Guest: MultiApp3_DSRDAMP2	192.168.1.107	MultiApp3-DA-MP2	Host: Yukon-TVOE-3 Guest: MultiApp3_DSRDAMP3	192.168.1.118	MultiApp3-DA-MP3
Identity	IP Address	Hostname															
RMS: Yukon_TVOE_1 Guest: MultiApp3_DSRDAMP1	192.168.1.24	MultiApp3-DA-MP1															
RMS: Yukon_TVOE_10 Guest: MultiApp3_DSRDAMP10	192.168.1.161	MultiApp3-DA-MP10															
RMS: Yukon_TVOE_2 Guest: MultiApp3_DSRDAMP2	192.168.1.107	MultiApp3-DA-MP2															
Host: Yukon-TVOE-3 Guest: MultiApp3_DSRDAMP3	192.168.1.118	MultiApp3-DA-MP3															

Procedure 32. Configure the MP Servers

<p>2. <input type="checkbox"/></p>	<p>NOAM VIP GUI: Login</p>	<p>If not already done, establish a GUI session on the NOAM server by using the XMI IP address of the first NOAM server. Open the web browser and enter a URL of:</p> <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 5px 0;"> <p><code>https://<Primary_NOAM_VIP_IP_Address></code></p> </div> <p>Login to the NOAM GUI as the <i>guiadmin</i> user:</p> 
<p>3. <input type="checkbox"/></p>	<p>NOAM VIP GUI: Navigate to Signaling Network Configurati on Screen</p>	<p>Navigate to Main Menu -> Configuration -> Network</p>  <p>Click on Insert in the lower left corner.</p> <div style="display: flex; gap: 10px; margin-top: 5px;"> Insert Edit Lock/Unlock Delete Report </div>

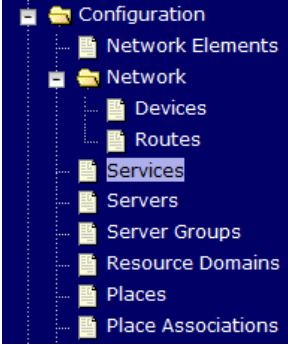
Procedure 32. Configure the MP Servers

<p>4.</p> <p style="margin-top: 10px;">□</p>	<p>NOAMP VIP GUI: Add Signaling Networks</p>	<p>You will see the following screen:</p> <p>Insert Network</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Field</th> <th style="text-align: left;">Value</th> <th style="text-align: left;">Description</th> </tr> </thead> <tbody> <tr> <td>Network Name</td> <td>XSI1 *</td> <td>The name of this network. [Default = N/A. Range = Alpha]</td> </tr> <tr> <td>Network Element</td> <td>- Unassigned - *</td> <td>The network element this network is a part of. If not spec</td> </tr> <tr> <td>VLAN ID</td> <td>5 *</td> <td>The VLAN ID to use for this network. [Default = N/A. Rang</td> </tr> <tr> <td>Network Address</td> <td>10.71.88.0 *</td> <td>The network address of this network. [Default = N/A. Ran colon hex (IPv6) format.]</td> </tr> <tr> <td>Netmask</td> <td>255.255.255.0 *</td> <td>Subnetting to apply to servers within this network. [Defau IPv6) or dotted decimal (IPv4) format.]</td> </tr> <tr> <td>Router IP</td> <td>10.71.88.3</td> <td>The IP address of a router on this network. If this is a def route on servers with interfaces on this network. If custo monitored.</td> </tr> <tr> <td>Default Network</td> <td><input type="radio"/> Yes <input checked="" type="radio"/> No</td> <td>A selection indicating whether this is the network with a c</td> </tr> <tr> <td>Routable</td> <td><input checked="" type="radio"/> Yes <input type="radio"/> No</td> <td>Whether or not this network is routable outside its netwo be possibly present in all network elements.</td> </tr> </tbody> </table> <p style="text-align: right; margin-top: 5px;"> <input type="button" value="OK"/> <input type="button" value="Apply"/> <input type="button" value="Cancel"/> </p> <p>Enter the Network Name, VLAN ID, Network Address, Netmask, and Router IP that matches the Signaling network</p> <p>Note: Even if the network does not use VLAN Tagging, you should enter the correct VLAN ID here as indicated by the NAPD</p> <ul style="list-style-type: none"> • IMPORTANT: Leave the Network Element field as Unassigned. • Select No for Default Network • Select Yes for Routable. <p>Press OK. If you are finished adding signaling networks</p> <p>-OR-</p> <p>Press Apply to save this signaling network and repeat this step to enter additional signaling networks.</p>	Field	Value	Description	Network Name	XSI1 *	The name of this network. [Default = N/A. Range = Alpha]	Network Element	- Unassigned - *	The network element this network is a part of. If not spec	VLAN ID	5 *	The VLAN ID to use for this network. [Default = N/A. Rang	Network Address	10.71.88.0 *	The network address of this network. [Default = N/A. Ran colon hex (IPv6) format.]	Netmask	255.255.255.0 *	Subnetting to apply to servers within this network. [Defau IPv6) or dotted decimal (IPv4) format.]	Router IP	10.71.88.3	The IP address of a router on this network. If this is a def route on servers with interfaces on this network. If custo monitored.	Default Network	<input type="radio"/> Yes <input checked="" type="radio"/> No	A selection indicating whether this is the network with a c	Routable	<input checked="" type="radio"/> Yes <input type="radio"/> No	Whether or not this network is routable outside its netwo be possibly present in all network elements.
Field	Value	Description																											
Network Name	XSI1 *	The name of this network. [Default = N/A. Range = Alpha]																											
Network Element	- Unassigned - *	The network element this network is a part of. If not spec																											
VLAN ID	5 *	The VLAN ID to use for this network. [Default = N/A. Rang																											
Network Address	10.71.88.0 *	The network address of this network. [Default = N/A. Ran colon hex (IPv6) format.]																											
Netmask	255.255.255.0 *	Subnetting to apply to servers within this network. [Defau IPv6) or dotted decimal (IPv4) format.]																											
Router IP	10.71.88.3	The IP address of a router on this network. If this is a def route on servers with interfaces on this network. If custo monitored.																											
Default Network	<input type="radio"/> Yes <input checked="" type="radio"/> No	A selection indicating whether this is the network with a c																											
Routable	<input checked="" type="radio"/> Yes <input type="radio"/> No	Whether or not this network is routable outside its netwo be possibly present in all network elements.																											

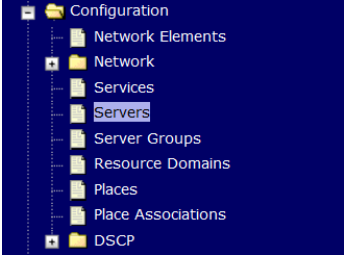
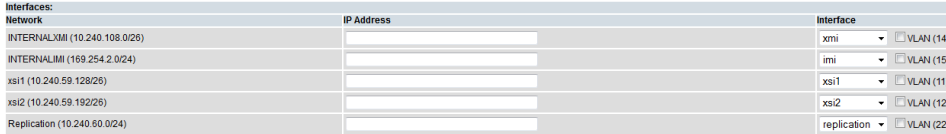
Procedure 32. Configure the MP Servers

<p>5.</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: [PCA Only]: Define SBR DB Replication Network</p>	<p>Note: Execute this step only if you are defining a separate, dedicated network for SBR Replication.</p> <p>Main Menu: Configuration -> Network [Insert]</p> <div style="border: 1px solid #ccc; padding: 5px; margin-bottom: 10px;"> <p style="background-color: #f0f0f0; margin: 0; padding: 2px;">Info ▾</p> <p style="margin: 5px 0 0 0;">Insert Network</p> <table border="1" style="width: 100%; border-collapse: collapse; font-size: 0.9em;"> <thead> <tr style="background-color: #e0e0e0;"> <th style="text-align: left;">Field</th> <th style="text-align: left;">Value</th> <th style="text-align: left;">Description</th> </tr> </thead> <tbody> <tr> <td>Network Name</td> <td>Replicaion *</td> <td>The name of this network. [Default = N/A. Range = Alphanumeric]</td> </tr> <tr> <td>Network Element</td> <td>- Unassigned - ▾</td> <td>The network element this network is a part of. If not specified, t</td> </tr> <tr> <td>VLAN ID</td> <td>8 *</td> <td>The VLAN ID to use for this network. [Default = N/A. Range = 1-</td> </tr> <tr> <td>Network Address</td> <td>10.71.88.0 *</td> <td>The network address of this network. [Default = N/A. Range = v format.]</td> </tr> <tr> <td>Netmask</td> <td>255.255.255.0 *</td> <td>Subnetting to apply to servers within this network. [Default = N/ decimal (IPv4) format.]</td> </tr> <tr> <td>Router IP</td> <td>10.71.88.3</td> <td>The IP address of a router on this network. If this is a default n with interfaces on this network. If customer router monitoring is</td> </tr> <tr> <td>Default Network</td> <td><input type="radio"/> Yes <input checked="" type="radio"/> No</td> <td>A selection indicating whether this is the network with a default</td> </tr> <tr> <td>Routable</td> <td><input checked="" type="radio"/> Yes <input type="radio"/> No</td> <td>Whether or not this network is routable outside its network ele present in all network elements.</td> </tr> </tbody> </table> <p style="text-align: right; margin-top: 5px;"> <input type="button" value="Ok"/> <input type="button" value="Apply"/> <input type="button" value="Cancel"/> </p> </div> <p>Enter the Network Name, VLAN ID, Network Address, Netmask, and Router IP that matches the SBR DB Replication network</p> <p>Note: Even if the network does not use VLAN Tagging, you should enter the correct VLAN ID here as indicated by the NAPD</p> <ul style="list-style-type: none"> IMPORTANT: Leave the Network Element field as Unassigned. Select No for Default Network Select Yes for Routable. <p>Press Ok. If you are finished adding signaling networks –OR- Press Apply to save this signaling network and repeat this step to enter additional signaling networks.</p>	Field	Value	Description	Network Name	Replicaion *	The name of this network. [Default = N/A. Range = Alphanumeric]	Network Element	- Unassigned - ▾	The network element this network is a part of. If not specified, t	VLAN ID	8 *	The VLAN ID to use for this network. [Default = N/A. Range = 1-	Network Address	10.71.88.0 *	The network address of this network. [Default = N/A. Range = v format.]	Netmask	255.255.255.0 *	Subnetting to apply to servers within this network. [Default = N/ decimal (IPv4) format.]	Router IP	10.71.88.3	The IP address of a router on this network. If this is a default n with interfaces on this network. If customer router monitoring is	Default Network	<input type="radio"/> Yes <input checked="" type="radio"/> No	A selection indicating whether this is the network with a default	Routable	<input checked="" type="radio"/> Yes <input type="radio"/> No	Whether or not this network is routable outside its network ele present in all network elements.
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VLAN ID	8 *	The VLAN ID to use for this network. [Default = N/A. Range = 1-																											
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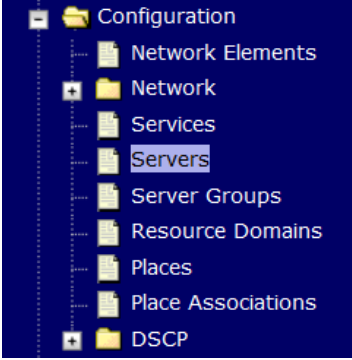
Procedure 32. Configure the MP Servers

<p>6.</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: [PCA Only]: Perform Additional Service to Networks Mapping</p>	<p>Note: Execute this step only if you are defining a separate, dedicated network for SBR Replication.</p> <p>Navigate to Main Menu -> Configuration -> Services</p>  <p>Select the Edit button</p> <div style="display: flex; justify-content: center; gap: 10px;"> <input type="button" value="Edit"/> <input type="button" value="Report"/> </div> <p>Set the Services as shown in the table below:</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="width: 33%;">Name</th> <th style="width: 33%;">Intra-NE Network</th> <th style="width: 33%;">Inter-NE Network</th> </tr> </thead> <tbody> <tr> <td>Replication_MP</td> <td><IMI Network></td> <td><SBR DB Replication Network>*</td> </tr> <tr> <td>ComAgent</td> <td><IMI Network></td> <td><SBR DB Replication Network>*</td> </tr> </tbody> </table> <p>Note: It is recommended that dual-path HA heartbeats be enabled in support of geo-diverse SBRs. This requires participating servers to be attached to at least two routable networks.</p> <p>Note: For HA_MP_Secondary it is recommended the Inter-NE Network be set as the PCA replication network (configured in Step 5) or the XMI network and Intra-NE Network be set as the IMI network.</p> <p>Main Menu: Configuration -> Services [Edit]</p> <div style="border: 1px solid #ccc; padding: 5px;"> <p style="text-align: right; font-size: small;">Tue Sep 15 10:...</p> <p>Services</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;">Name</th> <th style="width: 30%;">Intra-NE Network</th> <th style="width: 30%;">Inter-NE Network</th> </tr> </thead> <tbody> <tr> <td>OAM</td> <td>INTERNALIM ▾</td> <td>INTERNALXMI ▾</td> </tr> <tr> <td>Replication</td> <td>INTERNALIM ▾</td> <td>INTERNALXMI ▾</td> </tr> <tr> <td>Signaling</td> <td>Unspecified ▾</td> <td>Unspecified ▾</td> </tr> <tr> <td>HA_Secondary</td> <td>Unspecified ▾</td> <td>Unspecified ▾</td> </tr> <tr> <td>HA_MP_Secondary</td> <td>Unspecified ▾</td> <td>Unspecified ▾</td> </tr> <tr> <td>Replication_MP</td> <td>INTERNALIM ▾</td> <td>Replication ▾</td> </tr> <tr> <td>ComAgent</td> <td>INTERNALIM ▾</td> <td>Replication ▾</td> </tr> </tbody> </table> <p style="text-align: center; font-size: small;">OK Apply Cancel</p> </div> <p>Select the Ok button to apply the Service-to-Network selections.</p>	Name	Intra-NE Network	Inter-NE Network	Replication_MP	<IMI Network>	<SBR DB Replication Network>*	ComAgent	<IMI Network>	<SBR DB Replication Network>*	Name	Intra-NE Network	Inter-NE Network	OAM	INTERNALIM ▾	INTERNALXMI ▾	Replication	INTERNALIM ▾	INTERNALXMI ▾	Signaling	Unspecified ▾	Unspecified ▾	HA_Secondary	Unspecified ▾	Unspecified ▾	HA_MP_Secondary	Unspecified ▾	Unspecified ▾	Replication_MP	INTERNALIM ▾	Replication ▾	ComAgent	INTERNALIM ▾	Replication ▾
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Signaling	Unspecified ▾	Unspecified ▾																																	
HA_Secondary	Unspecified ▾	Unspecified ▾																																	
HA_MP_Secondary	Unspecified ▾	Unspecified ▾																																	
Replication_MP	INTERNALIM ▾	Replication ▾																																	
ComAgent	INTERNALIM ▾	Replication ▾																																	

Procedure 32. Configure the MP Servers

<p>7.</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Insert the MP server (Part 1)</p>	<p>Navigate to Main Menu->Configuration->Servers</p>  <p>Select the Insert button to insert the new MP server into servers table.</p> <p><input type="button" value="Insert"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/> <input type="button" value="Export"/> <input type="button" value="Report"/></p> <p>Fill out the following values:</p> <p>Hostname: <Hostname> Role: MP Network Element: [Choose Network Element] Hardware Profile: DSR TVOE Guest Location: <enter an optional location description></p> <p>The interface configuration form will now appear.</p>  <ul style="list-style-type: none"> • For the XMI network, enter the MP's XMI IP address. Select the xmi interface. • For the IMI network, enter the MP's IMI IP address. Select the imi interface. • For the XSI1 network, enter the MP's XSI1 IP address. Select the xsi1 interface. • For the XSI2 network, enter the MP's XSI2 IP address. Select the xsi2 interface. • For the Replication network (If Step 5 was executed), enter the MP's Replication IP address. Select the replication interface. <p>Note: If XSI3 and XSI4 were configured, follow the same method of entry as XSI1 and XSI2</p>				
<p>8.</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Insert the MP server (Part 2)</p>	<p>Next, add the following NTP servers:</p> <table border="1"> <thead> <tr> <th>NTP Server</th> <th>Preferred?</th> </tr> </thead> <tbody> <tr> <td><MP-RMS-TVOE-IP-Address></td> <td>Yes</td> </tr> </tbody> </table> <p>Select OK when all fields are filled in to finish MP server insertion.</p>	NTP Server	Preferred?	<MP-RMS-TVOE-IP-Address>	Yes
NTP Server	Preferred?					
<MP-RMS-TVOE-IP-Address>	Yes					

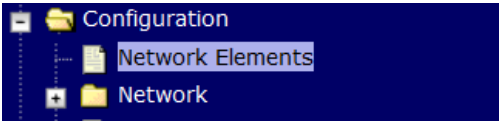
Procedure 32. Configure the MP Servers

<p>9.</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Export the Configuration</p>	<p>Navigate to Main Menu -> Configuration -> Servers.</p>  <p>From the GUI screen, select the MP server and then select Export to generate the initial configuration data for that server.</p> <p><input type="button" value="Insert"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/> <input type="button" value="Export"/> <input type="button" value="Report"/></p>
<p>10.</p> <p><input type="checkbox"/></p>	<p>NOAM VIP: Copy Configuration File to MP Server</p>	<p>Obtain a terminal session to the NOAM VIP as the admusr user.</p> <p>Use the awpushcfg utility to copy the configuration file created in the previous step from the <code>/var/TKLC/db/filemgmt</code> directory on the NOAM to the MP server, using the Control network IP address for the MP server.</p> <p>The configuration file will have a filename like "TKLCConfigData.<hostname>.sh".</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo awpushcfg</pre> <p>The awpushcfg utility is interactive, so the user will be prompted for the following:</p> <ul style="list-style-type: none"> • IP address of the local PMAC server: Use the management network address from the PMAC. • Username: Use admusr • Control network IP address for the target server: In this case, enter the control IP for the MP server). • Hostname of the target server: Enter the server name configured in step 1

Procedure 32. Configure the MP Servers

<p>11.</p> <p><input type="checkbox"/></p>	<p>MP Server: Verify awpushcfg was called and Reboot the Configured Server</p>	<p>Obtain a terminal window connection on the MP server console by establishing an ssh session from the PMAC of the MP.</p> <pre>\$ ssh admusr@<MP_Control_IP></pre> <p>Login as the <i>admusr</i> user.</p> <p>Verify awpushcfg was called by checking the following file:</p> <pre>\$ sudo cat /var/TKLC/appw/logs/Process/install.log</pre> <p>Verify no errors are present and that the following message is displayed:</p> <pre>[SUCCESS] script completed successfully!</pre> <p>Reboot the sever:</p> <pre>\$ sudo init 6</pre> <p>Proceed to the next step once the Server finished rebooting, The server is done rebooting once the login prompt is displayed.</p>
<p>12.</p> <p><input type="checkbox"/></p>	<p>MP Server: Login</p>	<p>After the reboot, login as <i>admusr</i>.</p>
<p>13.</p> <p><input type="checkbox"/></p>	<p>MP Server: Install Tuned (Oracle X6-2)</p>	<p>Activate the tuned profile for the Guest Virtual Machine:</p> <pre>\$ sudo tuned-adm profile virtual-guest</pre> <pre>\$ sudo service_conf add tuned rc runlevels=345</pre> <pre>\$ sudo service_conf add ktune rc runlevels=345</pre> <p>Verify that tuned is active:</p> <pre>\$ sudo tuned-adm active</pre> <p>Expected output:</p> <pre>Current active profile: virtual-guest Service tuned: enabled, running Service ktune: enabled, running</pre>

Procedure 32. Configure the MP Servers

<p>14. <input type="checkbox"/></p>	<p>MP Server: Verify Server Health</p>	<p>Execute the following command on the server and make sure that no errors are returned:</p> <pre style="background-color: #f0f0f0; padding: 5px;">\$ sudo syscheck Running modules in class hardware...OK Running modules in class disk...OK Running modules in class net...OK Running modules in class system...OK Running modules in class proc...OK LOG LOCATION: /var/TKLC/log/syscheck/fail_log</pre>
<p>15. <input type="checkbox"/></p>	<p>MP Server: Delete Auto-Configured Default Route on MP and Replace it with a Network Route via the XMI Network-Part1 (Optional)</p>	<p>Note: THIS STEP IS OPTIONAL AND SHOULD ONLY BE EXECUTED IF YOU PLAN TO CONFIGURE A DEFAULT ROUTE ON YOUR MP THAT USES A SIGNALING (XSI) NETWORK INSTEAD OF THE XMI NETWORK. (Not executing this step will mean that a default route will not be configurable on this MP and you will have to create separate network routes for each signaling network destination.)</p> <p>Using the iLO facility, log into the MP as the <i>admusr</i> user. (<i>Alternatively, you can log into the site's PMAC then SSH to the MP's control address.</i>)</p> <p>Determine <XMI_Gateway_IP> from your SO site network element info.</p> <p>Gather the following items:</p> <ul style="list-style-type: none"> • <NO_XMI_Network_Address> • <NO_XMI_Network_Netmask> • <DR_NO_XMI_Network_Address> • <DR_NO_XMI_Network_Netmask> • <TVOE_Mgmt_XMI_Network_Address> • <TVOE_Mgmt_XMI_Network_Netmask> <p>Note: You can either consult the XML files you imported earlier, or go to the NO GUI and view these values from the Main Menu -> Configuration -> Network Elements screen.</p>  <p>Proceed to the next step to modify the default routes on the MP servers.</p>

Procedure 32. Configure the MP Servers

<p>16.</p> <p>□</p>	<p>MP Server: Delete Auto-Configured Default Route on MP and Replace it with a Network Route via the XMI Network-Part2 (Optional)</p>	<p>After gathering the network information from step 15, proceed with modifying the default routes on the MP server.</p> <p>Establish a connection to the MP server, login as admusr.</p> <p>Create network routes to the NO's XMI(OAM) network:</p> <p>Note: If your NOAM XMI network is exactly the same as your MP XMI network, then you should skip this command and only configure the DR NO route.</p> <pre>\$ sudo /usr/TKLC/plat/bin/netAdm add --route=net --address=<NO_Site_Network_ID> --netmask=<NO_Site_Network_Netmask> --gateway=<MP_XMI_Gateway_IP_Address> --device=<MP_XMI_Interface> Route to <MP_XMI_Interface> added.</pre> <p>Create network routes to the DR NO's XMI(OAM) network:</p> <pre>\$ sudo /usr/TKLC/plat/bin/netAdm add --route=net --address=<DR-NO_Site_Network_ID> --netmask=<DR-NO_Site_Network_Netmask> --gateway=<MP_XMI_Gateway_IP_Address> --device=<MP_XMI_Interface> Route to <MP_XMI_Interface> added.</pre> <p>Create network routes to the Management Server TVOE XMI(OAM) network for NTP:</p> <pre>\$ sudo /usr/TKLC/plat/bin/netAdm add --route=net --address=<TVOE_Mgmt_XMI_Network_Address> --netmask=<TVOE_Mgmt_XMI_Network_Netmask> --gateway=<MP_XMI_Gateway_IP_Address> --device=<MP_XMI_Interface> Route to <MP_XMI_Interface> added.</pre> <p>(Optional) If Sending SNMP traps from individual servers, create host routes to customer SNMP trap destinations on the XMI network:</p> <pre>\$ sudo /usr/TKLC/plat/bin/netAdm add --route=host --address=<Customer_NMS_IP> --gateway=<MP_XMI_Gateway_IP_Address> --device=<MP_XMI_Interface> Route to <MP_XMI_Interface> added.</pre> <p>(Repeat for any existing customer NMS stations)</p> <p>Delete the existing default route:</p> <pre>\$ sudo /usr/TKLC/plat/bin/netAdm delete --route=default --gateway=<MP_XMI_Gateway_IP> --device=<MP_XMI_Interface> Route to <MP_XMI_Interface> removed.</pre>
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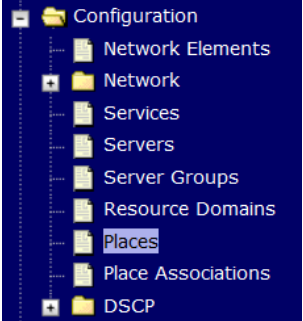

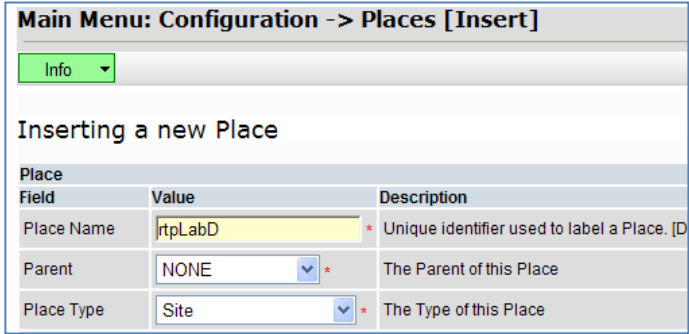
Procedure 32. Configure the MP Servers

<p>17.</p> <p><input type="checkbox"/></p>	<p>MP Server: Verify connectivity</p>	<p>After steps 15 and 16 have been executed, verify network connectivity.</p> <p>Establish a connection to the MP server, login as <i>admusr</i>.</p> <p>Ping active NO XMI IP address to verify connectivity:</p> <pre style="border: 1px solid black; padding: 5px;">\$ ping <ACTIVE_NO_XMI_IP_Address> PING 10.240.108.6 (10.240.108.6) 56(84) bytes of data. 64 bytes from 10.240.108.6: icmp_seq=1 ttl=64 time=0.342 ms 64 bytes from 10.240.108.6: icmp_seq=2 ttl=64 time=0.247 ms</pre> <p>(Optional) Ping Customer NMS Station(s):</p> <pre style="border: 1px solid black; padding: 5px;">\$ ping <Customer_NMS_IP> PING 172.4.116.8 (172.4.116.8) 56(84) bytes of data. 64 bytes from 172.4.116.8: icmp_seq=1 ttl=64 time=0.342 ms 64 bytes from 172.4.116.8: icmp_seq=2 ttl=64 time=0.247 ms</pre> <p>If you do not get a response, then verify your network configuration. If you continue to get failures then halt the installation and contact Oracle customer support.</p>
<p>18.</p> <p><input type="checkbox"/></p>	<p>Repeat for remaining MPs</p>	<p>Repeat this entire procedure for all remaining MP (SBR, SS7-MP, DA-MP, and IPFE) servers.</p>

Procedure 33. Configure Places and Assign MP Servers to Places (PCA ONLY)

S T E P #	<p>This procedure will provide the steps/reference to add "Places" in the PCA Network.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
1 <input type="checkbox"/>	<p>NOAM VIP GUI: Login</p>	<p>If not already done, establish a GUI session on the NOAM server by using the XMI IP address. Open the web browser and enter a URL of:</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p><code>http://<Primary_NOAM_VIP_IP_Address></code></p> </div> <p>Login to the NOAM GUI as the <i>guiadmin</i> user:</p> <div style="text-align: center; margin: 20px 0;"> </div>

Procedure 33. Configure Places and Assign MP Servers to Places (PCA ONLY)

<p>2</p> <p>☐</p> <p>NOAM VIP GUI: Configure Places</p>	<p>Establish a GUI session on the NOAMP by using the XMI VIP address. Login as user guidadmin.</p> <p>Navigate to Main Menu -> Configuration -> Places</p>  <p>Select the Insert button</p>   <p>Place Name: <Site Name> Parent: NONE Place Type: Site</p> <p>Repeat this step for each of the <i>PCA Places (Sites)</i> in the network.</p> <p>See the Terminology section for more information on <i>Sites & Places</i>.</p>
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Procedure 33. Configure Places and Assign MP Servers to Places (PCA ONLY)

<p>3</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Assign MP Servers To Places</p>
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Select the place configured in **step 2**, press the edit button.

For each place you have defined, choose the set of MP servers that will be assigned to those places.

Place	
Field	Value
Place Name	<input style="background-color: yellow; border: 1px solid red;" type="text" value="rtplabC"/> *
Parent	<input type="text" value="NONE"/> ▼ *
Place Type	<input type="text" value="Site"/> ▼ *
Servers	
LABCSONE <input type="checkbox"/> labCe1b04pdra1	


Check all the check boxes for **SS7-MPs** and **PCA DA-MP** and **SBR** servers that will be assigned to this place.

Repeat this step for all other DA-MP or SBR servers you wish to assign to places.

Note: All DA-MPs and SBR servers must be added to the *Site Place* that corresponds to the physical location of the server.

See the **Terminology** section for more information on *Sites*.

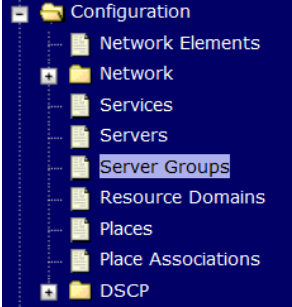
Procedure 34. Configure the MP Server Group(s) and Profile(s)

S T E P #	<p>This procedure will provide the steps to configure MP Server Groups</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
1 <input type="checkbox"/>	<p>NOAM VIP GUI: Login</p>	<p>If not already done, establish a GUI session on the NOAM server the VIP IP address of the NOAM server.</p> <p>Open the web browser and enter a URL of: <div style="border: 1px solid black; padding: 2px; display: inline-block;"> https://<Primary_NOAM_VIP_IP_Address> </div> </p> <p>Login to the NOAM GUI as the <i>guiadmin</i> user:</p> <div style="text-align: center;">  </div>

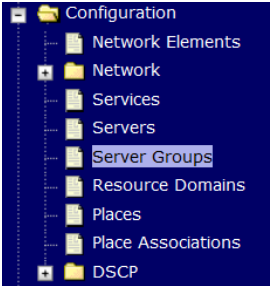
Procedure 34. Configure the MP Server Group(s) and Profile(s)

<p>2</p> <p>☐</p>	<p>NOAM VIP GUI: Determine Server Group Function</p>	<p>Determine what server group function will be configured, make note the following configuration decisions.</p> <table border="1"> <thead> <tr> <th>Server Group Function</th> <th>MPs Will Run</th> <th>Redundancy Model</th> </tr> </thead> <tbody> <tr> <td>DSR (multi-active cluster)</td> <td>Diameter Relay and Application Services</td> <td>Multiple MPs active Per SG</td> </tr> <tr> <td>IP Load Balancer</td> <td>IPFE application</td> <td>1 Active MP Per SG</td> </tr> <tr> <td>SS7-IWF</td> <td>MAP IWF Application</td> <td>1 Active MP Per SG</td> </tr> <tr> <td>Session Binding Repository</td> <td>Session Binding Repository Function</td> <td>1 Active MP and 1 Standby MP / Per SG</td> </tr> <tr> <td>Policy & Charging SBR</td> <td>Policy and Charging Session/or Policy Binding Function</td> <td>1 Active MP Per SG</td> </tr> </tbody> </table> <p>For PCA application:</p> <ul style="list-style-type: none"> - Online Charging function (only) <ul style="list-style-type: none"> ○ At least one MP Server Group with the “Policy and Charging SBR” function must be configured ○ At least one MP Server Group with the “DSR (multi-active cluster)” function must be configured ○ MP Server Groups with the “IP Load Balancer” function (IPFE) are optional. - Policy DRA function <ul style="list-style-type: none"> ○ At least two MP Server Groups with the “Policy and Charging SBR” function must be configured. One will store Session data and one will store Binding data. ○ At least one MP Server Group with the “DSR (multi-active cluster)” function must be configured ○ MP Server Groups with the “IP Load Balancer” function (IPFE) are optional. <p>WAN Replication Connection Count:</p> <ul style="list-style-type: none"> • For non-Policy and Charging SBR Server Groups: Default Value • For Policy and Charging Server Groups: 8 <p>For the PCA application, the following types of MP Server Groups must be configured:</p> <ul style="list-style-type: none"> - DA-MP (Function: DSR (multi-active cluster)) - SBR (Function: Policy and Charging SBR) - IPFE (Function: IP Load Balancer) – Optional) 	Server Group Function	MPs Will Run	Redundancy Model	DSR (multi-active cluster)	Diameter Relay and Application Services	Multiple MPs active Per SG	IP Load Balancer	IPFE application	1 Active MP Per SG	SS7-IWF	MAP IWF Application	1 Active MP Per SG	Session Binding Repository	Session Binding Repository Function	1 Active MP and 1 Standby MP / Per SG	Policy & Charging SBR	Policy and Charging Session/or Policy Binding Function	1 Active MP Per SG
Server Group Function	MPs Will Run	Redundancy Model																		
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Session Binding Repository	Session Binding Repository Function	1 Active MP and 1 Standby MP / Per SG																		
Policy & Charging SBR	Policy and Charging Session/or Policy Binding Function	1 Active MP Per SG																		

Procedure 34. Configure the MP Server Group(s) and Profile(s)

<p>3</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Enter MP Server Group Data</p>	<p>From the data collected from step 2, create the server group with the following: Navigate to Main Menu ->Configuration ->Server Groups</p>  <p>Select Insert</p> <p><input type="button" value="Insert"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/> <input type="button" value="Report"/></p> <p>Fill out the following fields:</p> <p>Server Group Name: <Server Group Name> Level: C Parent: [SOAMP Server Group That is Parent To this MP] Function: Select the Proper Function for this MP Server Group (Gathered in Step 2)</p> <p>Select OK when all fields are filled in.</p>
<p>4</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Repeat For Additional Server Groups</p>	<p>Repeat Steps 2-3 for any remaining MP server groups you wish to create.</p> <p>For instance, if you are installing IPFE, you will need to create an IP Load Balancer server group.</p>


Procedure 34. Configure the MP Server Group(s) and Profile(s)

<p>5</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Edit the MP Server Groups to include MPs</p>	<p>From the GUI, navigate to Main Menu->Configuration->Server Groups</p>  <p>Select a server group that you just created and then select Edit.</p> <p>Select the Network Element that represents the MP server group you wish to edit.</p> <p>Click the Include in SG box for every MP server that you wish to include in <i>this</i> server group. Leave other checkboxes blank.</p> <table border="1"> <thead> <tr> <th colspan="3">HPC6_90006</th> </tr> <tr> <th>Server</th> <th>SG Inclusion</th> <th>Preferred HA Role</th> </tr> </thead> <tbody> <tr> <td>MP-1</td> <td><input checked="" type="checkbox"/> Include in SG</td> <td><input type="checkbox"/> Preferred Spare</td> </tr> <tr> <td>MP-2</td> <td><input checked="" type="checkbox"/> Include in SG</td> <td><input type="checkbox"/> Preferred Spare</td> </tr> </tbody> </table> <p>Note: Each IPFE and SS7 server should be in its own server group.</p> <p>Select OK.</p>	HPC6_90006			Server	SG Inclusion	Preferred HA Role	MP-1	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare	MP-2	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare
HPC6_90006														
Server	SG Inclusion	Preferred HA Role												
MP-1	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare												
MP-2	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare												

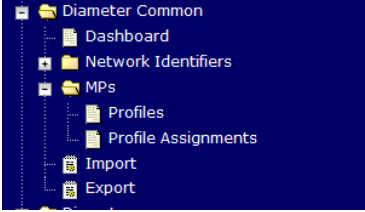
Procedure 34. Configure the MP Server Group(s) and Profile(s)

<p>6 <input type="checkbox"/></p>	<p>NOAM VIP GUI: [PCA ONLY] Edit the MP Server Group and add Preferred Spares for Site Redundancy (Optional)</p>	<p>If Two Site Redundancy for the Policy and Charging SBR Server Group is wanted, add a MP server that is physically located in a separate site (location) to the Server Group by clicking the Include in SG checkbox and also check the Preferred Spare checkbox.</p> <table border="1"> <thead> <tr> <th>Server</th> <th>SG Inclusion</th> <th>Preferred HA Role</th> </tr> </thead> <tbody> <tr> <td>LabF123SBRsp1</td> <td><input checked="" type="checkbox"/> Include in SG</td> <td><input checked="" type="checkbox"/> Preferred Spare</td> </tr> </tbody> </table> <p>If Three Site Redundancy for the SBR MP Server Group is wanted, add two SBR MP servers that are both physically located in separate sites (<i>location</i>) to the Server Group by clicking the Include in SG checkbox and also check the Preferred Spare checkbox for both servers.</p> <p>Note: The Preferred Spare servers should be different sites from the original server and should not be in the same site. There should be servers from three separate sites (locations).</p> <p>Note: There must first be Non-Preferred spare present in the server group before adding the preferred spare.</p> <table border="1"> <thead> <tr> <th>Server</th> <th>SG Inclusion</th> <th>Preferred HA Role</th> </tr> </thead> <tbody> <tr> <td>LabF123SBRsp1</td> <td><input checked="" type="checkbox"/> Include in SG</td> <td><input checked="" type="checkbox"/> Preferred Spare</td> </tr> <tr> <td>LabF123SBRsp2</td> <td><input checked="" type="checkbox"/> Include in SG</td> <td><input checked="" type="checkbox"/> Preferred Spare</td> </tr> </tbody> </table> <p>For more information about Site Redundancy for Policy and Charging SBR Server Groups, see the Terminology section.</p> <p>Select OK to save</p>	Server	SG Inclusion	Preferred HA Role	LabF123SBRsp1	<input checked="" type="checkbox"/> Include in SG	<input checked="" type="checkbox"/> Preferred Spare	Server	SG Inclusion	Preferred HA Role	LabF123SBRsp1	<input checked="" type="checkbox"/> Include in SG	<input checked="" type="checkbox"/> Preferred Spare	LabF123SBRsp2	<input checked="" type="checkbox"/> Include in SG	<input checked="" type="checkbox"/> Preferred Spare																														
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<p>7 <input type="checkbox"/></p>	<p>NOAM VIP GUI: Repeat For Additional Server Groups</p>	<p>Repeat Steps 5-6 for any remaining MP server groups you need to edit.</p>																																													
<p>8 <input type="checkbox"/></p>	<p>NOAM VIP GUI: Wait for Remote Database Alarm to Clear</p>	<p>Wait for the alarm Remote Database re-initialization in progress to be cleared before proceeding.</p> <p>Navigate to Main menu->Alarms & Events->View Active</p> <p>Main Menu: Alarms & Events -> View History (Filtered)</p> <table border="1"> <thead> <tr> <th>Seq #</th> <th>Event ID</th> <th>Timestamp</th> <th>Severity</th> <th>Product</th> <th>Process</th> <th>NE</th> <th>Server</th> <th>Type</th> </tr> </thead> <tbody> <tr> <td>414</td> <td>10200</td> <td>2015-03-20 09:30:00.090 EDT</td> <td>CLEAR</td> <td>...</td> <td>apwSoapServer</td> <td>Compass_NO</td> <td>Compass-NOA</td> <td>CFG</td> </tr> <tr> <td></td> <td></td> <td>Remote Database re-initialization in progress</td> <td colspan="6">Cleared because DB Re-Init Completed</td> </tr> <tr> <td>413</td> <td>10200</td> <td>2015-03-20 09:28:16.411 EDT</td> <td>MINOR</td> <td>...</td> <td>apwSoapServer</td> <td>Compass_NO</td> <td>Compass-NOA</td> <td>CFG</td> </tr> <tr> <td></td> <td></td> <td>Remote Database re-initialization in progress</td> <td colspan="6">Remote Database re-initialization in progress</td> </tr> </tbody> </table>	Seq #	Event ID	Timestamp	Severity	Product	Process	NE	Server	Type	414	10200	2015-03-20 09:30:00.090 EDT	CLEAR	...	apwSoapServer	Compass_NO	Compass-NOA	CFG			Remote Database re-initialization in progress	Cleared because DB Re-Init Completed						413	10200	2015-03-20 09:28:16.411 EDT	MINOR	...	apwSoapServer	Compass_NO	Compass-NOA	CFG			Remote Database re-initialization in progress	Remote Database re-initialization in progress					
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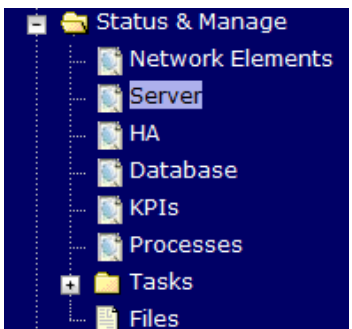
Procedure 34. Configure the MP Server Group(s) and Profile(s)

<p>9</p> <p><input type="checkbox"/></p>	<p>SOAM VIP GUI: Login</p>	<p>If not already done, establish a GUI session on the SOAM server by using the VIP IP address of the SOAM server.</p> <p>Open the web browser and enter a URL of:</p> <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 5px auto;"> <p><code>https://<Primary_SOAM_VIP_IP_Address></code></p> </div> <p>Login to the SOAM GUI as the <i>guiadmin</i> user:</p> <div style="text-align: center; margin: 20px 0;">  </div> <div style="text-align: center;"> <p>Oracle System Login</p> <hr style="width: 50%; margin: 0 auto;"/> <p style="font-size: small;">Fri Mar 20 12:29:52 2015 EDT</p> </div> <div style="text-align: center; margin: 20px 0;"> <div style="border: 1px solid gray; padding: 10px; width: 80%; margin: 0 auto;"> <p style="text-align: center;">Log In</p> <p style="text-align: center;">Enter your username and password to log in</p> <p>Username: <input type="text" value="guiadmin"/></p> <p>Password: <input type="password" value="••••••"/></p> <p style="text-align: center;"><input type="checkbox"/> Change password</p> <p style="text-align: center;"><input type="button" value="Log In"/></p> </div> </div> <p style="text-align: center; font-size: x-small;">Welcome to the Oracle System Login.</p> <p style="text-align: center; font-size: x-small;">Unauthorized access is prohibited. This Oracle system requires the use of Microsoft Internet Explorer 8.0, 9.0, or 10.0 with support for JavaScript and cookies.</p> <hr style="width: 50%; margin: 0 auto;"/> <p style="text-align: center; font-size: x-small;">Oracle and Java are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.</p>
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Procedure 34. Configure the MP Server Group(s) and Profile(s)


10	<p>SOAM VIP GUI: Assign Profiles to DA-MPs from SOAM GUI.</p>	<p>Navigate to Main Menu -> Diameter Common ->MPs -> Profiles Assignments</p>  <p>Refer to the DA-MP section. (If the site has both DSR and MAP-IWF server groups, you will see both a DA-MP section and an SS7-MP section)</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">DA-MP</th> <th style="text-align: left;">MP Profile</th> </tr> </thead> <tbody> <tr><td>MultiApp3-DA-MP1</td><td>VM:10K_MPS</td></tr> <tr><td>MultiApp3-DA-MP10</td><td>VM:10K_MPS</td></tr> <tr><td>MultiApp3-DA-MP2</td><td>VM:10K_MPS</td></tr> <tr><td>MultiApp3-DA-MP3</td><td>VM:10K_MPS</td></tr> <tr><td>MultiApp3-DA-MP4</td><td>VM:10K_MPS</td></tr> <tr><td>MultiApp3-DA-MP5</td><td>VM:10K_MPS</td></tr> <tr><td>MultiApp3-DA-MP6</td><td>VM:10K_MPS</td></tr> <tr><td>MultiApp3-DA-MP7</td><td>VM:10K_MPS</td></tr> <tr><td>MultiApp3-DA-MP8</td><td>VM:10K_MPS</td></tr> <tr><td>MultiApp3-DA-MP9</td><td>VM:10K_MPS</td></tr> <tr><td colspan="2"> </td></tr> <tr> <th style="text-align: left;">SS7-MP</th> <th style="text-align: left;">MP Profile</th> </tr> <tr><td>MultiApp3-SS7-MP1</td><td>VM:MD-IWF</td></tr> </tbody> </table> <p>For each MP, select the proper profile assignment based on the function each MP will serve:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Profile Name</th> <th style="text-align: left;">Description</th> </tr> </thead> <tbody> <tr> <td>VM:10K_MPS (Oracle X6-2)</td> <td>Virtualized DA-MP on TVOE Guest running relay, session, and database applications</td> </tr> <tr> <td>VM:MD-IWF</td> <td>Virtualized SS7-MP on TVOE Guest running MD-IWF applications</td> </tr> </tbody> </table> <p>When finished, press the Assign button</p>	DA-MP	MP Profile	MultiApp3-DA-MP1	VM:10K_MPS	MultiApp3-DA-MP10	VM:10K_MPS	MultiApp3-DA-MP2	VM:10K_MPS	MultiApp3-DA-MP3	VM:10K_MPS	MultiApp3-DA-MP4	VM:10K_MPS	MultiApp3-DA-MP5	VM:10K_MPS	MultiApp3-DA-MP6	VM:10K_MPS	MultiApp3-DA-MP7	VM:10K_MPS	MultiApp3-DA-MP8	VM:10K_MPS	MultiApp3-DA-MP9	VM:10K_MPS			SS7-MP	MP Profile	MultiApp3-SS7-MP1	VM:MD-IWF	Profile Name	Description	VM:10K_MPS (Oracle X6-2)	Virtualized DA-MP on TVOE Guest running relay, session, and database applications	VM:MD-IWF	Virtualized SS7-MP on TVOE Guest running MD-IWF applications
DA-MP	MP Profile																																			
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MultiApp3-DA-MP5	VM:10K_MPS																																			
MultiApp3-DA-MP6	VM:10K_MPS																																			
MultiApp3-DA-MP7	VM:10K_MPS																																			
MultiApp3-DA-MP8	VM:10K_MPS																																			
MultiApp3-DA-MP9	VM:10K_MPS																																			
SS7-MP	MP Profile																																			
MultiApp3-SS7-MP1	VM:MD-IWF																																			
Profile Name	Description																																			
VM:10K_MPS (Oracle X6-2)	Virtualized DA-MP on TVOE Guest running relay, session, and database applications																																			
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Procedure 34. Configure the MP Server Group(s) and Profile(s)

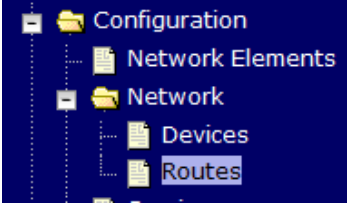
<p>11</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Login</p>	<p>If not already done, establish a GUI session on the NOAM server by using the VIP IP address of the NOAM server.</p> <p>Open the web browser and enter a URL of:</p> <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 5px 0;"> <p><code>https://<Primary_NOAM_VIP_IP_Address></code></p> </div> <p>Login to the NOAM GUI as the <i>guiadmin</i> user:</p> 
<p>12</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Restart MP servers</p>	<p>Navigate to Main menu->Status & Manage->Server</p>  <p>For each MP (SS7-MP, DA-MP, SBR) server:</p> <ul style="list-style-type: none"> • Select the MP server. • Select the Restart button. • Answer OK to the confirmation popup. Wait for the message which tells you that the restart was successful. <div style="border: 1px solid gray; padding: 5px; width: fit-content; margin: 10px 0;"> <p>Stop Restart Reboot NTP Sync Report</p> </div> <p>Note: POLICY AND CHARGING DRA INSTALLATIONS: You may continue to see alarms related to ComAgent until you complete PCA installation.</p>

4.15.6 DSR Configuration: Signaling Network

Procedure 35. Configure the Signaling Network Routes

S T E P #	<p>This procedure will provide the steps to configure Signaling Network Routes on MP-type servers (DA-MP, IPFE, SS7-MP, etc.)</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
1 <input type="checkbox"/>	<p>NOAM VIP GUI: Login</p>	<p>If not already done, establish a GUI session on the NOAM server the VIP IP address of the NOAM server.</p> <p>Open the web browser and enter a URL of: <div style="border: 1px solid black; padding: 2px; display: inline-block;"> https://<Primary_NOAM_VIP_IP_Address> </div> </p> <p>Login to the NOAM GUI as the <i>guiadmin</i> user:</p> <div style="text-align: center;">  </div>

Procedure 35. Configure the Signaling Network Routes


<p>2</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Navigate to Routes Configuration Screen</p>	<p>Navigate to Main Menu -> Configuration -> Network -> Routes</p>  <p>Select the first MP Server group you see listed on the first row of tabs as shown, then click the Entire Server Group link. Initially, no routes should be displayed.</p>  <p>Note: For SBRs that span multiple sites, routes should be added individually.</p>																		
<p>3</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Add Route</p>	<p>Click on Insert at the bottom of the screen to add additional routes.</p> 																		
<p>4</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Add Default Route for MPs Going Through Signaling Network Gateway (Optional)</p>	<p>OPTIONAL - Only execute this step if you performed Procedure 32 Step 16: which removed the XMI gateway default route on MPs</p> <p>If your MP servers no longer have a default route, then you can now insert a default route here which uses one of the signaling network gateways.</p> <p>Insert Route on Oahu-DSR-DAMP-1</p> <table border="1"> <thead> <tr> <th>Field</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Route Type</td> <td> <input type="radio"/> Net <input checked="" type="radio"/> Default <input type="radio"/> Host* </td> <td>Select a route type. [Default = N/A. Options = Net, Default, Host. You can configure at most one IPv4 default route :</td> </tr> <tr> <td>Device</td> <td> <input type="text" value="xsi1"/> </td> <td>Select the network device name through which traffic is being routed. The selection of AUTO will result in the device</td> </tr> <tr> <td>Destination</td> <td><input type="text"/></td> <td>The destination network address. [Default = N/A. Range = Valid Network Address of the network in dotted decimal</td> </tr> <tr> <td>Netmask</td> <td><input type="text"/></td> <td>A valid netmask for the network route destination IP address. [Default = N/A. Range = Valid Netmask for the netwo</td> </tr> <tr> <td>Gateway IP</td> <td><input type="text" value=""/></td> <td>The IP address of the gateway for this route. [Default = N/A. Range = Valid IP address of the gateway in dotted dec</td> </tr> </tbody> </table> <p style="text-align: right;"><input type="button" value="Ok"/> <input type="button" value="Apply"/> <input type="button" value="Cancel"/></p> <p>Route Type: Default</p> <p>Device: Select the signaling device that is directly attached to the network where the XSI default gateway resides.</p> <p>Gateway IP: The XSI gateway you wish to use for default signaling network access.</p> <p>Select OK</p> <p style="text-align: center;"><input type="button" value="Ok"/> <input type="button" value="Apply"/> <input type="button" value="Cancel"/></p>	Field	Value	Description	Route Type	<input type="radio"/> Net <input checked="" type="radio"/> Default <input type="radio"/> Host*	Select a route type. [Default = N/A. Options = Net, Default, Host. You can configure at most one IPv4 default route :	Device	<input type="text" value="xsi1"/>	Select the network device name through which traffic is being routed. The selection of AUTO will result in the device	Destination	<input type="text"/>	The destination network address. [Default = N/A. Range = Valid Network Address of the network in dotted decimal	Netmask	<input type="text"/>	A valid netmask for the network route destination IP address. [Default = N/A. Range = Valid Netmask for the netwo	Gateway IP	<input type="text" value=""/>	The IP address of the gateway for this route. [Default = N/A. Range = Valid IP address of the gateway in dotted dec
Field	Value	Description																		
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Destination	<input type="text"/>	The destination network address. [Default = N/A. Range = Valid Network Address of the network in dotted decimal																		
Netmask	<input type="text"/>	A valid netmask for the network route destination IP address. [Default = N/A. Range = Valid Netmask for the netwo																		
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Procedure 35. Configure the Signaling Network Routes

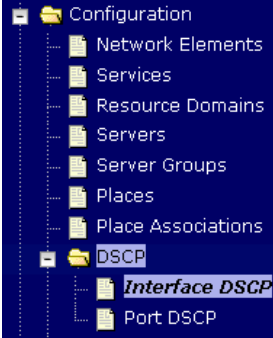
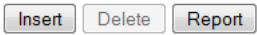
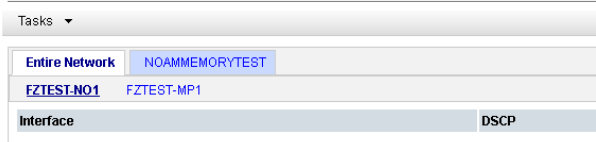
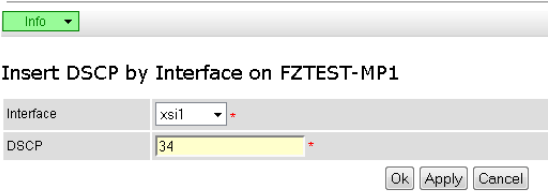
<p>5</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Add Network Routes for Diameter Peers</p>	<p>Use this step to add IPv4 and/or IPv6 routes to <i>diameter</i> peer destination networks. The goal here is to ensure that diameter traffic uses the gateway(s) on the signaling networks.</p> <table border="1"> <thead> <tr> <th>Field</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Route Type</td> <td> <input checked="" type="radio"/> Net <input type="radio"/> Default <input type="radio"/> Host </td> <td>Select a route type.</td> </tr> <tr> <td>Device</td> <td>bond0.5</td> <td>* Enter the network device name through which traffic is being routed. This must be an existing device on the server.</td> </tr> <tr> <td>Destination</td> <td>10.250.46.0</td> <td>A valid netmask for the destination network or host. Must be in dotted quad format</td> </tr> <tr> <td>Netmask</td> <td>255.255.255.0</td> <td>A valid netmask for the destination network or host. Must be in dotted quad format</td> </tr> <tr> <td>Gateway IP</td> <td>10.240.70.99</td> <td>* A valid IP address of the gateway. Must be in dotted quad format</td> </tr> </tbody> </table> <p style="text-align: right;"> <input type="button" value="Ok"/> <input type="button" value="Apply"/> <input type="button" value="Cancel"/> </p> <p>Route Type: Net</p> <p>Device: Select the appropriate signaling interface that will be used to connect to that network</p> <p>Destination: Enter the Network ID of Network to which the peer node is connected to.</p> <p>Netmask: Enter the corresponding Netmask.</p> <p>Gateway IP: Enter the Int-XSI switch VIP of the chosen Network for L3 deployments (either of int-XSI-1 or of int-XSI2). Or the IP of the customer gateway for L2 deployments.</p> <p>If you have more routes to enter, Press Apply to save the current route entry and repeat this step to enter more routes</p> <p>If you are finished entering routes, Press OK to save the latest route and leave this screen.</p>	Field	Value	Description	Route Type	<input checked="" type="radio"/> Net <input type="radio"/> Default <input type="radio"/> Host	Select a route type.	Device	bond0.5	* Enter the network device name through which traffic is being routed. This must be an existing device on the server.	Destination	10.250.46.0	A valid netmask for the destination network or host. Must be in dotted quad format	Netmask	255.255.255.0	A valid netmask for the destination network or host. Must be in dotted quad format	Gateway IP	10.240.70.99	* A valid IP address of the gateway. Must be in dotted quad format
Field	Value	Description																		
Route Type	<input checked="" type="radio"/> Net <input type="radio"/> Default <input type="radio"/> Host	Select a route type.																		
Device	bond0.5	* Enter the network device name through which traffic is being routed. This must be an existing device on the server.																		
Destination	10.250.46.0	A valid netmask for the destination network or host. Must be in dotted quad format																		
Netmask	255.255.255.0	A valid netmask for the destination network or host. Must be in dotted quad format																		
Gateway IP	10.240.70.99	* A valid IP address of the gateway. Must be in dotted quad format																		
<p>6</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Repeat for all other MP server groups.</p>	<p>The routes entered in this procedure should now be configured on all MPs in the server group for the first MP you selected.</p> <p>If you have additional MP server groups, repeat from step 2, but this time, select an MP from the next MP server group.</p> <p>Continue until you have covered all MP server groups. This includes DAMP, IPFE, and SS7MP servers.</p> <p>Note: IPFE and DAMP servers must have the same routes configured.</p>																		

4.15.7 DSR Configuration: DSCP (Optional)


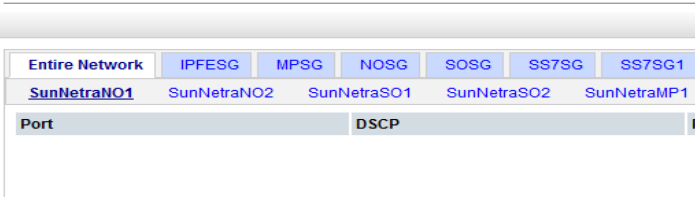
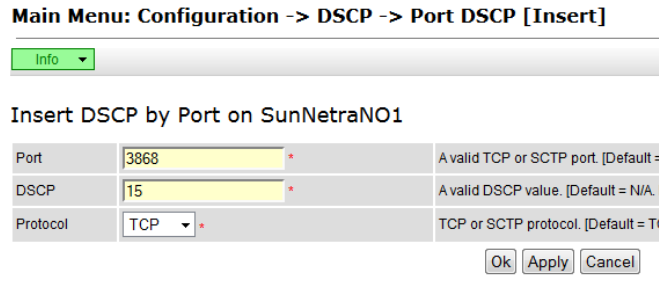
Procedure 36. Configure DSCP Values for Outgoing Traffic (Optional)

<p>S T E P #</p>	<p>This procedure will provide the steps to configure the DSCP values for outgoing packets on servers. DSCP values can be applied to an outbound interface as a whole, or to all outbound traffic using a specific TCP or SCTP source port. This step is optional and should only be executed if has been decided that your network will utilize packet DSCP markings for Quality-of-Service purposes.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
<p>1 <input type="checkbox"/></p>	<p>NOAM VIP GUI: Login</p>	<p>If not already done, establish a GUI session on the NOAM server to the VIP IP address of the NOAM server.</p> <p>Open the web browser and enter a URL of: <div style="border: 1px solid black; padding: 2px; display: inline-block;"> https://<Primary_NOAM_VIP_IP_Address> </div> </p> <p>Login to the NOAM GUI as the <i>guiadmin</i> user:</p> <div style="text-align: center;">  </div>

Procedure 36. Configure DSCP Values for Outgoing Traffic (Optional)

<p>2</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Option 1: Configure Interface DSCP</p>	<p>Note: The values displayed in the screenshots are for demonstration purposes only. The exact DSCP values for your site will vary.</p> <p>Navigate to Main Menu -> Configuration -> DSCP -> Interface DSCP</p>  <p>Select the server you wish to configure from the list of servers on the 2nd line. (You can view all servers with Entire Network selected; or limit yourself to a particular server group by clicking on that server group name's tab).</p> <p>Click Insert</p>  <p>Main Menu: Configuration -> DSCP -> Interface DSCP</p>  <p>Select the network interface from the drop down box, then enter the <i>DSCP value</i> you wish to have applied to packets leaving this interface.</p> <p>Main Menu: [Insertdscpbyintf]</p>  <p>Click OK if there are no more interfaces on this server to configure, or Apply to finish this interface and continue on with more interfaces by selecting them from the drop down and entering their <i>DSCP values</i>.</p>
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Procedure 36. Configure DSCP Values for Outgoing Traffic (Optional)

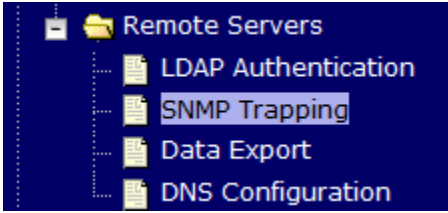
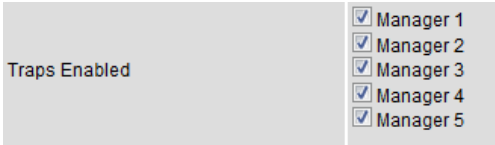
<p>3</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Option 2: Configure Port DSCP</p>	<p>Note: The values displayed in the screenshots are for demonstration purposes only. The exact DSCP values for your site will vary.</p> <p>Navigate to Main Menu -> Configuration -> DSCP -> Port DSCP</p>  <p>Select the server you wish to configure from the list of servers on the 2nd line. (You can view all servers with Entire Network selected; or limit yourself to a particular server group by clicking on that server group name's tab).</p> <p>Click Insert</p>  <p>Main Menu: Configuration -> DSCP -> Port DSCP</p>  <p>Enter the source port, DSCP value, and select the transport protocol.</p> <p>Main Menu: Configuration -> DSCP -> Port DSCP [Insert]</p>  <p>Click OK if there are no more port DSCPs on this server to configure, or Apply to finish this port entry and continue entering more port <i>DSCP mappings</i>.</p>
<p>4</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Repeat for additional servers.</p>	<p>Repeat Steps 2-3 for all remaining servers.</p>

4.15.8 DSR Configuration: SNMP (Optional)

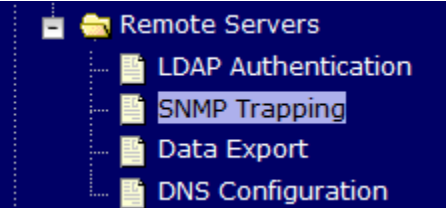
Procedure 37. Configure SNMP Trap Receiver(s) (Optional)

S T E P #	<p>This procedure will provide the steps to configure forwarding of SNMP Traps from each individual server.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
1 <input type="checkbox"/>	<p>NOAM VIP GUI: Login</p>	<p>If not already done, establish a GUI session on the NOAM server the VIP IP address of the NOAM server.</p> <p>Open the web browser and enter a URL of: <div style="border: 1px solid black; padding: 2px; display: inline-block;"> https://<Primary_NOAM_VIP_IP_Address> </div></p> <p>Login to the NOAM GUI as the <i>guiadmin</i> user:</p> <div style="text-align: center;"> </div> <p style="text-align: center; font-size: small;">Oracle and Java are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.</p>

Procedure 37. Configure SNMP Trap Receiver(s) (Optional)


<p>2</p> <p><input type="checkbox"/></p> <p>NOAM VIP</p> <p>GUI:</p> <p>Configure System-Wide SNMP Trap Receiver(s)</p>	<p>Navigate to Main Menu -> Administration -> Remote Servers -> SNMP Trapping</p>  <p>Verify that Traps Enabled is checked:</p>  <p>Fill in the IP address or hostname of the Network Management Station (NMS) you wish to forward traps to. This IP should be reachable from the NOAMP's "XMI" network.</p> <p>Continue to fill in additional secondary, tertiary, etc. Manager IPs in the corresponding slots if desired.</p> <table border="1"> <thead> <tr> <th>Variable</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>Manager 1</td> <td>10.10.55.88</td> </tr> </tbody> </table> <p>Enter the SNMP Community Name:</p> <table border="1"> <tr> <td>SNMPv2c Read-Only Community Name</td> <td>snmppublic</td> </tr> <tr> <td>SNMPv2c Read-Write Community Name</td> <td>snmppublic</td> </tr> </table> <p>Leave all other fields at their default values.</p> <p>Press OK</p>	Variable	Value	Manager 1	10.10.55.88	SNMPv2c Read-Only Community Name	snmppublic	SNMPv2c Read-Write Community Name	snmppublic
Variable	Value								
Manager 1	10.10.55.88								
SNMPv2c Read-Only Community Name	snmppublic								
SNMPv2c Read-Write Community Name	snmppublic								

Procedure 37. Configure SNMP Trap Receiver(s) (Optional)

<p>3</p> <p><input type="checkbox"/></p>	<p>NOAMP VIP: Enable Traps from Individual Servers (Optional)</p>	<p>Note: By default SNMP traps from MPs are aggregated and then displayed at the active NOAMP. If instead, you wish for every server to send its own traps directly to the NMS, then execute this procedure.</p> <p>This procedure requires that all servers, including MPs, have an XMI interface on which the customer SNMP Target server (NMS) is reachable.</p> <p>Navigate to Main Menu -> Administration -> Remote Servers -> SNMP Trapping</p>  <p>Make sure the checkbox next to Enabled is checked, if not, check it as shown below</p> <table border="1"> <tr> <td></td> <td></td> <td>[Default: enabled.]</td> </tr> <tr> <td>Traps from Individual Servers</td> <td><input checked="" type="checkbox"/> Enabled</td> <td>Enable or disable SNMP traps from in sent from individual servers, otherwise OAM&P server. [Default: disabled.]</td> </tr> <tr> <td></td> <td></td> <td>Configured Community Name (SNMP)</td> </tr> </table> <p>Then click on Apply and verify that the data is committed.</p>			[Default: enabled.]	Traps from Individual Servers	<input checked="" type="checkbox"/> Enabled	Enable or disable SNMP traps from in sent from individual servers, otherwise OAM&P server. [Default: disabled.]			Configured Community Name (SNMP)
		[Default: enabled.]									
Traps from Individual Servers	<input checked="" type="checkbox"/> Enabled	Enable or disable SNMP traps from in sent from individual servers, otherwise OAM&P server. [Default: disabled.]									
		Configured Community Name (SNMP)									
<p>4</p> <p><input type="checkbox"/></p>	<p>PMAC: Update the TVOE Host SNMP Community String</p>	<p>Establish an SSH session to the PMAC, login as admusr.</p> <p>Execute the following command to update the TVOE host community string:</p> <pre>\$ sudo pmaccli setCommStr --accessType=rw --commStr=<site specific value></pre> <p>Note: When this operation is initiated, all supporting TVOE hosting servers and the PMAC guest on the PMAC control network will be updated. All those servers that match the existing Site Specific Community String will not be updated again until the string name is changed.</p>									

4.15.9 DSR Configuration: IP Front End (IPFE)

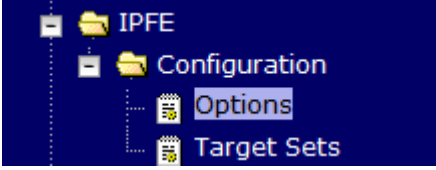
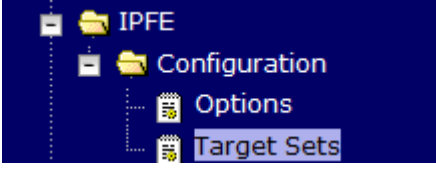
Procedure 38. IP Front End (IPFE) Configuration (Optional)

S T E P #	<p>This procedure will provide the steps to configure IP Front End (IPFE), and optimize performance.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
<p>1</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Login</p>	<p>If not already done, establish a GUI session on the NOAM server the VIP IP address of the NOAM server.</p> <p>Open the web browser and enter a URL of: <div style="border: 1px solid black; padding: 2px; display: inline-block;"> https://<Primary_NOAM_VIP_IP_Address> </div> </p> <p>Login to the NOAM GUI as the <i>guiadmin</i> user:</p> <div style="text-align: center;">  </div>

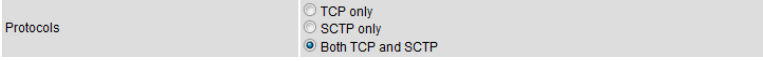
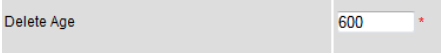
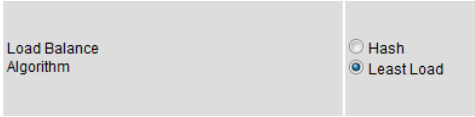
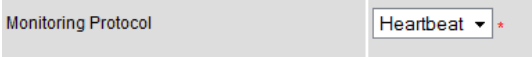
Procedure 38. IP Front End (IPFE) Configuration (Optional)

<p>2</p> <p><input type="checkbox"/></p>	<p>SOAM VIP GUI: Login</p>	<p>Establish a GUI session on the SOAM server the VIP IP address of the SOAM server.</p> <p>Open the web browser and enter a URL of:</p> <div style="border: 1px solid black; padding: 2px;"><p><code>https://<Primary_SOAM_VIP_IP_Address></code></p></div> <p>Login to the SOAM GUI as the <i>guiadmin</i> user:</p> <div style="text-align: center;"></div>
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Procedure 38. IP Front End (IPFE) Configuration (Optional)

<p>3</p> <p><input type="checkbox"/></p>	<p>SOAM VIP GUI: Configuration of replication IPFE association data.</p>	<p>Select Main Menu -> IPFE -> Configuration -> Options</p>  <p>Enter the IP address of the 1st IPFE in the IPFE-A1 IP Address field and the IP address of the 2nd IPFE in the IPFE-A2 IP Address field</p> <p>If applicable, enter the address of the 3rd and 4th IPFE servers in IPFE-B1 IP Address and IPFE-B2 IP Address fields.</p> <table border="1"> <thead> <tr> <th>Variable</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td colspan="2">Inter-IPFE Synchronization</td> </tr> <tr> <td>IPFE-A1 IP Address</td> <td>10.240.79.103 - Viper-IPFE1</td> </tr> <tr> <td>IPFE-A2 IP Address</td> <td>10.240.79.104 - Viper-IPFE2</td> </tr> <tr> <td>IPFE-B1 IP Address</td> <td><unset></td> </tr> <tr> <td>IPFE-B2 IP Address</td> <td><unset></td> </tr> </tbody> </table> <p>Note: It is recommended that the address reside on the IMI (Internal Management Interface) network.</p> <p>Note: IPFE-A1 and IPFE-A2 must have connectivity between each other via these addresses. The same applies with IPFE-B1 and IPFE-B2.</p> <p>Press OK</p>	Variable	Value	Inter-IPFE Synchronization		IPFE-A1 IP Address	10.240.79.103 - Viper-IPFE1	IPFE-A2 IP Address	10.240.79.104 - Viper-IPFE2	IPFE-B1 IP Address	<unset>	IPFE-B2 IP Address	<unset>
Variable	Value													
Inter-IPFE Synchronization														
IPFE-A1 IP Address	10.240.79.103 - Viper-IPFE1													
IPFE-A2 IP Address	10.240.79.104 - Viper-IPFE2													
IPFE-B1 IP Address	<unset>													
IPFE-B2 IP Address	<unset>													
<p>4</p> <p><input type="checkbox"/></p>	<p>SOAM VIP GUI: Configuration of IPFE Target sets-Part 1 (Insert Target Set)</p>	<p>Select Main Menu -> IPFE -> Configuration -> Target Sets</p>  <p>Select either Insert IPv4 or Insert IPv6 button, depending on the IP version of the target set you plan to use.</p> <div> <input type="button" value="Insert IPv4"/> <input type="button" value="Insert IPv6"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/> </div>												

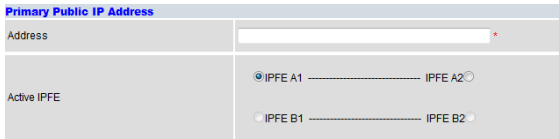
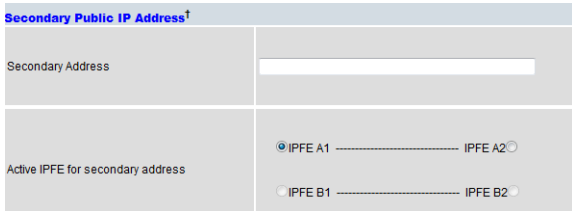

Procedure 38. IP Front End (IPFE) Configuration (Optional)

<p>5</p> <p><input type="checkbox"/></p>	<p>SOAM VIP GUI: Configuration of IPFE Target sets-Part 2 (Target Set Configuration)</p>	<p>Continued from the previous step, the following are configurable:</p> <p>Protocols: protocols the target set will support.</p>  <p>Delete Age: Specifies when the IPFE should remove its association data for a connection. Any packets presenting a source IP address/port combination that had been previously stored as association state but have been idle longer than the Delete Age configuration will be treated as a new connection and will not automatically go to the same application server.</p>  <p>Load Balance Algorithm: <i>Hash</i> or <i>Least Load</i> options</p>  <p>Note: In order for the IPFE to provide Least Load distribution, Main Menu -> IPFE -> Configuration -> Options, Monitoring Protocol must be set to Heartbeat so that the application servers can provide the load information the IPFE uses to select the least-loaded server for connections.</p>  <p>Note: The Least Load option is the default setting, and is the recommended option with exception of unique backward compatibility scenarios.</p>
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Procedure 38. IP Front End (IPFE) Configuration (Optional)

<p>6 □</p>	<p>SOAM VIP GUI: Configuration of IPFE Target sets-Part 3 (Target Set Configuration)</p>	<p>(Optional): If you have selected the Least Load algorithm, you may configure the following fields to adjust the algorithm's behavior:</p> <p>MPS Factor – Messages per Second (MPS) is one component of the least load algorithm. This field allows you to set it from 0 (not used in load calculations) to 100 (the only component used for load calculations). It is recommended that IPFE connections have Reserved Ingress MPS set to something other than the default, which is 0.</p> <table border="1"> <tr> <td>MPS Factor</td> <td>50 *</td> </tr> <tr> <td>Connection Count Factor</td> <td>50 *</td> </tr> </table> <p>To configure Reserved Ingress MPS, go to Main Menu -> Diameter -> Configuration -> Configuration Sets -> Capacity Configuration Sets. If you choose not to use Reserved Ingress MPS, set MPS Factor to 0 and Connection Count Factor, described below, to 100.</p> <p>Connection Count Factor – This is the other component of the least load algorithm. This field allows you to set it from 0 (not used in load calculations) to 100 (the only component used for load calculations). Increase this setting if connection storms (the arrival of many connections at a very rapid rate) are a concern.</p> <p>Allowed Deviation - Percentage within which two application server's load calculation results are considered to be equal. If very short, intense connection bursts are expected to occur, increase the value to smooth out the distribution.</p> <table border="1"> <tr> <td>Allowed Deviation</td> <td>5 *</td> </tr> </table>	MPS Factor	50 *	Connection Count Factor	50 *	Allowed Deviation	5 *
MPS Factor	50 *							
Connection Count Factor	50 *							
Allowed Deviation	5 *							

Procedure 38. IP Front End (IPFE) Configuration (Optional)

<p>7</p> <p><input type="checkbox"/></p> <p>SOAM VIP GUI: Configuration of IPFE Target sets-Part 4 (Target Set Configuration)</p>	<p>Primary Public IP Address: IP address for the target set</p>  <p>Note: This address must reside on the XSI (External Signaling Interface) network because it will be used by the application clients to reach the application servers. This address MUST NOT be a real interface address (that is, must not be associated with a network interface card).</p> <p>Active IPFE: IPFE to handle the traffic for the target set address.</p> <p>Secondary Public IP Address: If this target set supports either multi-homed SCTP or Both TCP and SCTP, provide a Secondary IP Address.</p>  <p>Note: A secondary address is required to support SCTP multi-homing. A secondary address can support TCP, but the TCP connections will not be multi-homed.</p> <p>Note: If SCTP multi-homing is to be supported, select the mate IPFE of the Active IPFE for the Active IPFE for secondary address to ensure that SCTP failover functions as designed.</p> <p>Target Set IP List: Select an IP address, a secondary IP address if supporting SCTP multi-homing, a description, and a weight for the application server.</p>  <p>Note: The IP address must be on the XSI network since they must be on the same network as the target set address. This address must also match the IP version of the target set address (IPv4 or IPv6). If the Secondary Public IP Address is configured, it must reside on the same application server as the first IP address.</p> <p>Note: If all application servers have an equal weight (e.g., 100, which is the default), they have an equal chance of being selected. Application servers with larger weights have a greater chance of being selected.</p> <p>Click the Add button to add more application servers (Up to 16)</p> <p>Click the Apply button.</p> <p style="text-align: center;"> <input type="button" value="Ok"/> <input type="button" value="Apply"/> <input type="button" value="Cancel"/> </p>
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Procedure 38. IP Front End (IPFE) Configuration (Optional)

8 <input type="checkbox"/>	SOAM VIP GUI: Repeat for additional Configuration of IPFE Target sets.	Repeat steps 5-7 for each target set (Up to 16). At least one target set must be configured.
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4.15 Application Configuration: SDS (Oracle X6-2)

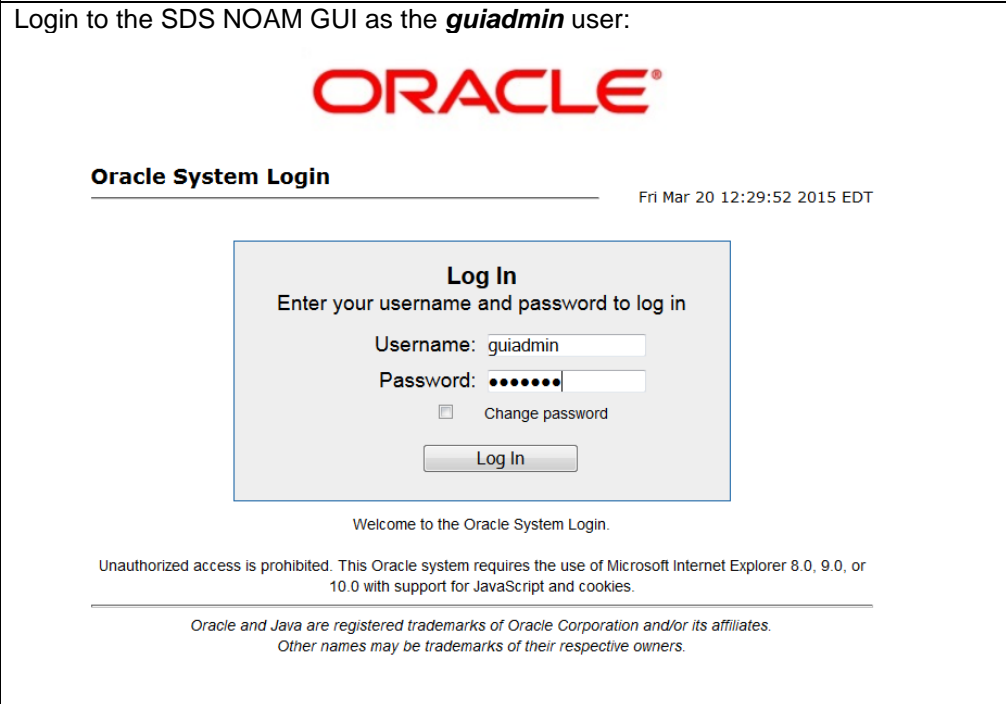
Note: SDS installation should only be performed on Oracle X6-2 Rack Mount Servers.

4.16.1 SDS Configuration: NOAMs

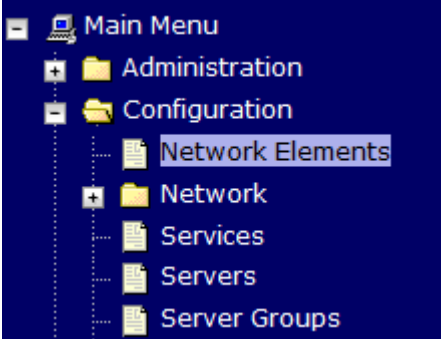
Procedure 39. Configure First SDS NOAM NE and Server

S T E P #	<p>This procedure will provide the steps to configure the First NOAM server.</p> <p>Note: SDS NOAM configuration only applicable on Oracle X6-2</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>																												
1 <input type="checkbox"/>	<p>Save the NOAM Network Data to an XML file</p>	<p>Using a text editor, create a SDS NOAM Network Element file that describes the networking of the target install environment of your first SDS NOAM server.</p> <p>Select an appropriate file name and save the file to a known location on your computer.</p> <p>A suggested filename format is “Appname_NName_NetworkElement.XML”, so for example a SDS NOAM network element XML file would have a filename “SDS_NOAM_NetworkElement.xml”.</p> <p>Alternatively, you can update the sample SDS Network Element file. It can be found on the management server at:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <pre>/usr/TKLC/smac/etc/SAMPLE-NetworkElement.xml</pre> </div> <p>A sample XML file can also be found in Appendix J: Sample Network Element.</p> <p>Note: The following limitations apply when specifying a Network Element name: A 1-32-character string. Valid characters are alphanumeric and underscore. Must contain at least one alpha and must not start with a digit.</p>																											
2 <input type="checkbox"/>	<p>Exchange SSH keys between PMAC and first SDS NOAM server</p>	<p>Use the PMAC GUI to determine the Control Network IP address of the server that is to be the first SDS NOAM server. From the PMAC GUI, navigate to Main Menu -> Software -> Software Inventory.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Identity</th> <th>IP Address</th> <th>Hostname</th> <th>Platform Name</th> <th>Platform Version</th> <th>Application Name</th> <th>Application Version</th> <th>Designation</th> <th>Function</th> </tr> </thead> <tbody> <tr> <td>RMS: ps5010439</td> <td style="border: 2px solid red;">192.168.1.56</td> <td>hostname0b42b7c4eb5a</td> <td>TPD (x86_64)</td> <td>7.3.0.0.0-88.27.0</td> <td>DSR</td> <td>8.0.0.0.0-80.11.1</td> <td></td> <td></td> </tr> <tr> <td>Guest: Brains_DSRNOAM</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>Note the IP address for the first SDS NOAM server.</p> <p>Login to the PMAC terminal as the admusr.</p> <p>From a terminal window connection on the PMAC as the admusr user, exchange SSH keys for admusr between the PMAC and the 1st SDS NOAM server using the keyexchange utility, using the Control network IP address for the SDS NOAM server. When prompted for the password, enter the password for the admusr user of the SDS NOAM server.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <pre>\$ keyexchange admusr@<NO1_Control_IP Address></pre> </div>	Identity	IP Address	Hostname	Platform Name	Platform Version	Application Name	Application Version	Designation	Function	RMS: ps5010439	192.168.1.56	hostname0b42b7c4eb5a	TPD (x86_64)	7.3.0.0.0-88.27.0	DSR	8.0.0.0.0-80.11.1			Guest: Brains_DSRNOAM								
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Guest: Brains_DSRNOAM																													

Procedure 39. Configure First SDS NOAM NE and Server

<p>3</p> <p><input type="checkbox"/></p>	<p>Connect a Web Browser to the NOAM GUI</p>	<p>Use SSH Tunneling through the PMAC to connect the laptop to the SDS NOAM server.</p> <p>If you are using tunneling, then you can skip the rest of this step and instead complete the instructions in Appendix K: Accessing the NOAM GUI using SSH Tunneling with Putty (for using Putty) Appendix L: Accessing the NOAM GUI using SSH Tunneling with OpenSSH for Windows (for OpenSSH). OpenSSH is recommended if you are using a Windows 7 PC.</p> <p>Enable that laptop Ethernet port to acquire a DHCP address and then access the NOAM-“A” GUI via its control IP address.</p>
<p>4</p> <p><input type="checkbox"/></p>	<p>SDS NOAM GUI: Login</p>	<p>Login to the SDS NOAM GUI as the <i>guiadmin</i> user:</p> 

Procedure 39. Configure First SDS NOAM NE and Server

5	<p>Create the SDS NOAM Network Element using the XML File</p>	<p>Navigate to Main Menu->Configuration->Network Elements</p>  <p>Select the Browse button, and enter the pathname of the SDS NOAM network XML file.</p> <p>Select the Upload File button to upload the XML file and configure the SDS NOAM Network Element.</p> <p>To create a new Network Element, upload a valid configuration file:</p> <p><input type="button" value="Browse..."/> No file selected. <input type="button" value="Upload File"/></p> <p><input type="button" value="Insert"/> <input type="button" value="Delete"/> <input type="button" value="Export"/> <input type="button" value="Report"/></p> <p>Once the data has been uploaded, you should see a folder appear with the name of your network element. Click on this folder and you will get a drop-down which describes the individual networks that are now configured:</p> <table border="1"> <thead> <tr> <th colspan="5">Network Element</th> </tr> <tr> <td colspan="5">NO_9006005</td> </tr> <tr> <th>Network Name</th> <th>Network Address</th> <th>Netmask</th> <th>VLAN ID</th> <th>Gateway IP Address</th> </tr> </thead> <tbody> <tr> <td>INTERNALXMI</td> <td>10.240.10.32</td> <td>255.255.255.224</td> <td>3</td> <td>10.240.10.35</td> </tr> <tr> <td>INTERNALIMI</td> <td>10.240.10.0</td> <td>255.255.255.224</td> <td>4</td> <td>10.240.10.3</td> </tr> </tbody> </table>	Network Element					NO_9006005					Network Name	Network Address	Netmask	VLAN ID	Gateway IP Address	INTERNALXMI	10.240.10.32	255.255.255.224	3	10.240.10.35	INTERNALIMI	10.240.10.0	255.255.255.224	4	10.240.10.3
Network Element																											
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INTERNALIMI	10.240.10.0	255.255.255.224	4	10.240.10.3																							

Procedure 39. Configure First SDS NOAM NE and Server

6	Map Services to Networks	<p>Navigate to Main Menu ->Configuration-> Services.</p> <p>Select the Edit button and set the Services as shown in the table below:</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr> <th style="text-align: center;">Name</th> <th style="text-align: center;">Intra-NE Network</th> <th style="text-align: center;">Inter-NE Network</th> </tr> </thead> <tbody> <tr> <td>OAM</td> <td style="text-align: center;"><IMI Network></td> <td style="text-align: center;"><XMI Network></td> </tr> <tr> <td>Replication</td> <td style="text-align: center;"><IMI Network></td> <td style="text-align: center;"><XMI Network></td> </tr> <tr> <td>Signaling</td> <td style="text-align: center;">Unspecified</td> <td style="text-align: center;">Unspecified</td> </tr> <tr> <td>HA_Secondary</td> <td style="text-align: center;"><IMI Network></td> <td style="text-align: center;"><XMI Network></td> </tr> <tr> <td>HA_MP_Secondary</td> <td style="text-align: center;"><IMI Network></td> <td style="text-align: center;"><XMI Network></td> </tr> <tr> <td>Replication_MP</td> <td style="text-align: center;"><IMI Network></td> <td style="text-align: center;"><XMI Network></td> </tr> <tr> <td>ComAgent</td> <td style="text-align: center;"><IMI Network></td> <td style="text-align: center;"><XMI Network></td> </tr> </tbody> </table> <p>For example, if your IMI network is named IMI and your XMI network is named XMI, then your services should config should look like the following:</p> <div style="border: 1px solid #ccc; padding: 5px; margin-bottom: 10px;"> <p>Services</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Name</th> <th style="text-align: left;">Intra-NE Network</th> <th style="text-align: left;">Inter-NE Network</th> </tr> </thead> <tbody> <tr> <td>OAM</td> <td>INTERNALIMI ▾</td> <td>INTERNALXMI ▾</td> </tr> <tr> <td>Replication</td> <td>INTERNALIMI ▾</td> <td>INTERNALXMI ▾</td> </tr> <tr> <td>Signaling</td> <td>Unspecified ▾</td> <td>Unspecified ▾</td> </tr> <tr> <td>HA_Secondary</td> <td>INTERNALIMI ▾</td> <td>INTERNALXMI ▾</td> </tr> <tr> <td>HA_MP_Secondary</td> <td>INTERNALIMI ▾</td> <td>INTERNALXMI ▾</td> </tr> <tr> <td>Replication_MP</td> <td>INTERNALIMI ▾</td> <td>INTERNALXMI ▾</td> </tr> <tr> <td>ComAgent</td> <td>INTERNALIMI ▾</td> <td>INTERNALXMI ▾</td> </tr> </tbody> </table> <p style="text-align: right; margin-top: 5px;"> <input type="button" value="Ok"/> <input type="button" value="Apply"/> <input type="button" value="Cancel"/> </p> </div> <p>Select the Ok button to apply the Service-to-Network selections.</p>	Name	Intra-NE Network	Inter-NE Network	OAM	<IMI Network>	<XMI Network>	Replication	<IMI Network>	<XMI Network>	Signaling	Unspecified	Unspecified	HA_Secondary	<IMI Network>	<XMI Network>	HA_MP_Secondary	<IMI Network>	<XMI Network>	Replication_MP	<IMI Network>	<XMI Network>	ComAgent	<IMI Network>	<XMI Network>	Name	Intra-NE Network	Inter-NE Network	OAM	INTERNALIMI ▾	INTERNALXMI ▾	Replication	INTERNALIMI ▾	INTERNALXMI ▾	Signaling	Unspecified ▾	Unspecified ▾	HA_Secondary	INTERNALIMI ▾	INTERNALXMI ▾	HA_MP_Secondary	INTERNALIMI ▾	INTERNALXMI ▾	Replication_MP	INTERNALIMI ▾	INTERNALXMI ▾	ComAgent	INTERNALIMI ▾	INTERNALXMI ▾
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Procedure 39. Configure First SDS NOAM NE and Server

<p>7</p> <p><input type="checkbox"/></p>	<p>Insert the 1st SDS NOAM server</p>	<p>Navigate to Main Menu -> Configuration -> Servers.</p> <p>Select the Insert button to insert the new SDS NOAM server into servers table (the first or server).</p> <table border="1"> <thead> <tr> <th>Attribute</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Hostname</td> <td>NO-Server1 *</td> <td>Unique name for the server. [Default string. Valid characters are alpha with an alphanumeric and end with a dot]</td> </tr> <tr> <td>Role</td> <td>NETWORK OAM&P *</td> <td>Select the function of the server</td> </tr> <tr> <td>System ID</td> <td>NO-Server1</td> <td>System ID for the NOAMP or SOAI 64-character string. Valid value is alphanumeric and hyphen</td> </tr> <tr> <td>Hardware Profile</td> <td>DSR TVOE Guest</td> <td>Hardware profile of the server</td> </tr> <tr> <td>Network Element Name</td> <td>NOAMMEMORYTEST *</td> <td>Select the network element</td> </tr> <tr> <td>Location</td> <td></td> <td>Location description [Default = "" value is any text string.]</td> </tr> </tbody> </table> <p>Fill in the fields as follows:</p> <p>Hostname: <Hostname></p> <p>Role: NETWORK OAM&P</p> <p>System ID: <Site System ID></p> <p>Hardware Profile: SDS TVOE Guest</p> <p>Network Element Name: [Choose NE from Drop Down Box]</p> <p>The network interface fields will now become available with selection choices based on the chosen hardware profile and network element</p> <table border="1"> <thead> <tr> <th colspan="3">Interfaces:</th> </tr> <tr> <th>Network</th> <th>IP Address</th> <th>Interface</th> </tr> </thead> <tbody> <tr> <td>INTERNALXMI (10.240.84.128/25)</td> <td>10.240.84.155</td> <td>xmi <input type="checkbox"/> VLAN (3)</td> </tr> <tr> <td>INTERNALIMI (10.240.85.0/26)</td> <td>10.240.85.10</td> <td>imi <input type="checkbox"/> VLAN (4)</td> </tr> </tbody> </table> <p>Ok Apply Cancel</p> <p>Fill in the server IP addresses for the XMI network. Select xmi for the interface. Leave the "VLAN" checkbox unchecked.</p> <p>Fill in the server IP addresses for the IMI network. Select imi for the interface. Leave the "VLAN" checkbox unchecked.</p> <p>Next, add the following NTP servers:</p> <table border="1"> <thead> <tr> <th>NTP Server</th> <th>Preferred?</th> </tr> </thead> <tbody> <tr> <td><1st NOAM-TVOE-IP-Address></td> <td>Yes</td> </tr> </tbody> </table> <p>Select the Ok button when you have completed entering all the server data.</p>	Attribute	Value	Description	Hostname	NO-Server1 *	Unique name for the server. [Default string. Valid characters are alpha with an alphanumeric and end with a dot]	Role	NETWORK OAM&P *	Select the function of the server	System ID	NO-Server1	System ID for the NOAMP or SOAI 64-character string. Valid value is alphanumeric and hyphen	Hardware Profile	DSR TVOE Guest	Hardware profile of the server	Network Element Name	NOAMMEMORYTEST *	Select the network element	Location		Location description [Default = "" value is any text string.]	Interfaces:			Network	IP Address	Interface	INTERNALXMI (10.240.84.128/25)	10.240.84.155	xmi <input type="checkbox"/> VLAN (3)	INTERNALIMI (10.240.85.0/26)	10.240.85.10	imi <input type="checkbox"/> VLAN (4)	NTP Server	Preferred?	<1st NOAM-TVOE-IP-Address>	Yes
Attribute	Value	Description																																					
Hostname	NO-Server1 *	Unique name for the server. [Default string. Valid characters are alpha with an alphanumeric and end with a dot]																																					
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NTP Server	Preferred?																																						
<1st NOAM-TVOE-IP-Address>	Yes																																						
<p>8</p> <p><input type="checkbox"/></p>	<p>Export the Initial Configuration</p>	<p>Navigate to Main Menu -> Configuration -> Servers.</p> <p>From the GUI screen, select the SDS NOAM server and then select Export to generate the initial configuration data for that server.</p> <p>Insert Edit Delete Export Report</p>																																					


Procedure 39. Configure First SDS NOAM NE and Server

9 <input type="checkbox"/>	SDS NOAM iLO: Copy Configuration File to 1 st SDS NOAM Server	<p>Obtain a terminal window to the 1st SDS NOAM server, logging in as the admusr user.</p> <p>(See Appendix C: TVOE iLO/iLOM GUI Access for instructions on how to access the SDS NOAM from iLO)</p> <p>Copy the configuration file created in the previous step from the <code>/var/TKLC/db/filemgmt</code> directory on the 1st SDS NOAM to the <code>/var/tmp</code> directory.</p> <p>The configuration file will have a filename like <code>TKLCConfigData.<hostname>.sh</code>. The following is an example:</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo cp /var/TKLC/db/filemgmt/TKLCConfigData.RMS01.sh /var/tmp/TKLCConfigData.sh</pre>
10 <input type="checkbox"/>	SDS NOAM iLO: Wait for Configuration to Complete	<p>The automatic configuration daemon will look for the file named <i>TKLCConfigData.sh</i> in the <code>/var/tmp</code> directory, implement the configuration in the file, and then prompt the user to reboot the server.</p> <p>Wait to be prompted to reboot the server, but DO NOT reboot the server, it will be rebooted later on in this procedure.</p> <p>Note: Ignore the warning about removing the USB key, since no USB key is present.</p>
11 <input type="checkbox"/>	SDS NOAM iLO: Set the Time zone and Reboot the Server	<p>From the command line prompt, execute <i>set_ini_tz.pl</i>. This will set the system time zone. The following command example uses the <code>America/New_York</code> time zone.</p> <p>Replace as appropriate with the time zone you have selected for this installation. For a full list of valid time zones, see Appendix I: List of Frequently used Time Zones.</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo /usr/TKLC/appworks/bin/set_ini_tz.pl "America/New_York" >/dev/null 2>&1</pre> <pre style="border: 1px solid black; padding: 5px;">\$ sudo init 6</pre>

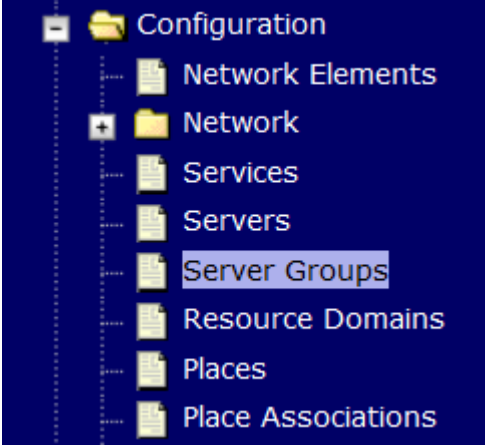
Procedure 39. Configure First SDS NOAM NE and Server

12 <input type="checkbox"/>	1st SDS NOAM: Configure Networking for Dedicated NetBackup Interface (Optional)	<p>Note: You will only execute this step if your SDS NOAM is using a dedicated Ethernet interface for NetBackup.</p> <p>Obtain a terminal window to the 1st SDS NOAM server, logging in as the <i>admusr</i> user.</p> <pre>\$ sudo /usr/TKLC/plat/bin/netAdm set --device=NetBackup --type=Ethernet --onboot=yes --address=<NO1_NetBackup_IP_Address> --netmask=<NO1_NetBackup_NetMask></pre> <pre>\$ sudo /usr/TKLC/plat/bin/netAdm add --route=net --device=NetBackup --address=<NO1_NetBackup_Network_ID> --netmask=<NO1_NetBackup_NetMask> --gateway=<NO1_NetBackup_Gateway_IP_Address></pre>
13 <input type="checkbox"/>	1st SDS NOAM Server: Install Tuned (Oracle X6-2)	<p>Activate the tuned profile for the Guest Virtual Machine:</p> <pre>\$ sudo tuned-adm profile virtual-guest</pre> <pre>\$ sudo service_conf add tuned rc runlevels=345</pre> <pre>\$ sudo service_conf add ktune rc runlevels=345</pre> <p>Verify that tuned is active:</p> <pre>\$ sudo tuned-adm active</pre> <p>Expected output:</p> <pre>Current active profile: virtual-guest Service tuned: enabled, running Service ktune: enabled, running</pre>
14 <input type="checkbox"/>	1st SDS NOAM Server: Verify Server Health	<p>Execute the following command on the 1st SDS NOAM server and make sure that no errors are returned:</p> <pre>\$ sudo syscheck</pre> <pre>Running modules in class hardware...OK Running modules in class disk...OK Running modules in class net...OK Running modules in class system...OK Running modules in class proc...OK LOG LOCATION: /var/TKLC/log/syscheck/fail_log</pre>

Procedure 40. Configure the SDS NOAM Server Group

S T E P #	<p>This procedure will provide the steps to configure the SDS NOAM server group.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
<p>1</p> <p><input type="checkbox"/></p>	<p>SDS NOAM GUI: Login</p>	<p>Establish a GUI session on the first SDS NOAM server by using the XMI IP address of the first SDS NOAM server. Open the web browser and enter a URL of:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p><code>https://<SDS_NO1_XMI_IP_Address></code></p> </div> <p>Login as the <i>guiadmin</i> user:</p> <div style="text-align: center;">  </div>

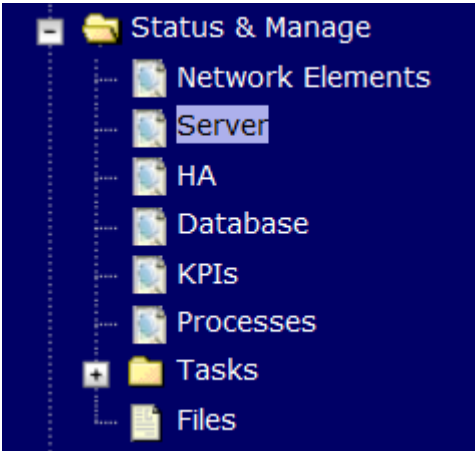
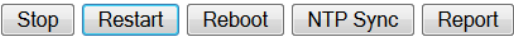
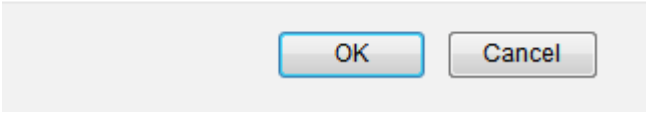
Procedure 40. Configure the SDS NOAM Server Group

2 <input type="checkbox"/>	SDS NOAM GUI: Enter NOAM Server Group Data	<p>Navigate to Main Menu -> Configuration -> Server Groups</p>  <p>Select Insert and fill the following fields:</p> <p><input type="button" value="Insert"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/> <input type="button" value="Report"/></p> <ul style="list-style-type: none">• Server Group Name: <Enter Server Group Name>• Level: A• Parent : None• Function: SDS• WAN Replication Connection Count: Use Default Value <p>Select OK when all fields are filled in.</p>
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Procedure 40. Configure the SDS NOAM Server Group

<p>3</p> <p><input type="checkbox"/></p>	<p>SDS NOAM GUI: Edit the SDS NOAM Server Group</p>	<p>From the GUI Main Menu -> Configuration -> Server Groups.</p> <p>Select the new server group, and then select Edit</p> <div style="text-align: center;"> <p><input type="button" value="Insert"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/> <input type="button" value="Report"/></p> </div> <p>Select the Network Element that represents the SDS NOAM.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3" style="background-color: #e0e0e0;">NO_900060103</th> </tr> <tr> <th style="width: 30%;">Server</th> <th style="width: 40%;">SG Inclusion</th> <th style="width: 30%;">Preferred HA Role</th> </tr> </thead> <tbody> <tr> <td>HPC6NO</td> <td><input checked="" type="checkbox"/> Include in SG</td> <td><input type="checkbox"/> Preferred Spare</td> </tr> </tbody> </table> <p>In the portion of the screen that lists the servers for the server group, find the SDS NOAM server being configured.</p> <p>Click the Include in SG checkbox.</p> <p>Leave other boxes blank.</p> <p>Press OK</p>	NO_900060103			Server	SG Inclusion	Preferred HA Role	HPC6NO	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare
NO_900060103											
Server	SG Inclusion	Preferred HA Role									
HPC6NO	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare									
<p>4</p> <p><input type="checkbox"/></p>	<p>SDS NOAM: Verify SDS NOAM server role</p>	<p>From terminal window to the iLO of the first SDS NOAM server, execute the following command:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <pre>\$ha.mystate</pre> </div> <p>Verify that the DbReplication and VIP item under the resourceId column has a value of Active under the role column.</p> <p>You might have to wait a few minutes for it to become in that state.</p> <p>Example:</p> <pre>[adminusr@Jetta-NO-1 ~]\$ ha.mystate resourceId role node subResources lastUpdate DbReplication Active A1027.209 0 0316:161158.499 VIP Active A1027.209 0 0316:161158.501 pSbrBBaseRepl OOS A1027.209 0 0316:155546.074 pSbrBindingRes OOS A1027.209 0 0316:155546.074 pSbrSBaseRepl OOS A1027.209 0 0316:155546.075 pSbrSessionRes OOS A1027.209 0 0316:155546.075 PSBR_B_Proc OOS A1027.209 0 0316:155546.074 PSBR_S_Proc OOS A1027.209 0 0316:155546.075 CacdProcessRes Active A1027.209 0 0316:161158.501 DA_MP_Leader OOS A1027.209 0 0316:155546.071 DSR_SLDB OOS A1027.209 0-63 0316:155546.071 VIP_DA_MP OOS A1027.209 0-63 0316:155546.072 EXGSTACK_Process OOS A1027.209 0-63 0316:155546.072 DSR_Process OOS A1027.209 0-63 0316:155546.072 CAPM_HELP_Proc OOS A1027.209 0 0316:155546.070 DSROAM_Proc Active A1027.209 0 0316:161158.497 CAPM_PFSF_Proc OOS A1027.209 0 0316:155546.070 SS7_MP_Process_HA_Proc OOS A1027.209 0-63 0316:155546.073 SS7_MP_Process OOS A1027.209 0-63 0316:155546.074</pre>									

Procedure 40. Configure the SDS NOAM Server Group

<p>5</p> <p><input type="checkbox"/></p>	<p>SDS NOAM GUI: Restart 1st SDS NOAM Server</p>	<p>From the SDS NOAM GUI, select the Main menu -> Status & Manage -> Server menu.</p>  <p>Select the first SDS NOAM server. Select the Restart button.</p>  <p>Answer OK to the confirmation popup.</p>  <p>Wait for restart to complete.</p>
--	--	--

Procedure 41. Configure the Second SDS NOAM Server

S T E P #	<p>This procedure will provide the steps to configure the Second SDS NOAM server.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
1 <input type="checkbox"/>	<p>Exchange SSH keys between PMAC and Second NOAM server</p>	<p>Use the PMAC GUI to determine the Control Network IP address of the server that is to be the second SDS NOAM server. From the PMAC GUI, navigate to Main Menu -> Software -> Software Inventory.</p> <p>Note the IP address for the Second SDS NOAM server.</p> <p>Login to the PMAC terminal as the admusr.</p> <p>From a terminal window connection on the PMAC as the admusr user, exchange SSH keys for admusr between the PMAC and the 2nd SDS NOAM server using the keyexchange utility, using the Control network IP address for the SDS NOAM server. When prompted for the password, enter the password for the admusr user of the SDS NOAM server.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <pre>\$ keyexchange admusr@<SDS_NO2_Control_IP Address></pre> </div> <p>Note: if keyexchange fails, edit /home/admusr/.ssh/known_hosts and remove blank lines, and retry the keyexchange commands.</p>
2 <input type="checkbox"/>	<p>SDS NOAM GUI: Login</p>	<p>If not already done, establish a GUI session on the first SDS NOAM server by using the XMI IP address of the first SDS NOAM server. Open the web browser and enter a URL of:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <pre>https://<SDS_NO1_XMI_IP_Address></pre> </div> <p>Login to the SDS NOAM GUI as the guiadmin user:</p> <div style="text-align: center; margin: 20px 0;"> </div> <p style="text-align: center; font-size: small;">Welcome to the Oracle System Login.</p> <p style="text-align: center; font-size: x-small;">Unauthorized access is prohibited. This Oracle system requires the use of Microsoft Internet Explorer 8.0, 9.0, or 10.0 with support for JavaScript and cookies.</p> <p style="text-align: center; font-size: x-small;">Oracle and Java are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.</p>

Procedure 41. Configure the Second SDS NOAM Server

<p>3</p> <p><input type="checkbox"/></p>	<p>SDS NOAM GUI: Insert the 2nd SDS NOAM server</p>	<p>Navigate to Main Menu -> Configuration -> Servers.</p> <p>Select the Insert button to insert the 2nd SDS NOAM server into servers table (the first or server).</p> <p>Adding a new server</p> <table border="1"> <thead> <tr> <th>Attribute</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>Hostname</td> <td>NO-Server2 *</td> </tr> <tr> <td>Role</td> <td>NETWORK OAM&P *</td> </tr> <tr> <td>System ID</td> <td>NO-Server2</td> </tr> <tr> <td>Hardware Profile</td> <td>DSR TVOE Guest</td> </tr> <tr> <td>Network Element Name</td> <td>JETTA *</td> </tr> <tr> <td>Location</td> <td></td> </tr> </tbody> </table> <p>Fill in the fields as follows:</p> <p>Hostname: <Hostname></p> <p>Role: NETWORK OAM&P</p> <p>System ID: <Site System ID></p> <p>Hardware Profile: SDS TVOE Guest</p> <p>Network Element Name: [Choose NE from Drop Down Box]</p> <p>The network interface fields will now become available with selection choices based on the chosen hardware profile and network element</p> <table border="1"> <thead> <tr> <th colspan="3">Interfaces:</th> </tr> <tr> <th>Network</th> <th>IP Address</th> <th>Interface</th> </tr> </thead> <tbody> <tr> <td>INTERNALXMI (10.240.84.128/25)</td> <td>10.240.84.155</td> <td>xmi <input type="checkbox"/> VLAN (3)</td> </tr> <tr> <td>INTERNALIMI (10.240.85.0/26)</td> <td>10.240.85.10</td> <td>imi <input type="checkbox"/> VLAN (4)</td> </tr> </tbody> </table> <p style="text-align: center;"> <input type="button" value="Ok"/> <input type="button" value="Apply"/> <input type="button" value="Cancel"/> </p> <p>Fill in the server IP addresses for the XMI network. Select xmi for the interface. Leave the "VLAN" checkbox unchecked.</p> <p>Fill in the server IP addresses for the IMI network. Select imi for the interface. Leave the "VLAN" checkbox unchecked.</p> <p>Next, add the following NTP servers:</p> <table border="1"> <thead> <tr> <th>NTP Server</th> <th>Preferred?</th> </tr> </thead> <tbody> <tr> <td><2nd NOAM-TVOE-IP-Address></td> <td>Yes</td> </tr> </tbody> </table> <p>Select the Ok button when you have completed entering all the server data.</p>	Attribute	Value	Hostname	NO-Server2 *	Role	NETWORK OAM&P *	System ID	NO-Server2	Hardware Profile	DSR TVOE Guest	Network Element Name	JETTA *	Location		Interfaces:			Network	IP Address	Interface	INTERNALXMI (10.240.84.128/25)	10.240.84.155	xmi <input type="checkbox"/> VLAN (3)	INTERNALIMI (10.240.85.0/26)	10.240.85.10	imi <input type="checkbox"/> VLAN (4)	NTP Server	Preferred?	<2nd NOAM-TVOE-IP-Address>	Yes
Attribute	Value																															
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Role	NETWORK OAM&P *																															
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NTP Server	Preferred?																															
<2nd NOAM-TVOE-IP-Address>	Yes																															
<p>4</p> <p><input type="checkbox"/></p>	<p>SDS NOAM GUI: Export the Initial Configuration</p>	<p>Navigate to Main Menu -> Configuration -> Servers.</p> <p>From the GUI screen, select the SDS NOAM server and then select Export to generate the initial configuration data for that server.</p> <p style="text-align: center;"> <input type="button" value="Insert"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/> <input type="button" value="Export"/> <input type="button" value="Report"/> </p>																														

Procedure 41. Configure the Second SDS NOAM Server

5 <input type="checkbox"/>	1st SDS NOAM Server: Copy Configuration File to 2 nd SDS NOAM Server	<p>Obtain a terminal session to the 1st SDS NOAM as the admusr user.</p> <p>Use the awpushcfg utility to copy the configuration file created in the previous step from the /var/TKLC/db/filemgmt directory on the 1st SDS NOAM to the 2nd SDS NOAM server, using the Control network IP address for the 2nd SDS NOAM server.</p> <p>The configuration file will have a filename like “TKLCConfigData.<hostname>.sh”.</p> <pre>\$ sudo awpushcfg</pre> <p>The awpushcfg utility is interactive, so the user will be prompted for the following:</p> <ul style="list-style-type: none"> • IP address of the local PMAC server: Use the local control network address from the PMAC. • Username: Use admusr • Control network IP address for the target server: In this case, enter the control IP for the 2nd SDS NOAM server). • Hostname of the target server: Enter the server name configured in step 3
6 <input type="checkbox"/>	PMAC: Verify awpushcfg was called and Reboot the Server	<p>Obtain a terminal window connection on the 2nd SDS NOAM.</p> <p>SSH from the 1st SDS NOAM to the 2nd SDS NOAM server by executing the following command:</p> <pre>\$ ssh admusr@<NO2 Control IP Address></pre> <p>Login as the admusr user.</p> <p>The automatic configuration daemon will look for the file named “TKLCConfigData.sh” in the /var/tmp directory, implement the configuration in the file, and then prompt the user to reboot the server.</p> <p>Verify awpushcfg was called by checking the following file</p> <pre>\$ sudo cat /var/TKLC/appw/logs/Process/install.log</pre> <p>Verify no errors are present and that the following message is displayed:</p> <pre>[SUCCESS] script completed successfully!</pre> <p>Now Reboot the Server:</p> <pre>\$ sudo init 6</pre> <p>Wait for the server to reboot</p>

Procedure 41. Configure the Second SDS NOAM Server

7 <input type="checkbox"/>	2nd SDS NOAM Server: Establish an SSH session and Login	Obtain a terminal window to the 2 nd SDS NOAM server, logging in as the <i>admusr</i> user.
8 <input type="checkbox"/>	2nd SDS NOAM Server: Configure Networking for Dedicated NetBackup Interface (Optional)	<p>Note: You will only execute this step if your SDS NOAM is using a dedicated Ethernet interface for NetBackup.</p> <pre>\$ sudo /usr/TKLC/plat/bin/netAdm set --device=NetBackup --type=Ethernet --onboot=yes --address=<NO2_NetBackup_IP_Address> --netmask=<NO2_NetBackup_NetMask></pre> <pre>\$ sudo /usr/TKLC/plat/bin/netAdm add --route=net --device=NetBackup --address=<NO1_NetBackup_Network_ID> --netmask=<NO2_NetBackup_NetMask> --gateway=<NO2_NetBackup_Gateway_IP_Address></pre>
9 <input type="checkbox"/>	2nd SDS NOAM Server: Install Tuned (Oracle X6-2)	<p>Activate the tuned profile for the Guest Virtual Machine:</p> <pre>\$ sudo tuned-adm profile virtual-guest</pre> <pre>\$ sudo service_conf add tuned rc runlevels=345</pre> <pre>\$ sudo service_conf add ktune rc runlevels=345</pre> <p>Verify that tuned is active:</p> <pre>\$ sudo tuned-adm active</pre> <p>Expected output:</p> <pre>Current active profile: virtual-guest Service tuned: enabled, running Service ktune: enabled, running</pre>

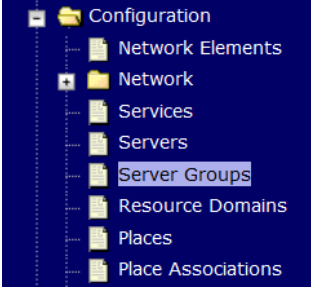
Procedure 41. Configure the Second SDS NOAM Server

10 <input type="checkbox"/>	2nd SDS NOAM Server: Verify Server Health	Execute the following command on the 2 nd SDS NOAM server and make sure that no errors are returned: <pre>\$ sudo syscheck Running modules in class hardware...OK Running modules in class disk...OK Running modules in class net...OK Running modules in class system...OK Running modules in class proc...OK LOG LOCATION: /var/TKLC/log/syscheck/fail_log</pre>
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Procedure 42. Complete SDS NOAM Server Group Configuration

S T E P #	<p>This procedure will provide the steps to finish configuring the SDS NOAM server group.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
<p>1</p> <p><input type="checkbox"/></p>	<p>SDS NOAM GUI: Login</p>	<p>Establish a GUI session on the first SDS NOAM server by using the XMI IP address of the first SDS NOAM server. Open the web browser and enter a URL of:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p><code>https://<SDS_NO1_XMI_IP_Address></code></p> </div> <p>Login as the <i>guiadmin</i> user:</p> 

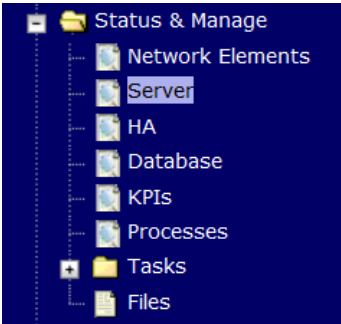
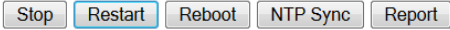
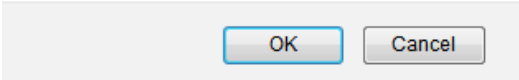
Procedure 42. Complete SDS NOAM Server Group Configuration

<p>2</p> <p><input type="checkbox"/></p>	<p>SDS NOAM GUI: Edit the SDS NOAM Server Group Data</p>	<p>Navigate to Main Menu->Configuration->Server Groups.</p>  <p>Select the SDS NOAM Server group and click on Edit</p> <p style="text-align: center;"> <input type="button" value="Insert"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/> <input type="button" value="Report"/> </p> <p>Add the 2nd SDS NOAM server to the Server Group by clicking the <i>Include in SG</i> checkbox for the 2nd SDS NOAM server.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3">RMSNO_900060102</th> </tr> <tr> <th>Server</th> <th>SG Inclusion</th> <th>Preferred HA Role</th> </tr> </thead> <tbody> <tr> <td>RMSNOA</td> <td><input checked="" type="checkbox"/> Include in SG</td> <td><input type="checkbox"/> Preferred Spare</td> </tr> <tr> <td>RMSNOB</td> <td><input checked="" type="checkbox"/> Include in SG</td> <td><input type="checkbox"/> Preferred Spare</td> </tr> </tbody> </table> <p>Click Apply.</p> <p>Add a SDS NOAM VIP by click on Add. Fill in the VIP Address and press Ok as shown below</p> <div style="border: 1px solid gray; padding: 5px; margin: 10px 0;"> <p style="text-align: center;">VIP Address <input type="button" value="Add"/></p> <p><input style="width: 100%;" type="text"/> <input type="button" value="Remove"/></p> <p style="text-align: right;"><input type="button" value="Ok"/> <input type="button" value="Apply"/> <input type="button" value="Cancel"/></p> </div>	RMSNO_900060102			Server	SG Inclusion	Preferred HA Role	RMSNOA	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare	RMSNOB	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare
RMSNO_900060102														
Server	SG Inclusion	Preferred HA Role												
RMSNOA	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare												
RMSNOB	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare												

Procedure 42. Complete SDS NOAM Server Group Configuration

<p>3</p> <p><input type="checkbox"/></p>	<p>SDS NOAM VIP: Establish GUI Session</p>	<p>Establish a GUI session on the SDS NOAM by using the XMI VIP address:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>https://<SDS_NOAM_VIP_IP_Address></p> </div> <p>Login as user guiadmin.</p> 																																													
<p>4</p> <p><input type="checkbox"/></p>	<p>SDS NOAM VIP: Wait for Remote Database Alarm to Clear</p>	<p>Wait for the alarm Remote Database re-initialization in progress to be cleared before proceeding.</p> <p>Navigate to Main menu->Alarms & Events->View Active</p> <p>Main Menu: Alarms & Events -> View History (Filtered)</p> <div style="border: 1px solid gray; padding: 5px; margin: 10px 0;"> <p style="text-align: right;">Fri Mar 20 12:29:52 2015 EDT</p> <p>Filter Tasks</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Seq #</th> <th>Event ID</th> <th>Timestamp</th> <th>Severity</th> <th>Product</th> <th>Process</th> <th>NE</th> <th>Server</th> <th>Type</th> </tr> </thead> <tbody> <tr> <td>414</td> <td>10200</td> <td>2015-03-20 09:30:00.090 EDT</td> <td style="color: green;">CLEAR</td> <td>...</td> <td>apwSoapServer</td> <td>Compass_NO</td> <td>Compass-NOA</td> <td>CFG</td> </tr> <tr> <td></td> <td colspan="2">Remote Database re-initialization in progress</td> <td colspan="6">Cleared because DB Re-Init Completed</td> </tr> <tr> <td>413</td> <td>10200</td> <td>2015-03-20 09:28:16.411 EDT</td> <td style="color: yellow;">MINOR</td> <td>...</td> <td>apwSoapServer</td> <td>Compass_NO</td> <td>Compass-NOA</td> <td>CFG</td> </tr> <tr> <td></td> <td colspan="2">Remote Database re-initialization in progress</td> <td colspan="6">Remote Database re-initialization in progress</td> </tr> </tbody> </table> </div>	Seq #	Event ID	Timestamp	Severity	Product	Process	NE	Server	Type	414	10200	2015-03-20 09:30:00.090 EDT	CLEAR	...	apwSoapServer	Compass_NO	Compass-NOA	CFG		Remote Database re-initialization in progress		Cleared because DB Re-Init Completed						413	10200	2015-03-20 09:28:16.411 EDT	MINOR	...	apwSoapServer	Compass_NO	Compass-NOA	CFG		Remote Database re-initialization in progress		Remote Database re-initialization in progress					
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	Remote Database re-initialization in progress		Remote Database re-initialization in progress																																												

Procedure 42. Complete SDS NOAM Server Group Configuration

<p>5</p> <p><input type="checkbox"/></p>	<p>SDS NOAM GUI: Restart 2nd SDS NOAM Server</p>	<p>From the NOAM GUI, select the Main menu -> Status & Manage -> Server menu.</p>  <p>Select the 2nd SDS NOAM server. Select the Restart button.</p>  <p>Answer OK to the confirmation popup.</p> <p>Are you sure you wish to restart application software on the following server(s)? Jetta-NO-2</p>  <p>Wait for restart to complete. Wait approximately 3-5 minutes before proceeding.</p>
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4.16.2 SDS Configuration: NetBackup Client Installation (Optional)

Procedure 43. Install NetBackup Client (Optional)

S T E P #	<p>This procedure will download and install NetBackup Client software on the server.</p> <p>Location of the bpstart_notify and bpend_notify scripts is required for the execution of this procedure. For Appworks based applications the scripts are located as follows:</p> <ul style="list-style-type: none"> - /usr/TKLC/appworks/sbin/bpstart_notify - /usr/TKLC/appworks/sbin/bpend_notify <p>Check off (√) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
1 <input type="checkbox"/>	Install NetBackup Client Software	<p>If a customer has a way of transferring and installing the NetBackup client without the aid of TPD tools (push configuration) then use Appendix H.2: NETBACKUP CLIENT INSTALL/UPGRADE WITH NBAUTOINSTALL</p> <p>Note: This is not common. If the answer to the previous question is not known then use Appendix H.1: NetBackup Client Install using PLATCFG</p>
2 <input type="checkbox"/>	Install NetBackup Client Software	<p>Choose the same method used in step 1 to install NetBackup on the 2nd SDS NOAM.</p>

4.16.3 SDS Configuration: Disaster Recovery SDS NOAM (Optional)

Procedure 44. SDS NOAM Configuration for DR Site (Optional)

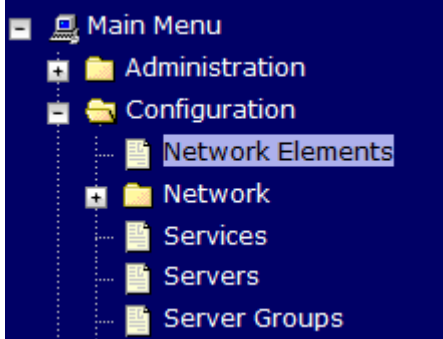
S T E P #	<p>This procedure will provide the steps to configure the First SDS DR NOAM server.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>
1 <input type="checkbox"/>	<p>PRIMARY SDS NOAM VIP GUI: Login</p> <p>Establish a GUI session on the SDS NOAM server by using the XMI VIP IP address. Open the web browser and enter a URL of:</p> <div style="border: 1px solid black; padding: 2px; margin: 5px 0;"> <p><code>https://<SDS_NOAM_XMI_VIP_IP_Address></code></p> </div> <p>Login as the <i>guiadmin</i> user:</p> <div style="text-align: center;">  </div>

Procedure 44. SDS NOAM Configuration for DR Site (Optional)

2

PRIMARY
SDS
NOAM
VIP GUI:
Insert the
SDS DR
NOAM
Network
Element

Navigate to **Main Menu->Configuration->Network Elements**



The **Network Elements** screen will display select the **Browse** (scroll to bottom left corner of screen).

To create a new Network Element, upload a valid configuration file:

A dialogue will pop up, browse to the location of the SDS DR NOAM Site Element XML File and click the **Open** button.

Then click **Upload File** as shown below

To create a new Network Element, upload a valid configuration file:

Once the data has been uploaded, you should see a folder appear with the name of your network element. Click on this folder and you will get a drop-down which describes the individual networks that are now configured:

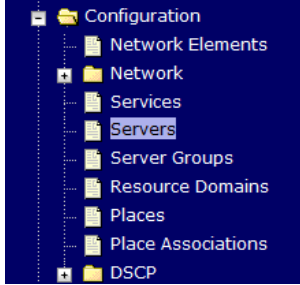
Network Element				
NO_9006005				
Network Name	Network Address	Netmask	VLAN ID	Gateway IP Address
INTERNALXMI	10.240.10.32	255.255.255.224	3	10.240.10.35
INTERNALIMI	10.240.10.0	255.255.255.224	4	10.240.10.3

Procedure 44. SDS NOAM Configuration for DR Site (Optional)

3

PRIMARY SDS NOAM VIP GUI:
Insert the 1st SDS DR-NOAM server

Navigate to **Main Menu -> Configuration -> Servers.**



Select the **Insert** button to insert the new SDS DR-NOAM server into servers table.

Adding a new server

Attribute	Value
Hostname	DR-NOAM-A *
Role	NETWORK OAM&P *
System ID	DR-NOAM-A
Hardware Profile	DSR TVOE Guest
Network Element Name	- Unassigned - *
Location	

Fill in the fields as follows:

Hostname: <Hostname>

Role: NETWORK OAM&P

System ID: <Site System ID>

Hardware Profile: SDS TVOE Guest

Network Element Name: [Choose NE from Drop Down Box]

The network interface fields will now become available with selection choices based on the chosen hardware profile and network element

Interfaces:		
Network	IP Address	Interface
INTERNALXMI (10.240.84.128/25)	10.240.84.155	xmi <input type="checkbox"/> VLAN (3)
INTERNALIMI (10.240.85.0/26)	10.240.85.10	imi <input type="checkbox"/> VLAN (4)

Ok Apply Cancel

Fill in the server IP addresses for the XMI network. Select **xmi** for the interface. **Leave the "VLAN" checkbox unchecked.**

Fill in the server IP addresses for the IMI network. Select **imi** for the interface. **Leave the "VLAN" checkbox unchecked.**

Next, add the following NTP servers:

NTP Server	Preferred?
<1st SDS-DR-NOAM-RMS-TVOE-IP-Address>	Yes

Select the **Ok** button when you have completed entering all the server data.

Procedure 44. SDS NOAM Configuration for DR Site (Optional)

<p>4</p> <p><input type="checkbox"/></p>	<p>PRIMARY SDS NOAM VIP GUI: Export the Initial Configuration</p>	<p>Navigate to Main Menu -> Configuration -> Servers.</p> <p>From the GUI screen, select the SDS DR-NOAM server and then select Export to generate the initial configuration data for that server.</p> <div style="border: 1px solid gray; padding: 5px; display: flex; justify-content: space-around; width: fit-content; margin: 10px auto;"> Insert Edit Delete Export Report </div>						
<p>5</p> <p><input type="checkbox"/></p>	<p>PMAC: Exchange SSH keys between PMAC and SDS DR-NOAM server</p>	<p>Use the PMAC GUI to determine the Control Network IP address of the server that is to be the first SDS NOAM server. From the PMAC GUI, navigate to Main Menu -> Software -> Software Inventory.</p> <table border="1" style="width: 100%; border-collapse: collapse; margin: 10px 0;"> <tr> <td style="font-size: small;">RMS: pt5010441</td> <td style="font-size: small;">192.168.1.51</td> <td style="font-size: small;">ZombieSDSDRNOAM1</td> <td style="font-size: small;">TPD (x86_64)</td> <td style="font-size: small;">7.2.0.0.0-88.21.0</td> <td style="font-size: small;">SDS</td> </tr> </table> <p>Note the IP address for the first SDS DR-NOAM server.</p> <p>Login to the PMAC terminal as the admusr.</p> <p>From a terminal window connection on the PMAC as the admusr user, exchange SSH keys for admusr between the PMAC and the 1st SDS DR-NOAM server using the keyexchange utility, using the Control network IP address for the SDS NOAM server. When prompted for the password, enter the password for the admusr user of the SDS NOAM server.</p> <div style="border: 1px solid gray; padding: 5px; margin: 10px 0;"> <pre>\$ keyexchange admusr@<DR-NO1_Control_IP Address></pre> </div>	RMS: pt5010441	192.168.1.51	ZombieSDSDRNOAM1	TPD (x86_64)	7.2.0.0.0-88.21.0	SDS
RMS: pt5010441	192.168.1.51	ZombieSDSDRNOAM1	TPD (x86_64)	7.2.0.0.0-88.21.0	SDS			
<p>6</p> <p><input type="checkbox"/></p>	<p>SDS NOAM VIP: Exchange SSH keys between SDS NOAM and PMAC at the SDS DR site.</p>	<p>From a terminal window connection on the SDS NOAMP VIP as the admusr.</p> <p>Exchange SSH keys for admusr between the SDS NOAM and the SDS DR NO's PMAC using the keyexchange utility.</p> <div style="border: 1px solid gray; padding: 5px; margin: 10px 0;"> <pre>\$ keyexchange admusr@<DR-NO1_Site_PMAC_Mgmt_IP Address></pre> </div> <p>When prompted for the password, enter the appropriate password for admusr on the PMAC server.</p>						

Procedure 44. SDS NOAM Configuration for DR Site (Optional)

7 <input type="checkbox"/>	Primary SDS NOAM: Copy Configuration File to 1 st SDS DR-NOAM Server	<p>Obtain a terminal session to the primary SDS NOAM as the admusr user.</p> <p>Use the awpushcfg utility to copy the configuration file created in the previous step from the <code>/var/TKLC/db/filemgmt</code> directory on the primary SDS NOAM to the 1st SDS DR-NOAM server, using the Control network IP address for the SDS DR-NOAM server.</p> <p>The configuration file will have a filename like “TKLCConfigData.<Hostname>.sh”.</p> <pre>\$ sudo awpushcfg</pre> <p>The awpushcfg utility is interactive, so the user will be prompted for the following:</p> <ul style="list-style-type: none"> • IP address of the local PMAC server: Use the local control network address from the PMAC. • Username: Use admusr • Control network IP address for the target server: In this case, enter the control IP for the 1st SDS DR-NOAM server). • Hostname of the target server: Enter the server name configured in step 3
8 <input type="checkbox"/>	1st SDS DR-NOAM Server: Verify awpushcfg was called and Reboot the Server	<p>Obtain a terminal window connection on the 1st SDS DR-NOAM iLO from the OA. (Use the procedure in Appendix C: TVOE iLO/iLOM GUI Access).</p> <p>Login as the admusr user.</p> <p>The automatic configuration daemon will look for the file named “TKLCConfigData.sh” in the <code>/var/tmp</code> directory, implement the configuration in the file, and then prompt the user to reboot the server.</p> <p>Verify awpushcfg was called by checking the following file</p> <pre>\$ sudo cat /var/TKLC/appw/logs/Process/install.log</pre> <p>Verify no errors are present and that the following message is displayed:</p> <pre>[SUCCESS] script completed successfully!</pre> <p>Now Reboot the Server:</p> <pre>\$ sudo init 6</pre> <p>Wait for the server to reboot</p>

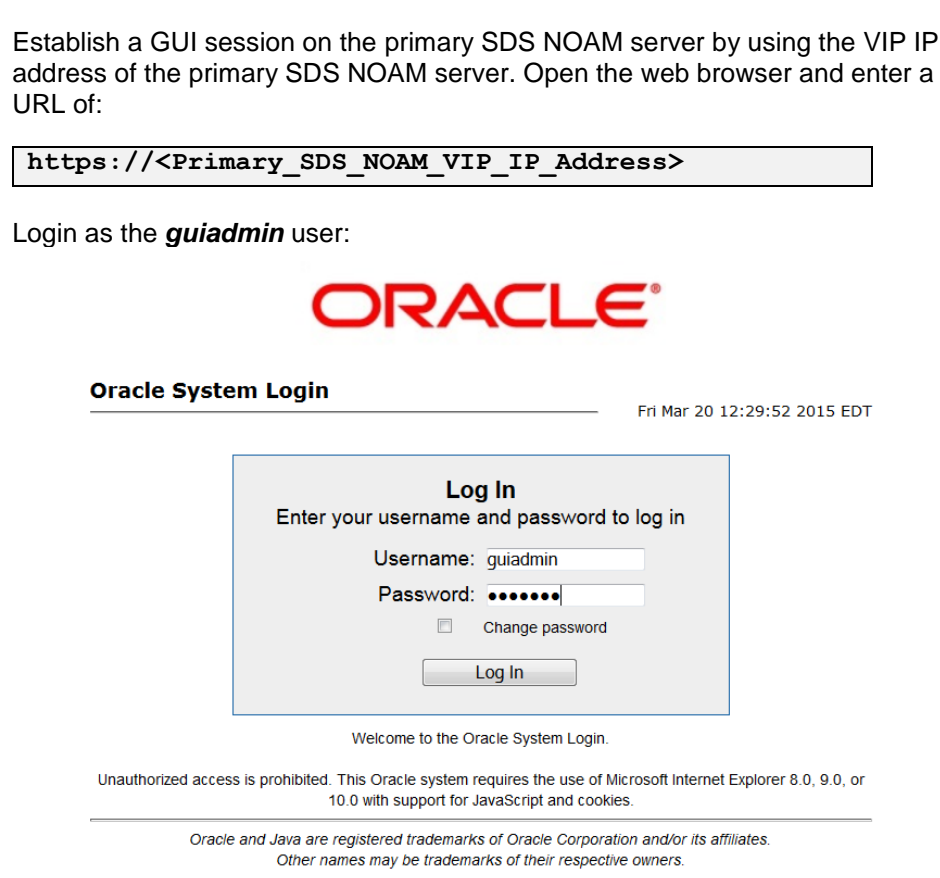
Procedure 44. SDS NOAM Configuration for DR Site (Optional)

<p>9 <input type="checkbox"/></p>	<p>1st SDS DR-NOAM: Configure Networking for Dedicated NetBackup Interface (Optional)</p>	<p>Note: You will only execute this step if your SDS DR-NOAM is using a dedicated Ethernet interface for NetBackup.</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo /usr/TKLC/plat/bin/netAdm set --device=NetBackup --type=Ethernet --onboot=yes --address=<NO1_NetBackup_IP_Address> --netmask=<NO1_NetBackup_NetMask></pre> <pre style="border: 1px solid black; padding: 5px;">\$ sudo /usr/TKLC/plat/bin/netAdm add --route=net --device=NetBackup --address=<NO1_NetBackup_Network_ID> --netmask=<NO1_NetBackup_NetMask> --gateway=<NO1_NetBackup_Gateway_IP_Address></pre>
<p>10 <input type="checkbox"/></p>	<p>1st SDS DR-NOAM: Establish an SSH session and Login</p>	<p>Obtain a terminal window to the 1st SDS DR-NOAM server, logging in as the <i>admusr</i> user.</p>
<p>11 <input type="checkbox"/></p>	<p>1st SDS DR-NOAM Server: Install Tuned (Oracle X6-2)</p>	<p>Activate the tuned profile for the Guest Virtual Machine:</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo tuned-adm profile virtual-guest \$ sudo service_conf add tuned rc runlevels=345 \$ sudo service_conf add ktune rc runlevels=345</pre> <p>Verify that tuned is active:</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo tuned-adm active</pre> <p>Expected output:</p> <pre>Current active profile: virtual-guest Service tuned: enabled, running Service ktune: enabled, running</pre>

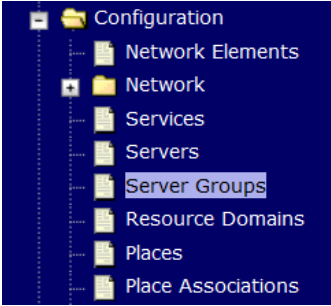
Procedure 44. SDS NOAM Configuration for DR Site (Optional)

<p>1 2 <input type="checkbox"/></p>	<p>1st SDS DR-NOAM Server: Verify Server Health</p>	<p>Execute the following command on the 1st SDS DR-NOAM server and make sure that no errors are returned:</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo syscheck Running modules in class hardware...OK Running modules in class disk...OK Running modules in class net...OK Running modules in class system...OK Running modules in class proc...OK LOG LOCATION: /var/TKLC/log/syscheck/fail_log</pre>				
<p>1 3 <input type="checkbox"/></p>	<p>Repeat for 2nd SDS DR NOAM Server</p>	<p>Repeat Steps 3 through 12 to configure 2nd SDS DR-NOAM Server. When inserting the 2nd SDS DR-NOAM server, change the NTP server address to the following:</p> <table border="1"> <thead> <tr> <th>NTP Server</th> <th>Preferred?</th> </tr> </thead> <tbody> <tr> <td><2nd SDS DR-NOAM-RMS-TVOE-IP-Address></td> <td>Yes</td> </tr> </tbody> </table>	NTP Server	Preferred?	<2nd SDS DR-NOAM-RMS-TVOE-IP-Address>	Yes
NTP Server	Preferred?					
<2nd SDS DR-NOAM-RMS-TVOE-IP-Address>	Yes					

Procedure 45. Pairing for SDS DR-NOAM Site (Optional)

<p>S T E P #</p>	<p>This procedure will provide the steps to pair the SDS DR-NOAM site.</p> <p>Prerequisite: Installation for SDS DR-NOAM Site complete</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
<p>1</p> <p><input type="checkbox"/></p>	<p>Primary SDS NOAM VIP GUI: Login</p>	<p>Establish a GUI session on the primary SDS NOAM server by using the VIP IP address of the primary SDS NOAM server. Open the web browser and enter a URL of:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p><code>https://<Primary_SDS_NOAM_VIP_IP_Address></code></p> </div> <p>Login as the <i>guiadmin</i> user:</p> <div style="text-align: center;">  <p>The screenshot shows the Oracle System Login interface. At the top is the Oracle logo. Below it is the text 'Oracle System Login' followed by a horizontal line and the date 'Fri Mar 20 12:29:52 2015 EDT'. In the center is a 'Log In' box with the instruction 'Enter your username and password to log in'. Inside this box, there are input fields for 'Username' (containing 'guiadmin') and 'Password' (with masked characters). Below the password field is a checkbox for 'Change password' and a 'Log In' button. Below the login box, it says 'Welcome to the Oracle System Login.' At the bottom, there is a warning: 'Unauthorized access is prohibited. This Oracle system requires the use of Microsoft Internet Explorer 8.0, 9.0, or 10.0 with support for JavaScript and cookies.' and a footer: 'Oracle and Java are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.'</p> </div>

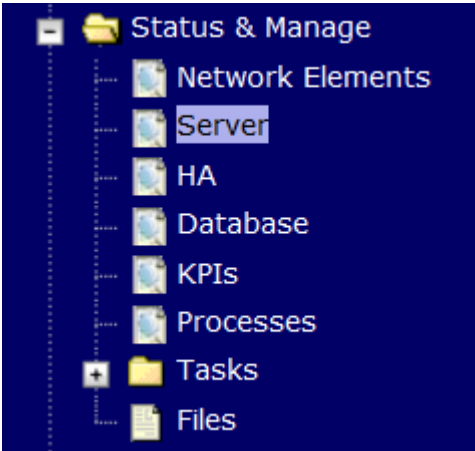
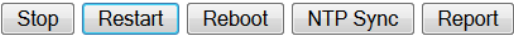
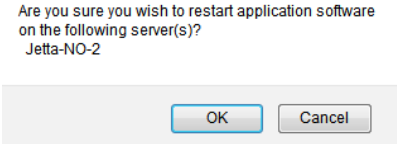
Procedure 45. Pairing for SDS DR-NOAM Site (Optional)

<p>2</p> <p><input type="checkbox"/></p>	<p>Primary SDS NOAM VIP GUI: Enter SDS DR-NOAM Server Group Data</p>	<p>Navigate to Main Menu -> Configuration -> Server Groups</p>  <p>Select Insert and fill the following fields:</p> <p><input type="button" value="Insert"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/> <input type="button" value="Report"/></p> <ul style="list-style-type: none"> • Server Group Name: <Enter Server Group Name> • Level: A • Parent : None • Function: SDS • WAN Replication Connection Count: Use Default Value <p>Select OK when all fields are filled in.</p>												
<p>3</p> <p><input type="checkbox"/></p>	<p>Primary SDS NOAM VIP GUI: Update Server Group</p>	<p>Select the Server Group that was created in the previous step, and click on Edit.</p> <p><input type="button" value="Insert"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/> <input type="button" value="Report"/></p> <p>The user will be presented with the Server Groups [Edit] screen</p> <p>Check the checkbox labeled Include in SG for both SDS DR-NOAM Servers as shown below and click on Apply</p> <table border="1"> <thead> <tr> <th colspan="3">deaDR_CSLAB_ATT</th> </tr> <tr> <th>Server</th> <th>SG Inclusion</th> <th>Preferred HA Role</th> </tr> </thead> <tbody> <tr> <td>deaNO-ChaNC-A</td> <td><input checked="" type="checkbox"/> Include in SG</td> <td><input type="checkbox"/> Preferred Spare</td> </tr> <tr> <td>deaNO-ChaNC-B</td> <td><input checked="" type="checkbox"/> Include in SG</td> <td><input type="checkbox"/> Preferred Spare</td> </tr> </tbody> </table>	deaDR_CSLAB_ATT			Server	SG Inclusion	Preferred HA Role	deaNO-ChaNC-A	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare	deaNO-ChaNC-B	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare
deaDR_CSLAB_ATT														
Server	SG Inclusion	Preferred HA Role												
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deaNO-ChaNC-B	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare												

Procedure 45. Pairing for SDS DR-NOAM Site (Optional)

<p>4</p> <p><input type="checkbox"/></p>	<p>Primary SDS NOAM VIP GUI: Add SDS DR- NOAM VIP</p>	<p>Click the Add dialogue button for the VIP Address and enter an IP Address for the VIP as shown below</p> <div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center;">VIP Address Add</p> <p>10.250.55.163 Remove</p> </div> <p>Then click the OK dialogue button. Verify that the banner information message states Data committed.</p> <div style="text-align: center;"> <p>Ok Apply Cancel</p> </div>																																																						
<p>5</p> <p><input type="checkbox"/></p>	<p>Primary SDS NOAM VIP GUI: Wait for Remote Database Alarm to Clear</p>	<p>Wait for the alarm Remote Database re-initialization in progress to be cleared before proceeding.</p> <p>Navigate to Main menu->Alarms & Events->View Active</p> <p>Main Menu: Alarms & Events -> View History (Filtered)</p> <div style="border: 1px solid gray; padding: 5px;"> <p style="text-align: right;">Fri Mar 20</p> <p>Filter Tasks</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Seq #</th> <th>Event ID</th> <th>Timestamp</th> <th>Severity</th> <th>Product</th> <th>Process</th> <th>NE</th> <th>Server</th> <th>Type</th> </tr> </thead> <tbody> <tr> <td></td> <td colspan="2">Event Text</td> <td colspan="6">Additional Info</td> </tr> <tr> <td>414</td> <td>10200</td> <td>2015-03-20 09:30:00.090 EDT</td> <td>CLEAR</td> <td>...</td> <td>apwSoapServer</td> <td>Compass_NO</td> <td>Compass-NOA</td> <td>CFG</td> </tr> <tr> <td></td> <td colspan="2">Remote Database re-initialization in progress</td> <td colspan="6">Cleared because DB Re-Init Completed</td> </tr> <tr> <td>413</td> <td>10200</td> <td>2015-03-20 09:28:16.411 EDT</td> <td>MINOR</td> <td>...</td> <td>apwSoapServer</td> <td>Compass_NO</td> <td>Compass-NOA</td> <td>CFG</td> </tr> <tr> <td></td> <td colspan="2">Remote Database re-initialization in progress</td> <td colspan="6">Remote Database re-initialization in progress</td> </tr> </tbody> </table> </div>	Seq #	Event ID	Timestamp	Severity	Product	Process	NE	Server	Type		Event Text		Additional Info						414	10200	2015-03-20 09:30:00.090 EDT	CLEAR	...	apwSoapServer	Compass_NO	Compass-NOA	CFG		Remote Database re-initialization in progress		Cleared because DB Re-Init Completed						413	10200	2015-03-20 09:28:16.411 EDT	MINOR	...	apwSoapServer	Compass_NO	Compass-NOA	CFG		Remote Database re-initialization in progress		Remote Database re-initialization in progress					
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	Remote Database re-initialization in progress		Remote Database re-initialization in progress																																																					

Procedure 45. Pairing for SDS DR-NOAM Site (Optional)

<p>6</p> <p><input type="checkbox"/></p>	<p>Primary SDS NOAM VIP GUI: Restart 1st SDS DR-NOAM Server</p>	<p>From the SDS NOAM GUI, select the Main menu -> Status & Manage -> Server menu.</p>  <p>Select the 1st SDS DR-NOAM server. Select the Restart button.</p>  <p>Answer OK to the confirmation popup.</p>  <p>Wait for restart to complete. Wait approximately 3-5 minutes before proceeding.</p>
<p>7</p> <p><input type="checkbox"/></p>	<p>Primary SDS NOAM VIP GUI :Restart the application on the 2nd DR-NOAM Server</p>	<p>Repeat Step 6, this time select the 2nd SDS DR-NOAM Server.</p>


4.16.3 SDS Configuration: Query Servers

The user should be aware that during the Query Server installation procedure, various errors may be seen at different stages of the procedure. During the execution of a step, the user is directed to ignore errors related to values other than the ones referenced by that step.

Procedure 46. Configuring SDS Query Servers

S T E P #	<p>This procedure will provide the steps to configure SDS query servers</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>																																					
1 <input type="checkbox"/>	<p>Exchange SSH keys between SOAM site's local PMAC and the Query Server</p>	<p>Use the PMAC GUI to determine the Control Network IP address of the server that is to be the query server. From the PMAC GUI, navigate to Main Menu -> Software -> Software Inventory.</p> <table border="1"> <thead> <tr> <th>Identity</th> <th>IP Address</th> <th>Hostname</th> <th>Platform Name</th> <th>Platform Version</th> <th>Application Name</th> <th>Application Version</th> <th>Designation</th> <th>Function</th> </tr> </thead> <tbody> <tr> <td>RMS:\ukon_TVCE_10</td> <td>192.168.1.45</td> <td>MultiApp3-QS</td> <td>TPD (x86_64)</td> <td>7.2.0.0-88.24.0</td> <td>SDS</td> <td>8.0.0.0-80.10.0</td> <td></td> <td></td> </tr> <tr> <td>Guest:</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>MultiApp3_SDSOS\R1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>Note the IP address for the Query Server server.</p> <p>Login to the PMAC terminal as the admusr.</p> <p>From a terminal window connection on the PMAC as the admusr user, exchange SSH keys for admusr between the PMAC and the query server using the keyexchange utility, using the Control network IP address for the query server. When prompted for the password, enter the password for the admusr user of the NOAM server.</p> <pre style="border: 1px solid black; padding: 5px;">\$ keyexchange admusr@<Query_Server_Control_IP Address></pre>	Identity	IP Address	Hostname	Platform Name	Platform Version	Application Name	Application Version	Designation	Function	RMS:\ukon_TVCE_10	192.168.1.45	MultiApp3-QS	TPD (x86_64)	7.2.0.0-88.24.0	SDS	8.0.0.0-80.10.0			Guest:									MultiApp3_SDSOS\R1								
Identity	IP Address	Hostname	Platform Name	Platform Version	Application Name	Application Version	Designation	Function																														
RMS:\ukon_TVCE_10	192.168.1.45	MultiApp3-QS	TPD (x86_64)	7.2.0.0-88.24.0	SDS	8.0.0.0-80.10.0																																
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MultiApp3_SDSOS\R1																																						

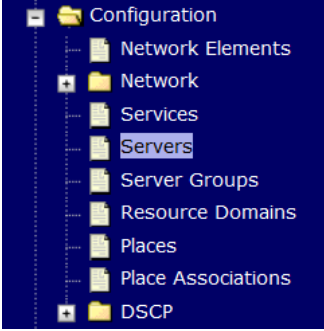
Procedure 46. Configuring SDS Query Servers

<p>2</p> <p><input type="checkbox"/></p>	<p>Primary SDS NOAM VIP GUI: Login</p>	<p>Establish a GUI session on the primary SDS NOAM server by using the VIP IP address of the primary SDS NOAM server. Open the web browser and enter a URL of:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p><code>https://<Primary_SDS_NOAM_VIP_IP_Address></code></p> </div> <p>Login as the <i>guiadmin</i> user:</p> <div style="text-align: center; margin: 20px 0;">  </div> <div style="text-align: center;"> <p>Oracle System Login</p> <hr style="width: 60%; margin: 0 auto;"/> <p style="font-size: small;">Fri Mar 20 12:29:52 2015 EDT</p> </div> <div style="text-align: center; margin: 20px 0;"> <div style="border: 1px solid gray; padding: 10px; width: fit-content; margin: 0 auto;"> <p>Log In</p> <p>Enter your username and password to log in</p> <p>Username: <input type="text" value="guiadmin"/></p> <p>Password: <input type="password" value="••••••"/></p> <p><input type="checkbox"/> Change password</p> <p><input type="button" value="Log In"/></p> </div> </div> <p style="text-align: center; font-size: x-small;">Welcome to the Oracle System Login.</p> <p style="text-align: center; font-size: x-small;">Unauthorized access is prohibited. This Oracle system requires the use of Microsoft Internet Explorer 8.0, 9.0, or 10.0 with support for JavaScript and cookies.</p> <hr style="width: 60%; margin: 0 auto;"/> <p style="text-align: center; font-size: x-small;">Oracle and Java are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.</p>
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Procedure 46. Configuring SDS Query Servers

3	<p>Primary SDS NOAM VIP GUI: Insert the first Query Server</p>	<p>Navigate to Main Menu -> Configuration -> Servers.</p> <p>Select the Insert button to insert the new SDS Query server into servers table (the first or server).</p> <p>Adding a new server</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Attribute</th> <th style="text-align: left;">Value</th> </tr> </thead> <tbody> <tr> <td>Hostname</td> <td>QS1 *</td> </tr> <tr> <td>Role</td> <td>QUERY SERVER *</td> </tr> <tr> <td>System ID</td> <td></td> </tr> <tr> <td>Hardware Profile</td> <td>SDS TVOE Guest</td> </tr> <tr> <td>Network Element Name</td> <td>NO_RLGHNC *</td> </tr> <tr> <td>Location</td> <td></td> </tr> </tbody> </table> <p>Fill in the fields as follows:</p> <p>Hostname: <Hostname></p> <p>Role: Query Server</p> <p>System ID: <Site System ID></p> <p>Hardware Profile: SDS TVOE Guest</p> <p>Network Element Name: [Choose NE from Drop Down Box]</p> <p>The network interface fields will now become available with selection choices based on the chosen hardware profile and network element</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3">Interfaces:</th> </tr> <tr> <th>Network</th> <th>IP Address</th> <th>Interface</th> </tr> </thead> <tbody> <tr> <td>INTERNALXMI (10.240.84.128/25)</td> <td>10.240.84.155</td> <td>xmi <input type="checkbox"/> VLAN (3)</td> </tr> <tr> <td>INTERNALIMI (10.240.85.0/26)</td> <td>10.240.85.10</td> <td>imi <input type="checkbox"/> VLAN (4)</td> </tr> </tbody> </table> <p style="text-align: center;"> <input type="button" value="Ok"/> <input type="button" value="Apply"/> <input type="button" value="Cancel"/> </p> <p>Fill in the server IP addresses for the XMI network. Select xmi for the interface. Leave the "VLAN" checkbox unchecked.</p> <p>Fill in the server IP addresses for the IMI network. Select imi for the interface. Leave the "VLAN" checkbox unchecked.</p> <p>Next, add the following NTP servers:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">NTP Server</th> <th style="text-align: center;">Preferred?</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;"><Query-Server-TVOE-IP-Address></td> <td style="text-align: center;">Yes</td> </tr> </tbody> </table> <p>Select the Ok button when you have completed entering all the server data.</p>	Attribute	Value	Hostname	QS1 *	Role	QUERY SERVER *	System ID		Hardware Profile	SDS TVOE Guest	Network Element Name	NO_RLGHNC *	Location		Interfaces:			Network	IP Address	Interface	INTERNALXMI (10.240.84.128/25)	10.240.84.155	xmi <input type="checkbox"/> VLAN (3)	INTERNALIMI (10.240.85.0/26)	10.240.85.10	imi <input type="checkbox"/> VLAN (4)	NTP Server	Preferred?	<Query-Server-TVOE-IP-Address>	Yes
Attribute	Value																															
Hostname	QS1 *																															
Role	QUERY SERVER *																															
System ID																																
Hardware Profile	SDS TVOE Guest																															
Network Element Name	NO_RLGHNC *																															
Location																																
Interfaces:																																
Network	IP Address	Interface																														
INTERNALXMI (10.240.84.128/25)	10.240.84.155	xmi <input type="checkbox"/> VLAN (3)																														
INTERNALIMI (10.240.85.0/26)	10.240.85.10	imi <input type="checkbox"/> VLAN (4)																														
NTP Server	Preferred?																															
<Query-Server-TVOE-IP-Address>	Yes																															

Procedure 46. Configuring SDS Query Servers

<p>4</p> <p><input type="checkbox"/></p>	<p>SDS NOAM VIP: Export the Initial Configuration</p>	<p>Navigate to Main Menu -> Configuration -> Servers.</p>  <p>From the GUI screen, select the query server and then select Export to generate the initial configuration data for that server.</p> <p><input type="button" value="Insert"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/> <input type="button" value="Export"/> <input type="button" value="Report"/></p>
<p>5</p> <p><input type="checkbox"/></p>	<p>SDS NOAM VIP: Copy Configuration File to Query Server</p>	<p>Obtain a terminal session to the SDS NOAM VIP as the admusr user.</p> <p>Use the awpushcfg utility to copy the configuration file created in the previous step from the <code>/var/TKLC/db/filemgmt</code> directory on the SDS NOAM to the query server, using the Control network IP address for the query server.</p> <p>The configuration file will have a filename like “TKLCConfigData.<hostname>.sh”.</p> <pre>\$ sudo awpushcfg</pre> <p>The awpushcfg utility is interactive, so the user will be prompted for the following:</p> <ul style="list-style-type: none"> • IP address of the local PMAC server: Use the local control network address from the PMAC. • Username: Use admusr • Control network IP address for the target server: In this case, enter the control IP for the query server). • Hostname of the target server: Enter the server name configured in step 3

Procedure 46. Configuring SDS Query Servers

<p>6 <input type="checkbox"/></p>	<p>Query Server: Verify awpushcfg was called and Reboot the Server</p>	<p>Obtain a terminal window connection on the query server console by establishing an ssh session from the SDS NOAM VIP terminal console.</p> <pre style="border: 1px solid black; padding: 5px;">\$ ssh admusr@<query_Server_Control_IP></pre> <p>Login as the <i>admusr</i> user.</p> <p>The automatic configuration daemon will look for the file named “<i>TKLCConfigData.sh</i>” in the /var/tmp directory, implement the configuration in the file, and then prompt the user to reboot the server.</p> <p>Verify awpushcfg was called by checking the following file</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo cat /var/TKLC/appw/logs/Process/install.log</pre> <p>Verify no errors are present and that the following message is displayed:</p> <pre style="border: 1px solid black; padding: 5px;">[SUCCESS] script completed successfully!</pre> <p>Now Reboot the Server:</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo init 6</pre> <p>Wait for the server to reboot</p>
<p>7 <input type="checkbox"/></p>	<p>Query Server: Login</p>	<p>Obtain a terminal window connection on the query server console by establishing an ssh session from the NOAM VIP terminal console.</p> <pre style="border: 1px solid black; padding: 5px;">\$ ssh admusr@<query_Server_Control_IP></pre>
<p>8 <input type="checkbox"/></p>	<p>Query Server: Install Tuned (Oracle X6-2)</p>	<p>Activate the tuned profile for the Guest Virtual Machine:</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo tuned-adm profile virtual-guest \$ sudo service_conf add tuned rc runlevels=345 \$ sudo service_conf add ktune rc runlevels=345</pre> <p>Verify that tuned is active:</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo tuned-adm active</pre> <p>Expected output:</p> <pre style="border: 1px solid black; padding: 5px;">Current active profile: virtual-guest Service tuned: enabled, running Service ktune: enabled, running</pre>

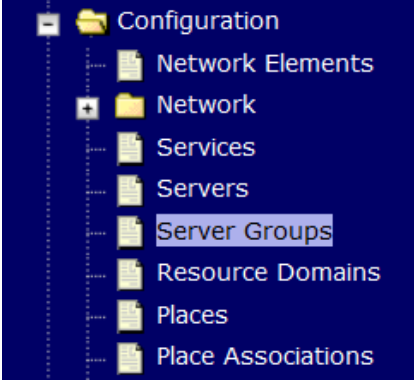
Procedure 46. Configuring SDS Query Servers

9 <input type="checkbox"/>	Query Server: Verify Server Health	Execute the following command on the query server and make sure that no errors are returned: <pre>\$ sudo syscheck Running modules in class hardware...OK Running modules in class disk...OK Running modules in class net...OK Running modules in class system...OK Running modules in class proc...OK LOG LOCATION: /var/TKLC/log/syscheck/fail_log</pre>
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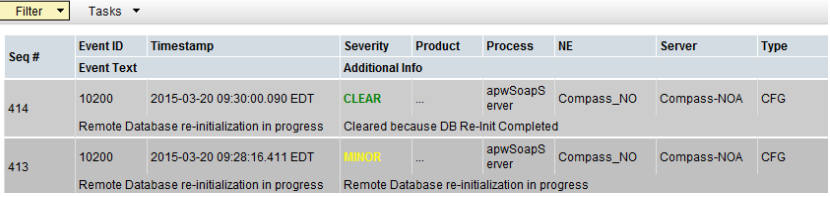
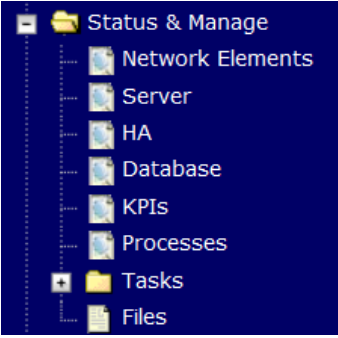
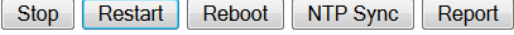
Procedure 47. Query Server SDS NOAM Pairing

S T E P #	<p>This procedure will provide the steps to pair the SDS query server with the SDS NOAMs</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
<p>1</p> <p><input type="checkbox"/></p>	<p>SDS NOAM VIP GUI: Login</p>	<p>Establish a GUI session on the primary SDS NOAM server by using the VIP IP address of the primary SDS NOAM server. Open the web browser and enter a URL of:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p><code>https://<Primary_SDS_NOAM_VIP_IP_Address></code></p> </div> <p>Login as the <i>guiadmin</i> user:</p> <div style="text-align: center;">  <p>The screenshot shows the Oracle System Login interface. At the top is the Oracle logo in red. Below it is the text 'Oracle System Login' and a timestamp 'Fri Mar 20 12:29:52 2015 EDT'. A central box titled 'Log In' contains the text 'Enter your username and password to log in'. There are two input fields: 'Username: guiadmin' and 'Password: ●●●●●●'. Below the password field is a checkbox labeled 'Change password' and a 'Log In' button. At the bottom of the screenshot, it says 'Welcome to the Oracle System Login.', 'Unauthorized access is prohibited. This Oracle system requires the use of Microsoft Internet Explorer 8.0, 9.0, or 10.0 with support for JavaScript and cookies.', and a footer with trademark information: 'Oracle and Java are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.'</p> </div>

Procedure 47. Query Server SDS NOAM Pairing

2	<p>SDS NOAM VIP GUI: Edit the SDS NOAM Server Group Data</p>	<p>Navigate to Main Menu->Configuration->Server Groups.</p>  <p>Select the SDS NOAM Server group and click on Edit</p> <div style="text-align: center;"> <input type="button" value="Insert"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/> <input type="button" value="Report"/> </div> <p>Add the query server to the Server Group by clicking the <i>Include in SG</i> checkbox for the query server.</p> <p>Main Menu: Configuration -> Server Groups [Edit]</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Field</th> <th style="text-align: left;">Value</th> <th style="text-align: left;">Description</th> </tr> </thead> <tbody> <tr> <td>Server Group Name</td> <td>NO_rlghnc_grp *</td> <td>Unique identifier used to identify the group. Must contain an underscore.</td> </tr> <tr> <td>Level</td> <td>A *</td> <td>Select one of the Levels supported by the system.</td> </tr> <tr> <td>Parent</td> <td>NONE *</td> <td>Select an existing Server Group.</td> </tr> <tr> <td>Function</td> <td>SDS *</td> <td>Select one of the Functions supported by the system.</td> </tr> <tr> <td>WAN Replication Connection Count</td> <td>1</td> <td>Specify the number of TCF connections. [Default = 1. Range = Any integer greater than 0.]</td> </tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3" style="text-align: left;">NO_RLGHNC</th> </tr> <tr> <th style="text-align: left;">Server</th> <th style="text-align: left;">SG Inclusion</th> <th style="text-align: left;">Preferred HA Role</th> </tr> </thead> <tbody> <tr> <td>sds-rlghnc-a</td> <td><input checked="" type="checkbox"/> Include in SG</td> <td><input type="checkbox"/> Preferred Spare</td> </tr> <tr> <td>sds-rlghnc-b</td> <td><input checked="" type="checkbox"/> Include in SG</td> <td><input type="checkbox"/> Preferred Spare</td> </tr> <tr> <td>qs-rlghnc</td> <td><input checked="" type="checkbox"/> Include in SG</td> <td><input type="checkbox"/> Preferred Spare</td> </tr> </tbody> </table> <p>Click OK.</p>	Field	Value	Description	Server Group Name	NO_rlghnc_grp *	Unique identifier used to identify the group. Must contain an underscore.	Level	A *	Select one of the Levels supported by the system.	Parent	NONE *	Select an existing Server Group.	Function	SDS *	Select one of the Functions supported by the system.	WAN Replication Connection Count	1	Specify the number of TCF connections. [Default = 1. Range = Any integer greater than 0.]	NO_RLGHNC			Server	SG Inclusion	Preferred HA Role	sds-rlghnc-a	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare	sds-rlghnc-b	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare	qs-rlghnc	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare
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sds-rlghnc-a	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare																																	
sds-rlghnc-b	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare																																	
qs-rlghnc	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare																																	

Procedure 47. Query Server SDS NOAM Pairing

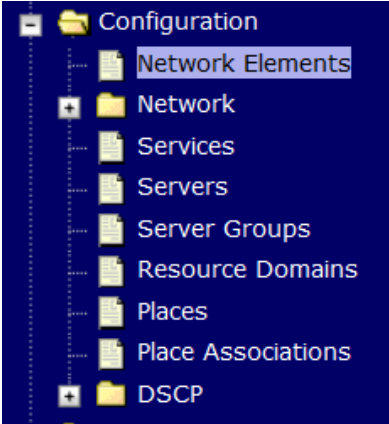
<p>3</p> <p><input type="checkbox"/></p>	<p>SDS NOAM VIP GUI: Wait for Remote Database Alarm to Clear</p>	<p>Wait for the alarm Remote Database re-initialization in progress to be cleared before proceeding.</p> <p>Navigate to Main menu->Alarms & Events->View Active</p> <p>Main Menu: Alarms & Events -> View History (Filtered)</p> 
<p>4</p> <p><input type="checkbox"/></p>	<p>SDS NOAM VIP GUI: Restart query server</p>	<p>Navigate to Main menu->Status & Manage->Server.</p>  <p>Select the query server.</p> <p>Select the Restart button.</p>  <p>Answer OK to the confirmation popup. Wait for restart to complete.</p>
<p>5</p> <p><input type="checkbox"/></p>	<p>Repeat for SDS DR-NOAM</p>	<p>If SDS DR-NOAMs have been configured, repeat this procedure at the site of the SDS DR-NOAMs</p>

4.16.4 SDS Configuration: SOAMs

Procedure 48. Configure the SDS DP SOAM NE

S T E P #	<p>This procedure will provide the steps to configure the SOAM Network Element</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
1 <input type="checkbox"/>	<p>NOAM SDS VIP GUI: Login</p>	<p>Establish a GUI session on the SDS NOAM server by using the VIP IP address of the NOAM server. Open the web browser and enter a URL of:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p><code>https://<Primary_SDS_NOAM_VIP_IP_Address></code></p> </div> <p>Login as the <i>guiadmin</i> user:</p> <div style="text-align: center;">  </div>


Procedure 48. Configure the SDS DP SOAM NE

<p>2</p> <p><input type="checkbox"/></p>	<p>NOAM SDS VIP GUI: Create the SOAM Network Element using an XML File</p>	<p>Make sure to have an SDS DP SOAM Network Element XML file available on the PC that is running the web browser. The SDS DP SOAM Network Element XML file is similar to what was created and used in Procedure 39, but defines the SDS DP SOAM “Network Element”.</p> <p>Refer to Appendix J: Sample Network Element for a sample Network Element xml file</p> <p>Navigate to Main Menu->Configuration->Network Elements</p>  <p>Select the Browse button, and enter the path and name of the SDS DP SOAM network XML file.</p> <p>Select the Upload File button to upload the XML file and configure the SDS DP SOAM Network Element.</p> <p>To create a new Network Element, upload a valid configuration file:</p> <p><input type="button" value="Browse..."/> No file selected. <input type="button" value="Upload File"/></p> <p><input type="button" value="Insert"/> <input type="button" value="Delete"/> <input type="button" value="Export"/> <input type="button" value="Report"/></p>
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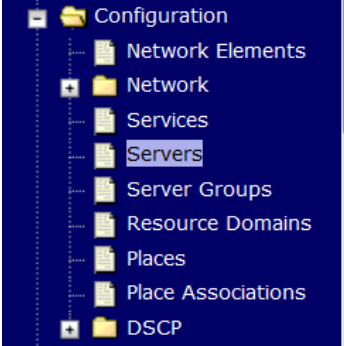
Procedure 49. Configure the SDS DP SOAM Servers

S T E P #	<p>This procedure will provide the steps to configure the SDS DP SOAM servers.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>																												
1 <input type="checkbox"/>	<p>Exchange SSH keys between SDS DP SOAM site's local PMAC and the SOAM Server</p>	<p>Use the PMAC GUI to determine the Control Network IP address of the server that is to be the SDS DP SOAM server. From the PMAC GUI, navigate to Main Menu -> Software -> Software Inventory.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Identity</th> <th>IP Address</th> <th>Hostname</th> <th>Platform Name</th> <th>Platform Version</th> <th>Application Name</th> <th>Application Version</th> <th>Designation</th> <th>Function</th> </tr> </thead> <tbody> <tr> <td>RMS: \vlon_TVCE_1</td> <td style="border: 2px solid red;">192.168.1.154</td> <td>MultiApp3-SOAM1</td> <td>TPD (x86_64)</td> <td>7.2.0.0.0-88.24.0</td> <td>DSR</td> <td>8.0.0.0.0-80.10.0</td> <td></td> <td></td> </tr> <tr> <td>Guest: MultiApp3_DSRSOAM1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>Note the IP address for the SDS DP SOAM server.</p> <p>Login to the PMAC terminal as the admusr.</p> <p>From a terminal window connection on the PMAC as the admusr user, exchange SSH keys for admusr between the PMAC and the SDS DP SOAM server using the keyexchange utility, using the Control network IP address for the SDS DP SOAM server. When prompted for the password, enter the password for the admusr user of the SDS DP SOAM server.</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <pre>\$ keyexchange admusr@<SO1_Control_IP Address></pre> </div>	Identity	IP Address	Hostname	Platform Name	Platform Version	Application Name	Application Version	Designation	Function	RMS: \vlon_TVCE_1	192.168.1.154	MultiApp3-SOAM1	TPD (x86_64)	7.2.0.0.0-88.24.0	DSR	8.0.0.0.0-80.10.0			Guest: MultiApp3_DSRSOAM1								
Identity	IP Address	Hostname	Platform Name	Platform Version	Application Name	Application Version	Designation	Function																					
RMS: \vlon_TVCE_1	192.168.1.154	MultiApp3-SOAM1	TPD (x86_64)	7.2.0.0.0-88.24.0	DSR	8.0.0.0.0-80.10.0																							
Guest: MultiApp3_DSRSOAM1																													
2 <input type="checkbox"/>	<p>Exchange SSH keys between SDS NOAM and PMAC at the SDS DP SOAM site (If necessary)</p>	<p>Note: If this SDS DP SOAM shares the same PMAC as the SDS NOAM, then you can skip this step.</p> <p>From a terminal window connection on the SDS NOAM VIP, as the admusr, exchange SSH keys for admusr between the SDS NOAM and the PMAC for this SDS DP SOAM site using the keyexchange utility.</p> <p>When prompted for the password, enter the admusr password for the PMAC server.</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <pre>\$ keyexchange admusr@<SO1_Site_PMAC_Mgmt_IP_Address></pre> </div> <p>Repeat this step for the standby SDS DP SOAM Server</p>																											

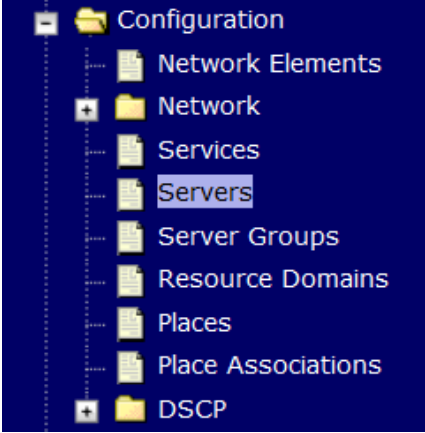
Procedure 49. Configure the SDS DP SOAM Servers

<p>3 □</p>	<p>NOAM SDS VIP GUI: Login</p>	<p>If not already done, establish a GUI session on the SDS NOAM server by using the XMI VIP address. Open the web browser and enter a URL of: <div style="border: 1px solid black; padding: 2px; display: inline-block;"> https://<Primary_SDS_NOAM_VIP_IP_Address> </div></p> <p>Login to the SDS NOAM GUI as the <i>guiadmin</i> user:</p> <div style="text-align: center;">  </div>
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Procedure 49. Configure the SDS DP SOAM Servers

4	<p>SDS NOAM VIP GUI: Insert the 1st SDS DP SOAM server</p>	<p>Navigate to Main Menu -> Configuration -> Servers.</p>  <p>Select the Insert button to insert the 1st SDS DP SOAM server into servers table (the first or server).</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Attribute</th> <th style="text-align: left;">Value</th> <th style="text-align: left;">Description</th> </tr> </thead> <tbody> <tr> <td>Hostname</td> <td>SOAM-A *</td> <td>Unique name for 20-character string minus sign. Must be alphanumeric.</td> </tr> <tr> <td>Role</td> <td>SYSTEM OAM *</td> <td>Select the function</td> </tr> <tr> <td>Hardware Profile</td> <td>DSR TVOE Guest</td> <td>Hardware profile</td> </tr> <tr> <td>Network Element Name</td> <td>HPC6_90006 *</td> <td>Select the network element</td> </tr> <tr> <td>Location</td> <td></td> <td>Location description. Valid value</td> </tr> </tbody> </table> <p>Fill in the fields as follows:</p> <p>Hostname: <Hostname></p> <p>Role: SYSTEM OAM</p> <p>System ID: <Site System ID></p> <p>Hardware Profile: SDS TVOE Guest</p> <p>Network Element Name: [Choose NE from Drop Down Box]</p> <p>The network interface fields will now become available with selection choices based on the chosen hardware profile and network element</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3">Interfaces:</th> </tr> <tr> <th>Network</th> <th>IP Address</th> <th>Interface</th> </tr> </thead> <tbody> <tr> <td>INTERNALXMI (10.240.84.128/25)</td> <td>10.240.84.155</td> <td>xmi <input type="checkbox"/> VLAN (3)</td> </tr> <tr> <td>INTERNALIMI (10.240.85.0/26)</td> <td>10.240.85.10</td> <td>imi <input type="checkbox"/> VLAN (4)</td> </tr> </tbody> </table> <p style="text-align: center;"> <input type="button" value="OK"/> <input type="button" value="Apply"/> <input type="button" value="Cancel"/> </p> <p>Fill in the server IP addresses for the XMI network. Select xmi for the interface. Leave the "VLAN" checkbox unchecked.</p> <p>Fill in the server IP addresses for the IMI network. Select imi for the interface. Leave the "VLAN" checkbox unchecked.</p> <p>Next, add the following NTP servers:</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="width: 50%;">NTP Server</th> <th style="width: 50%;">Preferred?</th> </tr> </thead> <tbody> <tr> <td><1st SDS-SOAM-RMS-TVOE-IP-Address></td> <td>Yes</td> </tr> </tbody> </table> <p>Select the Ok button when you have completed entering all the server data.</p>	Attribute	Value	Description	Hostname	SOAM-A *	Unique name for 20-character string minus sign. Must be alphanumeric.	Role	SYSTEM OAM *	Select the function	Hardware Profile	DSR TVOE Guest	Hardware profile	Network Element Name	HPC6_90006 *	Select the network element	Location		Location description. Valid value	Interfaces:			Network	IP Address	Interface	INTERNALXMI (10.240.84.128/25)	10.240.84.155	xmi <input type="checkbox"/> VLAN (3)	INTERNALIMI (10.240.85.0/26)	10.240.85.10	imi <input type="checkbox"/> VLAN (4)	NTP Server	Preferred?	<1st SDS-SOAM-RMS-TVOE-IP-Address>	Yes
Attribute	Value	Description																																		
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Hardware Profile	DSR TVOE Guest	Hardware profile																																		
Network Element Name	HPC6_90006 *	Select the network element																																		
Location		Location description. Valid value																																		
Interfaces:																																				
Network	IP Address	Interface																																		
INTERNALXMI (10.240.84.128/25)	10.240.84.155	xmi <input type="checkbox"/> VLAN (3)																																		
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NTP Server	Preferred?																																			
<1st SDS-SOAM-RMS-TVOE-IP-Address>	Yes																																			

Procedure 49. Configure the SDS DP SOAM Servers

<p>5</p> <p><input type="checkbox"/></p>	<p>SDS NOAM VIP GUI: Export the Initial Configuration</p>	<p>Navigate to Main Menu -> Configuration -> Servers.</p>  <p>From the GUI screen, select the SDS SOAM server and then select Export to generate the initial configuration data for that server.</p> <p><input type="button" value="Insert"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/> <input type="button" value="Export"/> <input type="button" value="Report"/></p>
<p>6</p> <p><input type="checkbox"/></p>	<p>SDS NOAM VIP: Copy Configuration File to 1st SDS DP SOAM Server</p>	<p>Obtain a terminal session to the SDS NOAM VIP as the admusr user.</p> <p>Use the awpushcfg utility to copy the configuration file created in the previous step from the <code>/var/TKLC/db/filemgmt</code> directory on the SDS NOAM to the 1st SDS DP SOAM server, using the Control network IP address for the 1st SDS DP SOAM server.</p> <p>The configuration file will have a filename like <code>TKLCConfigData.<hostname>.sh</code>.</p> <pre>\$ sudo awpushcfg</pre> <p>The awpushcfg utility is interactive, so the user will be prompted for the following:</p> <ul style="list-style-type: none"> • IP address of the local PMAC server: Use the local control network address from the PMAC. • Username: Use admusr • Control network IP address for the target server: In this case, enter the control IP for the 1st SDS DP SOAM server). • Hostname of the target server: Enter the server name configured in step 4


Procedure 49. Configure the SDS DP SOAM Servers

7 <input type="checkbox"/>	1st SDS DP SOAM Server: Verify awpushcfg was called and Reboot the Server	<p>Obtain a terminal window connection on the 1st SDS DP SOAM server console by establishing an ssh session from the SDS NOAM VIP terminal console.</p> <pre>\$ ssh admusr@<SDS_SO1_Control_IP></pre> <p>Login as the <i>admusr</i> user.</p> <p>The automatic configuration daemon will look for the file named “<i>TKLCConfigData.sh</i>” in the /var/tmp directory, implement the configuration in the file, and then prompt the user to reboot the server.</p> <p>Verify awpushcfg was called by checking the following file</p> <pre>\$ sudo cat /var/TKLC/appw/logs/Process/install.log</pre> <p>Verify no errors are present and that the following message is displayed:</p> <pre>[SUCCESS] script completed successfully!</pre> <p>Now Reboot the Server:</p> <pre>\$ sudo init 6</pre> <p>Wait for the server to reboot</p>
8 <input type="checkbox"/>	1st SDS DP SOAM Server: Login	<p>Obtain a terminal window connection on the 1st SDS DP SOAM server console by establishing an ssh session from the SDS NOAM VIP terminal console.</p> <pre>\$ ssh admusr@<SDS_SO1_Control_IP></pre>
9 <input type="checkbox"/>	1st SDS DP SOAM Server: Install Tuned (Oracle X6-2)	<p>Activate the tuned profile for the Guest Virtual Machine:</p> <pre>\$ sudo tuned-adm profile virtual-guest</pre> <pre>\$ sudo service_conf add tuned rc runlevels=345</pre> <pre>\$ sudo service_conf add ktune rc runlevels=345</pre> <p>Verify that tuned is active:</p> <pre>\$ sudo tuned-adm active</pre> <p>Expected output:</p> <pre>Current active profile: virtual-guest Service tuned: enabled, running Service ktune: enabled, running</pre>

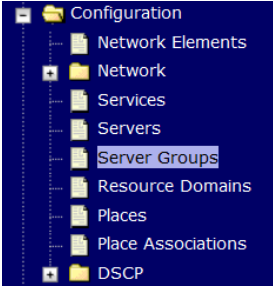
Procedure 49. Configure the SDS DP SOAM Servers

<p>10</p> <p><input type="checkbox"/></p>	<p>1st SDS DP SOAM Server: Verify Server Health</p>	<p>Execute the following command on the 1st SDS DP SOAM server and make sure that no errors are returned:</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo syscheck Running modules in class hardware...OK Running modules in class disk...OK Running modules in class net...OK Running modules in class system...OK Running modules in class proc...OK LOG LOCATION: /var/TKLC/log/syscheck/fail_log</pre>				
<p>11</p> <p><input type="checkbox"/></p>	<p>Insert and Configure the 2nd SDS DP SOAM server</p>	<p>Repeat this procedure to insert and configure the 2nd SDS DP SOAM server, with the exception of the NTP server, which should be configured as so:</p> <table border="1"> <thead> <tr> <th>NTP Server</th> <th>Preferred?</th> </tr> </thead> <tbody> <tr> <td><2nd SDS DP SOAM-RMS-TVOE-IP-Address></td> <td>Yes</td> </tr> </tbody> </table> <p>Instead of data for the 1st SDS DP SOAM Server, insert the network data for the 2nd SDS DP SOAM server, transfer the <i>TKLCConfigData</i> file to the 2nd SDS DP SOAM server, and reboot the 2nd SDS DP SOAM server when prompted at a terminal window.</p>	NTP Server	Preferred?	<2nd SDS DP SOAM-RMS-TVOE-IP-Address>	Yes
NTP Server	Preferred?					
<2nd SDS DP SOAM-RMS-TVOE-IP-Address>	Yes					

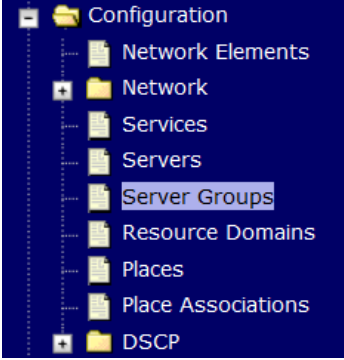

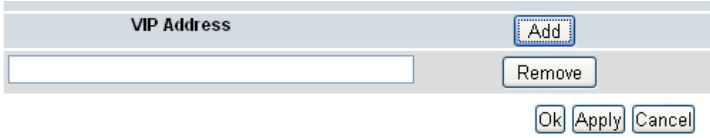
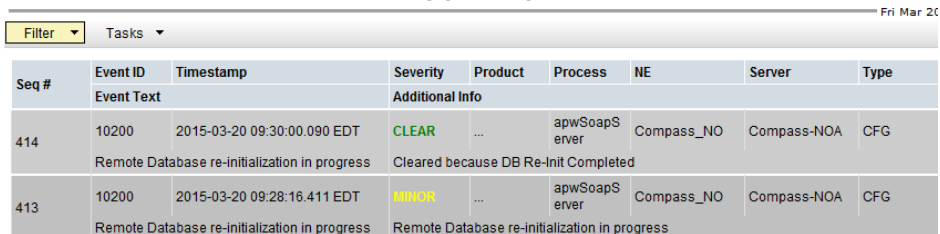
Procedure 50. Configure the SDS DP SOAM Server Group

S T E P #	<p>This procedure will provide the steps to configure the SOAM Server Group</p> <p>Check off (√) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
1 <input type="checkbox"/>	<p>NOAM SDS VIP GUI: Login</p>	<p>If not already done, establish a GUI session on the SDS NOAM server by using the XMI VIP address of the SDS NOAM server. Open the web browser and enter a URL of:</p> <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 5px auto;"> <p><code>https://<Primary_NOAM_VIP_IP_Address></code></p> </div> <p>Login to the SDS NOAM GUI as the <i>guiadmin</i> user:</p> <div style="text-align: center; margin: 20px 0;">  </div>

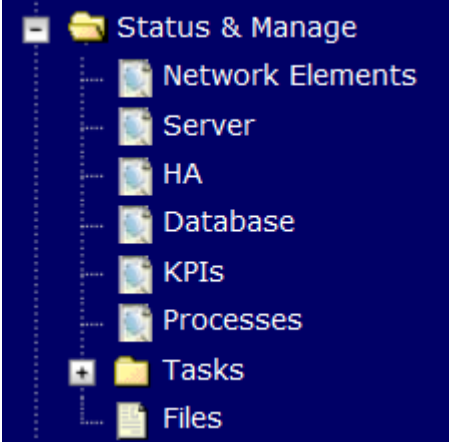
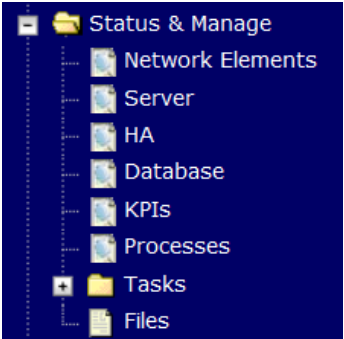
Procedure 50. Configure the SDS DP SOAM Server Group

<p>2</p> <p><input type="checkbox"/></p>	<p>SDS NOAM VIP GUI: Enter SOAM Server Group Data</p>	<p>After approximately 5 minutes for the 2nd SDS DP SOAM server to reboot,</p> <p>Navigate to the GUI Main Menu->Configuration->Server Groups</p>  <p>Select Insert</p> <p><input type="button" value="Insert"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/> <input type="button" value="Report"/></p> <p>Add the SDS DP SOAM Server Group name along with the values for the following fields:</p> <ul style="list-style-type: none"> • Name: <Hostname> • Level: B • Parent [Select the NOAM Server Group] • Function: SDS (Active/Standby Pair) • WAN Replication Connection Count: Use Default Value <p>Select OK when all fields are filled.</p>
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Procedure 50. Configure the SDS DP SOAM Server Group

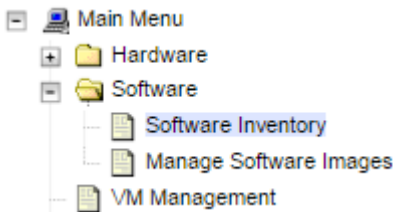
<p>3</p> <p><input type="checkbox"/></p>	<p>SDS NOAM VIP GUI: Edit the SDS DP SOAM Server Group and add VIP</p>	<p>From the GUI Main Menu->Configuration->Server Groups</p>  <p>Select the new SDS DP SOAM server group, and then select Edit.</p>  <p>Add both SDS DP SOAM servers to the Server Group Primary Site by clicking the Include in SG checkbox.</p> <p>Do not check any of the Preferred Spare checkboxes.</p> <table border="1"> <thead> <tr> <th>Server</th> <th>SG Inclusion</th> <th>Preferred HA Role</th> </tr> </thead> <tbody> <tr> <td>RMSSOA</td> <td><input checked="" type="checkbox"/> Include in SG</td> <td><input type="checkbox"/> Preferred Spare</td> </tr> <tr> <td>RMSOB</td> <td><input checked="" type="checkbox"/> Include in SG</td> <td><input type="checkbox"/> Preferred Spare</td> </tr> </tbody> </table> <p>Click Apply.</p> <p>Add a SDS DP SOAM VIP by click on Add. Fill in the VIP Address and press Ok as shown below:</p> 	Server	SG Inclusion	Preferred HA Role	RMSSOA	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare	RMSOB	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare																																																						
Server	SG Inclusion	Preferred HA Role																																																															
RMSSOA	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare																																																															
RMSOB	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare																																																															
<p>4</p> <p><input type="checkbox"/></p>	<p>SDS NOAM VIP GUI: Wait for Remote Database Alarm to Clear</p>	<p>Wait for the alarm Remote Database re-initialization in progress to be cleared before proceeding.</p> <p>Navigate to Main menu->Alarms & Events->View Active</p> <p>Main Menu: Alarms & Events -> View History (Filtered)</p>  <table border="1"> <thead> <tr> <th>Seq #</th> <th>Event ID</th> <th>Timestamp</th> <th>Severity</th> <th>Product</th> <th>Process</th> <th>NE</th> <th>Server</th> <th>Type</th> </tr> </thead> <tbody> <tr> <td>414</td> <td>10200</td> <td>2015-03-20 09:30:00.090 EDT</td> <td>CLEAR</td> <td>...</td> <td>apwSoapServer</td> <td>Compass_NO</td> <td>Compass-NOA</td> <td>CFG</td> </tr> <tr> <td></td> <td></td> <td>Remote Database re-initialization in progress</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>413</td> <td>10200</td> <td>2015-03-20 09:28:16.411 EDT</td> <td>MINOR</td> <td>...</td> <td>apwSoapServer</td> <td>Compass_NO</td> <td>Compass-NOA</td> <td>CFG</td> </tr> <tr> <td></td> <td></td> <td>Remote Database re-initialization in progress</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Seq #	Event ID	Timestamp	Severity	Product	Process	NE	Server	Type	414	10200	2015-03-20 09:30:00.090 EDT	CLEAR	...	apwSoapServer	Compass_NO	Compass-NOA	CFG			Remote Database re-initialization in progress																413	10200	2015-03-20 09:28:16.411 EDT	MINOR	...	apwSoapServer	Compass_NO	Compass-NOA	CFG			Remote Database re-initialization in progress															
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414	10200	2015-03-20 09:30:00.090 EDT	CLEAR	...	apwSoapServer	Compass_NO	Compass-NOA	CFG																																																									
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		Remote Database re-initialization in progress																																																															

Procedure 50. Configure the SDS DP SOAM Server Group


<p>5</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Restart 1st SDS DP SOAM server</p>	<p>From the SDS NOAMP GUI, select Main menu->Status & Manage->Server.</p>  <p>Select the 1st SDS DP SOAM server.</p> <p>Select the Restart button. Answer OK to the confirmation popup. Wait for restart to complete.</p> <p> <input type="button" value="Stop"/> <input type="button" value="Restart"/> <input type="button" value="Reboot"/> <input type="button" value="NTP Sync"/> <input type="button" value="Report"/> </p>
<p>6</p> <p><input type="checkbox"/></p>	<p>SDS NOAM VIP GUI: Restart 2nd SDS DP SOAM server</p>	<p>From the SDS NOAM GUI, select Main menu->Status & Manage->Server.</p>  <p>Select the 2nd SDS DP SOAM server.</p> <p>Select the Restart button. Answer OK to the confirmation popup. Wait for restart to complete.</p> <p> <input type="button" value="Stop"/> <input type="button" value="Restart"/> <input type="button" value="Reboot"/> <input type="button" value="NTP Sync"/> <input type="button" value="Report"/> </p>

4.16.5 SDS Configuration: DPs

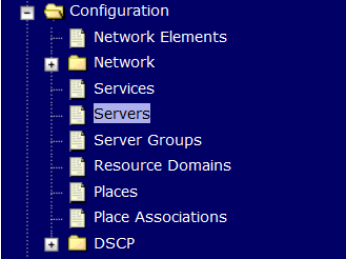
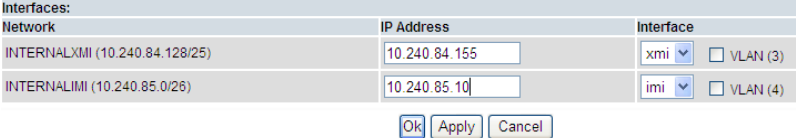
Procedure 51. Configure the SDS DP Servers

S T E P #	<p>This procedure will provide the steps to configure SDS DP Servers</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>																	
1 <input type="checkbox"/>	<p>PMAC: Exchange SSH keys between SDS DP site's local PMAC and the DP server</p>	<p>Use the DP site's PMAC GUI to determine the Control Network IP address of the server that is to be a SDS DP server. From the MP site's PMAC GUI, navigate to Main Menu -> Software -> Software Inventory.</p>  <table border="1"> <thead> <tr> <th>Identity</th> <th>IP Address</th> <th>Hostname</th> <th>Platform Name</th> <th>Platform Version</th> <th>Application Name</th> <th>Application Version</th> <th>Designation</th> </tr> </thead> <tbody> <tr> <td>Enc:103 Bay:15E Guest SdsRelayDp2</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>Note the IP address for a SDS DP server.</p> <p>Login to the SDS DP site's PMAC terminal as the admusr.</p> <p>From a terminal window connection on the SDS DP site's PMAC as the admusr.</p> <p>Exchange SSH keys for admusr between the PMAC and the SDS DP server using the keyexchange utility, using the Control network IP address for the SDS DP server.</p> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> <p>\$ keyexchange admusr@<MP_Control_IP Address></p> </div> <p>When prompted for the password, enter the password for the admusr user of the SDS DP server.</p>	Identity	IP Address	Hostname	Platform Name	Platform Version	Application Name	Application Version	Designation	Enc:103 Bay:15E Guest SdsRelayDp2							
Identity	IP Address	Hostname	Platform Name	Platform Version	Application Name	Application Version	Designation											
Enc:103 Bay:15E Guest SdsRelayDp2																		

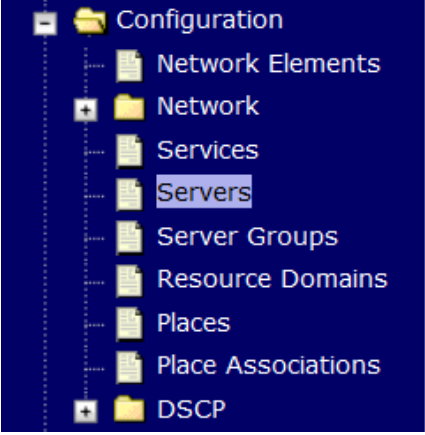
Procedure 51. Configure the SDS DP Servers

<p>2 <input type="checkbox"/></p>	<p>SDS NOAM VIP GUI: Login</p>	<p>If not already done, establish a GUI session on the SDS NOAM server by using the XMI VIP address of the SDS NOAM server. Open the web browser and enter a URL of:</p> <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 5px 0;"> <p><code>https://<Primary_SDS_NOAM_VIP_IP_Address></code></p> </div> <p>Login to the SDS NOAM GUI as the <i>guiadmin</i> user:</p> <div style="text-align: center; margin: 10px 0;">  </div>
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Procedure 51. Configure the SDS DP Servers

<p>3</p> <p><input type="checkbox"/></p>	<p>SDS NOAM VIP GUI: Insert the SDS DP server (Part 1)</p>	<p>Navigate to Main Menu->Configuration->Servers</p>  <p>Select the Insert button to insert the new SDS DP server into servers table.</p> <p><input type="button" value="Insert"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/> <input type="button" value="Export"/> <input type="button" value="Report"/></p> <p>Fill out the following values:</p> <p>Hostname: <Hostname> Role: MP Network Element: [Choose Network Element] Hardware Profile: SDS TVOE Guest Location: <enter an optional location description></p> <p>The interface configuration form will now appear.</p>  <ul style="list-style-type: none"> • For the XMI network, enter the SDS DP's XMI IP address. Select the xmi interface. Leave the "VLAN" checkbox unchecked. • For the IMI network, enter the SDS DP's IMI IP address. Select the imi interface. Leave the "VLAN" checkbox unchecked. 				
<p>4</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Insert the DP server (Part 2)</p>	<p>Next, add the following NTP servers:</p> <table border="1"> <thead> <tr> <th>NTP Server</th> <th>Preferred?</th> </tr> </thead> <tbody> <tr> <td><SDS-DP-RMS-TVOE-IP-Address></td> <td>Yes</td> </tr> </tbody> </table> <p>Select OK when all fields are filled in to finish SDS DP server insertion.</p>	NTP Server	Preferred?	<SDS-DP-RMS-TVOE-IP-Address>	Yes
NTP Server	Preferred?					
<SDS-DP-RMS-TVOE-IP-Address>	Yes					

Procedure 51. Configure the SDS DP Servers

<p>5</p> <p><input type="checkbox"/></p>	<p>SDS NOAM VIP GUI: Export the Configuration</p>	<p>Navigate to Main Menu -> Configuration -> Servers.</p>  <p>From the GUI screen, select the SDS DP server and then select Export to generate the initial configuration data for that server.</p> <p><input type="button" value="Insert"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/> <input type="button" value="Export"/> <input type="button" value="Report"/></p>
<p>6</p> <p><input type="checkbox"/></p>	<p>SDS NOAM VIP GUI: Copy Configuration File to SDS DP Server</p>	<p>Obtain a terminal session to the SDS NOAM VIP as the admusr user.</p> <p>Use the awpushcfg utility to copy the configuration file created in the previous step from the <code>/var/TKLC/db/filemgmt</code> directory on the SDS NOAM to the SDS DP server, using the Control network IP address for the MP server.</p> <p>The configuration file will have a filename like <code>TKLCConfigData.<hostname>.sh</code>.</p> <pre>\$ sudo awpushcfg</pre> <p>The awpushcfg utility is interactive, so the user will be prompted for the following:</p> <ul style="list-style-type: none"> • IP address of the local PMAC server: Use the local control network address from the PMAC. • Username: Use admusr • Control network IP address for the target server: In this case, enter the control IP for the SDS DP server). • Hostname of the target server: Enter the server name configured in step 3


Procedure 51. Configure the SDS DP Servers

7 <input type="checkbox"/>	SDS DP Server: Verify awpushcfg was called and Reboot the Configured Server	<p>Obtain a terminal window connection on the SDS DP server console by establishing an ssh session from the SDS NOAM VIP terminal console.</p> <pre>\$ ssh admusr@<DP_Control_IP></pre> <p>Login as the <i>admusr</i> user.</p> <p>Verify awpushcfg was called by checking the following file:</p> <pre>\$ sudo cat /var/TKLC/appw/logs/Process/install.log</pre> <p>Verify no errors are present and that the following message is displayed:</p> <pre>[SUCCESS] script completed successfully!</pre> <p>Reboot the sever:</p> <pre>\$ sudo init 6</pre> <p>Proceed to the next step once the Server finished rebooting, The server is done rebooting once the login prompt is displayed.</p>
8 <input type="checkbox"/>	SDS DP Server: Install Tuned (Oracle X6-2)	<p>Activate the tuned profile for the Guest Virtual Machine:</p> <pre>\$ sudo tuned-adm profile virtual-guest</pre> <pre>\$ sudo service_conf add tuned rc runlevels=345</pre> <pre>\$ sudo service_conf add ktune rc runlevels=345</pre> <p>Verify that tuned is active:</p> <pre>\$ sudo tuned-adm active</pre> <p>Expected output:</p> <pre>Current active profile: virtual-guest Service tuned: enabled, running Service ktune: enabled, running</pre>

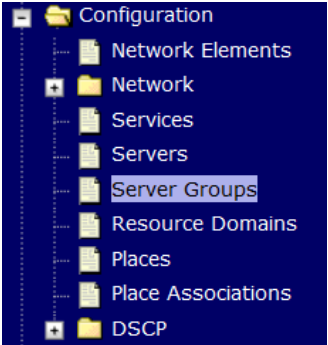
Procedure 51. Configure the SDS DP Servers

<p>9</p> <p><input type="checkbox"/></p>	<p>SDS DP Server: Verify Server Health</p>	<p>After the reboot, login as <i>admusr</i>.</p> <p>Execute the following command as super-user on the server and make sure that no errors are returned:</p> <pre style="border: 1px solid black; padding: 5px;"> \$ sudo syscheck Running modules in class hardware...OK Running modules in class disk...OK Running modules in class net...OK Running modules in class system...OK Running modules in class proc...OK LOG LOCATION: /var/TKLC/log/syscheck/fail_log </pre>
<p>10</p> <p><input type="checkbox"/></p>	<p>Repeat for remaining SDS DPs</p>	<p>Repeat this entire procedure for all remaining SDS DP servers.</p>

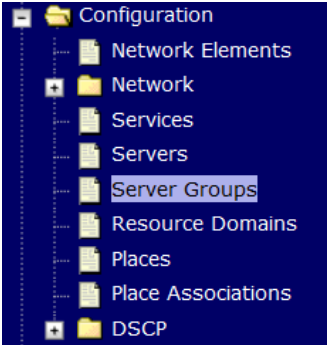
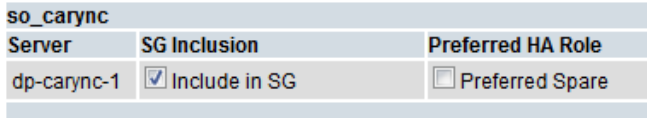
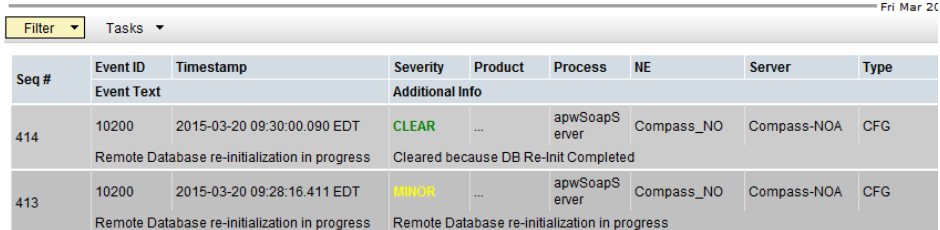
Procedure 52. Configure the SDS DP Server Group(s) and Profile(s)

S T E P #	<p>This procedure will provide the steps to configure MP Server Groups</p> <p>Check off (√) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
<p>1</p> <p><input type="checkbox"/></p>	<p>SDs NOAM VIP GUI: Login</p>	<p>If not already done, establish a GUI session on the SDS NOAM server the VIP address.</p> <p>Open the web browser and enter a URL of: <div style="border: 1px solid black; padding: 2px; display: inline-block;"> https://<Primary_NOAM_VIP_IP_Address> </div> </p> <p>Login to the SDS NOAM GUI as the <i>guiadmin</i> user:</p> <div style="text-align: center;">  </div>

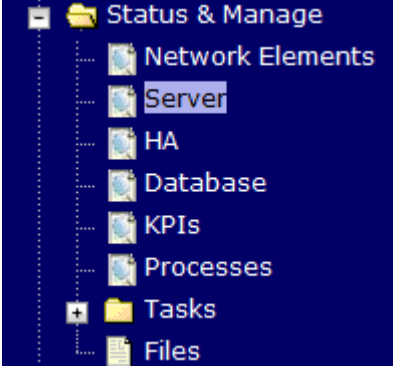
Procedure 52. Configure the SDS DP Server Group(s) and Profile(s)

<p>2</p> <p><input type="checkbox"/></p>	<p>SDS NOAM VIP GUI: Enter SDS DP Server Group Data</p>	<p>Navigate to Main Menu ->Configuration ->Server Groups</p>  <p>Select Insert</p> <p><input type="button" value="Insert"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/> <input type="button" value="Report"/></p> <p>Fill out the following fields:</p> <p>Server Group Name: <Server Group Name> Level: C Parent: [SDS DP SOAM Server Group That is Parent To this SDS DP] Function: SDS</p> <p>Select OK when all fields are filled in.</p>
<p>3</p> <p><input type="checkbox"/></p>	<p>SDS NOAM VIP GUI: Repeat For Additional Server Groups</p>	<p>Repeat Step 2 for any remaining SDS DP server groups you wish to create.</p>

Procedure 52. Configure the SDS DP Server Group(s) and Profile(s)

<p>4</p> <p><input type="checkbox"/></p>	<p>SDS NOAM VIP GUI: Edit the SDS DP Server Groups to include SDS DPs</p>	<p>From the GUI, navigate to Main Menu->Configuration->Server Groups</p>  <p>Select a server group that you just created and then select Edit.</p> <p>Select the Network Element that represents the SDS DP server group you wish to edit.</p> <p>Click the Include in SG box for the SDS DP server that you wish to include in <i>this</i> server group. Leave other checkboxes blank.</p>  <p>Note: Each SDS DP server should be in its own server group.</p> <p>Select OK.</p>
<p>5</p> <p><input type="checkbox"/></p>	<p>SDS NOAM VIP GUI: Repeat For Additional Server Groups</p>	<p>Repeat Step 4 for any remaining SDS DP server groups you need to edit.</p>
<p>6</p> <p><input type="checkbox"/></p>	<p>SDS NOAM VIP GUI: Wait for Remote Database Alarm to Clear</p>	<p>Wait for the alarm Remote Database re-initialization in progress to be cleared before proceeding.</p> <p>Navigate to Main menu->Alarms & Events->View Active</p> <p>Main Menu: Alarms & Events -> View History (Filtered)</p> 

Procedure 52. Configure the SDS DP Server Group(s) and Profile(s)

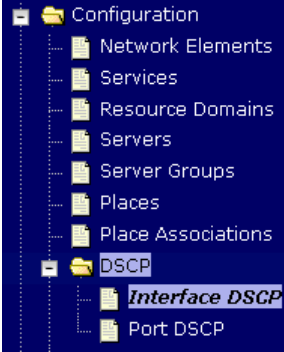
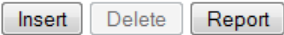
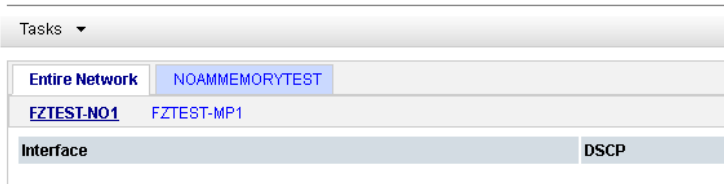


7 <input type="checkbox"/>	SDS NOAM VIP GUI: Restart SDS DP servers	<p>Navigate to Main menu->Status & Manage->Server</p>  <p>For each SDS DP server:</p> <ul style="list-style-type: none">• Select the SDS DP server.• Select the Restart button.• Answer OK to the confirmation popup. Wait for the message which tells you that the restart was successful. <p>Stop Restart Reboot NTP Sync Report</p>
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4.16.6 SDS Configuration: DSCP (Optional)

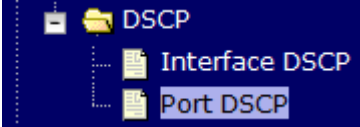

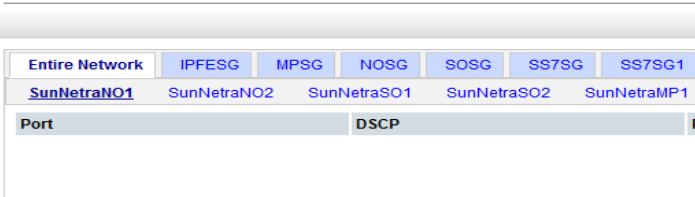

Procedure 53. Configure DSCP Values for Outgoing Traffic (Optional)

<p>S T E P #</p>	<p>This procedure will provide the steps to configure the DSCP values for outgoing packets on servers. DSCP values can be applied to an outbound interface as a whole, or to all outbound traffic using a specific TCP or SCTP source port. This step is optional and should only be executed if has been decided that your network will utilize packet DSCP markings for Quality-of-Service purposes.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
<p>1</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Login</p>	<p>If not already done, establish a GUI session on the NOAM server the VIP IP address of the NOAM server.</p> <p>Open the web browser and enter a URL of: <div style="border: 1px solid black; padding: 2px; display: inline-block;"> https://<Primary_NOAM_VIP_IP_Address> </div> </p> <p>Login to the NOAM GUI as the <i>guiadmin</i> user:</p> <div style="text-align: center;">  </div>

Procedure 53. Configure DSCP Values for Outgoing Traffic (Optional)

<p>2</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Option 1: Configure Interface DSCP</p>	<p>Note: The values displayed in the screenshots are for demonstration purposes only. The exact DSCP values for your site will vary.</p> <p>Navigate to Main Menu -> Configuration -> DSCP -> Interface DSCP</p>  <p>Select the server you wish to configure from the list of servers on the 2nd line. (You can view all servers with Entire Network selected; or limit yourself to a particular server group by clicking on that server group name's tab).</p> <p>Click Insert</p>  <p>Main Menu: Configuration -> DSCP -> Interface DSCP</p>  <p>Select the network interface from the drop down box, then enter the <i>DSCP value</i> you wish to have applied to packets leaving this interface.</p> <p>Main Menu: [Insertdscpbyintf]</p>  <p>Insert DSCP by Interface on FZTEST-MP1</p>  <p>Click OK if there are no more interfaces on this server to configure, or Apply to finish this interface and continue on with more interfaces by selecting them from the drop down and entering their <i>DSCP values</i>.</p>
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Procedure 53. Configure DSCP Values for Outgoing Traffic (Optional)

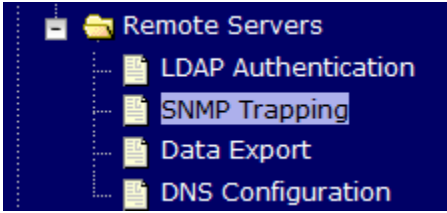
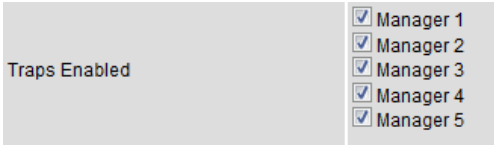
<p>3</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Option 2: Configure Port DSCP</p>	<p>Note: The values displayed in the screenshots are for demonstration purposes only. The exact DSCP values for your site will vary.</p> <p>Navigate to Main Menu -> Configuration -> DSCP -> Port DSCP</p>  <p>Select the server you wish to configure from the list of servers on the 2nd line. (You can view all servers with Entire Network selected; or limit yourself to a particular server group by clicking on that server group name's tab).</p> <p>Click Insert</p>  <p>Main Menu: Configuration -> DSCP -> Port DSCP</p>  <p>Enter the source port, DSCP value, and select the transport protocol.</p> <p>Main Menu: Configuration -> DSCP -> Port DSCP [Insert]</p>  <p>Insert DSCP by Port on SunNetraNO1</p> <table border="1"> <tr> <td>Port</td> <td>3868 *</td> <td>A valid TCP or SCTP port. [Default =</td> </tr> <tr> <td>DSCP</td> <td>15 *</td> <td>A valid DSCP value. [Default = N/A.]</td> </tr> <tr> <td>Protocol</td> <td>TCP *</td> <td>TCP or SCTP protocol. [Default = T</td> </tr> </table> <p>Ok Apply Cancel</p> <p>Click OK if there are no more port DSCPs on this server to configure, or Apply to finish this port entry and continue entering more port <i>DSCP mappings</i>.</p>	Port	3868 *	A valid TCP or SCTP port. [Default =	DSCP	15 *	A valid DSCP value. [Default = N/A.]	Protocol	TCP *	TCP or SCTP protocol. [Default = T
Port	3868 *	A valid TCP or SCTP port. [Default =									
DSCP	15 *	A valid DSCP value. [Default = N/A.]									
Protocol	TCP *	TCP or SCTP protocol. [Default = T									
<p>4</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Repeat for additional servers.</p>	<p>Repeat Steps 2-3 for all remaining servers.</p>									

4.16.7 SDS Configuration: SNMP (Optional)

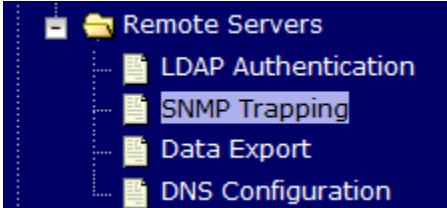
Procedure 54. Configure SNMP Trap Receiver(s) (Optional)

S T E P #	<p>This procedure will provide the steps to configure forwarding of SNMP Traps from each individual server.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
1 <input type="checkbox"/>	<p>SDS NOAM VIP GUI: Login</p>	<p>If not already done, establish a GUI session on the NOAM server the VIP IP address of the NOAM server.</p> <p>Open the web browser and enter a URL of: <div style="border: 1px solid black; padding: 2px; display: inline-block;"> https://<Primary_NOAM_VIP_IP_Address> </div></p> <p>Login to the NOAM GUI as the <i>guiadmin</i> user:</p> <div style="text-align: center;">  </div>

Procedure 54. Configure SNMP Trap Receiver(s) (Optional)

<p>2</p> <p><input type="checkbox"/></p> <p>SDS NOAM VIP GUI: Configure System-Wide SNMP Trap Receiver(s)</p>	<p>Navigate to Main Menu -> Administration -> Remote Servers -> SNMP Trapping</p>  <p>Verify that Traps Enabled is checked:</p>  <p>Fill in the IP address or hostname of the Network Management Station (NMS) you wish to forward traps to. This IP should be reachable from the NOAMP's "XMI" network.</p> <p>Continue to fill in additional secondary, tertiary, etc. Manager IPs in the corresponding slots if desired.</p> <table border="1"> <thead> <tr> <th>Variable</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>Manager 1</td> <td>10.10.55.88</td> </tr> </tbody> </table> <p>Enter the SNMP Community Name:</p> <table border="1"> <tr> <td>SNMPv2c Read-Only Community Name</td> <td>snmppublic</td> </tr> <tr> <td>SNMPv2c Read-Write Community Name</td> <td>snmppublic</td> </tr> </table> <p>Leave all other fields at their default values.</p> <p>Press OK</p>	Variable	Value	Manager 1	10.10.55.88	SNMPv2c Read-Only Community Name	snmppublic	SNMPv2c Read-Write Community Name	snmppublic
Variable	Value								
Manager 1	10.10.55.88								
SNMPv2c Read-Only Community Name	snmppublic								
SNMPv2c Read-Write Community Name	snmppublic								

Procedure 54. Configure SNMP Trap Receiver(s) (Optional)

3	<p>SDS</p> <p>NOAM VIP</p> <p>GUI:</p> <p>Enable Traps from Individual Servers (Optional)</p>	<p>Note: By default SNMP traps from MPs are aggregated and then displayed at the active NOAMP. If instead, you wish for every server to send its own traps directly to the NMS, then execute this procedure.</p> <p>This procedure requires that all servers, including MPs, have an XMI interface on which the customer SNMP Target server (NMS) is reachable.</p> <p>Navigate to Main Menu -> Administration -> Remote Servers -> SNMP Trapping</p> <div style="text-align: center;">  </div> <p>Make sure the checkbox next to Enabled is checked, if not, check it as shown below</p> <table border="1" style="width: 100%; border-collapse: collapse; margin: 10px 0;"> <tr> <td style="width: 30%;"></td> <td style="width: 30%;"></td> <td style="width: 40%; text-align: right;">[Default: enabled.]</td> </tr> <tr> <td>Traps from Individual Servers</td> <td style="text-align: center;"><input checked="" type="checkbox"/> Enabled</td> <td>Enable or disable SNMP traps from in sent from individual servers, otherwise OAM&P server. [Default: disabled.]</td> </tr> <tr> <td></td> <td></td> <td style="text-align: right;">Configured Community Name (SNMP</td> </tr> </table> <p>Then click on Apply and verify that the data is committed.</p>			[Default: enabled.]	Traps from Individual Servers	<input checked="" type="checkbox"/> Enabled	Enable or disable SNMP traps from in sent from individual servers, otherwise OAM&P server. [Default: disabled.]			Configured Community Name (SNMP
		[Default: enabled.]									
Traps from Individual Servers	<input checked="" type="checkbox"/> Enabled	Enable or disable SNMP traps from in sent from individual servers, otherwise OAM&P server. [Default: disabled.]									
		Configured Community Name (SNMP									

4.16 IDIH Installation and Configuration (Optional)

The following procedures outline the steps needed to install and configure IDIH.

Note: If IDIH already exists, and this is an IDIH re-installation; execute **Appendix O: IDIH External Drive Removal** before proceeding.

Note: Before proceeding, refer to **Section 4.9** for IDIH VM placement information.

4.16.1 IDIH Installation

This procedure is part of DSR software installation. The installation procedure uses the “fast deployment” utility (fdconfig) bundled with the PMAC server to install and configure IDIH.

Note: [Non-HA Lab Node Installations of Oracle X6-2]: Follow procedure Appendix Q.6 instead of Procedure 55 for IDIH installation.

Procedure 55. IDIH Installation (Optional)

S T E P #	<p>This procedure will provide the steps to install and configure IDIH.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
1 <input type="checkbox"/>	<p>TVOE Host: Load Application ISO</p>	<p>Note: If the IDIH ISO images have NOT yet been added to the PMAC, execute this steps 1-4</p> <p>Add the Application ISO images (Mediation, Application, and Oracle) to the PMAC, this can be done in one of three ways:</p> <ol style="list-style-type: none"> 1. Attach the USB device containing the ISO to a USB port. 2. Copy the Application ISO file to the PMAC server into the /var/TKLC/smac/image/isoimages/home/smacftpusr/ directory as pmacftpusr user: <p>cd into the directory where your ISO image is located on the TVOE Host (<i>not on the PMAC server</i>)</p> <p>Using sftp, connect to the PMAC server</p> <pre style="border: 1px solid black; padding: 5px;">\$ sftp pmacftpusr@<pmac_management_network_ip> \$ put <image>.iso</pre> <p>After the image transfer is 100% complete, close the connection:</p> <pre style="border: 1px solid black; padding: 5px;">\$ quit</pre>

Procedure 55. IDIH Installation (Optional)

2 <input type="checkbox"/>	PMAC GUI: Login	<p>Open web browser and enter:</p> <div style="border: 1px solid black; padding: 2px;"><p><code>https://<PMAC Mgmt Network IP></code></p></div> <p>Login as <i>guiadmin</i> user:</p> 
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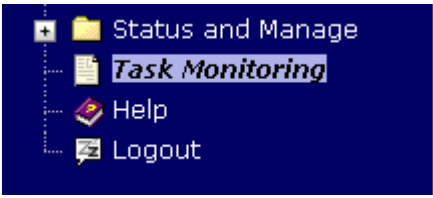
Procedure 55. IDIH Installation (Optional)

<p>3</p> <p>□</p>	<p>PMAC GUI: Attach the software Image to the PMAC Guest</p>	<p>If in Step 1 the ISO image was transferred directly to the PMAC guest via sftp, skip the rest of this step and continue with step 4. If the image is on a USB device, continue with this step.</p> <p>In the PMAC GUI, navigate to Main Menu -> VM Management. In the "VM Entities" list, select the PMAC guest. On the resulting "View VM Guest" page, select the Media tab.</p> <p>Under the Media tab, find the ISO image in the "Available Media" list, and click its Attach button. After a pause, the image will appear in the "Attached Media" list.</p> <div style="border: 1px solid #ccc; padding: 10px; margin: 10px 0;"> <p>View guest MultiApp3_DSRDAMP1</p> <p>VM Info Software Network Media</p> <p>Attached Media Available Media</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Attach</th> <th style="width: 30%;">Label</th> <th style="width: 60%;">Image Path</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Attach</td> <td>3.2.0.0.0_88.24.0</td> <td>/var/TKLC/upgrade/MultiApp3_DSRDAMP1.iso</td> </tr> <tr> <td style="text-align: center;">Attach</td> <td>7.2.0.0.0_88.24.0</td> <td>/var/TKLC/upgrade/TPD install-7.2.0.0.0_88.24.0-OracleLinux6.7-x86_64.iso</td> </tr> </tbody> </table> </div> <div style="border: 1px solid #ccc; padding: 10px; margin: 10px 0;"> <p>View guest MultiApp3_DSRDAMP1</p> <p>VM Info Software Network Media</p> <p>Attached Media Available Media</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Attached</th> <th style="width: 90%;">Image Path</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Detach</td> <td>/var/TKLC/tvoe/mapping-isos/MultiApp3_DSRDAMP1.iso</td> </tr> </tbody> </table> </div>	Attach	Label	Image Path	Attach	3.2.0.0.0_88.24.0	/var/TKLC/upgrade/MultiApp3_DSRDAMP1.iso	Attach	7.2.0.0.0_88.24.0	/var/TKLC/upgrade/TPD install-7.2.0.0.0_88.24.0-OracleLinux6.7-x86_64.iso	Attached	Image Path	Detach	/var/TKLC/tvoe/mapping-isos/MultiApp3_DSRDAMP1.iso
Attach	Label	Image Path													
Attach	3.2.0.0.0_88.24.0	/var/TKLC/upgrade/MultiApp3_DSRDAMP1.iso													
Attach	7.2.0.0.0_88.24.0	/var/TKLC/upgrade/TPD install-7.2.0.0.0_88.24.0-OracleLinux6.7-x86_64.iso													
Attached	Image Path														
Detach	/var/TKLC/tvoe/mapping-isos/MultiApp3_DSRDAMP1.iso														

Procedure 55. IDIH Installation (Optional)

<p>4</p> <p><input type="checkbox"/></p>	<p>PMAC GUI: Add Application Image</p>	<p>Navigate to Main Menu -> Software -> Manage Software Images</p> <p>Press Add Image button. Use the drop down to select the image.</p> <div style="border: 1px solid #ccc; padding: 5px; margin: 10px 0;"> Add Image Edit Image Delete Selected </div> <p>If the image was supplied on a USB drive, it will appear as a virtual device ("device://..."). These devices are assigned in numerical order as USB images become available on the Management Server. The first virtual device is reserved for internal use by TVOE and PMAC; therefore, the ISO of interest is normally present on the second device, "device://dev/sr1". If one or more USB-based images were already present on the Management Server before you started this procedure, choose a correspondingly higher device number.</p> <p>If in Step 1 the image was transferred to PMAC via sftp it will appear in the list as a local file "/var/TKLC/...".</p> <p>Main Menu: Software -> Manage Software Images [Add Image]</p> <hr style="border: 1px solid #ccc;"/> <p>Images may be added from any of these sources:</p> <ul style="list-style-type: none"> • Oracle-provided media in the PM&C host's CD/DVD drive (Refer to Note) • USB media attached to the PM&C's host (Refer to Note) • External mounts. Prefix the directory with "extfile://". • These local search paths: <ul style="list-style-type: none"> ◦ /var/TKLC/upgrade/*.iso ◦ /var/TKLC/smac/image/isoimages/home/smacftpusr/*.iso <p>Note: CD and USB images mounted on PM&C's VM host must first be made accessible to the PM&C</p> <div style="border: 1px solid #ccc; padding: 5px; margin: 10px 0;"> <p>Path: <input style="width: 100%;" type="text"/></p> <p>Description: <input style="width: 100%; height: 20px;" type="text"/></p> </div> <div style="margin-top: 10px;"> Add New Image Cancel </div> <p>Select the appropriate path and Press Add New Image button.</p> <p>You may check the progress using the Task Monitoring link. Observe the green bar indicating success.</p> <p>Once the green bar is displayed, remove the IDIH Media from the optical drive of the management server.</p>
<p>5</p> <p><input type="checkbox"/></p>	<p>PMAC: Establish Terminal Session</p>	<p>Establish an SSH session to the PMAC. Login as admusr.</p>

Procedure 55. IDIH Installation (Optional)

<p>6 <input type="checkbox"/></p>	<p>PMAC: Copy the fdc template XML file to the guest-dropin Directory</p>	<p>Copy the vedsr_idih.xml.template XML file to the pmac guest-dropin directory.</p> <p>Execute the following command:</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo cp /usr/TKLC/smac/html/TPD/mediation-7.1.0.0.0_x.x.x.x/vedsr_idih.xml.template /var/TKLC/smac/guest-dropin \$ cd /var/TKLC/smac/guest-dropin/ \$ mv vedsr_idih.xml.template <idih_fdc_file_name>.xml</pre>
<p>7 <input type="checkbox"/></p>	<p>PMAC: Configure the fdc.xml file</p>	<p>Configure the <idih_fdc_file_name>.xml file. See Appendix M: IDIH Fast Deployment Configuration for a breakdown of the parameters and a sample XML configuration file.</p> <p>Update the software versions, hostnames, bond interfaces, network addresses, and network VLAN information for the TVOE host and IDIH guests that you are installing.</p>
<p>8 <input type="checkbox"/></p>	<p>PMAC: Run the fdconfig.</p>	<p>Run the fdconfig configuration by executing the following commands:</p> <pre style="border: 1px solid black; padding: 5px;">\$ screen \$ sudo fdconfig config --file=<idih_fdc_file_name>.xml</pre> <p>Example: \$sudo fdconfig config --file=tvoe-ferbrms4_01-22-15.xml</p> <p>Note: This is a long duration command (45-90 Minutes). If the screen command was run prior to executing the fdconfig, perform a “screen -dr” to resume the screen session in the event of a terminal timeout etc.</p>
<p>9 <input type="checkbox"/></p>	<p>PMAC GUI: Monitor the Configuration</p>	<p>If not already done so, establish a GUI session on the PMAC server.</p> <p>Navigate to Main Menu -> Task Monitoring</p>  <p>Monitor the IDIH configuration to completion.</p>

4.16.2 Post IDIH Installation Configuration

The following sections should be executed after IDIH installation is complete.

4.17.2.1 IDIH Configuration: Configure DSR Reference Data Synchronization

After an IDIH fresh installation, reference data synchronization is initially disabled. Reference data synchronization requires some initial configuration before it is enabled.

The Trace Ref Data Adapter application must retrieve data from web services hosted by the DSR SOAM web server, and this requires the DSR SOAM virtual IP address (VIP) to be configured.

The DSR SOAM VIP will be unique at each customer site because it is defined based on the customer's network configuration. Therefore, there is no standard default value for the DSR SOAM VIP.

Procedure 56. Configure DSR Reference Data Synchronization for IDIH (Optional)

S T E P #	<p>This procedure will provide the steps to configure DSR reference data synchronization for IDIH</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
1 <input type="checkbox"/>	<p>IDIH Application Server: Login</p>	<p>Establish an SSH session to the IDIH Application Server. Login as user <i>admusr</i>.</p> <p>Issue the following commands to login as <i>tekelec</i> user.</p> <pre style="border: 1px solid black; padding: 2px; display: inline-block;">\$ sudo su - tekelec</pre>

Procedure 56. Configure DSR Reference Data Synchronization for IDIH (Optional)


<p>2</p> <p><input type="checkbox"/></p>	<p>IDIH Application Server: Execute Configuration Script.</p>	<p>Execute the following script:</p> <pre> \$ apps/trda-config.sh Example output: corsair-app:/usr/TKLC/xlH apps/trda-config.sh dos2unix: converting file /usr/TKLC/xlH/boa/user_projects/domains/tekelec/nsp/trace-refdata-ad Please enter DSR oam server IP address: 10.240.39.175 SQL*Plus: Release 12.1.0.2.0 Production on Thu Oct 1 15:04:40 2015 Copyright (c) 1982, 2014, Oracle. All rights reserved. Last Successful login time: Thu Oct 01 2015 13:27:57 -04:00 Connected to: Oracle Database 12c Enterprise Edition Release 12.1.0.2.0 - 64bit Production With the Partitioning, Automatic Storage Management, OLAP, Advanced Analytics and Real Application Testing options SQL> SQL> 2 3 4 5 1 row merged. SQL> Commit complete. SQL> Disconnected from Oracle Database 12c Enterprise Edition Release 12.1.0.2.0 - 64bit Produ With the Partitioning, Automatic Storage Management, OLAP, Advanced Analytics and Real Application Testing options Buildfile: /usr/TKLC/xlH/apps/trace-refdata-adapter/build.xml app.disable: common.weblogic.stop: [echo] [echo] [echo] ===== [echo] application: xihtra [echo] date: 2015-10-01 15:04:41 [echo] ===== [echo] === stop application EAR [echo] date: 2015-10-01 15:04:41 [java] weblogic.Deployer invoked with options: -adminurl t3://appserver:7001 -userconfigprojects/domains/tekelec/keyfile.secure -name xlH Trace Reference Data Adapter -stop [java] <Oct 1, 2015 3:05:08 PM EDT> <Info> <J2EE Deployment SPI> <BEA-260121> <Initiating [java] Task 24 initiated: [Deployer:149026]stop application xlH Trace Reference Data Adap [java] Task 24 completed: [Deployer:149026]stop application xlH Trace Reference Data Adap [java] Target state: stop completed on Server nsp [java] BUILD SUCCESSFUL Total time: 29 seconds Buildfile: /usr/TKLC/xlH/apps/trace-refdata-adapter/build.xml app.enable: common.weblogic.start: [echo] [echo] [echo] ===== [echo] application: xihtra [echo] date: 2015-10-01 15:05:10 [echo] ===== [echo] === start application EAR [echo] date: 2015-10-01 15:05:10 [java] weblogic.Deployer invoked with options: -adminurl t3://appserver:7001 -userconfigprojects/domains/tekelec/keyfile.secure -name xlH Trace Reference Data Adapter -start [java] <Oct 1, 2015 3:05:56 PM EDT> <Info> <J2EE Deployment SPI> <BEA-260121> <Initiating [java] Task 25 initiated: [Deployer:149026]start application xlH Trace Reference Data Ada [java] Task 25 completed: [Deployer:149026]start application xlH Trace Reference Data Ada [java] Target state: start completed on Server nsp [java] BUILD SUCCESSFUL Total time: 1 minute 17 seconds </pre> <p>For prompt “Please enter DSR OAM server IP address”, enter the VIP of the DSR SOAM and press Enter.</p> <p>Note: If the address entered is unreachable the script will exit with error “Unable to connect to <ip-address>!”</p>
<p>DSR - 7 . 4</p>	<p>2 9 0</p> <p>November 2016</p>	

Procedure 56. Configure DSR Reference Data Synchronization for IDIH (Optional)

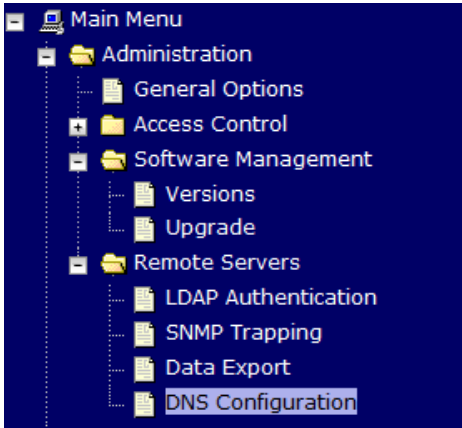
3	IDIH App Server: Monitor Completion	Monitor the log file located at: <div style="border: 1px solid black; padding: 2px; margin: 5px 0;"><code>/var/TKLC/xIH/log/apps/weblogic/apps/application.log</code></div> Examine the log file for entries containing text “Trace Reference Data Adapter”
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4.17.2.2 IDIH Configuration: Configuring the SSO Domain

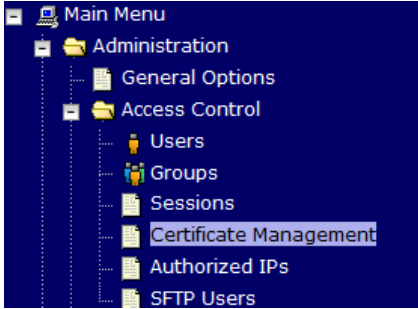

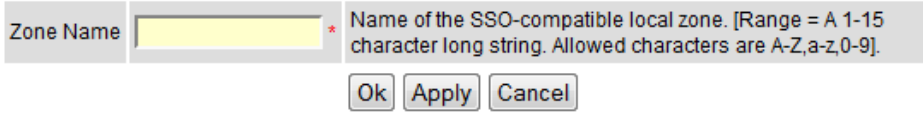

Procedure 57. IDIH Configuration: Configuring the SSO Domain (Optional)

S T E P #	This procedure will provide the steps to configure SSO Domain for IDIH Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. If this procedure fails, contact Appendix R: My Oracle Support (MOS) , and ask for assistance.	
1	NOAM VIP GUI: Login <input type="checkbox"/>	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: <div style="border: 1px solid black; padding: 2px; margin: 5px 0;"><code>https://<Primary_NOAM_VIP_IP_Address></code></div> Login as the guiadmin user: 

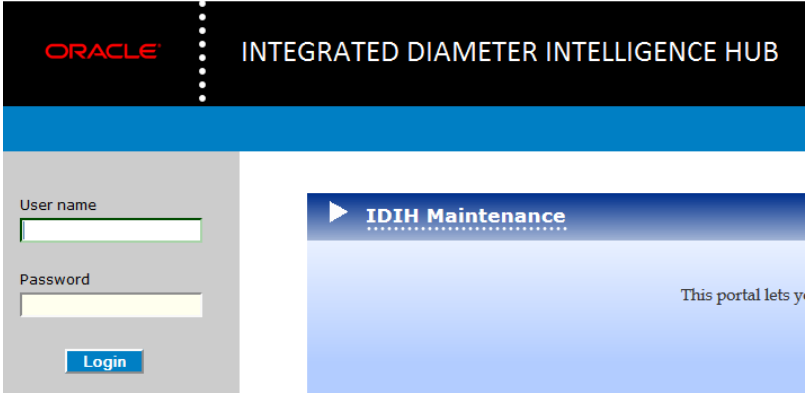
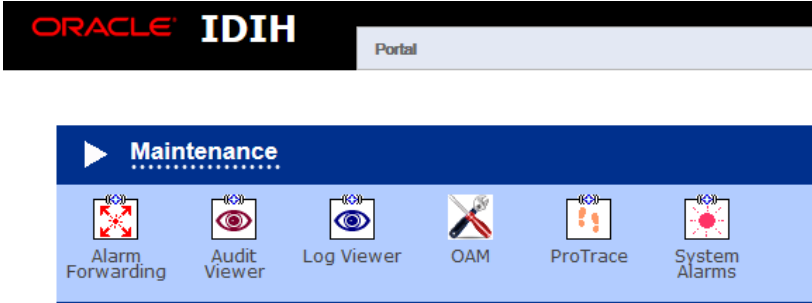
Procedure 57. IDIH Configuration: Configuring the SSO Domain (Optional)

<p>2</p> <p><input type="checkbox"/></p> <p>NOAM VIP GUI: Configure DNS</p>	<p>Navigate to Main Menu -> Administration -> Remote Servers -> DNS Configuration</p>  <p>Configure values for the following fields:</p> <ul style="list-style-type: none"> • Domain Name • Name Server • Search Domain 1 <div style="border: 1px solid #ccc; padding: 5px; margin-bottom: 5px;"> <p>System Domain</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 70%;">Domain Name</th> </tr> </thead> <tbody> <tr> <td style="text-align: right;">Domain</td> <td><input style="width: 95%;" type="text"/></td> </tr> </tbody> </table> </div> <div style="border: 1px solid #ccc; padding: 5px; margin-bottom: 5px;"> <p>External DNS Name Server</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 70%;">Address</th> </tr> </thead> <tbody> <tr> <td style="text-align: right;">Name Server</td> <td><input style="width: 95%;" type="text"/></td> </tr> </tbody> </table> </div> <div style="border: 1px solid #ccc; padding: 5px;"> <p>Domain Search Order</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 70%;">Domain Name</th> </tr> </thead> <tbody> <tr> <td style="text-align: right;">Search Domain 1</td> <td><input style="width: 95%;" type="text"/></td> </tr> </tbody> </table> </div> <p>If values have already been configured, select the Cancel button; otherwise configure the above values and select the OK button.</p> <p style="text-align: center;"> <input type="button" value="Ok"/> <input type="button" value="Cancel"/> </p>		Domain Name	Domain	<input style="width: 95%;" type="text"/>		Address	Name Server	<input style="width: 95%;" type="text"/>		Domain Name	Search Domain 1	<input style="width: 95%;" type="text"/>
	Domain Name												
Domain	<input style="width: 95%;" type="text"/>												
	Address												
Name Server	<input style="width: 95%;" type="text"/>												
	Domain Name												
Search Domain 1	<input style="width: 95%;" type="text"/>												

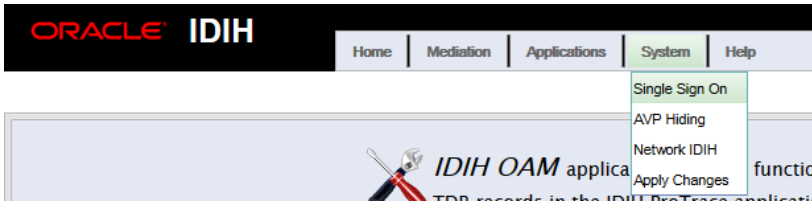
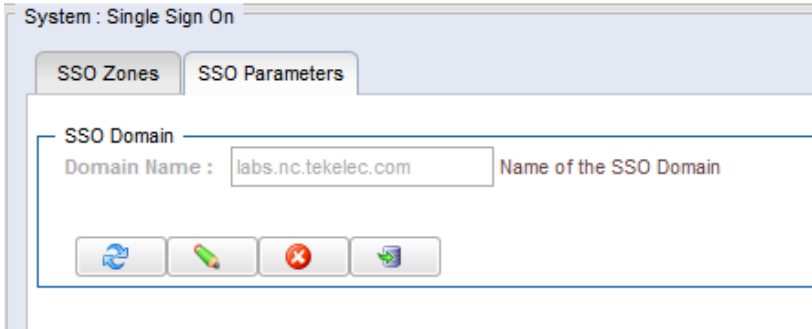
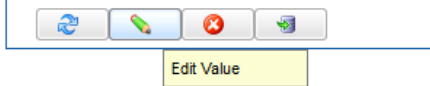

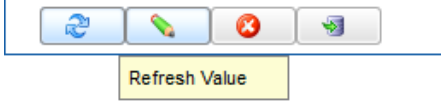
Procedure 57. IDIH Configuration: Configuring the SSO Domain (Optional)

<p>3</p> <p>NOAM VIP GUI:</p> <p>Establish SSO Local Zone</p>	<p>Navigate to Main Menu -> Access Control -> Certification Management</p>  <p>Select the Establish SSO Zone button</p>  <p>Enter a value for Zone Name:</p>  <p>Select the Ok button.</p> <p>Information for the new Certificate type of SSO Local is now displayed.</p> <p>Select the Report button.</p>  <p>The Certificate Report is displayed. Select and copy the encoded certificate text to the clipboard for future access.</p> <p>Example of Certificate report:</p> <pre> -----BEGIN CERTIFICATE----- MIICKzCCAdWgAwIBAgIJAOVfSLNc3CeJMA0GCSqGSIb3DQEBCwUAMHExCzAJBgNV BAYTAlVTMQswCQYDVQQIDAJQZjEQMA4GA1UEBwwHUmFsZWlnaDEPMA0GA1UECgwG T3JhY2x1MQswCQYDVQQLEDAJQVJvJEQMA4GA1UEAwwHTGlnZXJ0eTETMBEGCSqGSIb3 DQEJARYEdGVzdDAeFw0xNTA1MDQxNDIzNTRaFw0xNjA1MDMxNDIzNTRaMHExCzAJ BgNVBAYTAlVTMQswCQYDVQQIDAJQZjEQMA4GA1UEBwwHUmFsZWlnaDEPMA0GA1UE CgwGT3JhY2x1MQswCQYDVQQLEDAJQVJvJEQMA4GA1UEAwwHTGlnZXJ0eTETMBEGCSqG SIb3DQEJARYEdGVzdDBcMA0GCSqGSIb3DQEBAQUAA0sAMEgCQCZ/MpkhlvMP/iJ s5xDO2MwxJm3jYim43H8gr9pfbTMNPF6L9kluJYi+2T0hngJFQLpIn6SK6pXnuAGY f/vDwfqPAGMBAAGjUDBOMB0GA1UdDgQWBBS6IzIOLP1gizQ6+BERr8Fo2XyDVDAf BgNVHSMEGDAWgBS6IzIOLP1gizQ6+BERr8Fo2XyDVDAWgNVHRMEBTADAQH/MA0G CSqGSIb3DQEBCwUAA0EAOwIqBMEQyvfvvt38r/yfgIx3w5dN8SBwHjHC5TpJrHV6U zFlg5dfzoLz7ditjGohWJ919VRw39LQ81KfP7SMxwA== -----END CERTIFICATE----- </pre>
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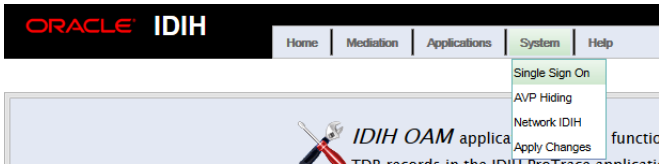
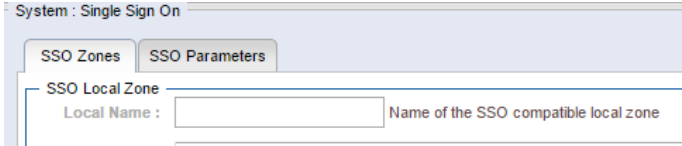

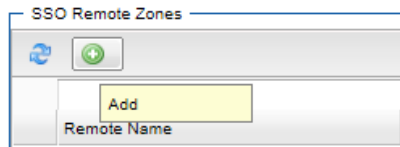


Procedure 57. IDIH Configuration: Configuring the SSO Domain (Optional)

<p>4</p> <p><input type="checkbox"/></p>	<p>IDIH Application Server GUI: Login</p>	<p>Establish a GUI session on the IDIH app server:</p> <p><input type="text" value="https://< Server IP>"/></p> <p>Login as the <i>idihadmin</i> user:</p> 
<p>5</p> <p><input type="checkbox"/></p>	<p>IDIH Application Server GUI: Launch the OAM portal</p>	<p>Navigate to the OAM portal Icon to Launch the OAM web application:</p> 

Procedure 57. IDIH Configuration: Configuring the SSO Domain (Optional)


<p>6</p> <p>□</p> <p>IDIH Application Server GUI: Configure the SSO Domain</p>	<p>Navigate to System -> Single Sign on</p>  <p>Select the SSO Parameters Tab</p>  <p>Select the Edit Value Icon Button</p>  <p>Enter a value for the Domain Name.</p> <p>Note: This should be the same domain name assigned in the DSR NOAM DNS Configuration (Step 2)</p> <p>Select the Save icon button.</p>  <p>Select the Refresh icon button to display data saved for the Remote Zone.</p> 
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Procedure 57. IDIH Configuration: Configuring the SSO Domain (Optional)

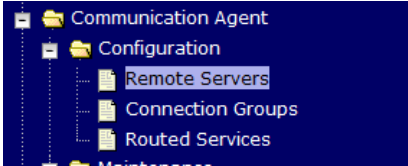
7	<p>DIH Application Server GUI: Configure the SSO Remote Zone</p>	<p>Navigate to System -> Single Sign on</p>  <p>Select the SSO Zones Tab</p>  <p>Select the Add icon button</p>  <p>Enter a value for field Remote Name</p>  <p>For field X.509 Certificate, paste the encoded certificate text from the clipboard that was previously copied from the DSR NOAM.</p> <pre style="border: 1px solid gray; padding: 5px;">X.509 Certificate -----BEGIN CERTIFICATE----- MIIENTCCAx2gAwIBAgIBAMA DGA1UECgwGT3JhY2xiMREwDwYDVQQLEDAhB6HB: CQEWEnN1cHBvcnRAb3JhY2xiLmNvbTAeFw0xNTA3MT FDASBgNVBAoMCO1vbnJpc3ZpbGxiMREwDwYDVQQK dHlwZT1BV1NTTzEhMB8GCSpGSlb3DQEJARYSo3Vwo yYDdhXohb5bhORLUGCsSpo4RzHHlvKAu7DNI2GSs9; DrVBdyqDqmBhP1stxGAaBFhnbSuUma2Qgy4mKppfeyX LLx5+o5EwkS8OhB9AVqwjX+oETf58WYKgAgIX82o8rAW FoAUwCZ+1CZucSz4AivgXb122X/SLYwDAYDVROTBAI tJi7N8HC9AEe0S8akEdE9pJHP7NwGjY1v5581Z2dnJ2s dxoXMVS5IEOO5Ea5PKk6ZyI3QCet1sEa5CRjIbOU04hj: CERTIFICATE-----</pre> <p>Select the save icon</p>  <p>Select the Refresh icon to display the data saved for remote zone.</p> 
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4.17.2.3 IDIH Configuration: Configuring IDIH in the DSR


Procedure 58. IDIH Configuration: Configure IDIH in the DSR (Optional)

S T E P #	<p>This procedure will provide the steps to complete the IDIH integration on the DSR.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
1 <input type="checkbox"/>	<p>NOAM VIP GUI: Login</p>	<p>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:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>https://<Primary_NOAM_VIP_IP_Address></p> </div> <p>Login as the <i>guiadmin</i> user:</p> <div style="text-align: center;">  </div>

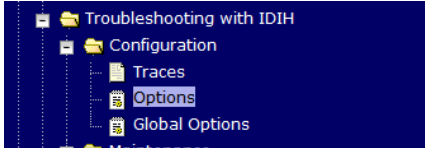
Procedure 58. IDIH Configuration: Configure IDIH in the DSR (Optional)

2	<p>NOAM VIP GUI: Configure CommAgent Connection</p>	<p>Navigate to Main Menu -> Communication Agent -> Configuration -> Remote Servers</p>  <p>Select the Insert button</p> <div style="border: 1px solid #ccc; padding: 5px; width: fit-content; margin: 5px auto;"> <input type="button" value="Insert"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/> </div> <p>Add the IDIH Mediation Server</p> <p>For the Remote Server IP address field, enter the IMI IP address of the IDIH Mediation Server.</p> <p>For the IP address Preference field, enter the IP protocol preference (if IPv6 and IPv4 are configured)</p> <table border="1" style="width: 100%; border-collapse: collapse; margin: 10px 0;"> <thead> <tr> <th style="text-align: left;">Field</th> <th style="text-align: left;">Value</th> </tr> </thead> <tbody> <tr> <td>Remote Server Name</td> <td><input style="width: 100%;" type="text" value=""/></td> </tr> <tr> <td>Remote Server IPv4 IP Address</td> <td><input style="width: 100%;" type="text" value=""/></td> </tr> <tr> <td>Remote Server IPv6 IP Address</td> <td><input style="width: 100%;" type="text" value=""/></td> </tr> <tr> <td>Remote Server Mode</td> <td>-- Select --</td> </tr> <tr> <td>IP Address Preference</td> <td>ComAgent Network Preference</td> </tr> </tbody> </table> <p>Set the Remote Server Mode to Server</p> <p>Select the DA-MP server group from the Available Local Server Groups column</p> <p>Click the >> button to move the DA-MP server group to the Assigned Local Server Groups column</p> <div style="border: 1px solid #ccc; padding: 10px; margin: 10px 0;"> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border: 1px solid #ccc; padding: 5px; width: 50%; text-align: center;"> Available Local Server Groups PCA1_IPFEA1 PCA1_IPFEA2 </td> <td style="text-align: center; padding: 5px;"> <input type="button" value=">>"/> <input type="button" value="<<"/> </td> <td style="border: 1px solid #ccc; padding: 5px; width: 50%; text-align: center;"> Assigned Local Server Groups PCA1_DAMP </td> </tr> </table> </div> <p>Click OK</p>	Field	Value	Remote Server Name	<input style="width: 100%;" type="text" value=""/>	Remote Server IPv4 IP Address	<input style="width: 100%;" type="text" value=""/>	Remote Server IPv6 IP Address	<input style="width: 100%;" type="text" value=""/>	Remote Server Mode	-- Select --	IP Address Preference	ComAgent Network Preference	Available Local Server Groups PCA1_IPFEA1 PCA1_IPFEA2	<input type="button" value=">>"/> <input type="button" value="<<"/>	Assigned Local Server Groups PCA1_DAMP
Field	Value																
Remote Server Name	<input style="width: 100%;" type="text" value=""/>																
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Available Local Server Groups PCA1_IPFEA1 PCA1_IPFEA2	<input type="button" value=">>"/> <input type="button" value="<<"/>	Assigned Local Server Groups PCA1_DAMP															

Procedure 58. IDIH Configuration: Configure IDIH in the DSR (Optional)

<p>3</p> <p><input type="checkbox"/></p>	<p>SOAM VIP GUI: Login</p>	<p>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:</p> <div style="border: 1px solid black; padding: 2px;"><p>https://<Primary_SOAM_VIP_IP_Address></p></div> <p>Login as the <i>guiadmin</i> user:</p> <div style="text-align: center;"><p>The screenshot shows the Oracle System Login interface. At the top is the Oracle logo in red. Below it is the text 'Oracle System Login' followed by a horizontal line and the date 'Fri Mar 20 12:29:52 2015 EDT'. In the center is a 'Log In' box with the heading 'Log In' and the instruction 'Enter your username and password to log in'. Inside this box are two input fields: 'Username: guiadmin' and 'Password: ●●●●●●'. Below the password field is a checkbox labeled 'Change password' and a 'Log In' button. Below the login box is the text 'Welcome to the Oracle System Login.' At the bottom of the page, there is a disclaimer: 'Unauthorized access is prohibited. This Oracle system requires the use of Microsoft Internet Explorer 8.0, 9.0, or 10.0 with support for JavaScript and cookies.' and a footer: 'Oracle and Java are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.'</p></div>
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Procedure 58. IDIH Configuration: Configure IDIH in the DSR (Optional)

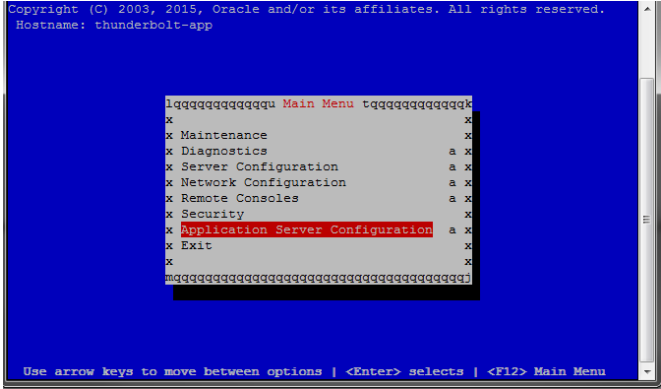
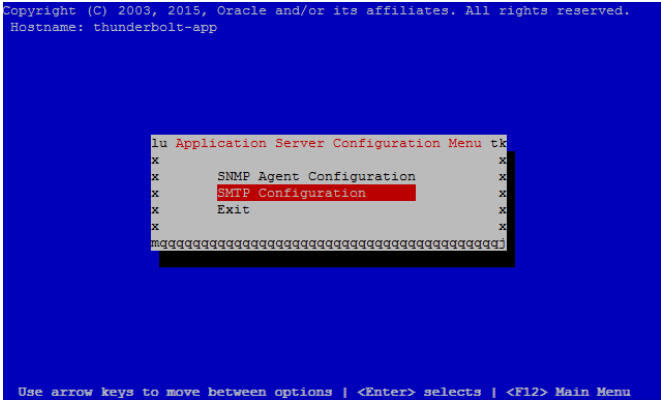
4	<p>SOAM VIP GUI: Configure IDIH Hostname</p>	<p>Navigate to Main Menu -> Diameter -> Troubleshooting with IDIH -> Configuration -> Options</p>  <p>From the drop down box, Select the mediation server configured in Step to in the IDIH Host Name field</p> <p>Enter the fully qualified domain name (or IP address) of the App server in the IDIH Visualization Address field:</p> <p>Main Menu: Diameter -> Troubleshooting with IDIH -> Configuration -> Options</p> <hr/> <p>IDIH Configuration</p> <table border="1"> <thead> <tr> <th>Field</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Max bandwidth</td> <td>25 *</td> <td>Maximum amount of bandwidth specified in Mbps that is used for s maximum. Node will discard TTRs so that the bandwidth required t the configured maximum. [Default = 25Mbps (26214400 bps); Range = 0-25]</td> </tr> <tr> <td>IDIH Host Name</td> <td>- Select -</td> <td>The Host Name of the peer IDIH server used for sending the mess: [Default = n/a].</td> </tr> <tr> <td>IDIH Visualization address</td> <td>100.65.135.179</td> <td>The IP address or FQDN of the remote IDIH server that visualizes th "Maintenance" screen). If an IP address is used in place of a FQDN then IDIH SSO function [Default=n/a].</td> </tr> </tbody> </table> <p style="text-align: right;"> <input type="button" value="Apply"/> <input type="button" value="Cancel"/> </p> <p>Click the Apply button</p>	Field	Value	Description	Max bandwidth	25 *	Maximum amount of bandwidth specified in Mbps that is used for s maximum. Node will discard TTRs so that the bandwidth required t the configured maximum. [Default = 25Mbps (26214400 bps); Range = 0-25]	IDIH Host Name	- Select -	The Host Name of the peer IDIH server used for sending the mess: [Default = n/a].	IDIH Visualization address	100.65.135.179	The IP address or FQDN of the remote IDIH server that visualizes th "Maintenance" screen). If an IP address is used in place of a FQDN then IDIH SSO function [Default=n/a].
Field	Value	Description												
Max bandwidth	25 *	Maximum amount of bandwidth specified in Mbps that is used for s maximum. Node will discard TTRs so that the bandwidth required t the configured maximum. [Default = 25Mbps (26214400 bps); Range = 0-25]												
IDIH Host Name	- Select -	The Host Name of the peer IDIH server used for sending the mess: [Default = n/a].												
IDIH Visualization address	100.65.135.179	The IP address or FQDN of the remote IDIH server that visualizes th "Maintenance" screen). If an IP address is used in place of a FQDN then IDIH SSO function [Default=n/a].												

4.17.2.4 IDIH Configuration: Configuring Mail Server (Optional)

Procedure 59. IDIH Configuration: Configure Mail Server-Optional (Optional)

<p>S T E P #</p>	<p>This procedure will provide the steps to configure the SMTP mail server.</p> <p>Note: This procedure is optional; however, this option is required for Security (password initialization set to AUTOMATIC) and Forwarding (forwarding by mail filter defined) and is available only on the Application server.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
<p>1</p> <p><input type="checkbox"/></p>	<p>IDIH Application Server: Login</p>	<p>Establish an SSH session to the IDIH Application Server, login as admusr.</p>

Procedure 59. IDIH Configuration: Configure Mail Server-Optional (Optional)

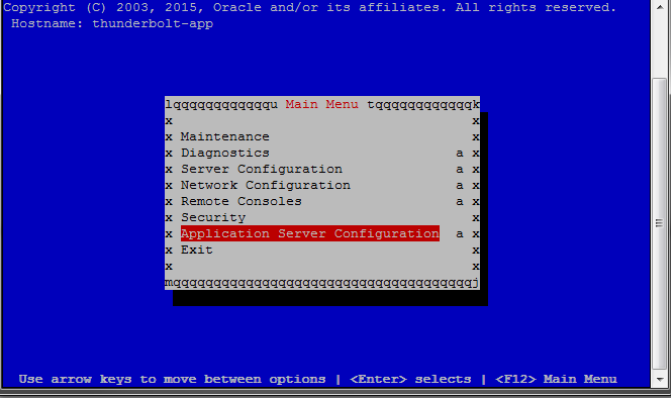
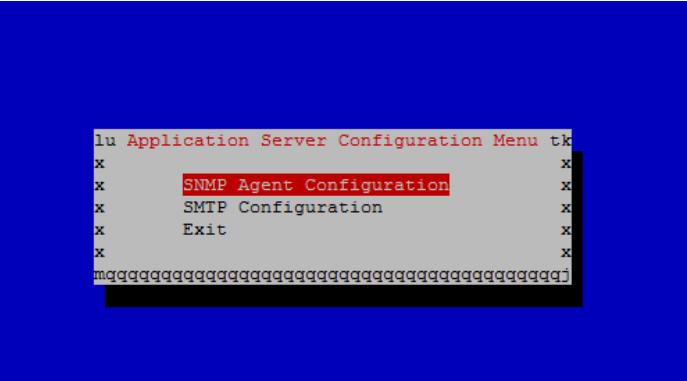
<p>2</p> <p><input type="checkbox"/></p> <p>IDIH Application Server: Configure the Authenticated Mail Server</p>	<p>Enter the platcfg menu, execute the following command:</p> <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 5px 0;"> <p>\$ sudo su - platcfg</p> </div> <p>Select Application Server Configuration</p>  <p>Select SMTP Configuration</p>  <p>Select Edit</p> <p>Enter the following parameters:</p> <ol style="list-style-type: none"> 1. Mail Server IP Address 2. User 3. Password 4. Email Address (From) 5. Mail smtp timeout 6. Mail smtp connectiontimeout 7. SNMP over SSL used? <p>Select OK</p> <p>Select Exit to exit the platcfg menu.</p>
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4.17.2.5 IDIH Configuration: Configuring SNMP Management Server (Optional)

Procedure 60. IDIH Configuration: Configure SNMP Management Server-Optional (Optional)

S T E P #	<p>This procedure will provide the steps to configure the SNMP management server.</p> <p>Note: This procedure is optional; however, this option is required for Forwarding (forwarding by SNMP filter defined) and is available only on the application server.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
1 <input type="checkbox"/>	IDIH Application Server: Login	Establish an SSH session to the IDIH Application Server, login as admusr .

Procedure 60. IDIH Configuration: Configure SNMP Management Server-Optional (Optional)

<p>2</p> <p><input type="checkbox"/></p>	<p>IDIH Application Server: Configure SNMP Management Server</p>	<p>Enter the platcfg menu, execute the following command:</p> <pre>\$ sudo su - platcfg</pre> <p>Select Application Server Configuration</p>  <p>Select SNMP Agent Configuration</p>  <p>Select Edit</p> <p>Enter the IP address of the SNMP Management Server</p> <p>Note: The SNMP agent configuration is updated and the SNMP Management server is automatically restarted.</p> <p>Select OK</p> <p>Select Exit to exit the platcfg menu.</p>
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4.17.2.6 IDIH Configuration: Change Network Interface (Optional)

Procedure 61. IDIH Configuration: Change Network Interface-Optional (Optional)

S T E P #	<p>This procedure will provide the steps to change the default network interface</p> <p>Note: Initially the default network interface used to transport TTRs from DSR to DIH uses the internal imi network; however, this can be changed if required. It should be noted that changing this interface could degrade performance of TTR transmission.</p> <p>Note: A script is provided to manage the settings so that the operator doesn't need to know the details required to apply the settings. There are two settings 'interface.name' and 'interface.enabled'.</p> <p>When interface.enabled=True then communications over the 'interface.name =value', where value is the name of the network interface as defined on the platform, is the only specified interface that is used for communications.</p> <p>When 'interface.enabled=False' then communications over the named interface is not enforced, that is, all interfaces configured on the platform are allowed to be used for communications.</p> <p>For example, if it is required to use the xmi interface for communication instead of the default internal imi interface, then the operator would supply 'xmi' when prompted for the interface name and 'True' when prompted if interface filtering should be applied.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
<p>1</p> <input type="checkbox"/>	<p>IDIH Mediation Server: Login</p>	<p>Establish an SSH session to the IDIH Mediation Server. Login as user admusr.</p> <p>Issue the following commands to login as tekelec user.</p> <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 5px 0;"> <pre>\$ sudo su - tekelec</pre> </div>

Procedure 61. IDIH Configuration: Change Network Interface-Optional (Optional)

<p>2</p> <p><input type="checkbox"/></p>	<p>IDIH Mediation Server: Execute the Change Interface Script</p>	<p>Execute the change interface script with the following command:</p> <pre style="border: 1px solid black; padding: 10px;"> \$ chgIntf.sh Answer the following questions during execution of the script: This script is used to change the interface name (default = imi) used for mediation communications and whether to enable network interface filtering or not. Please answer the following questions or enter CTRL-C to exit out of the script. Current setting are: interface.name=imi interface.enabled=True Enter new network interface name, return to keep current [imi]: xmi Do you want to enable network interface filtering [True False], return to keep current [True]: Updating configuration properties file with 'interface.name=xmi' and 'interface.enable=True', and restarting mediation configuration bundle... </pre>
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4.17.2.7 IDIH Configuration: CPU Pinning

Follow **Section 4.12** for CPU Pinning on the servers that host the IDIH VMs.

4.17.2.8 IDIH Configuration: Generate Disaster Recovery FDC File (Optional)

Procedure 62. IDIH Configuration: Backup the upgrade and Disaster Recovery FDC File-Optional (Optional)

<p>S T E P #</p>	<p>This procedure will provide the steps to generate a disaster recovery fdc file.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
<p>1</p> <p><input type="checkbox"/></p>	<p>Identify Backup Server</p>	<p>Identify an external server to be used as a backup server for the following steps. The server should not be co-located with any of the following items:</p> <ul style="list-style-type: none"> • TVOE • PMAC • DSR NOAM • DSR SOAM
<p>2</p> <p><input type="checkbox"/></p>	<p>PMAC: Establish Terminal Session</p>	<p>Establish an SSH session to the PMAC. Login as admusr.</p>

Procedure 62. IDIH Configuration: Backup the upgrade and Disaster Recovery FDC File-Optional (Optional)

3 <input type="checkbox"/>	PMAC: Verify Upgrade fdc file exists	<p>Execute the following commands to verify the upgrade FDC file for IDIH exists:</p> <pre>\$ cd /var/TKLC/smac/guest-dropin \$ ls -l *.xml</pre> <p>The following output is expected:</p> <pre>-rw-r----- 1 root smac 9542 May 11 09:43 <idih_install>.xml</pre> <p>Note: The <idih_upgrade>.xml file is the same file used for upgrade and disaster recovery procedures.</p>
4 <input type="checkbox"/>	PMAC: Transfer the FDC file to a remote server.	<p>Login to the backup server identified in step 1 and copy backup image to the customer server where it can be safely stored. If the customer system is a Linux system, please execute the following command to copy the backup image to the customer system.</p> <pre>\$ sudo scp admusr@<PMAC_IP_Address>:/var/TKLC/smac/guest-dropin/<idih_upgrade.xml> /path/to/destination/</pre> <p>When prompted, enter the admusr user password and press Enter.</p> <p>If the Customer System is a Windows system please refer to [12] procedure <i>Using WinSCP</i> to copy the backup image to the customer system.</p>

4.17 Post-Install Activities

4.18.1 Optimization (DSR & Oracle X6-2)

Procedure 63. Optimization Procedure (DSR & Oracle X6-2)

S T E P #	<p>This procedure will provide instruction on how to run Optimization Scripts for Oracle X6-2.</p> <p>Prerequisite: All previous DSR installation steps have been completed.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
1 <input type="checkbox"/>	<p>DSR NOAM VIP: Login</p>	<p>Establish an SSH to the NOAM VIP address, login as <i>admusr</i>.</p>
2 <input type="checkbox"/>	<p>DSR NOAM VIP: Execute the Optimization Script on the Active NOAM</p>	<p>Execute the following commands to execute the performance optimization script on the active NOAM:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <pre>\$ cd /usr/TKLC/dsr/bin/ \$ sudo ./rmsNoamConfig.sh</pre> </div> <p>Note: Configuration Successful output should be given.</p>


4.18.2 Activate Optional Features

Procedure 64. Activate Optional Features

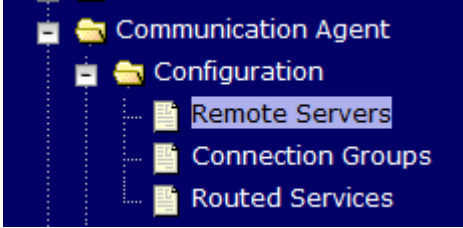
S T E P #	<p>This procedure will provide instruction on how to install DSR optional components once regular installation is complete.</p> <p>Prerequisite: All previous DSR installation steps have been completed.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
1 <input type="checkbox"/>	<p>Refer to Install Guides for Optional Features to Complete Installation</p>	<p>Refer to Section 3.3 for a list of feature install documents whose procedures are to be executed at this moment.</p>
2 <input type="checkbox"/>	<p>DR-NOAM: Feature Activation</p>	<p>If the DR NOAM was configured in Section 4.15.3, and MAPIWF has been activated in step 1; SSH to the active DR-NOAM, login as admusr.</p> <p>Execute the following commands:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <pre>\$ cd /usr/TKLC/dsr/prod/maint/loaders/activate \$ sudo ./load.mapinterworkingActivateAsourced</pre> </div> <p>Repeat this step for the standby DR-NOAM.</p>

4.18.3 Configure ComAgent Connections (DSR + SDS-Oracle X6-2)

Procedure 65. Configure ComAgent Connections (DSR + SDS-Oracle X6-2)

<p>S T E P #</p>	<p>This procedure will provide instruction on how to configure ComAgent connections on DSR/SDS for use in the FABR application.</p> <p>Prerequisite: FABR application is activated.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>
<p>1</p> <p><input type="checkbox"/></p> <p>SDS NOAM VIP GUI: Login</p>	<p>Establish a GUI session on the SDS NOAM server by using the VIP IP address of the NOAM server. Open the web browser and enter a URL of:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p><code>https://<Primary_SDS_NOAM_VIP_IP_Address></code></p> </div> <p>Login as the <i>guiadmin</i> user:</p> <div style="text-align: center; margin: 10px 0;">  </div>


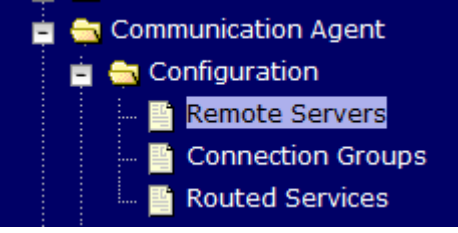
Procedure 65. Configure ComAgent Connections (DSR + SDS-Oracle X6-2)

2 <input type="checkbox"/>	SDS NOAM VIP GUI: Configure Remote Server IP Address	Navigate to Main Menu -> Communication Agent -> Configuration -> Remote Servers  Click Insert <input type="button" value="Insert"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/>
-------------------------------	---	--

Procedure 65. Configure ComAgent Connections (DSR + SDS-Oracle X6-2)

<p>3</p> <p><input type="checkbox"/></p>	<p>SDS NOAM VIP GUI: Configure Remote Server IP Address</p>	<p>Enter the Remote Server Name for the DSR MP Server:</p> <table border="1"> <thead> <tr> <th>Field</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Remote Server Name</td> <td>RDU08MP1 *</td> <td>Unique identifier used to label a Remote Server. [Default: n/a; Range: A 32-character string. Valid underscore. Must contain at least one alpha and</td> </tr> </tbody> </table> <p>Enter the Remote Server IMI IP address:</p> <table border="1"> <tbody> <tr> <td>Remote Server IP Address</td> <td>169.254.2.6 *</td> <td>This is the IP address of the Remote Server. Default: n/a; Range: A valid IPv4 address.</td> </tr> </tbody> </table> <p>Note: This should be the IMI IP address of the MP server.</p> <p>Select Client for the Remote Server Mode from the pull down menu:</p> <table border="1"> <tbody> <tr> <td>Remote Server Mode</td> <td>Client *</td> </tr> </tbody> </table> <p>Select the Local Server Group for the SDS DP server group:</p> <table border="1"> <thead> <tr> <th>Available Local Server Groups</th> <th>Assigned Local Server Groups</th> </tr> </thead> <tbody> <tr> <td> <ul style="list-style-type: none"> DP_rghnc_1_grp DP_drhmc_1_grp </td> <td></td> </tr> </tbody> </table> <p>Click Apply</p> <table border="1"> <thead> <tr> <th>Available Local Server Groups</th> <th>Assigned Local Server Groups</th> </tr> </thead> <tbody> <tr> <td></td> <td> <ul style="list-style-type: none"> DP_rghnc_1_grp DP_drhmc_1_grp </td> </tr> </tbody> </table>	Field	Value	Description	Remote Server Name	RDU08MP1 *	Unique identifier used to label a Remote Server. [Default: n/a; Range: A 32-character string. Valid underscore. Must contain at least one alpha and	Remote Server IP Address	169.254.2.6 *	This is the IP address of the Remote Server. Default: n/a; Range: A valid IPv4 address.	Remote Server Mode	Client *	Available Local Server Groups	Assigned Local Server Groups	<ul style="list-style-type: none"> DP_rghnc_1_grp DP_drhmc_1_grp 		Available Local Server Groups	Assigned Local Server Groups		<ul style="list-style-type: none"> DP_rghnc_1_grp DP_drhmc_1_grp
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Remote Server Name	RDU08MP1 *	Unique identifier used to label a Remote Server. [Default: n/a; Range: A 32-character string. Valid underscore. Must contain at least one alpha and																			
Remote Server IP Address	169.254.2.6 *	This is the IP address of the Remote Server. Default: n/a; Range: A valid IPv4 address.																			
Remote Server Mode	Client *																				
Available Local Server Groups	Assigned Local Server Groups																				
<ul style="list-style-type: none"> DP_rghnc_1_grp DP_drhmc_1_grp 																					
Available Local Server Groups	Assigned Local Server Groups																				
	<ul style="list-style-type: none"> DP_rghnc_1_grp DP_drhmc_1_grp 																				
<p>4</p> <p><input type="checkbox"/></p>	<p>SDS NOAM VIP GUI: Repeat</p>	<p>Repeat steps 2-3 for each remote MP in the same SOAM NE.</p>																			

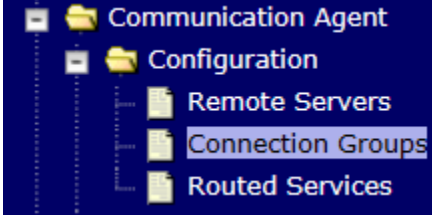
Procedure 65. Configure ComAgent Connections (DSR + SDS-Oracle X6-2)

<p>5</p> <p><input type="checkbox"/></p>	<p>DSR NOAM VIP GUI: Login</p>	<p>Establish a GUI session on the DSR NOAM server by using the VIP IP address of the NOAM server. Open the web browser and enter a URL of:</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p><code>https://<Primary_DSR_NOAM_VIP_IP_Address></code></p> </div> <p>Login as the <i>guiadmin</i> user:</p>  <p>Welcome to the Oracle System Login.</p> <p>Unauthorized access is prohibited. This Oracle system requires the use of Microsoft Internet Explorer 8.0, 9.0, or 10.0 with support for JavaScript and cookies.</p> <p><small>Oracle and Java are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.</small></p>
<p>6</p> <p><input type="checkbox"/></p>	<p>DSR NOAM VIP GUI: Configure Remote Server IP Address</p>	<p>Navigate to Main Menu -> Communication Agent -> Configuration -> Remote Servers</p>  <p>Click Insert</p> <div style="display: flex; justify-content: center; gap: 20px;"> <div style="border: 1px solid gray; padding: 5px 15px;">Insert</div> <div style="border: 1px solid gray; padding: 5px 15px;">Edit</div> <div style="border: 1px solid gray; padding: 5px 15px;">Delete</div> </div>

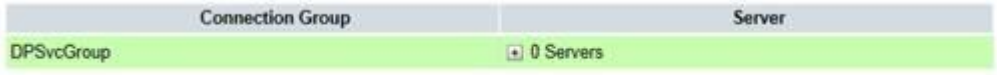


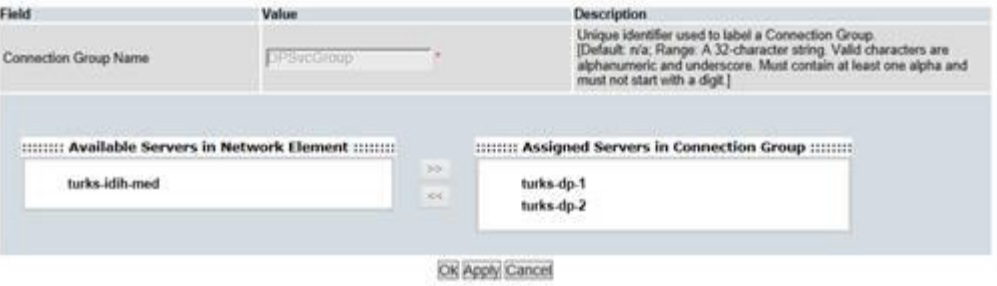

Procedure 65. Configure ComAgent Connections (DSR + SDS-Oracle X6-2)

<p>7</p> <p><input type="checkbox"/></p> <p>DSR NOAM VIP GUI: Configure Remote Server IP Address</p>	<p>Enter the Remote Server Name for the SDS DP Server:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Field</th> <th style="text-align: left;">Value</th> </tr> </thead> <tbody> <tr> <td>Remote Server Name</td> <td>RDU08SDSDP1 *</td> </tr> </tbody> </table> <p>Enter the Remote Server IMI IP address:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Remote Server IPv4 IP Address</td> <td>169.254.2.9</td> </tr> </table> <p>Note: This should be the IMI IP address of the DP Server.</p> <p>Select Server for the Remote Server Mode from the pull down menu:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Remote Server Mode</td> <td>Server ▼ *</td> </tr> </table> <p>Select the IP Address Preference:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>IP Address Preference</td> <td> <div style="border: 1px solid black; padding: 2px;"> ComAgent Network Preference ▼ ComAgent Network Preference IPv4 Preferred IPv6 Preferred </div> </td> </tr> </table> <p>Select the Local Server Group for the DSR MP server group:</p> <div style="border: 1px solid gray; padding: 5px; margin-bottom: 10px;"> <p style="text-align: center;">Add selected Local Server Group(s).</p> <table style="width: 100%;"> <tr> <td style="border: 1px solid gray; padding: 5px;"> Available Local Server Groups Oahu_IPFE_1 Oahu_IPFE_2 Oahu_SS7MP_1 Oahu_SS7MP_2 Oahu_DAMP </td> <td style="text-align: center; padding: 5px;"> >> << </td> <td style="border: 1px solid gray; padding: 5px;"> Assigned Local Server Groups </td> </tr> </table> <p style="text-align: right;">Ok Apply Cancel</p> </div> <div style="border: 1px solid gray; padding: 5px;"> <table style="width: 100%;"> <tr> <td style="border: 1px solid gray; padding: 5px;"> Available Local Server Groups Oahu_IPFE_1 Oahu_IPFE_2 Oahu_SS7MP_1 Oahu_SS7MP_2 </td> <td style="text-align: center; padding: 5px;"> >> << </td> <td style="border: 1px solid gray; padding: 5px;"> Assigned Local Server Groups Oahu_DAMP </td> </tr> </table> <p style="text-align: right;">Ok Apply Cancel</p> </div> <p>Click Apply</p>	Field	Value	Remote Server Name	RDU08SDSDP1 *	Remote Server IPv4 IP Address	169.254.2.9	Remote Server Mode	Server ▼ *	IP Address Preference	<div style="border: 1px solid black; padding: 2px;"> ComAgent Network Preference ▼ ComAgent Network Preference IPv4 Preferred IPv6 Preferred </div>	Available Local Server Groups Oahu_IPFE_1 Oahu_IPFE_2 Oahu_SS7MP_1 Oahu_SS7MP_2 Oahu_DAMP	>> <<	Assigned Local Server Groups	Available Local Server Groups Oahu_IPFE_1 Oahu_IPFE_2 Oahu_SS7MP_1 Oahu_SS7MP_2	>> <<	Assigned Local Server Groups Oahu_DAMP
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Remote Server Name	RDU08SDSDP1 *																
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Procedure 65. Configure ComAgent Connections (DSR + SDS-Oracle X6-2)

<p>8 □</p>	<p>DSR NOAM VIP GUI: Repeat</p>	<p>Repeat steps 6-7 for each remote DP in the same SOAM NE.</p>
<p>9 □</p>	<p>DSR NOAM VIP GUI: Configure Connection Groups</p>	<p>Navigate to Main Menu -> Communication Agent -> Configuration -> Connection Groups</p>  <p>The screenshot shows a hierarchical menu structure on a dark blue background. At the top is 'Communication Agent' with a folder icon. Below it is 'Configuration' with a folder icon. Under 'Configuration', there are four items: 'Remote Servers' (document icon), 'Connection Groups' (document icon, highlighted with a light blue selection bar), and 'Routed Services' (document icon). A vertical dotted line on the left indicates the path from the root to the selected item.</p>

Procedure 65. Configure ComAgent Connections (DSR + SDS-Oracle X6-2)

<p>10</p> <p><input type="checkbox"/></p>	<p>DSR NOAM VIP GUI: Edit Connection Groups</p>	<p>Select the DPSvcGroup Connection Group</p>  <p>Click Edit</p>  <p>Select the desired DP servers from the Available Servers in Network Element:</p>   <p>Click Ok</p>
<p>11</p> <p><input type="checkbox"/></p>	<p>DSR NOAM VIP GUI: Verify correct number of servers in group</p>	<p>Verify Correct number of servers are in the connection group.</p> 

4.18.4 Shared Secret Encryption Key Revocation (RADIUS)

Procedure 66: Shared secret encryption key revocation (RADIUS Only)

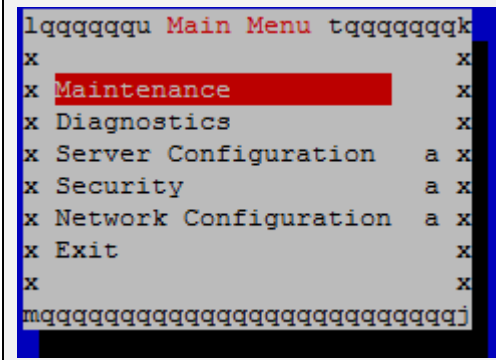
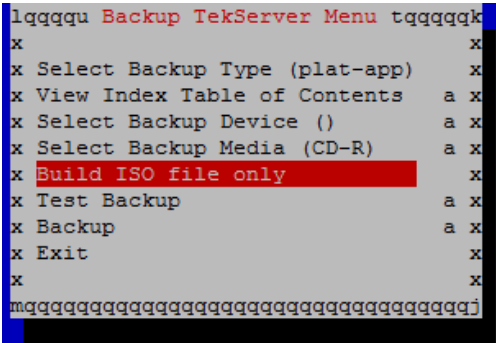
S T E P #	This procedure will provide instruction on how to change shared secret encryption key on DSR RADIUS setup.	
	Check off (√) each step as it is completed. Boxes have been provided for this purpose under each step number.	
	If this procedure fails, contact Appendix R: My Oracle Support (MOS) , and ask for assistance.	
1 <input type="checkbox"/>	Revoke RADIUS shared secret encryption key	Refer to RADIUS Shared Secret Key revocation MOP to change the encryption key on the DSR installed setup. Refer to [15] Note: This is highly recommended to change the key after installation due to security reasons.

4.18.5 Backup TVOE Configuration

Procedure 67. Backup TVOE Configuration

S T E P #	This procedure will provide instruction on how to back up each TVOE rack mount server after a successful installation.	
	Check off (√) each step as it is completed. Boxes have been provided for this purpose under each step number.	
	If this procedure fails, contact Appendix R: My Oracle Support (MOS) , and ask for assistance.	
1 <input type="checkbox"/>	Identify Backup Server	Identify an external server to be used as a backup server for the following steps. The server should not be co-located with any of the following items: <ul style="list-style-type: none"> • TVOE • PMAC • DSR NOAM • DSR SOAM • SDS NOAM • SDS DP SOAM
2 <input type="checkbox"/>	TVOE Server: Login	Establish an SSH session to the TVOE host server, login as admusr .

Procedure 67. Backup TVOE Configuration

<p>3</p> <p><input type="checkbox"/></p>	<p>TVOE Server: Build ISO backup file</p>	<p>Execute the following command from the TVOE server:</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo su - platcfg</pre>  <p>Select the following menu options sequentially: Maintenance -> Backup and Restore ->Backup Platform (CD/DVD). The “Backup TekServer Menu” page will now be shown.</p> <p>Note: If no cdrom device is found by TPD, you will receive an error dialog with the message: "No disk device available. This is normal on systems without a cdrom device." Press Enter to continue.</p> <p>Build the backup ISO image by selecting: Build ISO file only</p>  <p>Note: Creating the ISO image may happen so quickly that this screen may only appear for an instant.</p> <p>After the ISO is created, platcfg will return to the Backup TekServer Menu. The ISO has now been created and is located in the /var/TKLC/bkp/ directory. An example filename of a backup file that was created is: "hostname1307466752-plat-app-201104171705.iso"</p> <p>Exit out of platcfg by selecting Exit.</p>
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Procedure 67. Backup TVOE Configuration


<p>4 <input type="checkbox"/></p>	<p>Backup Server: Transfer TVOE Files to Backup Server</p>	<p>Login to the backup server identified in step 1 and copy backup image to the customer server where it can be safely stored. If the customer system is a Linux system, please execute the following command to copy the backup image to the customer system.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <pre>\$ sudo scp tvoexfer@<TVOE IP Address>:/var/TKLC/bkp/* /path/to/destination/</pre> </div> <p>Move the TVOE backup to a customer provided backup server for safe keeping.</p> <p>When prompted, enter the tvoexfer user password and press Enter.</p> <p>If the Customer System is a Windows system please refer to [12] procedure <i>Using WinSCP</i> to copy the backup image to the customer system.</p> <p>The TVOE backup file has now been successfully placed on the backup server.</p>
<p>5 <input type="checkbox"/></p>	<p>Repeat for Additional TVOE Servers</p>	<p>Repeat steps 2-4 for additional TVOE servers</p>

4.18.6 Backup PMAC Application

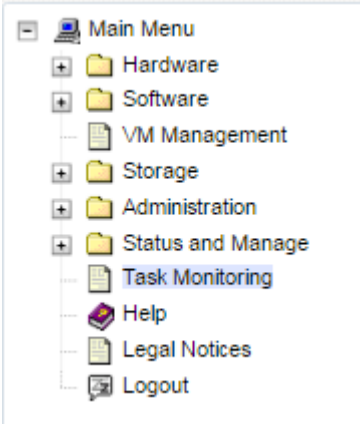
Procedure 68. Backup PMAC Application

<p>S T E P #</p>	<p>This procedure will provide instruction on how to back up each PMAC application installed in this procedure.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
<p>1 <input type="checkbox"/></p>	<p>Identify Backup Server</p>	<p>Identify an external server to be used as a backup server for the following steps. The server should not be co-located with any of the following items:</p> <ul style="list-style-type: none"> • TVOE • PMAC • DSR NOAM • DSR SOAM • SDS NOAM • SDS DP SOAM
<p>2 <input type="checkbox"/></p>	<p>PMAC Server: Login</p>	<p>Establish an SSH session to the PMAC server, login as admusr.</p>

Procedure 68. Backup PMAC Application


<p>3</p> <p><input type="checkbox"/></p>	<p>PMAC Server: Build backup File</p>	<p>Execute the following command from the PMAC server:</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo /usr/TKLC/smac/bin/pmacadm backup</pre> <pre style="border: 1px solid black; padding: 5px;">PM&C backup been successfully initiated as task ID 7</pre> <p>Note: The backup runs as a background task. To check the status of the background task use the PMAC GUI Task Monitor page:</p> <p>or issue the command "sudo pmaccli getBgTasks". The result should eventually be "PMAC Backup successful" and the background task should indicate "COMPLETE".</p>
<p>4</p> <p><input type="checkbox"/></p>	<p>PMAC GUI: Login</p>	<p>Open web browser and enter:</p> <pre style="border: 1px solid black; padding: 5px;">http://<PMAC Mgmt Network IP></pre> <p>Login as <i>guiadmin</i> user:</p> 

Procedure 68. Backup PMAC Application

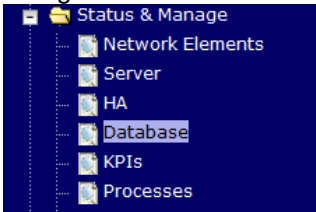

<p>5</p> <p><input type="checkbox"/></p>	<p>PMAC Server GUI: Monitor/Verify Backup Task Completion</p>	<p>Navigate to Main Menu -> Task Monitoring</p>  <p>Monitor the Backup PMAC Task:</p> <table border="1"> <thead> <tr> <th>ID</th> <th>Task</th> <th>Target</th> <th>Status</th> <th>State</th> <th>Task Output</th> <th>Running Time</th> <th>Start Time</th> <th>Progress</th> </tr> </thead> <tbody> <tr> <td>2524</td> <td>Backup PM&C</td> <td></td> <td>PM&C Backup successful</td> <td>COMPLETE</td> <td>N/A</td> <td>0:00:53</td> <td>2016-09-30 05:00:02</td> <td>100%</td> </tr> </tbody> </table> <p>Note: Alternatively, you can monitor the Backup task by executing the following command:</p> <pre style="border: 1px solid black; padding: 5px; width: fit-content;">\$ sudo pmaccli getBgTasks</pre>	ID	Task	Target	Status	State	Task Output	Running Time	Start Time	Progress	2524	Backup PM&C		PM&C Backup successful	COMPLETE	N/A	0:00:53	2016-09-30 05:00:02	100%
ID	Task	Target	Status	State	Task Output	Running Time	Start Time	Progress												
2524	Backup PM&C		PM&C Backup successful	COMPLETE	N/A	0:00:53	2016-09-30 05:00:02	100%												
<p>6</p> <p><input type="checkbox"/></p>	<p>Backup Server: Transfer PMAC File to Backup Server</p>	<p>Login to the backup server identified in step 1 and copy backup image to the customer server where it can be safely stored. If the customer system is a Linux system, please execute the following command to copy the backup image to the customer system.</p> <pre style="border: 1px solid black; padding: 5px; width: fit-content;">\$ sudo scp admusr@<PMAC_IP_Address>:/var/TKLC/smac/backup/* /path/to/destination/</pre> <p>When prompted, enter the admusr user password and press Enter.</p> <p>If the Customer System is a Windows system please refer to [12] procedure <i>Using WinSCP</i> to copy the backup image to the customer system.</p>																		
<p>7</p> <p><input type="checkbox"/></p>	<p>Repeat for Additional PMAC Servers</p>	<p>Repeat steps 2-6 for additional PMAC servers</p>																		

4.18.7 Backup NOAM Database

Procedure 69. NOAM Database Backup

S T E P #	<p>This procedure will provide instruction on how to back up the NOAM Database.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
1 <input type="checkbox"/>	<p>Identify Backup Server</p>	<p>Identify an external server to be used as a backup server for the following steps. The server should not be co-located with any of the following items:</p> <ul style="list-style-type: none"> • TVOE • PMAC • DSR NOAM • DSR SOAM • SDS NOAM • SDS DP SOAM
2 <input type="checkbox"/>	<p>NOAM VIP GUI: Login</p>	<p>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:</p> <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 10px auto;"> <p><code>http://<Primary_NOAM_VIP_IP_Address></code></p> </div> <p>Login as the <i>guiadmin</i> user:</p> <div style="text-align: center; margin: 20px 0;">  <p>The screenshot shows the Oracle System Login interface. At the top is the Oracle logo. Below it, the text 'Oracle System Login' is displayed on the left, and the date 'Fri Mar 20 12:29:52 2015 EDT' is on the right. A central box titled 'Log In' contains the instruction 'Enter your username and password to log in'. Below this are two input fields: 'Username: guiadmin' and 'Password: ●●●●●●'. There is a checkbox for 'Change password' and a 'Log In' button. At the bottom of the screenshot, it says 'Welcome to the Oracle System Login.' and a disclaimer: 'Unauthorized access is prohibited. This Oracle system requires the use of Microsoft Internet Explorer 8.0, 9.0, or 10.0 with support for JavaScript and cookies.' At the very bottom, it states 'Oracle and Java are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.'</p> </div>

Procedure 69. NOAM Database Backup

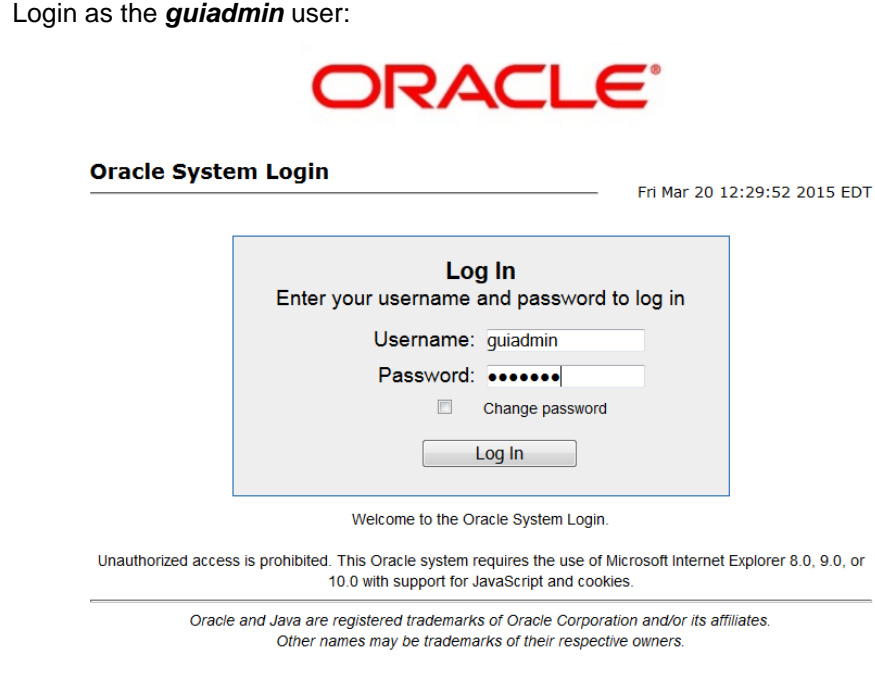
<p>3</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Perform Database Backup</p>	<p>Navigate to Main Menu -> Status & Manage -> Database</p>  <p>Select the Active NOAM</p> <p>Select the Backup Button:</p>  <p>Select the desired file compression method</p> <p>Database Backup</p> <table border="1"><thead><tr><th>Field</th><th>Value</th></tr></thead><tbody><tr><td colspan="2">Server: Jetta-NO-1</td></tr><tr><td>Select data for backup</td><td><input type="checkbox"/> Provisioning <input checked="" type="checkbox"/> Configuration</td></tr><tr><td>Compression</td><td><input type="radio"/> gzip <input checked="" type="radio"/> bzip2 <input type="radio"/> none *</td></tr><tr><td>Archive Name</td><td>Backup.dsr.Jetta-NO-1.Configuration.NETWORK_OAMP.20150505_12415 *</td></tr><tr><td>Comment</td><td><input type="text"/></td></tr></tbody></table> <p><input type="button" value="Ok"/> <input type="button" value="Cancel"/></p> <p>Set the archive file name if needed.</p> <p>Select OK</p>	Field	Value	Server: Jetta-NO-1		Select data for backup	<input type="checkbox"/> Provisioning <input checked="" type="checkbox"/> Configuration	Compression	<input type="radio"/> gzip <input checked="" type="radio"/> bzip2 <input type="radio"/> none *	Archive Name	Backup.dsr.Jetta-NO-1.Configuration.NETWORK_OAMP.20150505_12415 *	Comment	<input type="text"/>
Field	Value													
Server: Jetta-NO-1														
Select data for backup	<input type="checkbox"/> Provisioning <input checked="" type="checkbox"/> Configuration													
Compression	<input type="radio"/> gzip <input checked="" type="radio"/> bzip2 <input type="radio"/> none *													
Archive Name	Backup.dsr.Jetta-NO-1.Configuration.NETWORK_OAMP.20150505_12415 *													
Comment	<input type="text"/>													

Procedure 69. NOAM Database Backup

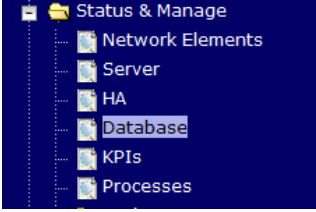

4 <input type="checkbox"/>	Backup Server: Transfer File to Backup Server	<p>Login to the backup server identified in step 1 and copy backup image and key file (RADIUS Only) to the customer server where it can be safely stored. If the customer system is a Linux system, please execute the following command to copy the backup image to the customer system.</p> <pre style="background-color: #f0f0f0; padding: 10px;">\$ sudo scp admusr@<NOAM VIP>:/var/TKLC/db/filemgmt/backup/* /path/to/destination/</pre> <p>Execute following command to encrypt the key file before sending to filemgmt area :</p> <pre>\$./sharedKrevo -encr</pre> <p>Copy key file to customer server :</p> <pre>\$ sudo scp admusr@<NOAM VIP>:/var/TKLC/db/filemgmt/DpiKf.bin.encr /path/to/destination/</pre> <p>When prompted, enter the admusr user password and press Enter.</p> <p>If the Customer System is a Windows system please refer to [12] procedure <i>Using WinSCP</i> to copy the backup image to the customer system.</p>
5 <input type="checkbox"/>	Repeat for Additional NOAM Servers	Repeat steps 2-4 for additional DSR and SDS NOAM Sites

4.18.8 Backup SOAM Database



Procedure 70. SOAM Database Backup

S T E P #	<p>This procedure will provide instruction on how to back up the SOAM Database.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
1 <input type="checkbox"/>	<p>Identify Backup Server</p>	<p>Identify an external server to be used as a backup server for the following steps. The server should not be co-located with any of the following items:</p> <ul style="list-style-type: none"> • TVOE • PMAC • DSR NOAM • DSR SOAM • SDS NOAM • SDS DP SOAM
2 <input type="checkbox"/>	<p>SOAM VIP GUI: Login</p>	<p>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:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p><code>http://<Primary_SOAM_VIP_IP_Address></code></p> </div> <p>Login as the <i>guiadmin</i> user:</p> <div style="text-align: center;">  <p>The screenshot shows the Oracle System Login interface. At the top is the Oracle logo. Below it is the text 'Oracle System Login' and the date 'Fri Mar 20 12:29:52 2015 EDT'. A central box contains a 'Log In' form with the instruction 'Enter your username and password to log in'. The form has a 'Username' field with 'guiadmin' entered, a 'Password' field with masked characters, a 'Change password' checkbox, and a 'Log In' button. Below the form, it says 'Welcome to the Oracle System Login.' At the bottom, there is a disclaimer: 'Unauthorized access is prohibited. This Oracle system requires the use of Microsoft Internet Explorer 8.0, 9.0, or 10.0 with support for JavaScript and cookies. Oracle and Java are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.'</p> </div>

Procedure 70. SOAM Database Backup

<p>3</p> <p><input type="checkbox"/></p>	<p>SOAM VIP GUI: Perform Database Backup</p>	<p>Navigate to Main Menu -> Status & Manage -> Database</p>  <p>Select the Active SOAM</p> <p>Select the Backup Button:</p>  <p>Select the desired file compression method</p> <p>Database Backup</p> <table border="1"> <thead> <tr> <th>Field</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td colspan="2">Server: Jetta-NO-1</td> </tr> <tr> <td>Select data for backup</td> <td><input type="checkbox"/> Provisioning <input checked="" type="checkbox"/> Configuration</td> </tr> <tr> <td>Compression</td> <td><input type="radio"/> gzip <input checked="" type="radio"/> bzip2 <input type="radio"/> none *</td> </tr> <tr> <td>Archive Name</td> <td>Backup.dsr.Jetta-NO-1.Configuration.NETWORK_OAMP.20150505_12415 *</td> </tr> <tr> <td>Comment</td> <td><input type="text"/></td> </tr> </tbody> </table> <p>Ok Cancel</p> <p>Set the archive file name if needed.</p> <p>Select OK</p>	Field	Value	Server: Jetta-NO-1		Select data for backup	<input type="checkbox"/> Provisioning <input checked="" type="checkbox"/> Configuration	Compression	<input type="radio"/> gzip <input checked="" type="radio"/> bzip2 <input type="radio"/> none *	Archive Name	Backup.dsr.Jetta-NO-1.Configuration.NETWORK_OAMP.20150505_12415 *	Comment	<input type="text"/>
Field	Value													
Server: Jetta-NO-1														
Select data for backup	<input type="checkbox"/> Provisioning <input checked="" type="checkbox"/> Configuration													
Compression	<input type="radio"/> gzip <input checked="" type="radio"/> bzip2 <input type="radio"/> none *													
Archive Name	Backup.dsr.Jetta-NO-1.Configuration.NETWORK_OAMP.20150505_12415 *													
Comment	<input type="text"/>													
<p>4</p> <p><input type="checkbox"/></p>	<p>Backup Server: Transfer PMAC File to Backup Server</p>	<p>Login to the backup server identified in step 1 and copy backup image to the customer server where it can be safely stored. If the customer system is a Linux system, please execute the following command to copy the backup image to the customer system.</p> <pre>\$ sudo scp admusr@<SOAM VIP>:/var/TKLC/db/filemgmt/backup/* /path/to/destination/</pre> <p>When prompted, enter the admusr user password and press Enter.</p> <p>If the Customer System is a Windows system please refer to [12] procedure <i>Using WinSCP</i> to copy the backup image to the customer system.</p>												
<p>5</p> <p><input type="checkbox"/></p>	<p>Repeat for Additional DSR SOAM servers</p>	<p>Repeat steps 2-4 for additional DSR SOAM Sites</p>												

Procedure 71. Enable/Disable DTLS (SCTP Diameter Connections Only)

S T E P #	<p>This procedure will provide instructions on how to prepare clients before configuring SCTP diameter connections.</p> <p style="text-align: center;"> Important </p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
1 <input type="checkbox"/>	Enable/Disable DTLS (SCTP Diameter Connections Only)	<p>Oracle's SCTP Datagram Transport Layer Security (DTLS) has SCTP AUTH extensions by default. SCTP AUTH extensions are required for SCTP DTLS. However, there are known impacts with SCTP AUTH extensions as covered by the CVEs referenced below. It is highly recommended that customers installing DSR 7.4 should prepare clients before the DSR connections are established after installation. This will ensure the DSR to Client SCTP connection will establish with SCTP AUTH extensions enabled. See RFC 6083. If customers DO NOT prepare clients to accommodate the DTLS changes, then the SCTP connections to client devices MAY NOT establish after the DSR is installed.</p> <p>https://access.redhat.com/security/cve/CVE-2015-1421</p> <p>https://access.redhat.com/security/cve/CVE-2014-5077</p> <p>Execute procedures in [13] to disable/enable the DTLS feature.</p>

Appendix A: Pre-IPM Procedures

Appendix A.1: Setting the Server's CMOS Clock

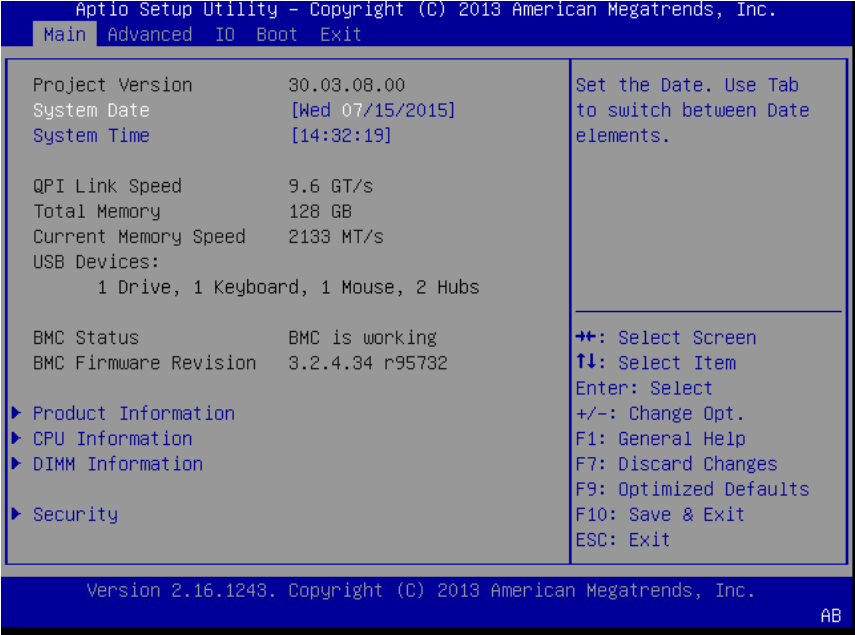
The date and time in the server's CMOS clock must be set accurately before running the IPM procedure.

Note: The IPM installation process managed by PMAC for blade servers automatically sets the server's CMOS clock, so there is no need to set the server CMOS clock when using PMAC.


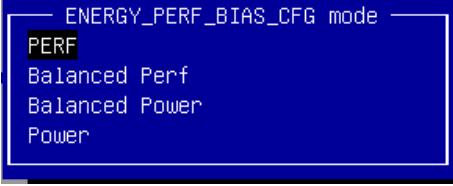
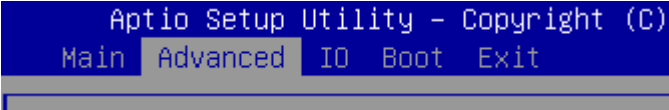
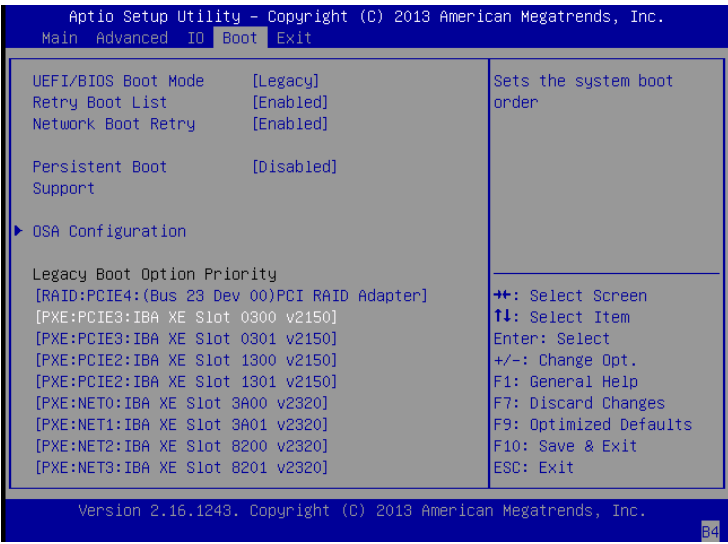
Appendix A.2: Configure the RMS Server BIOS Settings

Appendix A.2.1 Configure Oracle X6-2 Server

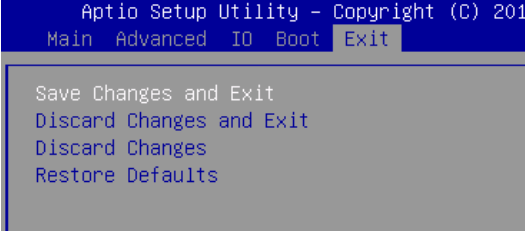
Appendix A.2.1. Configure Oracle X6-2 Server BIOS Settings

<p>S T E P #</p>	<p>This procedure explains the steps needed to configure Oracle rack mount server BIOS settings.</p> <p>Check off (√) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
<p>1 <input type="checkbox"/></p>	<p>Oracle X6-2: Access iLO GUI</p>	<p>Obtain access to the Oracle X6-2 iLOM by following Appendix C.1: iLOM GUI Access (Oracle X6-2)</p>
<p>2 <input type="checkbox"/></p>	<p>Oracle X6-2: Reboot</p>	<p>Reboot the server. After the server is powered on, press the F2 key when prompted to access the Setup Utility:</p> 
<p>3 <input type="checkbox"/></p>	<p>Oracle X6-2: Set Server Data and Time</p>	<p>From the above screen (Step 1), set the data and time:</p>

Appendix A.2.1. Configure Oracle X6-2 Server BIOS Settings

<p>4</p> <p><input type="checkbox"/></p>	<p>Oracle X6-2: Advanced Menu</p>	<p>From the above screen (Step 1) Go to the Advanced menu.</p>  <p>Select CPU Power Management Configuration option.</p> <p>If ENERGY_PERF_BIAS_CFG mode is not set to [PERF], select PERF and press Enter.</p>  <p>Press <ESC> to return to the advanced menu.</p> 
<p>5</p> <p><input type="checkbox"/></p>	<p>Oracle X6-2: Advanced Menu</p>	<p>Select the Boot Menu:</p> <p>Under Legacy Boot Option, verify the RAID Adapter is listed first. If not, highlight it and use the '+' key to move it to the top of the list:</p> 

Appendix A.2.1. Configure Oracle X6-2 Server BIOS Settings

6 <input type="checkbox"/>	Oracle X6-2: Save Changes and Exit	<p>Go to the Exit menu:</p>  <p>Select Save Changes and Exit.</p> <p>Confirm Yes</p>
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Appendix B: Upgrade Server Firmware

Appendix B.1: Oracle X6-2

Needed Material:

- Oracle Firmware Upgrade Pack 3.1.7[1]
- Oracle Firmware Upgrade Pack 3.1.7 Upgrade Guide[2]

Note: The minimum supported Oracle Firmware Upgrade Pack for DSR 7.4 is release 3.1.7. However, when upgrading firmware, it is recommended that the latest release be used. Refer to the Oracle Firmware Upgrade Pack Release Notes for procedures on how to obtain the firmware, and then follow the procedures in the Oracle Firmware Upgrade Pack Upgrade Guide to upgrade the firmware.

Appendix C: TVOE iLO/iLOM GUI Access

Appendix C.1: iLOM GUI Access (Oracle X6-2)

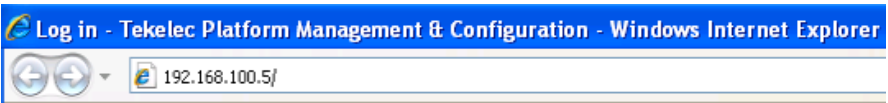
Appendix C.1. TVOE iLOM GUI Access

This procedure contains the steps to set a static IP address on the iLOM and access the TVOE iLOM GUI.

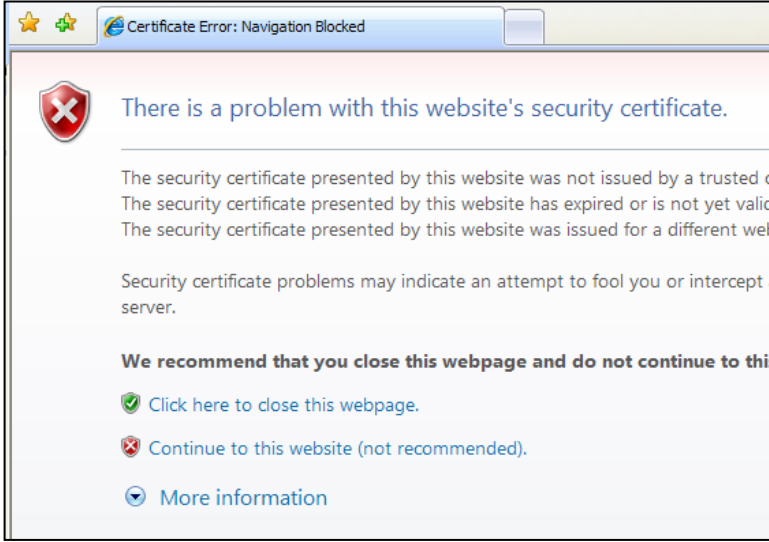
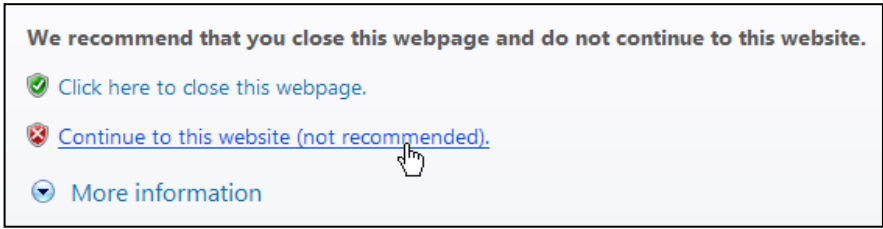
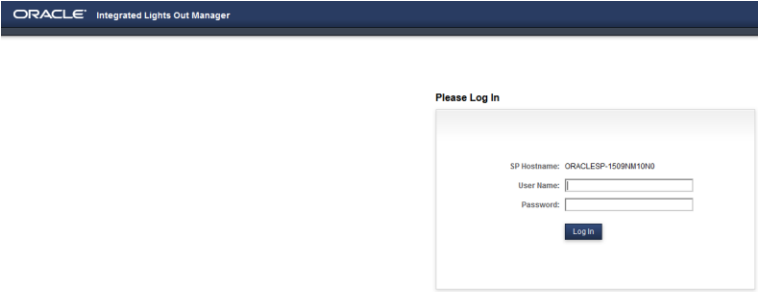
Note: These steps assume Out-of-Box State

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

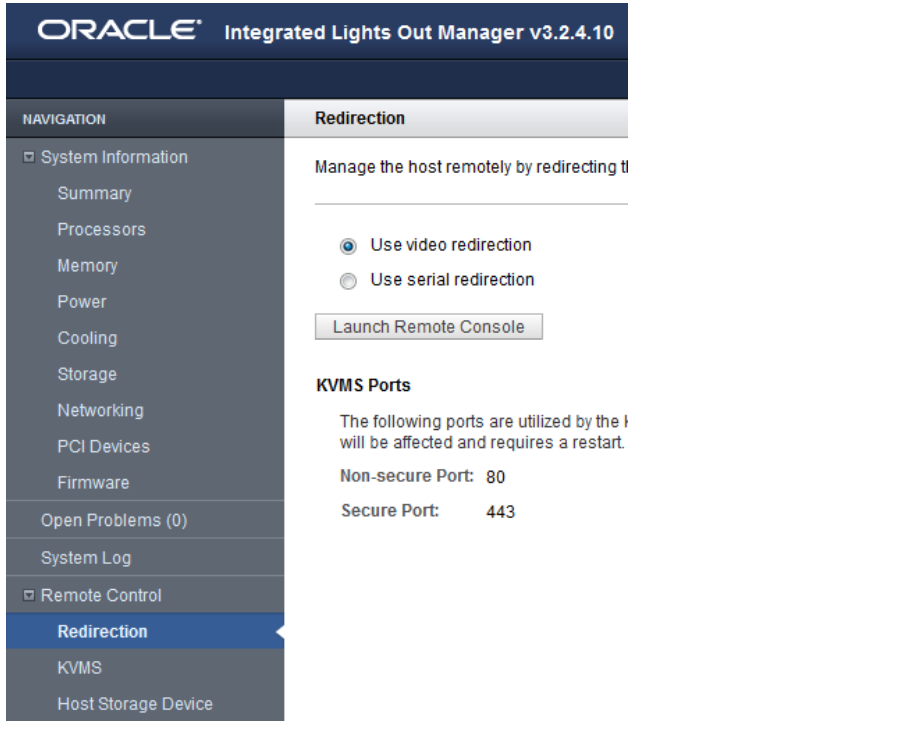
If this procedure fails, contact **Appendix R: My Oracle Support (MOS)**, and ask for assistance.

STEP #	Procedure	Result
1 <input type="checkbox"/>	Launch Internet Explorer Execute Appendix D to set the iLOM IP to the value contained in the NAPD. Once the IP address has been configured, Navigate to customer IP (e.g. 192.168.100.5).	

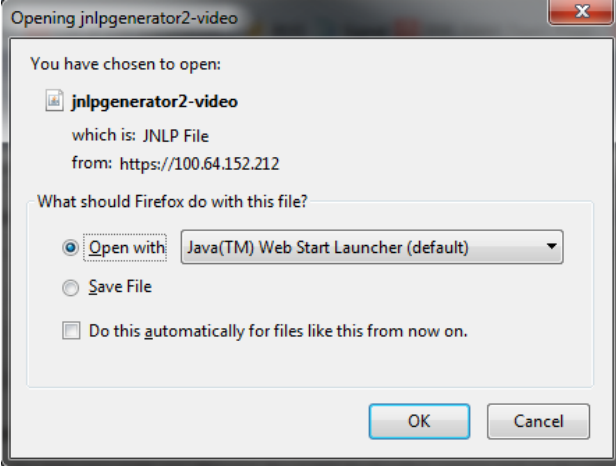
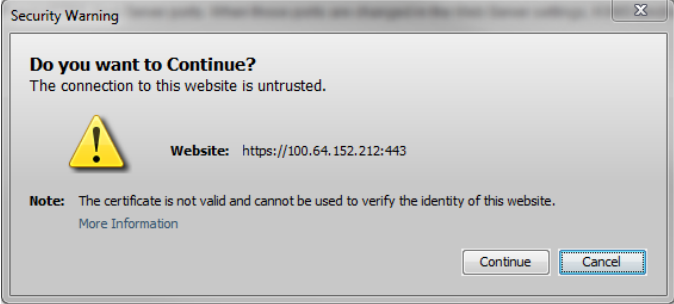
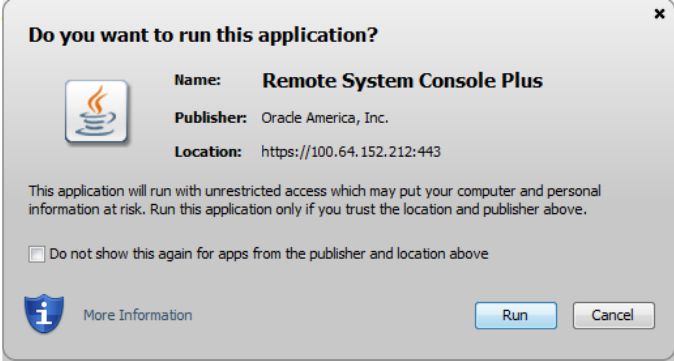
Appendix C.1. TVOE iLOM GUI Access

<p>2</p> <p><input type="checkbox"/></p>	<p>Internet Explorer may display a warning message regarding the Security Certificate.</p>	
<p>3</p> <p><input type="checkbox"/></p>	<p>Select the option to Continue to the website (not recommended)</p>	
<p>4</p> <p><input type="checkbox"/></p>	<p>Oracle X6-2: Login</p>	<p>Login to the Oracle rack mount server iLOM:</p> 

Appendix C.1. TVOE iLOM GUI Access

<p>5</p> <p>□</p>	<p>Oracle X6-2: Access the Remote Console</p>	<p>Navigate to Remote Control -> Redirection</p> <p>Select Launch Remote Console</p>  <p>The screenshot shows the Oracle Integrated Lights Out Manager (ILOM) v3.2.4.10 interface. On the left is a navigation menu with categories like System Information, Remote Control, and KVMS. The 'Redirection' option under Remote Control is selected. The main content area shows the 'Redirection' page with a sub-header 'Manage the host remotely by redirecting traffic'. There are two radio buttons: 'Use video redirection' (which is selected) and 'Use serial redirection'. Below these is a 'Launch Remote Console' button. At the bottom, there is a section for 'KVMS Ports' with a warning that the following ports will be affected and require a restart: Non-secure Port: 80 and Secure Port: 443.</p>
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Appendix C.1. TVOE iLOM GUI Access

<p>6</p> <p><input type="checkbox"/></p>	<p>Oracle X6-2: Access the Remote Console</p>	<p>Select OK and open with Java Web Start Launcher</p>  <p>Select Continue and Run for any security warning prompts</p>  
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Appendix D: Changing the TVOE iLO/iLOM Address

Appendix D.1: Oracle X6-2 Servers (Changing iLOM IP address using Keyboard/Monitor)

Appendix D.1. Changing the TVOE Oracle X6-2 iLOM Address using keyboard/Monitor

This procedure will set the IP address of the TVOE iLOM on Oracle X6-2 servers to the customer's network so that it can be accessed by Oracle support.

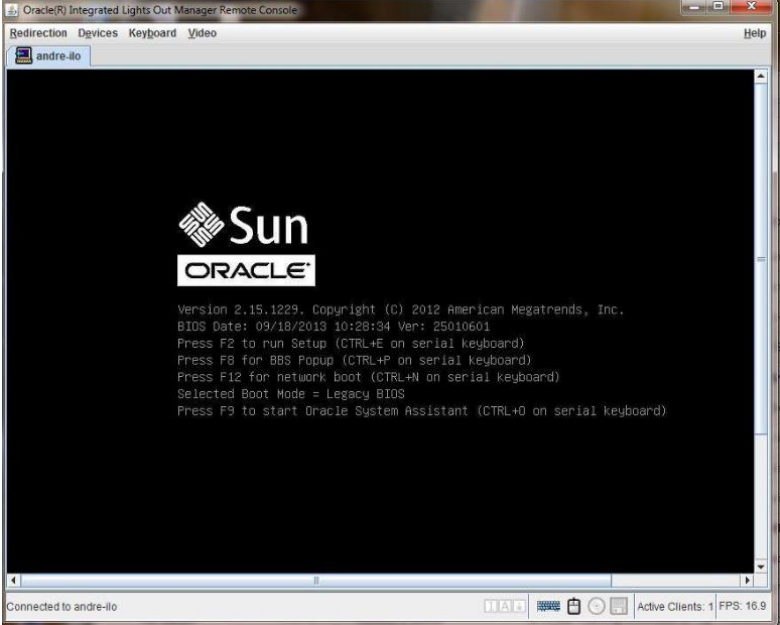
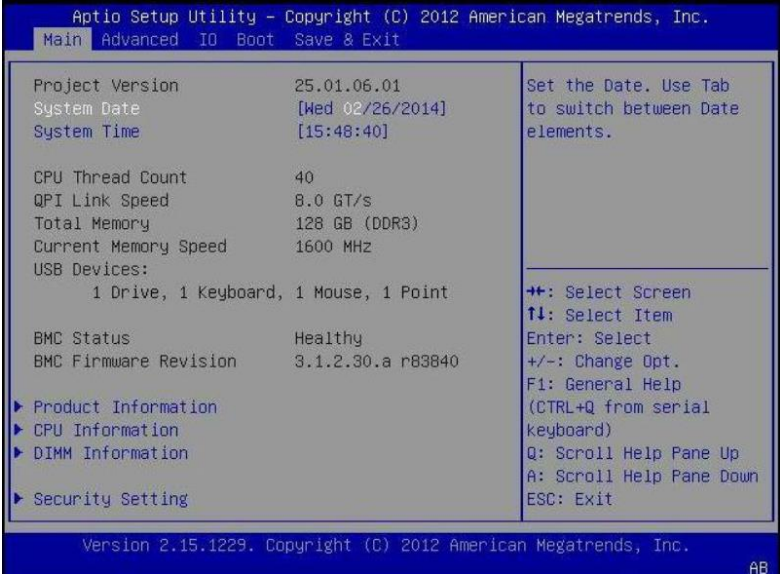
Note: By default the ILOM is configured to get its IP address Dynamically through DHCP. This procedure lists how to statically set the IP address of the ILOM using a keyboard and monitor.

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

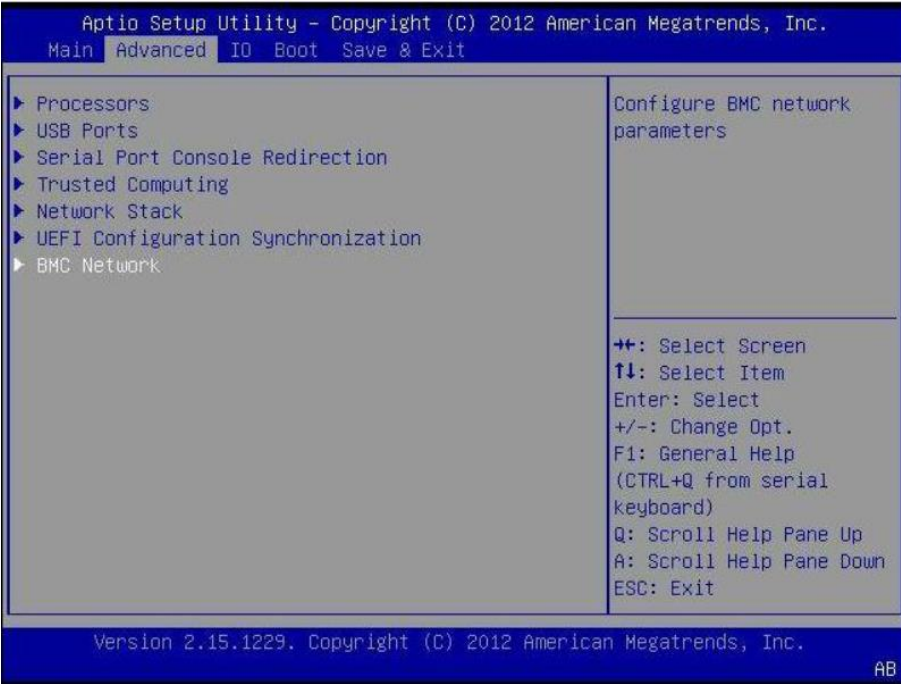
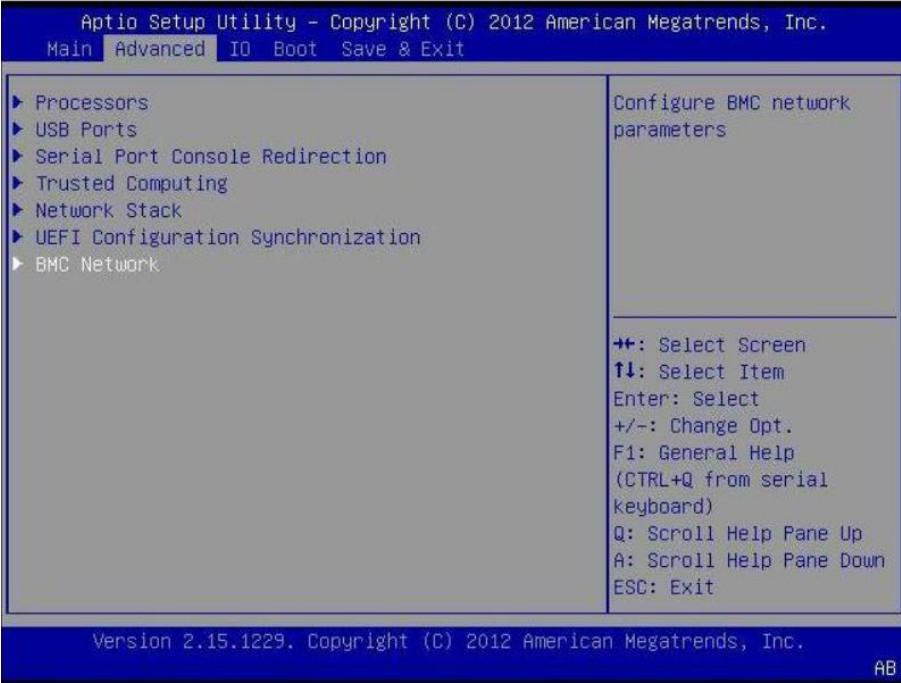
If this procedure fails, contact **Appendix R: My Oracle Support (MOS)**, and ask for assistance.

STEP #	Procedure	Result
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Appendix D.1. Changing the TVOE Oracle X6-2 iLOM Address using keyboard/Monitor

<p>1</p> <p><input type="checkbox"/></p>	<p>Oracle X6-2: Reboot and Access BIOS Configuration Menu</p>	<p>Reboot the Server</p> <p>Press F2 when prompted to enter the BIOS configuration menu:</p>  <p>This action will take you to the Main Menu:</p> 
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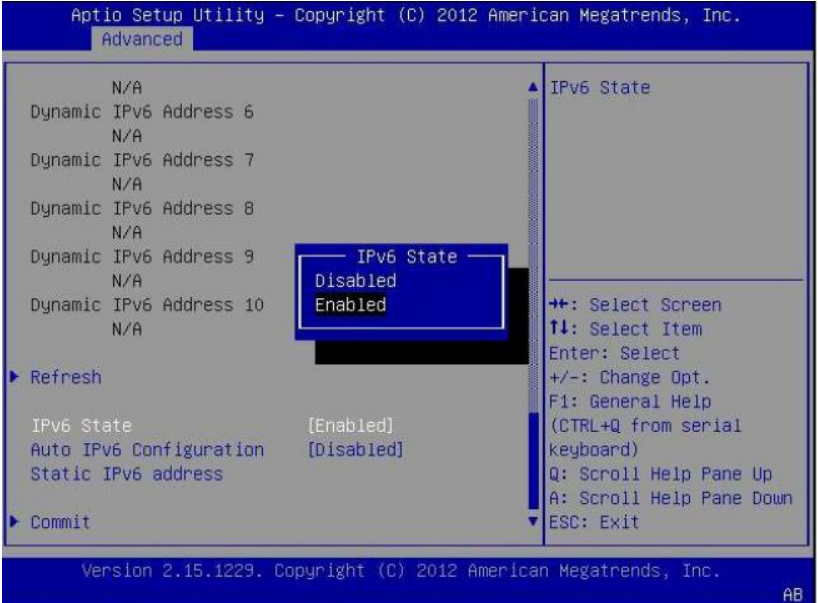
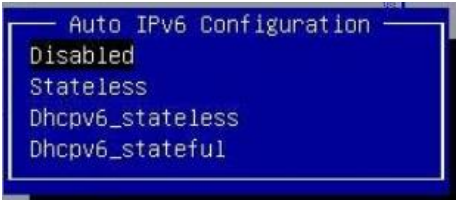

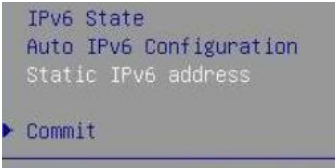
Appendix D.1. Changing the TVOE Oracle X6-2 iLOM Address using keyboard/Monitor

<p>2</p> <p>☐</p>	<p>Oracle X6-2: Access the Configuration Menu</p>	<p>Use the arrow keys to navigate to the Advanced menu:</p>  <p>Use the arrow keys to navigate to the BMC Network menu:</p> 
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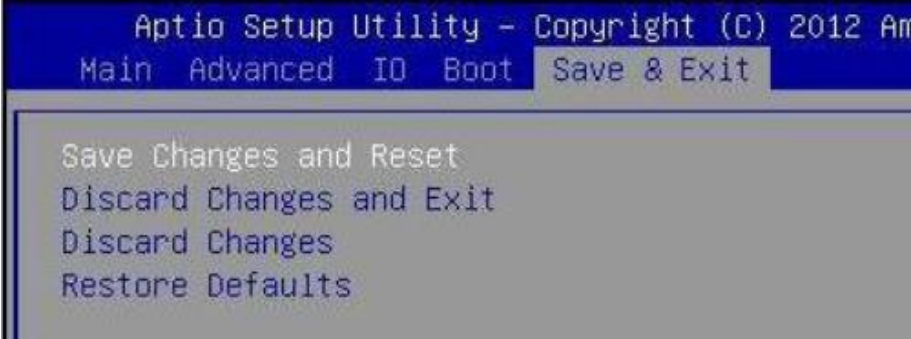
Appendix D.1. Changing the TVOE Oracle X6-2 iLOM Address using keyboard/Monitor

<p>3 □</p>	<p>Oracle X6-2: Configure Static IPv4 Addresses</p>	<p style="text-align: center;">Setting Static IPv4 Address, IPv6 Skip this step</p> <p>Use the arrow keys to navigate through the menu to highlight IPv4 IP Assignment:</p>  <p>Press Enter</p> <p>Highlight Static, then press Enter</p> <p>Use the arrow keys to navigate down to highlight IPv4 address, press Enter</p>  <p>Enter the desired IPv4 address, press Enter</p> <p>Repeat for IPv4 Subnet Mask and IPv4 Default Gateway</p> <p>Select the Commit BELOW the IPv4 fields:</p> 
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Appendix D.1. Changing the TVOE Oracle X6-2 iLOM Address using keyboard/Monitor

<p>4</p> <p>☐</p> <p>Oracle X6-2: Configure Static IPv6 Addresses</p>	<p style="text-align: center;">Setting Static IPv6 Address</p> <p>Page down to the IPv6 configuration settings, set IPv6 State to Enabled and press Enter:</p>  <p>Navigate to Auto IPv6 Configuration, set Auto IPv6 Configuration to Disabled and press Enter</p>  <p>Highlight the Static IPv6 address option, press Enter</p> <p>Enter the IPv6 address:</p>  <p>Select the Commit BELOW the IPv6 fields:</p> 
--	---

Appendix D.1. Changing the TVOE Oracle X6-2 iLOM Address using keyboard/Monitor

5 <input type="checkbox"/>	Oracle X6-2: Save and Exit	<p>Exit the BMC Network menu by pressing the escape key</p> <p>Use the arrow keys to navigate through the menu and select the Save & Exit tab:</p>  <p>The screenshot shows the Aptio Setup Utility interface. At the top, it reads 'Aptio Setup Utility - Copyright (C) 2012 Am'. Below this, there are four menu items: 'Main', 'Advanced', 'IO Boot', and 'Save & Exit'. The 'Save & Exit' item is highlighted with a blue background. Below the menu items, there are four options: 'Save Changes and Reset', 'Discard Changes and Exit', 'Discard Changes', and 'Restore Defaults'.</p> <p>Select Save Changes and Reset</p> <p>When prompted, select Yes to confirm "Save configuration and reset?"</p> <p>The Server will reboot</p>
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Appendix D.2: Oracle X6-2 Servers (Changing iLOM IP address using Serial Console)

Appendix D.2. Changing the TVOE Oracle X6-2 iLOM Address using Serial Console

This procedure will set the IP address of the TVOE iLOM on Oracle X6-2 servers to the customer's network so that it can be accessed by Oracle support.

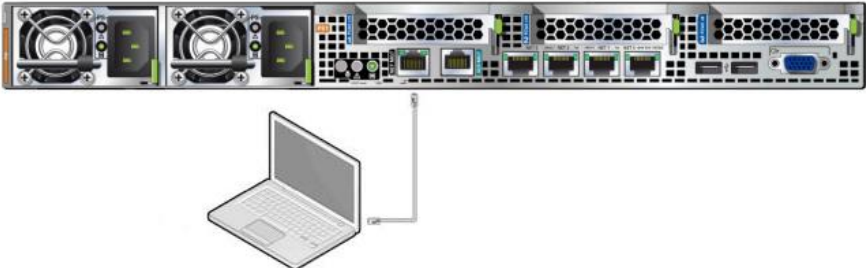
Note: By default the ILOM is configured to get its IP address Dynamically through DHCP. This procedure lists how to statically set the IP address of the ILOM using the serial console

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

If this procedure fails, contact **Appendix R: My Oracle Support (MOS)**, and ask for assistance.

STEP #	Procedure	Result												
<p>1</p> <p><input type="checkbox"/></p>	<p>Connect to the Serial Management Port of the Oracle X6-2 Server.</p>	<div> </div> <div> <h3>Serial Management Port</h3> </div> <div> <p>The serial management connector (labeled SER MGT) is an RJ-45 connector that can be accessed from the rear panel. This port is the default connection to the server. Use this port <i>only</i> for server management.</p> </div> <div> <p>TABLE 19 Default Serial Connections for Serial Port</p> </div> <div> <table border="1"> <thead> <tr> <th>Parameter</th> <th>Setting</th> </tr> </thead> <tbody> <tr> <td>Connector</td> <td>SER MGT</td> </tr> <tr> <td>Rate</td> <td>9600 baud</td> </tr> <tr> <td>Parity</td> <td>None</td> </tr> <tr> <td>Stop bits</td> <td>1</td> </tr> <tr> <td>Data bits</td> <td>8</td> </tr> </tbody> </table> </div> <div> <p>Connect a laptop to the serial management (SER MGT) port on the server:</p> </div> <div> </div>	Parameter	Setting	Connector	SER MGT	Rate	9600 baud	Parity	None	Stop bits	1	Data bits	8
Parameter	Setting													
Connector	SER MGT													
Rate	9600 baud													
Parity	None													
Stop bits	1													
Data bits	8													

Appendix D.2. Changing the TVOE Oracle X6-2 iLOM Address using Serial Console

<p>2 <input type="checkbox"/></p>	<p>Login to the Serial Console</p>	<ol style="list-style-type: none"> 1) Press Enter on the terminal. The Oracle ILOM login prompt appears. 2) Type your Oracle ILOM user name (default user: root), and then press Enter. A password prompt appears. 3) Type the password associated with your user name, press Enter. Oracle ILOM displays the default command prompt (->), indicating that you have successfully logged in.
<p>3 <input type="checkbox"/></p>	<p>Configure NET_MGT Network Interface</p>	<ol style="list-style-type: none"> 1) Navigate to the /SP/network target: -> cd /SP/network 2) Ensure that the SP network interface is enabled. -> set state=enabled 3) Configure a static IPv4 address for the SP. -> set pendingipdiscovery=static pendingipaddress=<ip_address> pendingipnetmask=<netmask> pendingipgateway=<gateway> commitpending=true 4) Verify settings. -> show
<p>4 <input type="checkbox"/></p>	<p>Connect to the NET_MGT port</p>	<p>Connect a laptop to the network management (NET MGT) port on the server:</p>  <p>The diagram shows a server rack with various ports. A laptop is connected to the server via a cable, specifically to the network management (NET_MGT) port.</p>

Appendix E: Attaching an ISO Image to a Server using the iLO or iLOM

As an alternative to mounting the ISO image via USB, the user may also mount the ISO via the iLO or iLOM Oracle rack mount servers.

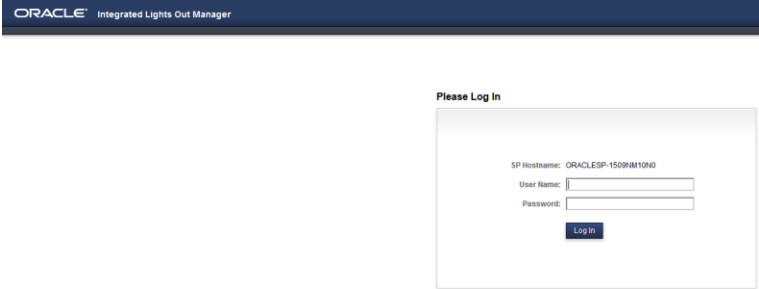
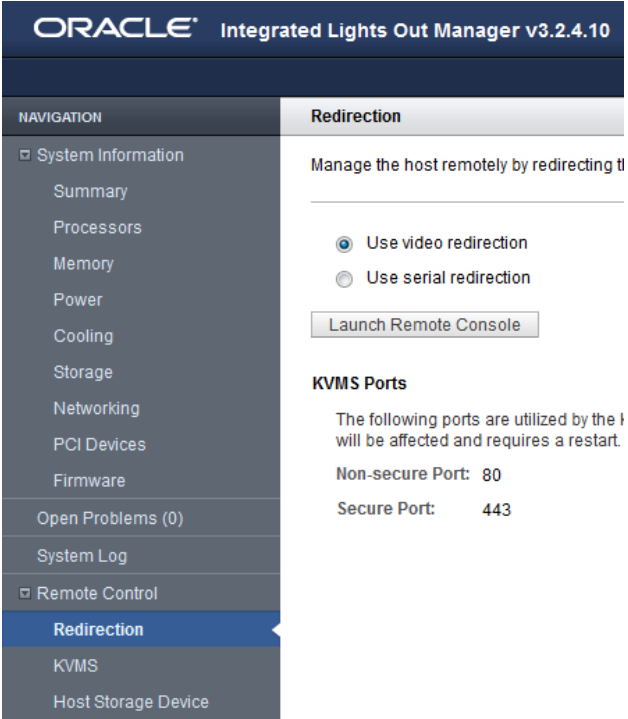
Appendix E.1: Oracle X6-2 Servers (iLOM)

Appendix E.1.1. Oracle X6-2 Servers Mounting the ISO image via iLOM

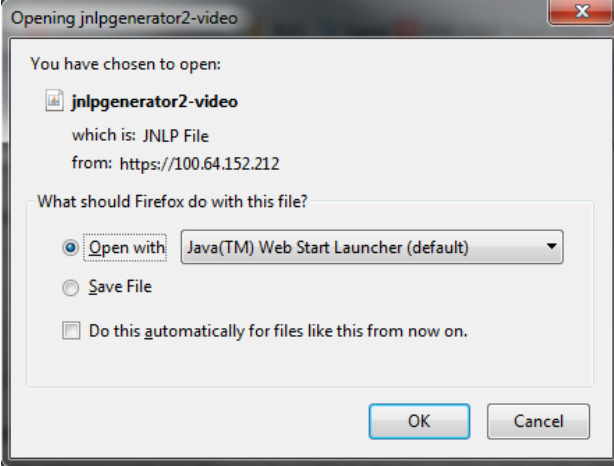
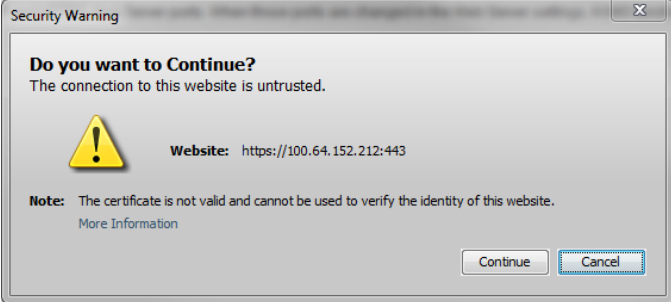
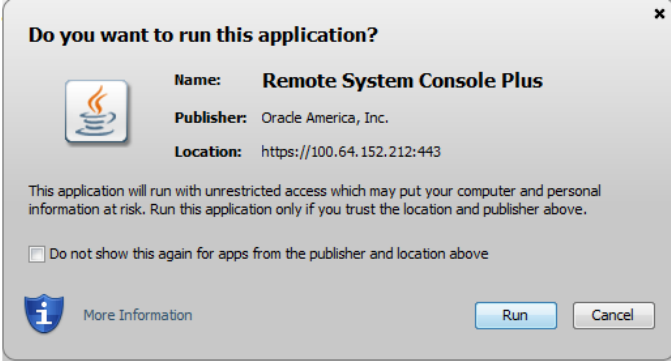
This procedure describes the steps needed to attach an ISO image to a server using the iLOM for Oracle rack mount servers.

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

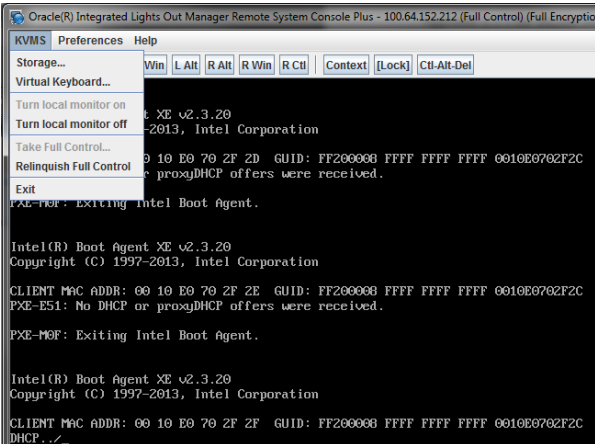
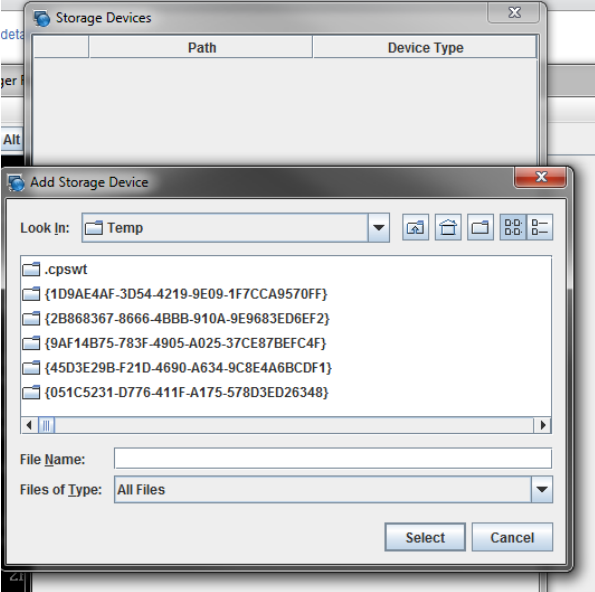
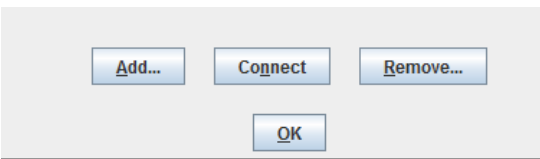
If this procedure fails, contact **Appendix R: My Oracle Support (MOS)**, and ask for assistance.

STEP #	Procedure	Result
<p>1</p> <p><input type="checkbox"/></p>	<p>Oracle X6-2: Login</p>	<p>Login to the Oracle rack mount server ILOM:</p> 
<p>2</p> <p><input type="checkbox"/></p>	<p>Oracle X6-2: Access the Remote Console</p>	<p>Navigate to Remote Control -> Redirection</p> <p>Select Launch Remote Console</p> 

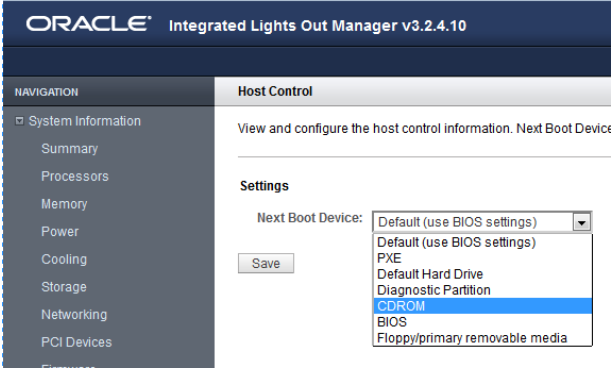
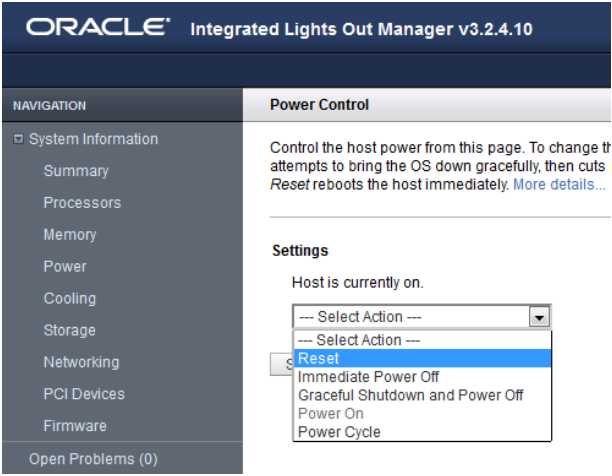
Appendix E.1.1. Oracle X6-2 Servers Mounting the ISO image via iLOM

<p>3</p> <p><input type="checkbox"/></p>	<p>Oracle X6-2: Access the Remote Console</p>	<p>Select OK and open with Java Web Start Launcher</p>  <p>Select Continue and Run for any security warning prompts</p>  
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Appendix E.1.1. Oracle X6-2 Servers Mounting the ISO image via iLOM

<p>4</p> <p><input type="checkbox"/></p>	<p>Oracle X6-2: Mount the ISO from the Remote Console</p>	<p>Navigate to KVMS</p> <p>Select Storage</p>  <p>Select Add, browse to the ISO located on the local machine.</p>  <p>Click Select</p> <p>Once the ISO image is selected, now select Connect</p> 
--	--	---

Appendix E.1.1. Oracle X6-2 Servers Mounting the ISO image via iLOM

<p>5</p> <p><input type="checkbox"/></p>	<p>Oracle X6-2: Change the Device for Next Boot</p>	<p>Change the Next Boot Device by navigating to Host Management -> Host Control</p> <p>In the drop down box, select CDROM</p>  <p>Click Save</p>
<p>6</p> <p><input type="checkbox"/></p>	<p>Oracle X6-2: Power Cycle</p>	<p>Reboot the rack mount server to start the install by navigating to Host Management -> Power Control</p> <p>From the drop down box, select Reset</p>  <p>Click the Save button</p> <p><input type="button" value="Save"/></p> <p>Confirm Save</p>

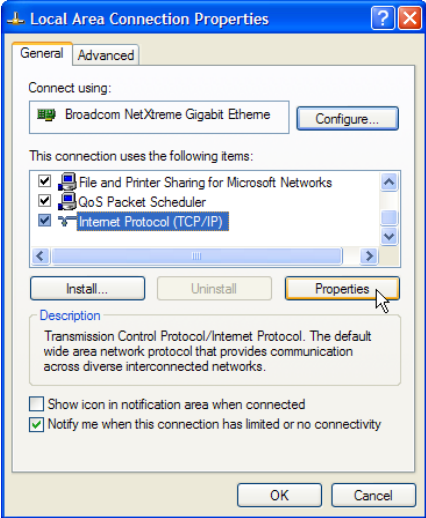
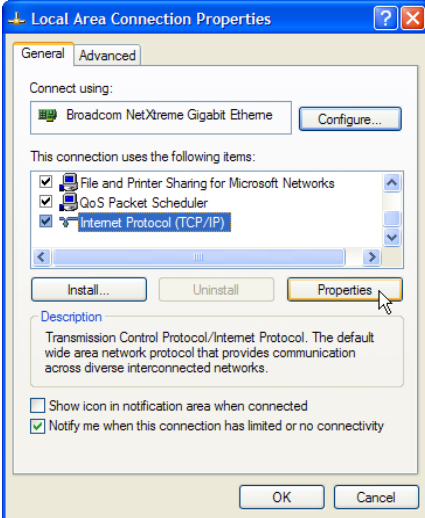
Appendix F: Configuring for TVOE iLO Access

Appendix F.1 Connecting to the TVOE iLO

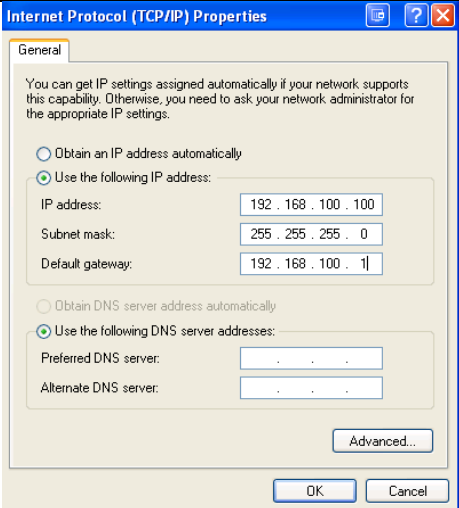
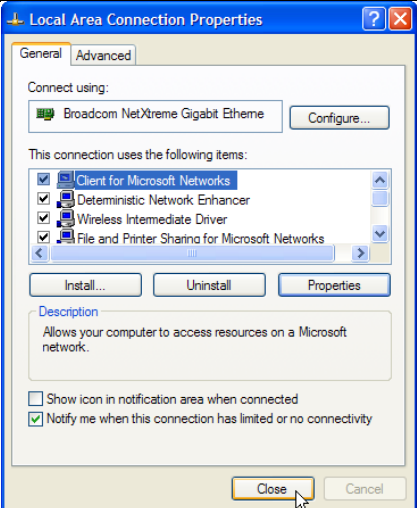
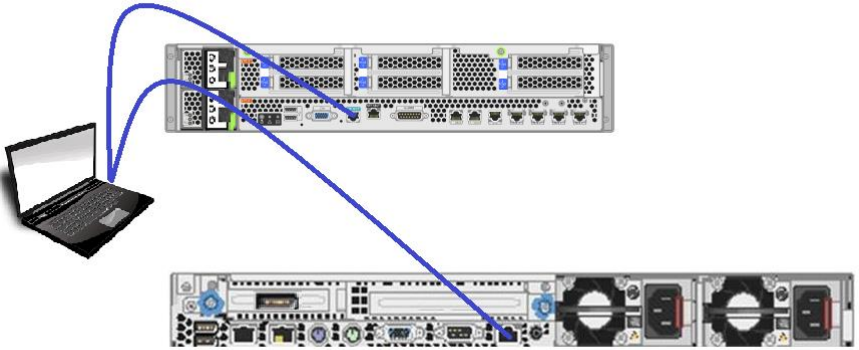
This procedure contains the steps to connect a laptop to the TVOE iLO via a directly cabled Ethernet connection.

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

If this procedure fails, contact **Appendix R: My Oracle Support (MOS)**, and ask for assistance.

STEP #	Procedure	Result	
<p>1</p> <p><input type="checkbox"/></p>	<p>Access the laptop network interface cards TCP/IP Properties screen.</p> <p>NOTE: For this step follow the instruction specific to the laptop's OS (XP or 7).</p>	<p style="text-align: center;">Windows XP</p> <ul style="list-style-type: none"> • Go to Control Panel • Double-click on Network Connections • Right-click the wired Ethernet Interface icon and select Properties • Select Internet Protocol (TCP/IP) <p>Select Properties</p> 	<p style="text-align: center;">Windows 7</p> <ul style="list-style-type: none"> • Go to Control Panel. • Double-click on Network and Sharing Center • Select Change Adapter Settings (left menu) • Right-click the Local Area Connection icon and select Properties <p>Select Internet Protocol Version 4 (TCP/IPv4)</p> 

Appendix F.1 Connecting to the TVOE iLO

<p>2</p> <p><input type="checkbox"/></p>	<p>Click Use the following IP address</p> <p>Set the IP address to 192.168.100.100</p> <p>Set the Subnet mask to 255.255.255.0</p> <p>Set the Default gateway to 192.168.100.1</p> <p>Select OK.</p> <p>Select Close from the network interface card's main Properties screen.</p>		
<p>3</p> <p><input type="checkbox"/></p>	<p>Connect the laptop's Ethernet port directly to the TVOE iLO port using a standard Cat-5 cross-over cable.</p>		

Appendix G: SNMP Configuration

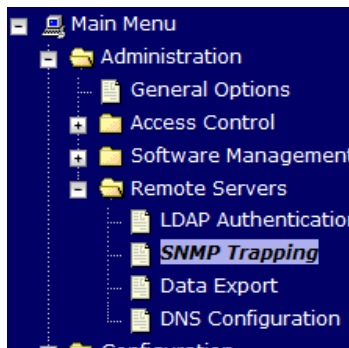
The network-wide plan for SNMP configuration should be decided upon before DSR installation proceeds. This section provides some recommendations for these decisions.

SNMP traps can originate from the following entities in a DSR installation:

- DSR Application Servers (NOAM, SOAM, MPs of all types)
- DSR Auxiliary Components (TVOE hosts, PMAC)

DSR application servers can be configured to:

1. Send all their SNMP traps to the NOAM via merging from their local SOAM. All traps will terminate at the NOAMP and be viewable from the NOAMP GUI (entire network) and the SOAM GUI (site specific) if **only** NOAM and SOAM are configured as Manager and **Traps Enabled** checkbox is selected for these managers on **Main Menu > Administration > Remote Servers > SNMP Trapping screen**. This is the default configuration option.



2. Send all their SNMP traps to an external Network Management Station (NMS). The traps will NOT be seen at the SOAM OR at the NOAM. They will be viewable at the configured NMS(s) only if **only** external NMS is configured as Manager and **Traps Enabled** checkbox is selected for this manager on **Main Menu > Administration > Remote Servers > SNMP Trapping screen**.

Main Menu: Administration -> Remote Servers -> SNMP Trapping

Variable	Value	Description
Manager 1	<input type="text"/>	A remote manager to receive address or a valid hostname, case-insensitive, max. 20-chr SNMP trap port of '162' will be
Manager 2	<input type="text"/>	See description for Manager 1
Manager 3	<input type="text"/>	See description for Manager 1
Manager 4	<input type="text"/>	See description for Manager 1
Manager 5	<input type="text"/>	See description for Manager 1
Enabled Versions	SNMPv2c and SNMPv3 ▾	Selectively enable SNMPv2c, - supports both SNMP version
Traps Enabled	<input checked="" type="checkbox"/> Manager 1 <input checked="" type="checkbox"/> Manager 2 <input checked="" type="checkbox"/> Manager 3 <input checked="" type="checkbox"/> Manager 4 <input checked="" type="checkbox"/> Manager 5	Enable or disable SNMP trap enabled.]

3. Send SNMP traps from individual servers like MPs of all types If **Traps from Individual Servers** check box is selected on **Main Menu > Administration > Remote Servers > SNMP Trapping screen**.

Traps from Individual Servers Enabled

Application server SNMP configuration is done from the NOAM GUI, near the end of DSR installation.

See the procedure list for details.

DSR Auxiliary components must have their SNMP trap destinations set explicitly. Trap destinations can be the NOAM VIP, the SOAM VIP, or an external (customer) NMS.

The recommended configuration is as follows:

The following components:

- PMAC (TVOE)
- PMAC (App)
- TVOE for DSR Servers

Should have their SNMP trap destinations set to:

1. The local SOAM VIP
2. The customer NMS, if available

Note: All the entities **MUST** use the same Community String during configuration of the NMS server.

Note: SNMP community strings i.e. (Read Only or Read Write SNMP community strings) should be same for all the components like OAM/MP servers, PMACs, TVOEs and external NMS.

Appendix H: Application NetBackup Client Installation Procedures

NetBackup is a utility that allows for management of backups and recovery of remote systems. The NetBackup suite is for the purpose of supporting Disaster Recovery at the customer site. The following procedures provides instructions for installing and configuring the NetBackup client software on an application server in two different ways, first using platcfg and second using nbAutoInstall (push Configuration)

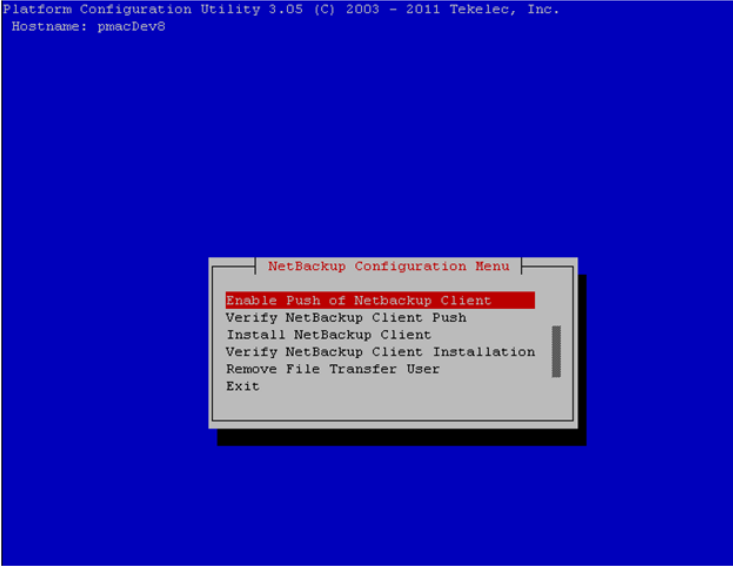
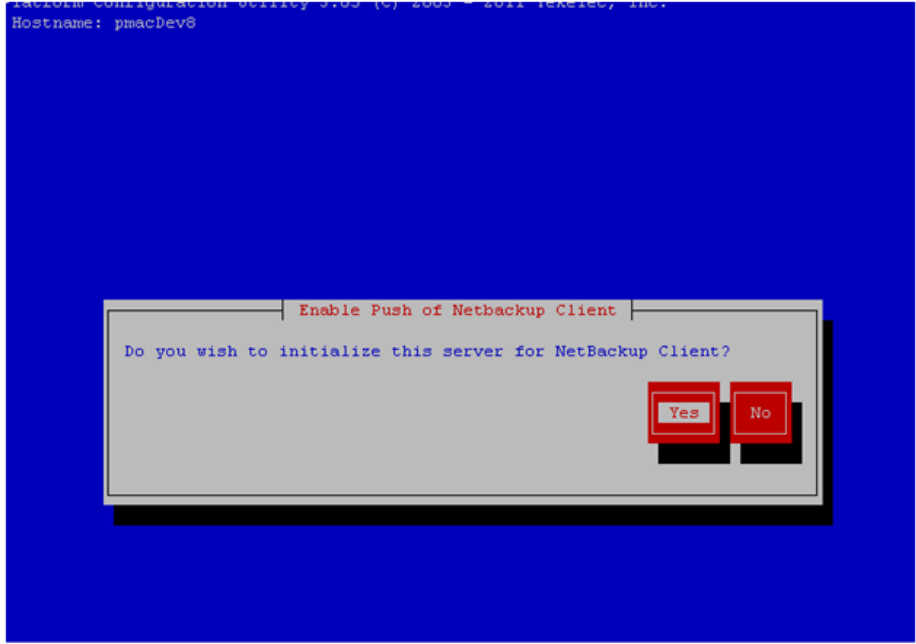
Please note that at the writing of this document, the supported versions of NetBackup are 7.1, 7.5 and 7.6.

Appendix H.1: NetBackup Client Install using PLATCFG

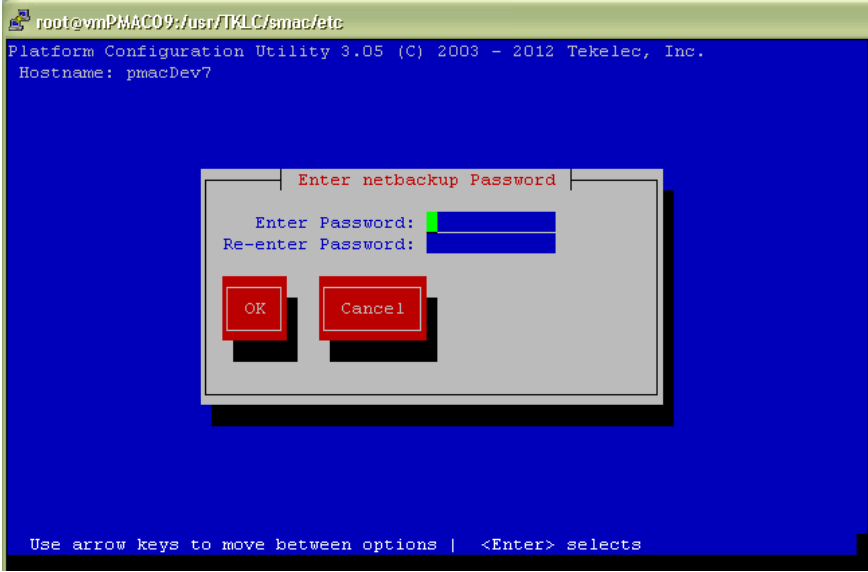
Appendix H.1. Application NetBackup Client Installation (Using Platcfg)

<p>S T E P #</p>	<p>This procedure explains the NetBackup installation using platcfg</p> <p>Prerequisites:</p> <ul style="list-style-type: none"> • Application server platform installation has been completed. • Site survey has been performed to determine the network requirements for the application server, and interfaces have been configured. • NetBackup server is available to copy, sftp, the appropriate NetBackup Client software to the application server. <p>Note: Execute the following procedure to migrate to having NetBackup installed via platcfg instead of using NBAutoInstall (<i>Push Configuration</i>)</p> <p>Check off (√) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
<p>1</p> <p><input type="checkbox"/></p>	<p>Application server iLO: Login</p>	<p>Login and launch the integrated remote console SSH to the application Server (PMAC or NOAM) as <i>admusr</i> using the management network for the PMAC or XMI network for the NOAM.</p>

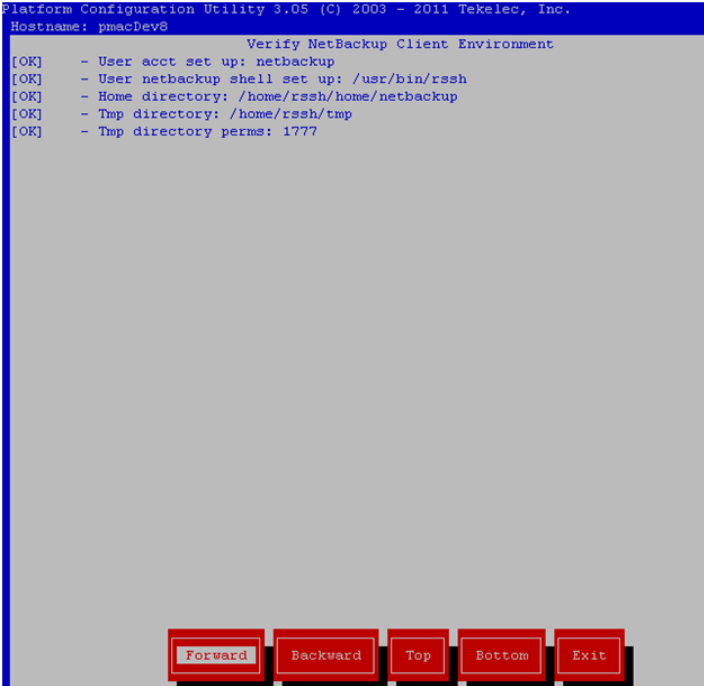
Appendix H.1. Application NetBackup Client Installation (Using Platcfg)

<p>2</p> <p><input type="checkbox"/></p>	<p>Application server iLO: Navigate to NetBackup Configuration</p>	<p>Configure NetBackup Client on application server</p> <pre>\$ sudo su - platcfg</pre> <p>Navigate to NetBackup -> Configuration</p>  <p>The screenshot shows a blue terminal window with the text "Platform Configuration Utility 3.05 (C) 2003 - 2011 Tekelec, Inc. Hostname: pmacDev8". A grey dialog box titled "NetBackup Configuration Menu" is centered on the screen. The menu items are: "Enable Push of Netbackup Client" (highlighted in red), "Verify NetBackup Client Push", "Install NetBackup Client", "Verify NetBackup Client Installation", "Remove File Transfer User", and "Exit".</p>
<p>3</p> <p><input type="checkbox"/></p>	<p>Application server iLO: Enable Push of NetBackup Client</p>	<p>Navigate to NetBackup Configuration -> Enable Push of NetBackup Client</p>  <p>The screenshot shows a blue terminal window with the text "Platform Configuration Utility 3.05 (C) 2003 - 2011 Tekelec, Inc. Hostname: pmacDev8". A grey dialog box titled "Enable Push of Netbackup Client" is centered on the screen. The dialog contains the question "Do you wish to initialize this server for NetBackup Client?" and two red buttons labeled "Yes" and "No".</p>

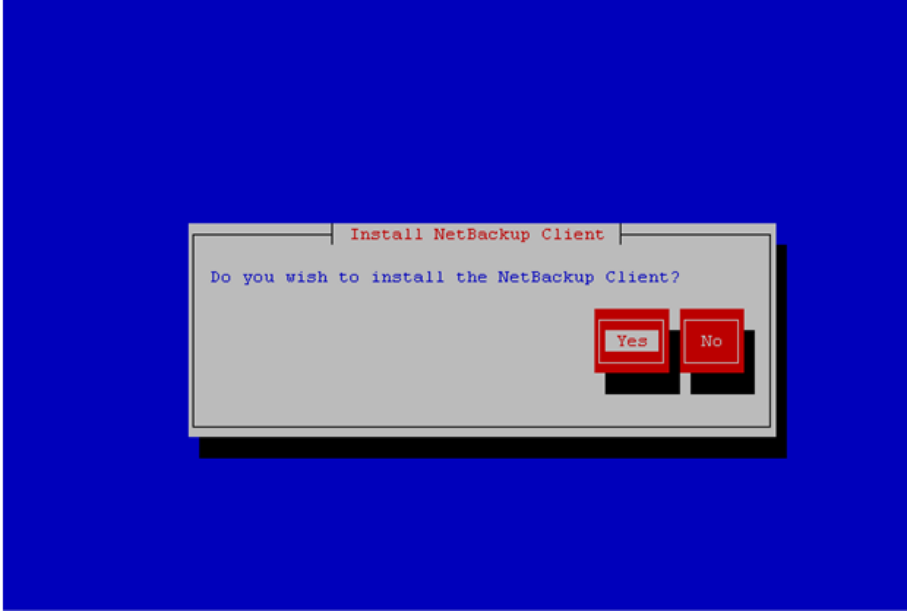
Appendix H.1. Application NetBackup Client Installation (Using Platcfg)

4 <input type="checkbox"/>	Application server iLO: Enter NetBackup password	<p>Enter the NetBackup password:</p>  <p>Select OK</p> <p>Note: If the version of NetBackup is 7.6.0.0 or greater, follow the instructions provided by the OSDC download for the version of NetBackup that is being pushed.</p>
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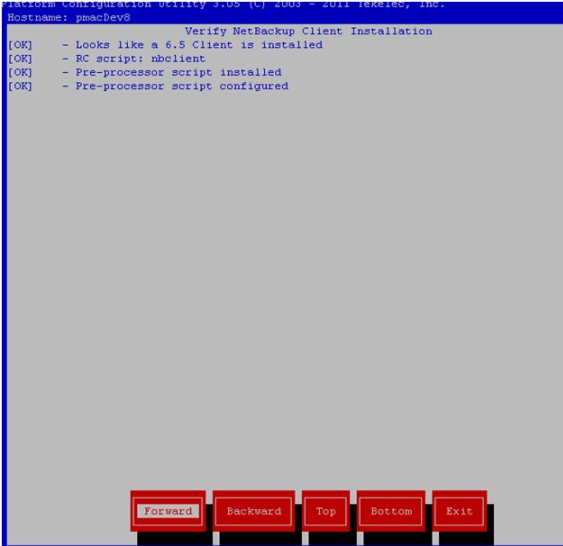
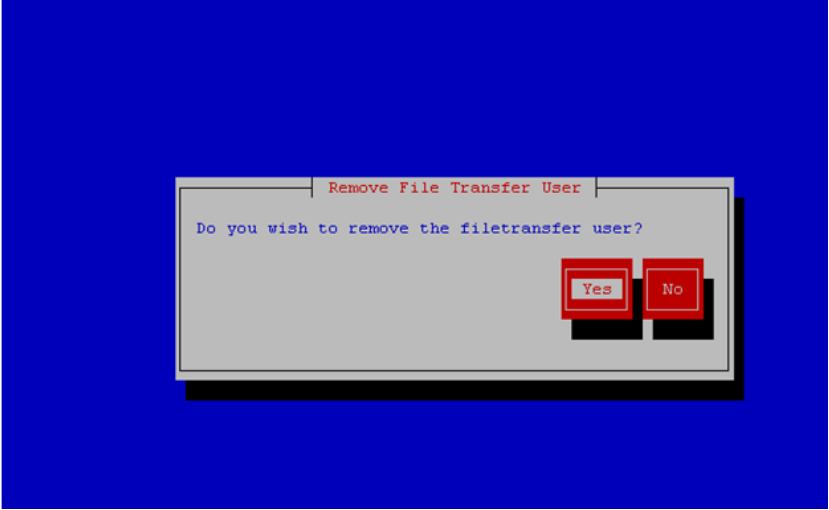
Appendix H.1. Application NetBackup Client Installation (Using Platcfg)

5 <input type="checkbox"/>	Application server iLO: Verify NetBackup Client software push is enabled.	Navigate to NetBackup Configuration -> Verify NetBackup Client Push  <pre>Platform Configuration Utility 3.05 (C) 2003 - 2011 Tekelec, Inc. Hostname: pmacDev9 Verify NetBackup Client Environment [OK] - User acct set up: netbackup [OK] - User netbackup shell set up: /usr/bin/rssh [OK] - Home directory: /home/rssh/home/netbackup [OK] - Tmp directory: /home/rssh/tmp [OK] - Tmp directory perms: 1777</pre> <p>Verify list entries indicate OK for NetBackup client software environment. Select Exit to return to NetBackup Configuration menu.</p>
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Appendix H.1. Application NetBackup Client Installation (Using Platcfg)

7 □	Application server iLO: Install NetBackup Client software on application server.	<p>Execute the command:</p> <pre>\$ sudo chmod 555 /var/TKLC/home/rssh/tmp/client_config</pre> <p>Where NETBACKUP_BIN is the temporary directory where the NetBackup client install programs were copied in step 5. The directory should look similar to the following: "/tmp/bp.XXXX/"</p> <p>Navigate to NetBackup Configuration -> Install NetBackup Client</p>  <p>Verify list entries indicate OK for NetBackup client software installation</p> <p>Select Exit to return to NetBackup Configuration menu</p>
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Appendix H.1. Application NetBackup Client Installation (Using Platcfg)

<p>8</p> <p><input type="checkbox"/></p>	<p>Application server iLO: Verify NetBackup Client software installation on the application server.</p>	<p>Navigate to NetBackup Configuration -> Verify NetBackup Client Installation.</p>  <p>Verify list entries indicate OK for NetBackup Client software installation. Select Exit to return to NetBackup Configuration menu.</p>
<p>9</p> <p><input type="checkbox"/></p>	<p>Application server iLO: Disable NetBackup Client software transfer to the application server.</p>	<p>Navigate to NetBackup Configuration -> Remove File Transfer User</p>  <p>Select Yes to remove the NetBackup file transfer user from the application server</p>
<p>10</p> <p><input type="checkbox"/></p>	<p>Application server iLO: Exit platform configuration utility (platcfg)</p>	<p>Exit platform configuration utility (platcfg)</p>

Appendix H.1. Application NetBackup Client Installation (Using Platcfg)

11 <input type="checkbox"/>	Application server iLO: Verify Server bp.conf file	Verify that the server has been added to the <code>/usr/opensv/NetBackup/bp.conf</code> file: Issue the following command: <pre>\$ sudo cat /usr/opensv/NetBackup/bp.conf CLIENT_NAME = 10.240.34.10 SERVER = NB71server</pre>
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Appendix H.1. Application NetBackup Client Installation (Using Platcfg)

12 **Application server iLO:**
 Use platform configuration utility (platcfg) to modify hosts file with NetBackup server alias.

Note: After the successful transfer and installation of the NetBackup client software the NetBackup servers hostname can be found in the NetBackup **"/usr/opensv/NetBackup/bp.conf"** file, identified by the **SERVER** configuration parameter.

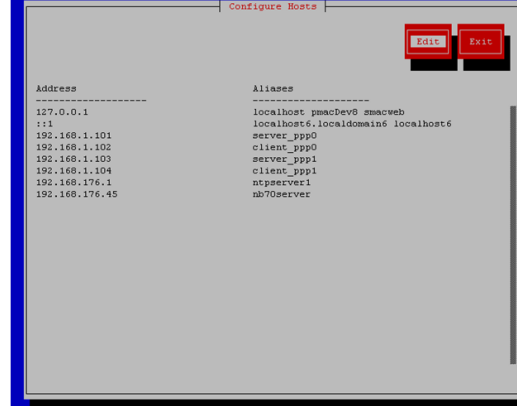
The NetBackup server hostname and IP address must be added to the application server's host's file. List NetBackup servers hostname:

```
$ sudo cat /usr/opensv/NetBackup/bp.conf
SERVER = nb70server
CLIENT_NAME = pmacDev8
```

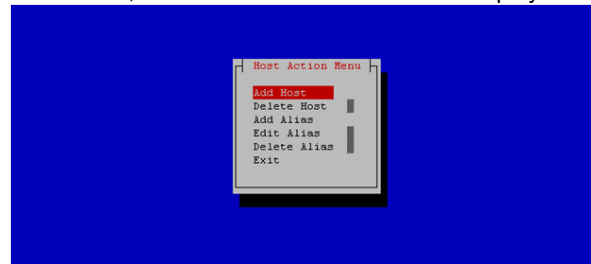
Use platform configuration utility (platcfg) to update application hosts file with NetBackup Server alias.

```
$ sudo su - platcfg
```

Navigate to **Network Configuration -> Modify Hosts File**



Select **Edit**, the **Host Action Menu** will be displayed.



Select **Add Host**, and enter the appropriate data



Select **OK**, confirm the host alias add, and exit Platform Configuration Utility

Appendix H.1. Application NetBackup Client Installation (Using Platcfg)

13 <input type="checkbox"/>	Application server iLO: Create links to NetBackup client notify scripts on application server where NetBackup expects to find them.	Copy the notify scripts from appropriate path on application server for given application: <pre>\$ sudo ln -s <path>/bpstart_notify /usr/opensv/NetBackup/bin/bpstart_notify \$ sudo ln -s <path>/bpend_notify /usr/opensv/NetBackup/bin/bpend_notify</pre> An example of <path> is <code>"/usr/TKLC/appworks/sbin"</code>
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Appendix H.2: NETBACKUP CLIENT INSTALL/UPGRADE WITH NBAUTOINSTALL

Note: Execute the following procedure to migrate to having NetBackup installed via NBAutoInstall (*Push Configuration*) instead of manual installation using platcfg

Note: Executing this procedure will enable TPD to automatically detect when a NetBackup Client is installed and then complete TPD related tasks that are needed for effective NetBackup Client operation. With this procedure, the NetBackup Client install (pushing the client and performing the install) is the responsibility of the customer and is not covered in this procedure.

Appendix H.2. Application NetBackup Client Installation (NBAUTOINSTALL)

S T E P #	<p>This procedure explains the NetBackup installation with NBAUTOINSTALL</p> <p>Prerequisites:</p> <ul style="list-style-type: none"> • Application server platform installation has been completed. • Site survey has been performed to determine the network requirements for the application server, and interfaces have been configured. • NetBackup server is available to copy, sftp, the appropriate NetBackup Client software to the application server. <p>Note: If the customer does not have a way to push and install NetBackup Client, then use NetBackup Client Install/Upgrade with platcfg.</p> <p>Note: It is required that this procedure is executed before the customer does the NetBackup Client install.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
1 <input type="checkbox"/>	Application server iLO: Login	<p>Login and launch the integrated remote console.</p> <p>SSH to the application Server (PMAC or NOAM) as <i>admusr</i> using the management network for the PMAC or XMI network for the NOAM.</p>
2 <input type="checkbox"/>	Application server iLO: Enable nbAutoInstall	<p>Execute the following command:</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo /usr/TKLC/plat/bin/nbAutoInstall --enable</pre>
3 <input type="checkbox"/>	Application server iLO: Create links to NetBackup client notify scripts on application server where NetBackup expects to find them.	<p>Execute the following commands</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo mkdir -p /usr/opencv/NetBackup/bin/ \$ sudo ln -s <path>/bpstart_notify /usr/opencv/NetBackup/bin/bpstart_notify \$ sudo ln -s <path>/bpend_notify /usr/opencv/NetBackup/bin/bpend_notify</pre> <p>Note: An example of <path> is "/usr/TKLC/plat/sbin"</p>

Appendix H.2. Application NetBackup Client Installation (NBAUTOINSTALL)

4 <input type="checkbox"/>	Application server iLO: Verify NetBackup configuration file	<p>Open <code>/usr/openv/NetBackup/bp.conf</code> and make sure it points to the NetBackup Server using the following command:</p> <pre>\$ sudo vi /usr/openv/NetBackup/bp.conf</pre> <pre>SERVER = nb75server CLIENT_NAME = 10.240.10.185 CONNECT_OPTIONS = localhost 1 0 2</pre> <p>Note: Verify that the above server name matches the NetBackup Server, and verify that the <code>CLIENT_NAME</code> matches the hostname or IP of the local client machine, if they do not, update them as necessary.</p> <p>Edit <code>/etc/hosts</code> using the following command and add the NetBackup server:</p> <pre>\$ sudo vi /etc/hosts</pre> <pre>e.g.: 192.168.176.45 nb75server</pre> <p>Note: The server will now periodically check to see if a new version of NetBackup Client has been installed and will perform necessary TPD configuration accordingly. At any time, the customer may now push and install a new version of NetBackup Client.</p>
-------------------------------	---	--

Appendix H.3: Create NetBackup Client Config File


This procedure will copy a NetBackup Client config file into the appropriate location on the TPD based application server. This config file will allow a customer to install previously unsupported versions of NetBackup Client by providing necessary information to TPD.

Appendix H.3. Create NetBackup Client Config File

S T E P #	<p>This procedure will copy a NetBackup Client config file into the appropriate location on the TPD based application server. This config file will allow a customer to install previously unsupported versions of NetBackup Client by providing necessary information to TPD.</p> <p>Check off (√) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
1 <input type="checkbox"/>	Application server iLO: Create NetBackup Config File	<p>Create the NetBackup Client config file on the server using the contents that were previously determined. The config file should be placed in the <i>/usr/TKLC/plat/etc/NetBackup/profiles</i> directory and should follow the following naming conventions: NB\$ver.conf</p> <p>Where \$ver is the client version number with the periods removed. For the 7.5 client the value of \$ver would be 75 and the full path to the file would be: <i>/usr/TKLC/plat/etc/NetBackup/profiles/NB75.conf</i></p> <p>Note: The config files must start with "NB" and must have a suffix of ".conf". The server is now capable of installing the corresponding NetBackup Client. The server is now capable of installing the corresponding NetBackup Client.</p>
2 <input type="checkbox"/>	Application server iLO: Create NetBackup Config script	<p>Create the NetBackup Client config script file on the server using the contents that were previously determined. The config script file should be placed in the <i>/usr/TKLC/plat/etc/NetBackup/scripts</i> directory. The name of the NetBackup Client config script file should be determined from the contents of the NetBackup Client config file.</p> <p>As an example for the NetBackup 7.5 client the following is applicable:</p> <p><u>NetBackup Client config:</u> <i>/usr/TKLC/plat/etc/NetBackup/profiles/NB75.conf</i></p> <p><u>NetBackup Client config script:</u> <i>/usr/TKLC/plat/etc/NetBackup/scripts/NB75</i></p>

Appendix H.4: Configure PMAC Application NetBackup Virtual Disk

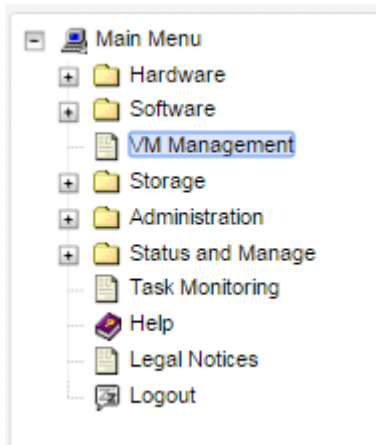
Appendix H.4. Configure the PMAC Application Guest NetBackup Virtual Disk

S T E P #	<p>This procedure will configure the PMAC application guest NetBackup Virtual Disk.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
1 <input type="checkbox"/>	PMAC GUI: Login	<p>Open web browser and navigate to the PMAC GUI, Login as guiadmin user:</p> <p><code>https://<pmac_network_ip></code></p> 

Appendix H.4. Configure the PMAC Application Guest NetBackup Virtual Disk

2 **PMAC GUI:**
 Create NetBackup Virtual Disk

Navigate to **Main Menu -> VM Management**



Edit the PMAC application guest to add the "NetBackup" virtual disk. Click "Edit" and enter the following data for the new NetBackup virtual disk.

- Size (MB): "2048"
- Host Pool: "vgguests"
- Host Vol Name: "<pmacGuestName>_NetBackup.img"
- Guest Dev Name: "NetBackup"

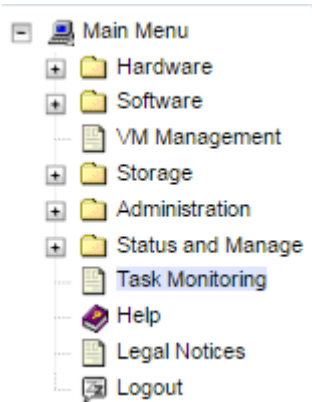
Virtual Disks					
Primary	Size (MB)	Host Pool	Host Vol Name	Guest Dev Name	
YES	51200	vgguests	5010441PMAC.img	PRIMARY	...
NO	10240	vgguests	5010441PMAC_logs.img	logs	...
NO	61440	vgguests	5010441PMAC_images.img	images	...
NO	20480	vgguests	5010441PMAC_isolimages.img	isoimages	...
NO	2048	vgguests	NetBackup.img	NetBackup	...

Confirm the PMAC application guest edit.

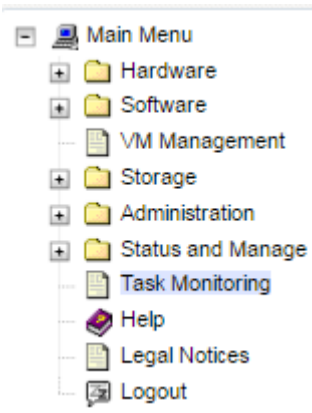
A confirmation dialog will be presented with the message, "Changes to the PMAC guest :<pmacGuestName> will not take effect until after the next power cycle. Do you wish to continue?"

Click **OK** to continue.

Appendix H.4. Configure the PMAC Application Guest NetBackup Virtual Disk

3	PMAC GUI: Verify NetBackup Virtual Disk	Confirm the Edit VM Guest task has completed successfully. Navigate to Main Menu -> Task Monitoring																		
		 <p>The screenshot shows a tree view of the PMAC GUI. The 'Main Menu' is expanded, and 'Task Monitoring' is highlighted in blue. Other items include Hardware, Software, VM Management, Storage, Administration, Status and Manage, Help, Legal Notices, and Logout.</p>																		
		Confirm that the guest edit task has completed successfully.																		
		<table border="1"> <thead> <tr> <th>ID</th> <th>Task</th> <th>Target</th> <th>Status</th> <th>State</th> <th>Task Output</th> <th>Running Time</th> <th>Start Time</th> <th>Progress</th> </tr> </thead> <tbody> <tr> <td>1459</td> <td>Edit Guest</td> <td>RMS: pc5010441 Guest: 5010441PMAC</td> <td>Guest editing completed (5010441PMAC)</td> <td>COMPLETE</td> <td>N/A</td> <td>0:00:14</td> <td>2016-08-10 13:16:18</td> <td>100%</td> </tr> </tbody> </table>	ID	Task	Target	Status	State	Task Output	Running Time	Start Time	Progress	1459	Edit Guest	RMS: pc5010441 Guest: 5010441PMAC	Guest editing completed (5010441PMAC)	COMPLETE	N/A	0:00:14	2016-08-10 13:16:18	100%
ID	Task	Target	Status	State	Task Output	Running Time	Start Time	Progress												
1459	Edit Guest	RMS: pc5010441 Guest: 5010441PMAC	Guest editing completed (5010441PMAC)	COMPLETE	N/A	0:00:14	2016-08-10 13:16:18	100%												

Appendix H.4. Configure the PMAC Application Guest NetBackup Virtual Disk

4	<p>PMAC GUI: Verify "In-Progress" tasks</p>	<p>Navigate to Main Menu -> Task Monitoring</p>  <p>If any tasks show as in-progress (blue) then wait for the task to complete prior to going to the next step.</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: left;"> <thead> <tr> <th>ID</th> <th>Task</th> <th>Target</th> <th>Status</th> <th>State</th> <th>Task Output</th> <th>Running Time</th> <th>Start Time</th> <th>Progress</th> </tr> </thead> <tbody> <tr> <td>1169</td> <td>Create Guest</td> <td>Hosts: pc5010439 Guest: Zombie_DSRSS7MP2</td> <td>Guest creation completed (Zombie_DSRSS7MP2)</td> <td>COMPLETE</td> <td></td> <td>0:00:44</td> <td>2016-08-05 12:10:46</td> <td>100%</td> </tr> <tr> <td>1170</td> <td>Install OS</td> <td>RMS: pc5010441 Guest: Zombie_DSRDAMP1</td> <td>Timed Out</td> <td>FAILED</td> <td>N/A</td> <td>0:16:40</td> <td>2016-08-05 12:10:53</td> <td>57%</td> </tr> <tr> <td>1171</td> <td>Install OS</td> <td>RMS: pc5010439 Guest: Zombie_DSRDAMP2</td> <td>Timed Out</td> <td>FAILED</td> <td>N/A</td> <td>0:16:32</td> <td>2016-08-05 12:11:02</td> <td>57%</td> </tr> <tr> <td>1172</td> <td>Install OS</td> <td>RMS: pc5010441 Guest: Zombie_DSRIPFE1</td> <td>Done: TPD.install-7.2.0.0.0_88.23.0-OracleLinux8.7-x86_64</td> <td>COMPLETE</td> <td>N/A</td> <td>0:24:36</td> <td>2016-08-05 12:11:08</td> <td>100%</td> </tr> </tbody> </table> <p>Note: If desired, you can delete all of the Complete and Failed tasks using the "Delete Completed" and "Delete Failed" buttons. This will leave only the in-progress tasks.</p>	ID	Task	Target	Status	State	Task Output	Running Time	Start Time	Progress	1169	Create Guest	Hosts: pc5010439 Guest: Zombie_DSRSS7MP2	Guest creation completed (Zombie_DSRSS7MP2)	COMPLETE		0:00:44	2016-08-05 12:10:46	100%	1170	Install OS	RMS: pc5010441 Guest: Zombie_DSRDAMP1	Timed Out	FAILED	N/A	0:16:40	2016-08-05 12:10:53	57%	1171	Install OS	RMS: pc5010439 Guest: Zombie_DSRDAMP2	Timed Out	FAILED	N/A	0:16:32	2016-08-05 12:11:02	57%	1172	Install OS	RMS: pc5010441 Guest: Zombie_DSRIPFE1	Done: TPD.install-7.2.0.0.0_88.23.0-OracleLinux8.7-x86_64	COMPLETE	N/A	0:24:36	2016-08-05 12:11:08	100%
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Appendix H.4. Configure the PMAC Application Guest NetBackup Virtual Disk

<p>5</p> <p><input type="checkbox"/></p>	<p>Management Server TVOE iLO/iLOM: SSH into the Management Server</p>	<p>Using an SSH client such as <code>putty</code>, <code>ssh</code> to the TVOE host as <i>admusr</i>.</p> <p>Login using <i>virsh</i>, and wait until you see the login prompt :</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo /usr/bin/virsh list Id Name State ----- 1 myTPD running 2 PM&C running</pre> <pre style="border: 1px solid black; padding: 5px;">\$ sudo /usr/bin/virsh console <PM&C> [Output Removed] Starting ntdMgr: [OK] Starting atd: [OK] 'TPD Up' notification(s) already sent: [OK] upstart: Starting tpdProvd... upstart: tpdProvd started. CentOS release 6.2 (Final) Kernel 2.6.32-220.17.1.el6prere16.0.0_80.14.0.x86_64 on an x86_64 PM&Cdev7 login:</pre>
<p>6</p> <p><input type="checkbox"/></p>	<p>PMAC: Shutdown the PMAC Guest</p>	<p>Assuming no in-progress tasks exists, it is safe to shut down the PMAC guest. Execute the following command:</p> <pre style="border: 1px solid black; padding: 5px;">[admusr@pmac ~]\$ sudo /usr/bin/halt -p Broadcast message from root@pmacDev901 (/dev/ttyS0) at 11:20 ... The system is going down for power off NOW! [admusr@pmac ~]\$</pre> <p>Eventually the <code>virsh</code> console session is closed and you are returned to the TVOE host command prompt:</p> <pre style="border: 1px solid black; padding: 5px;">Halting system... Power down. [admusr@tvoe ~]\$</pre>

Appendix H.4. Configure the PMAC Application Guest NetBackup Virtual Disk

7 <input type="checkbox"/>	Management Server TVOE iLO/iLOM: Verify PMAC Guest is shutdown	<p>From the TVOE host command prompt execute the following command:</p> <pre>[admusr@tvoe ~]\$ sudo /usr/bin/virsh list --all Id Name State ----- - pmac shut off [admusr@tvoe ~]\$</pre> <p>This should show the guest state as “shut off”. You will want to be sure all guests are in the shut off state as well.</p>
8 <input type="checkbox"/>	Management Server TVOE iLO/iLOM: Start PMAC Guest	<p>Issue the following command to start the PMAC guest:</p> <pre>\$ sudo /usr/bin/virsh virsh # list --all Id Name State ----- 20 pmacU14-1 shut off virsh # start pmacU14-1 Domain pmacU14-1 started virsh # list --all Id Name State ----- 20 pmacU14-1 running</pre>

Appendix I: List of Frequently used Time Zones

Table 3. Time Zones

Time Zone Value	Description	Universal Time Code (UTC) Offset
America/New_York	Eastern Time	UTC-05
America/Chicago	Central Time	UTC-06
America/Denver	Mountain Time	UTC-07
America/Phoenix	Mountain Standard Time - Arizona	UTC-07
America/Los_Angeles	Pacific Time	UTC-08
America/Anchorage	Alaska Time	UTC-09
Pacific/Honolulu	Hawaii	UTC-10
Africa/Johannesburg		UTC+02
America/Mexico_City	Central Time - most locations	UTC-06
Africa/Monrovia		UTC+00
Asia/Tokyo		UTC+09
America/Jamaica		UTC-05
Europe/Rome		UTC+01
Asia/Hong_Kong		UTC+08
Pacific/Guam		UTC+10
Europe/Athens		UTC+02
Europe/London		UTC+00
Europe/Paris		UTC+01
Europe/Madrid	mainland	UTC+01
Africa/Cairo		UTC+02
Europe/Copenhagen		UTC+01
Europe/Berlin		UTC+01
Europe/Prague		UTC+01
America/Vancouver	Pacific Time - west British Columbia	UTC-08
America/Edmonton	Mountain Time - Alberta, east British Columbia & westSaskatchewan	UTC-07
America/Toronto	Eastern Time - Ontario - most locations	UTC-05
America/Montreal	Eastern Time - Quebec - most locations	UTC-05
America/Sao_Paulo	South & Southeast Brazil	UTC-03
Europe/Brussels		UTC+01
Australia/Perth	Western Australia - most locations	UTC+08
Australia/Sydney	New South Wales - most locations	UTC+10
Asia/Seoul		UTC+09
Africa/Lagos		UTC+01
Europe/Warsaw		UTC+01
America/Puerto_Rico		UTC-04
Europe/Moscow	Moscow+00 - west Russia	UTC+04
Asia/Manila		UTC+08
Atlantic/Reykjavik		UTC+00
Asia/Jerusalem		UTC+02

Appendix J: Sample Network Element

In order to enter all the network information for a network element, a specially formatted XML file needs to be filled out with the required network information. The network information is needed to configure both the NOAM and any SOAM Network Elements.

It is expected that the maintainer/creator of this file has networking knowledge of this product and the customer site at which it is being installed. The following is an example of a Network Element XML file.

The SOAM Network Element XML file needs to have same network names for the networks as the NOAMP Network Element XML file has. It is easy to accidentally create different network names for NOAMP and SOAM Network Element, and then the mapping of services to networks will not be possible.

Figure 4. Example Network Element XML File

```
<?xml version="1.0"?>
<networkelement>
<name>NE</name>
<networks>
<network>
<name>INTERNALXMI</name>
<vlanId>3</vlanId>
  <ip>10.2.0.0</ip>
<mask>255.255.255.0</mask>
<gateway>10.2.0.1</gateway>
<isDefault>true</isDefault>
</network>
<network>
<name>INTERNALIMI</name>
<vlanId>4</vlanId>
<ip>10.3.0.0</ip>
<mask>255.255.255.0</mask>
<nonRoutable>true</nonRoutable>
</network>
</networks>
</networkelement>
```

'nonRoutable' Field: By defining a network as 'nonRoutable' as seen above for INTERNALIMI, this means that the network shall not be routable outside the layer 3 boundary. This allows the user to define the same IP range in each SOAM site, and no duplicate IP check will be performed during server creation.

Appendix K: Accessing the NOAM GUI using SSH Tunneling with Putty

Appendix K.1. Accessing the NOAM GUI using SSH Tunneling with Putty

S T E P #	<p>Note: This procedure assumes that the NOAM server you wish to create a tunnel to has been IPM'd with the DSR application ISO</p> <p>Note: This procedure assumes that you have exchanged SSH keys between the PMAC and the first NOAM server.</p> <p>Note: This procedure assumes that you have obtained the control network IP address for the first NOAM server. You can get this from the PMAC GUI's Software Inventory screen.</p> <p>That variable will be referred to as <NOAM-Control-IP> in these instructions.</p> <p>Note: It is recommended that you only use this procedure if you are using Windows XP. There are known issues with putty and Windows 7 that may cause unpredictable results when viewing GUI screens through SSH tunnels.</p> <p>Check off (√) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
1 <input type="checkbox"/>	Log in to PMAC Server using Putty	Launch the Putty application from your station and open a session to the PMAC's management address.

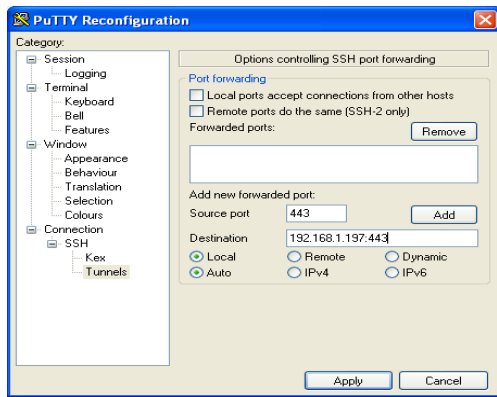
Appendix K.1. Accessing the NOAM GUI using SSH Tunneling with Putty

2 **Create SSH Tunnel through the PMAC in Putty**

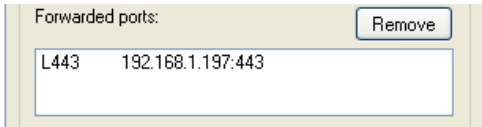


Click the icon in the upper left hand corner of the Putty window to bring down the **main menu**.

Select **Change Settings**
 Select **Connections -> SSH -> Tunnels**




1. Verify that the **“Local”** and **“Auto”** buttons are selected. Leave other fields blank
2. In **Source Port**, enter **443**
3. In **Destination**, enter **<NOAM-Control-IP>:443**
4. Click **Add**



You should now see a display similar to the following in the text box at the center of this dialog.


5. Click **Apply**
6. **Connect** to the PMAC, and login as **admusr**

Appendix K.1. Accessing the NOAM GUI using SSH Tunneling with Putty


<p>3</p> <p><input type="checkbox"/></p>	<p>Use Local Web Browser to Connect to GUI</p>	<p>Using your web browser, navigate to the following URL:</p> <p><input type="text" value="https://localhost/"/></p>  <p>You should arrive at the login screen for the NOAM GUI.</p> <p>Note: If using windows 7 and a blank screen is displayed, enable Compatibility Mode in IE, or use a different browser (Firefox or Chrome)</p>
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Appendix L: Accessing the NOAM GUI using SSH Tunneling with OpenSSH for Windows

Appendix L.1. Accessing the NOAM GUI using SSH Tunneling with OpenSSH for Windows

<p>S</p> <p>T</p> <p>E</p> <p>P</p> <p>#</p>	<p>Note: This procedure assumes that the NOAM server you wish to create a tunnel to has been IPM'd with the DSR application ISO</p> <p>Note: This procedure assumes that you have exchanged SSH keys between the PMAC and the first NOAM server.</p> <p>Note: This procedure assumes that you have obtained the control network IP address for the first NOAM server. You can get this from the PMAC GUI's Software Inventory screen. That variable will be referred to as <NOAM-Control-IP> in these instructions.</p> <p>Note: This is the recommended tunneling method if you are using Windows 7.</p> <p>Check off (√) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	<p>Using your web browser, navigate to the following URL:</p> <p><input type="text" value="https://localhost/"/></p>  <p>You should arrive at the login screen for the NOAM GUI.</p> <p>Note: If using windows 7 and a blank screen is displayed, enable Compatibility Mode in IE, or use a different browser (Firefox or Chrome)</p>
<p>1</p> <p><input type="checkbox"/></p>	<p>If Needed, Download and Install OpenSSH for Windows</p>	<p>Download OpenSSH for Windows from here.</p> <p>Extract the installer from the ZIP file, then run the installer. openssh is now installed on your PC.</p>

Appendix L.1. Accessing the NOAM GUI using SSH Tunneling with OpenSSH for Windows

<p>2</p> <p><input type="checkbox"/></p>	<p>Create SSH Tunnel Through the PMAC</p>	<p>Open up a Command Prompt shell</p> <p>Within the command shell, enter the following to create the SSH tunnel to the 1st NO, through the PMAC:</p> <pre style="border: 1px solid black; padding: 5px;">> ssh -L 443:<1st_NO_Control_IP_Address>:443 admusr@<PMAC_Management_IP_Address></pre> <p>(Answer Yes if it asks if you want to continue connecting)</p> <p>The tunnel to the 1st NOAM is now established.</p>
<p>3</p> <p><input type="checkbox"/></p>	<p>Use Local Web Browser to Connect to GUI</p>	<p>Using your web browser, navigate to the following URL:</p> <pre style="border: 1px solid black; padding: 2px;">https://localhost/</pre>  <p>You should arrive at the login screen for the NOAM GUI.</p>

Appendix M: IDIH Fast Deployment Configuration

The `fdc.cfg` file contains 8 sections. The following is a list of those sections with a short description:

Section	Description
Software Images	A list of the TVOE, TPD, and iDIH application versions.
TVOE RMS	Includes Hardware Type and ILO address of the Rack Mount Server.
TVOE Configuration (Up to 3)	Contains all ip addresses, hostname and network devices for the TVOE host.
Guest Configurations (3)	The guest sections contain network and hostname configuration for the Oracle, Mediation and Application guests.

SOFTWARE IMAGES

Be sure to update the software images section based on software versions you intend to install. The following table outlines typical installation failures caused by incorrect software versions. Use the `"fdconfig dumpsteps -file="` command to produce output of a Fast Deployment Session.

Software Image	Element	Command Text
TVOE ISO	mgmtsrvrtvoe	IPM Server
TPD ISO	Oracle,tpd Mediation,tpd Application,tpd	IPM Server
iDIH Mediation ISO	Mgmtsrvrtvoe,configExt	Transfer File
iDIH Oracle ISO iDIH Mediation ISO iDIH Application ISO	Oracle,ora Mediation,med Application,app	Upgrade Server

TVOE RMS

The TVOE RMS section contains the ILO ip address and Hardware profile. If the ILO IP address is incorrect the PMAC will not be able to discover the Rack Mount Server, server discovery must occur before the installation can begin.

TVOE CONFIGURATION

This section defines the hostname, network ip addresses for the TVOE bridges and it defines the network devices. You can define the devices you intend to use for bonded interfaces and the tagged bonded interfaces you intend to associate with a bridge.

GUEST CONFIGURATION

These sections contain the hostname, IPv4 addresses, IPv4 netmask, IPv4 gateway, and IPv6 addresses. If you do not intend to configure IPv6 addresses then leave those IP addresses commented out. The IPv6 netmask is included in the IPv6 address.

Note: Although the network for the iDIH 'int' network can be changed to a unique value, the IP scheme must follow the below rules:

- db-guest int ip = x.y.z.**n**
- Mediation-guest int ip = x.y.z.**n+1**
- Appserver-guest int ip = x.y.z.**n+2**

Note: this network is a non-routable network, so if the IP range of this network is not required; it is recommended that these values are left unchanged from the fast deployment template.

Below is FDC configuration template included on the mediation ISO:

IPv4 Configuration shown:

Note: IPv6 addresses should be entered into the <address> field in the FDC template. IPv6 prefix should be configured in the '<netmask>' field in the FDC template as only the number of the prefix (i.e 64)

Note: The hostname in the <serverinfo><hostname> stanza in the Oracle Server can be anything except uppercase "ORA". The example below is **NOT** allowed:

```
<serverinfo>
<!--Specify Oracle server hostname -->
<hostname>ORA</hostname>
</serverinfo>
```

```
<?xml version="1.0"?>
<fdc>
  <infrastructures>
    <infrastructure name="localPMAC">
      <interfaces>
        <interface>
          <ipaddress>127.0.0.1</ipaddress>
        </interface>
      </interfaces>
      <software>
        <image id="tpd">
          <!--Target TPD release Image here -->
          <name>TPD.install-7.0.2.0.0 86.28.0-OracleLinux6.6-x86 64</name>
        </image>
        <image id="ora">
          <!--Target oracle release image name here -->
          <name>oracle-7.1.0.0.0_71.20.1-x86_64</name>
        </image>
        <image id="med">
          <!--Target mediation release image name here -->
          <name>mediation-7.1.0.0.0 71.21.0-x86 64</name>
        </image>
        <image id="app">
          <!--Target application release image name here -->
          <name>apps-7.1.0.0.0 71.20.1-x86 64</name>
        </image>
      </software>
      <hardware>
        <cabinet id="1">
```



```

    <cabid>1</cabid>
  </cabinet>
  <rms id="mgmtrsrvr1">
    <!-- RMS #1 iLO/iLOM address -->
    <rmsOOBIP>10.250.56.201</rmsOOBIP>
    <!-- RMS #1 hostname can be changed here -->
    <rmsname>Sterling-TVOE-3</rmsname>
    <!--iLO login user/pass -->
    <rmsuser>root</rmsuser>
    <rmpassword>changeme</rmpassword>
  </rms>
  <rms id="mgmtrsrvr2">
    <!-- RMS #2 iLO/iLOM address -->
    <rmsOOBIP>10.250.56.202</rmsOOBIP>
    <!-- RMS #2 hostname can be changed here -->
    <rmsname>Sterling-TVOE-4</rmsname>
    <!--iLO login user/pass -->
    <rmsuser>root</rmsuser>
    <rmpassword>changeme</rmpassword>
  </rms>
  <rms id="mgmtrsrvr3">
    <!-- RMS #3 iLO/iLOM address -->
    <rmsOOBIP>10.250.56.203</rmsOOBIP>
    <!-- RMS #3 hostname can be changed here -->
    <rmsname>Sterling-TVOE-5</rmsname>
    <!--iLO login user/pass -->
    <rmsuser>root</rmsuser>
    <rmpassword>changeme</rmpassword>
  </rms>
</hardware>
<tvoehost id="mgmtrsrvrtvoe1">
  <hardware>
    <!--rmshwid must match rms id above -->
    <rmshwid>mgmtrsrvr1</rmshwid>
  </hardware>
</tvoehost>
<tvoehost id="mgmtrsrvrtvoe2">
  <hardware>
    <!--rmshwid must match rms id above -->
    <rmshwid>mgmtrsrvr2</rmshwid>
  </hardware>
</tvoehost>
<tvoehost id="mgmtrsrvrtvoe3">
  <hardware>
    <!--rmshwid must match rms id above -->
    <rmshwid>mgmtrsrvr3</rmshwid>
  </hardware>
</tvoehost>
</infrastructure>
</infrastructures>
<servers>
  <tvoeguest id="ORA">
    <infrastructure>localPMAC</infrastructure>
    <!--Specify which Rack Mount Server TVOE Host the Oracle server will be placed -->
    <tvoehost>mgmtrsrvrtvoe1</tvoehost>
    <name>ORA</name>
    <cpus>4</cpus>
    <memory>8192</memory>
    <watchdog>ON</watchdog>
    <vnics>
      <vnic>
        <hostbridge>control</hostbridge>
        <guestdevname>control</guestdevname>
      </vnic>
      <vnic>
        <hostbridge>int</hostbridge>
        <guestdevname>int</guestdevname>
      </vnic>
      <vnic>
        <hostbridge>xmi</hostbridge>
        <guestdevname>xmi</guestdevname>
      </vnic>
    </vnics>
    <vdisks>
      <vdisk>
        <hostvolname>ORA.img</hostvolname>
        <hostpool>vgguests</hostpool>
        <size>65536</size>
        <primary>yes</primary>
        <guestdevname>PRIMARY</guestdevname>
      </vdisk>
    </vdisks>
  </tvoeguest>
</servers>

```

```

<vdisk>
  <hostvolname>ORA_sdb.img</hostvolname>
  <hostpool>vgguests</hostpool>
  <size>51200</size>
  <primary>no</primary>
  <guestdevname>sdb</guestdevname>
</vdisk>
<vdisk>
  <hostvolname>ORA_sdc.img</hostvolname>
  <hostpool>vgguests</hostpool>
  <size>51200</size>
  <primary>no</primary>
  <guestdevname>sdc</guestdevname>
</vdisk>
</vdisks>
<software>
  <baseimage>tpd</baseimage>
  <appimage>ora</appimage>
</software>
<tpdnetworking>
  <tpdinterfaces>
    <tpdinterface id="int">
      <device>int</device>
      <type>Ethernet</type>
      <onboot>yes</onboot>
      <bootproto>none</bootproto>
      <address>10.254.254.2</address>
      <netmask>255.255.255.224</netmask>
    </tpdinterface>
    <tpdinterface id="xmi">
      <device>xmi</device>
      <type>Ethernet</type>
      <onboot>yes</onboot>
      <bootproto>none</bootproto>
      <!--Specify xmi IP address -->
      <address>10.240.30.204</address>
      <!--Specify xmi subnet -->
      <netmask>255.255.255.128</netmask>
    </tpdinterface>
  </tpdinterfaces>
  <tpdroutes>
    <tpdroute id="xmi_default">
      <type>default</type>
      <device>xmi</device>
      <!--Specify default gateway of xmi network-->
      <gateway>10.240.30.129</gateway>
    </tpdroute>
  </tpdroutes>
</tpdnetworking>
<serverinfo>
  <!--Specify Oracle server hostname-->
  <hostname>Sterling-IDIH-ora</hostname>
</serverinfo>
<scripts>
  <postsrvapp>
    <scriptfile id="oracleConfig">
      <filename>/usr/bin/sudo</filename>
      <arguments>/opt/xIH/oracle/configureOracle.sh</arguments>
      <timeout>4100</timeout>
    </scriptfile>
  </postsrvapp>
  <postdeploy>
    <scriptfile id="oraHealthcheck">
      <filename>/usr/bin/sudo</filename>
      <arguments>/usr/TKLC/xIH/plat/bin/analyze_server.sh -i</arguments>
    </scriptfile>
  </postdeploy>
</scripts>
</tvoeguest>
<tvoeguest id="MED">
  <infrastructure>localPMAC</infrastructure>
  <!--Specify which Rack Mount Server TVOE Host the Mediation server will be placed -->
  <tvoehost>mgmtsrvrtvoe2</tvoehost>
  <name>MED</name>
  <cpus>4</cpus>
  <memory>8192</memory>
  <watchdog>ON</watchdog>
  <vnics>
    <vnic>
      <hostbridge>control</hostbridge>
      <guestdevname>control</guestdevname>
    </vnic>
  </vnics>

```

```

</vnic>
<vnic>
  <hostbridge>int</hostbridge>
  <guestdevname>int</guestdevname>
</vnic>
<vnic>
  <hostbridge>xmi</hostbridge>
  <guestdevname>xmi</guestdevname>
</vnic>
<vnic>
  <hostbridge>imi</hostbridge>
  <guestdevname>imi</guestdevname>
</vnic>
</vnics>
<vdisk>
  <vdisk>
    <hostvolname>MED.img</hostvolname>
    <hostpool>vgguests</hostpool>
    <size>65536</size>
    <primary>yes</primary>
    <guestdevname>PRIMARY</guestdevname>
  </vdisk>
</vdisk>
<software>
  <baseimage>tpd</baseimage>
  <appimage>med</appimage>
</software>
<tpdnetworking>
  <tpdinterfaces>
    <tpdinterface id="imi">
      <device>imi</device>
      <type>Ethernet</type>
      <onboot>yes</onboot>
      <bootproto>none</bootproto>
      <!--Specify imi IP address -->
      <address>192.168.201.139</address>
      <!--Specify imi subnet mask -->
      <netmask>255.255.255.0</netmask>
    </tpdinterface>
    <tpdinterface id="int">
      <device>int</device>
      <type>Ethernet</type>
      <onboot>yes</onboot>
      <bootproto>none</bootproto>
      <address>10.254.254.3</address>
      <netmask>255.255.255.224</netmask>
    </tpdinterface>
    <tpdinterface id="xmi">
      <device>xmi</device>
      <type>Ethernet</type>
      <onboot>yes</onboot>
      <bootproto>none</bootproto>
      <!--Specify xmi IP address -->
      <address>10.240.30.203</address>
      <!--Specify xmi subnet mask -->
      <netmask>255.255.255.128</netmask>
    </tpdinterface>
  </tpdinterfaces>
  <tpdroutes>
    <tpdroute id="xmi_default">
      <type>default</type>
      <device>xmi</device>
      <!--Specify default gateway of xmi network-->
      <gateway>10.240.30.129</gateway>
    </tpdroute>
  </tpdroutes>
</tpdnetworking>
<serverinfo>
  <!--Specify Mediation server hostname-->
  <hostname>Sterling-IDIH-med</hostname>
</serverinfo>
<scripts>
  <postdeploy>
    <scriptfile id="medConfig">
      <filename>/usr/bin/sudo</filename>
      <arguments>/opt/xIH/mediation/install.sh</arguments>
    </scriptfile>
    <scriptfile id="medHealthcheck">
      <filename>/usr/bin/sudo</filename>
      <arguments>/usr/TKLC/xIH/plat/bin/analyze_server.sh -i</arguments>
    </scriptfile>
  </postdeploy>
</scripts>

```

```

    </postdeploy>
  </scripts>
</tvoeguest>
<tvoeguest id="APP">
  <infrastructure>localPMAC</infrastructure>
  <!--Specify which Rack Mount Server TVOE Host the Application server will be placed -->
  <tvoehost>mgmtsrvrtvoe3</tvoehost>
  <name>APP</name>
  <cpus>4</cpus>
  <memory>8192</memory>
  <watchdog>ON</watchdog>
  <vnics>
    <vnic>
      <hostbridge>control</hostbridge>
      <guestdevname>control</guestdevname>
    </vnic>
    <vnic>
      <hostbridge>int</hostbridge>
      <guestdevname>int</guestdevname>
    </vnic>
    <vnic>
      <hostbridge>xmi</hostbridge>
      <guestdevname>xmi</guestdevname>
    </vnic>
  </vnics>
  <vdisks>
    <vdisk>
      <hostvolname>APP.img</hostvolname>
      <hostpool>vgguests</hostpool>
      <size>65536</size>
      <primary>yes</primary>
      <guestdevname>PRIMARY</guestdevname>
    </vdisk>
  </vdisks>
  <software>
    <baseimage>tpd</baseimage>
    <appimage>app</appimage>
  </software>
  <tpdnetworking>
    <tpdinterfaces>
      <tpdinterface id="int">
        <device>int</device>
        <type>Ethernet</type>
        <onboot>yes</onboot>
        <bootproto>none</bootproto>
        <address>10.254.254.4</address>
        <netmask>255.255.255.224</netmask>
      </tpdinterface>
      <tpdinterface id="xmi">
        <device>xmi</device>
        <type>Ethernet</type>
        <onboot>yes</onboot>
        <bootproto>none</bootproto>
        <!--Specify xmi IP address -->
        <address>10.240.30.202</address>
        <!--Specify xmi subnet mask -->
        <netmask>255.255.255.128</netmask>
      </tpdinterface>
    </tpdinterfaces>
    <tpdroutes>
      <tpdroute id="xmi_default">
        <type>default</type>
        <device>xmi</device>
        <!--Specify default gateway of xmi network-->
        <gateway>10.240.30.129</gateway>
      </tpdroute>
    </tpdroutes>
  </tpdnetworking>
  <serverinfo>
    <!--Specify Application server hostname-->
    <hostname>Sterling-IDIH-app</hostname>
  </serverinfo>
  <scripts>
    <postdeploy>
      <scriptfile id="appSleep">
        <filename>/bin/sleep</filename>
        <arguments>60</arguments>
      </scriptfile>
      <scriptfile id="appConfig">
        <filename>/usr/bin/sudo</filename>
        <arguments>/opt/xIH/apps/install.sh</arguments>
    </postdeploy>
  </scripts>
</tvoeguest>

```

```

        <timeout>7000</timeout>
      </scriptfile>
      <scriptfile id="appHealthcheck">
        <filename>/usr/bin/sudo</filename>
        <arguments>/usr/TKLC/xIH/plat/bin/analyze_server.sh -i</arguments>
      </scriptfile>
    </postdeploy>
  </scripts>
</tvoeguest>
</servers>
</fdc>

```

Appendix N: Creating a Bootable USB Drive on Linux


Appendix N.1. Creating a Bootable USB Drive on Linux

S T E P #	<p>This procedure will create a Bootable USB drive from a .iso file on a Linux Machine</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
1 <input type="checkbox"/>	Insert USB Media	<p>Insert the USB Media into the USB Port. It should automatically be mounted under /media</p> <p>Obtain the path of the USB drive by running:</p> <pre style="border: 1px solid black; padding: 2px;">\$ ls /media</pre> <p>The output should be similar to the following: sdb1</p> <p>Note down the path without the partition number (in this case, it would be /dev/sdb)</p>
	Linux Machine	<p>Obtain the TVOE .iso file and copy it onto the local Linux machine (e.g. under /var/TKLC/upgrade)</p>
	Copy the .ISO file onto the USB drive	<p>Use the dd command to copy the .iso file onto the USB drive</p> <p>Note: Make sure you do not use the partition number when copying the file</p> <pre style="border: 1px solid black; padding: 2px;">\$ sudo dd if=<path_to_iso_image> of=/dev/sdb bs=4M oflag=direct</pre>

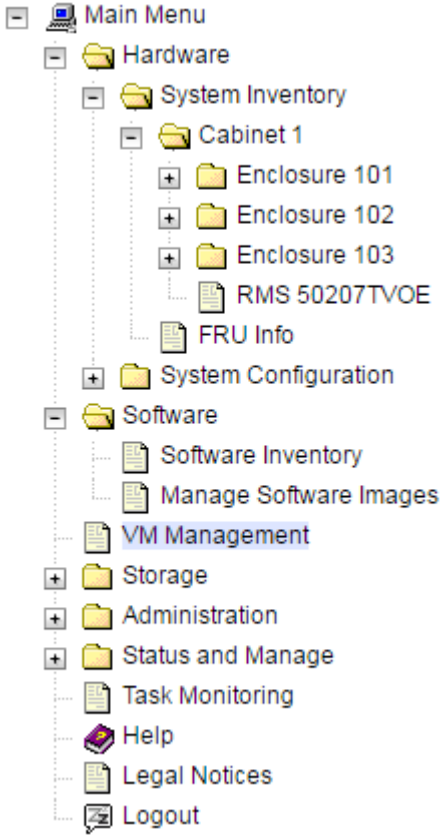
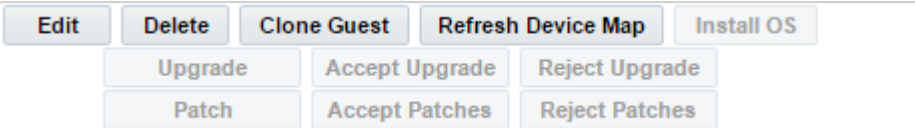
Appendix O: IDIH External Drive Removal

This procedure should only be run if the user intends to do a fresh installation on an existing IDIH.

Appendix O.1. IDIH External Drive Removal

<p>S T E P #</p>	<p>This procedure will destroy all of the data in the Oracle Database.</p> <p>Warning: Do not perform this procedure on an IDIH system unless you intent to do a fresh TVOE installation.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
<p>1</p> <p><input type="checkbox"/></p>	<p>PMAC GUI: Login</p>	<p>Open web browser and enter:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>https://<PMAC Mgmt Network IP></p> </div> <p>Login as guiadmin user:</p> 

Appendix O.1. IDIH External Drive Removal

<p>2</p> <p><input type="checkbox"/></p>	<p>PMAC GUI: Delete VMs if Needed</p>	<p>Before a re-installation can be performed, the IDIH VMs must be removed first.</p> <p>Navigate to Main Menu -> VM Management</p>  <p>Select each of the IDIH VMs and select the Delete button.</p> 
<p>3</p> <p><input type="checkbox"/></p>	<p>IDIH TVOE HOST: Login</p>	<p>Establish an SSH session to the TVOE host, login as admusr</p>

Appendix O.1. IDIH External Drive Removal

<p>4</p> <p><input type="checkbox"/></p>	<p>IDIH TVOE HOST: Verify External Drive Exists</p>	<p>Execute the following command to verify the external drive exists:</p> <p>Oracle X6-2</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo storcli -ldinfo -l1 -a0 head</pre> <p>The following information should be displayed:</p> <pre style="border: 1px solid black; padding: 5px;">Adapter 0 -- Virtual Drive Information: Virtual Drive: 1 (Target Id: 1) Name : RAID Level : Primary-1, Secondary-0, RAID Level Qualifier-0 Size : 1.633 TB Mirror Data : 1.633 TB State : Optimal Strip Size : 64 KB</pre>
<p>5</p> <p><input type="checkbox"/></p>	<p>IDIH TVOE HOST: Remove the External Drive and Volume Group</p>	<p>Execute the following command to remove the external drive and volume group:</p> <p>Oracle X6-2:</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo /usr/TKLC/plat/sbin/storageClean pool \ --poolName=external3 --level=pv \$ sudo /usr/TKLC/plat/sbin/storageClean lvm \ --vgName=external3 --level=vg \$ sudo /usr/TKLC/plat/sbin/storageClean pool \ --poolName=external2 --level=pv \$ sudo /usr/TKLC/plat/sbin/storageClean lvm \ --vgName=external2 --level=vg \$ sudo /usr/TKLC/plat/sbin/storageClean pool \ --poolName=external1 --level=pv \$ sudo /usr/TKLC/plat/sbin/storageClean lvm \ --vgName=external1 --level=vg \$ sudo megacli -cfglddel -l3 -a0 \$ sudo megacli -cfglddel -l2 -a0 \$ sudo megacli -cfglddel -l1 -a0</pre>

Appendix P: Growth/De-Growth/Re-Shuffle (Oracle X6-2)

For scenarios where growth or de-growth is required, it may be necessary to delete or re-shuffle VM guests, SDS, and DSR servers. **Appendix P.1:** Growth (X6-2) will explain how to add individual VMs and add various DSR/SDS servers. **Appendix P.2:** De-Growth (Oracle X6-2) will explain how to delete individual VMs and move or remove various DSR/SDS servers.

Appendix P.1: Growth (X6-2)


For growth scenarios where it is necessary to add DSR/SDS servers, the following sequence of steps should be followed:

Step	Procedure(s)
Perform Backups	Appendix P.1.1
Perform system health check	Appendix P.1.2
Identify Servers which will be affected by the Growth: <ul style="list-style-type: none"> • DR-NOAM • SOAM Spares • DSR MP (SBR, SS7MP, IPFE)/ SDS DP • Query Server 	
Add new rack mount server	Appendix P.1.3
Create and Configure the VMs on the new Rack Mount Servers	
Configure Servers in new VM locations	NOAM/DR-NOAM (DSR/SDS): Appendix P.1.4 SOAM (DSR/SDS): Appendix P.1.5 MP/DP (DSR/SDS): Appendix P.1.6 Query Server (SDS): Appendix P.1.7
Post Growth Health Check	Appendix P.1.8
Post Growth Backups	Appendix P.1.9

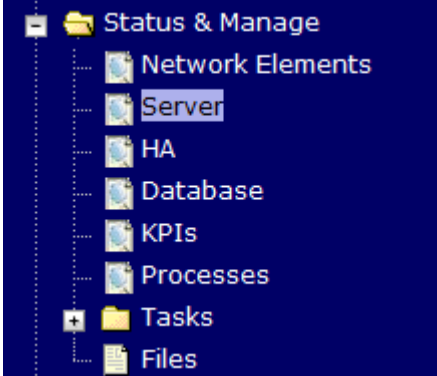
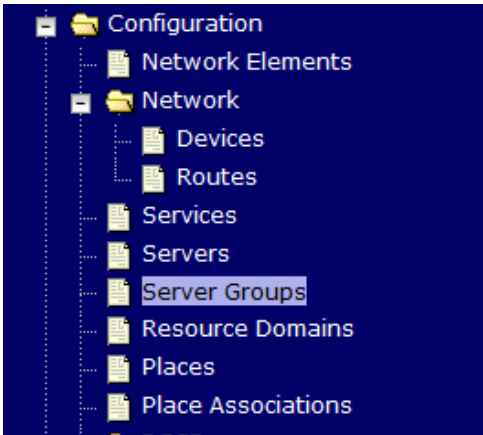
Appendix P.1.1 Perform Backups

S T E P #	This procedure will reference steps to backup all necessary items before a growth scenario.	
	Check off (√) each step as it is completed. Boxes have been provided for this purpose under each step number.	
	If this procedure fails, contact Appendix R: My Oracle Support (MOS) , and ask for assistance.	
1 <input type="checkbox"/>	Backup TVOE	Backup all TVOE host configurations by executing Section 4.18.5 Backup TVOE Configuration
2 <input type="checkbox"/>	Backup PMAC	Backup the PMAC application by executing Section 4.18.6 Backup PMAC Application
3 <input type="checkbox"/>	Backup NOAM/SOAM databases	Backup the NOAM and SOAM Databases by executing Sections 4.18.7 Backup NOAM Database and 4.18.8 Backup SOAM Database Note: Database backup on SDS SOAMs not required



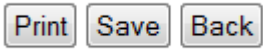
Appendix P.1.2 Perform Health Check

S T E P #	<p>This procedure will provide steps verify system status and log all alarms.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
<p>1</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Login</p>	<p>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:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p><code>http://<Primary_NOAM_VIP_IP_Address></code></p> </div> <p>Login as the <i>guiadmin</i> user:</p> <div style="text-align: center;">  <p>The screenshot shows the Oracle System Login interface. At the top is the Oracle logo in red. Below it is the text 'Oracle System Login' and the date 'Fri Mar 20 12:29:52 2015 EDT'. A central box titled 'Log In' contains the instruction 'Enter your username and password to log in'. It has two input fields: 'Username: guiadmin' and 'Password: ●●●●●●'. There is a 'Change password' checkbox and a 'Log In' button. Below the box, it says 'Welcome to the Oracle System Login.' and 'Unauthorized access is prohibited. This Oracle system requires the use of Microsoft Internet Explorer 8.0, 9.0, or 10.0 with support for JavaScript and cookies.' At the bottom, it states 'Oracle and Java are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.'</p> </div>

Appendix P.1.2 Perform Health Check

<p>2</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Verify Server Status</p>	<p>Navigate to Main Menu -> Status & Manage -> Server</p>  <p>Verify all Server Status is Normal (Norm) for: Alarm (Alm), Database (DB), Replication Status, and Processes (Proc).</p> <table border="1"> <thead> <tr> <th>Appl State</th> <th>Alm</th> <th>DB</th> <th>Reporting Status</th> <th>Proc</th> </tr> </thead> <tbody> <tr> <td>Enabled</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> <tr> <td>Enabled</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> <tr> <td>Enabled</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> <tr> <td>Enabled</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> </tbody> </table> <p>Do not proceed to with Growth/De-Growth 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.</p> <p>If the Alarm (Alm) status is not Norm but only Minor alarms are present, it is acceptable to proceed. 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</p>	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
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																							
<p>3</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Verify Server Configuration</p>	<p>Navigate to Main Menu -> Configuration -> Server Groups</p>  <p>Verify the configuration data is correct for your network.</p>																									

Appendix P.1.2 Perform Health Check

<p>4</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Log Current Alarms</p>	<p>Navigate to Main Menu -> Alarms & Events -> View Active</p>  <p>Click on the Report button</p>  <p>Save or Print this report, keep copies for future reference.</p> 
<p>5</p> <p><input type="checkbox"/></p>	<p>SOAM VIP GUI: Repeat For SOAM</p>	<p>Repeat Steps 1-4 for the SOAM</p>

Appendix P.1.3 Adding a new TVOE Server/VMs

<p>S T E P #</p>	<p>This procedure will provide steps to add a new rack mount server.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
<p>1</p> <p><input type="checkbox"/></p>	<p>Add/Configure Additional Rack Mount Servers</p>	<p>Follow the steps in Section 4.6, Section 4.7 and Section 4.8 to install and configure TVOE on additional rack mount servers.</p>
<p>2</p> <p><input type="checkbox"/></p>	<p>Add/Configure New VMs</p>	<ol style="list-style-type: none"> 1. Determine CPU placement and pinning information by referring to Section 4.9 2. Create new virtual Machines by following Section 4.11 3. Perform CPU Pinning by following Section 4.12 4. Install TPD and DSR/SDS Software by following Section 4.13

Appendix P.1.4 Growth: DR-NOAM

S T E P #	<p>This procedure will reference steps to configure a DR-NOAM on the new virtual machine for VM Growth scenarios.</p> <p>Prerequisites:</p> <ul style="list-style-type: none"> NEW Virtual Machine Created TPD/DSR software installed <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
1 <input type="checkbox"/>	NOAM VIP GUI: Configure the DR-NOAM	<p>Configure the DR-NOAM by executing the steps referenced in the following procedures:</p> <p><u>DSR DR-NOAM</u>: Section 4.15.3 DSR Configuration: Disaster Recovery NOAM (Optional)</p> <p><u>SDS DR-NOAM</u>: Section 4.16.3 SDS Configuration: Disaster Recovery SDS NOAM (Optional)</p>
2 <input type="checkbox"/>	DR-NOAM: Activate Optional Features (DSR Only)	<p style="text-align: center;">DSR DR-NOAMs ONLY, SDS DR-NOAMs SKIP THIS STEP</p> <p>If there are any optional features currently activated, the feature activation procedures will need to be run again. Refer to Section 3.3.</p>
3 <input type="checkbox"/>	DR-NOAM VIP: Login	Establish an SSH to the DR-NOAM VIP address, login as admusr .
4 <input type="checkbox"/>	DR-NOAM VIP: Transfer Optimization Script from the Primary NOAM	<p>Execute the following commands to transfer and set permissions of the optimization script from the primary NOAM:</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo scp -r admusr@<Primary NOAM XMI VIP>:/usr/TKLC/dsr/bin/rmsNoamConfig.sh /usr/TKLC/dsr/bin \$ sudo chmod 777 /usr/TKLC/dsr/bin/rmsNoamConfig.sh</pre>
5 <input type="checkbox"/>	NOAM VIP: Execute the Optimization Script on the Active NOAM	<p>Execute the following commands to execute the performance optimization script on the active NOAM:</p> <pre style="border: 1px solid black; padding: 5px;">\$ cd /usr/TKLC/dsr/bin/ \$ sudo ./rmsNoamConfig.sh</pre> <p>Note: Configuration Successful output should be given.</p>

Appendix P.1.4 Growth: DR-NOAM

<p>6</p> <p><input type="checkbox"/></p>	<p>NOAM VIP: Execute the key revocation Script on the Active NOAM (RADIUS)</p>	<p>If the RADIUS key has never been revoked, skip this step (If RADIUS was never configured on any site in the network, the RADIUS key would have most likely never been revoked. Check with your system administrator)</p> <p>Execute the following commands to execute the key revocation script on active NOAM server to copy key file to new NOAM server created:</p> <pre style="border: 1px solid black; padding: 5px;">\$ cd /usr/TKLC/dsr/bin/ \$./sharedKrevo -synchronize -server <new_NOAM_hostname></pre> <p>Note: Key transfer successful output should be given.</p>
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Appendix P.1.5 Growth: SOAM spare (DSR/PCA Only)

<p>S T E P #</p>	<p>This procedure will reference steps to configure an SOAM spare on the new virtual machine for VM growth scenarios.</p> <p>Prerequisites:</p> <ul style="list-style-type: none"> • NEW Virtual Machine Created • TPD/DSR software installed <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
<p>1</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Configure the SOAM spare</p>	<p>Configure the SOAM spare by executing the steps referenced in the following procedures:</p> <p><u>DSR SOAM spare:</u></p> <ul style="list-style-type: none"> • Procedure 28 Procedure 29 Procedure 30 (Steps 1,4,6, and 9)
<p>2</p> <p><input type="checkbox"/></p>	<p>NOAM GUI: Activate Optional Features</p>	<p>If there are any optional features currently activated, the feature activation procedures will need to be run again. Refer to Section 3.3.</p>

Appendix P.1.5 Growth: SOAM spare (DSR/PCA Only)

3 <input type="checkbox"/>	<p>NOAM VIP: Execute the key revocation Script on the Active NOAM (RADIUS)</p>	<p>If the RADIUS key has never been revoked, skip this step (If RADIUS was never configured on any site in the network, the RADIUS key would have most likely never been revoked. Check with your system administrator)</p> <p>Execute the following commands to execute the key revocation script on active NOAM server to copy key file to new SOAM server created:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <pre>\$ cd /usr/TKLC/dsr/bin/ \$./sharedKrevo -synchronize -server <new_SOAM_hostname></pre> </div> <p>Note: Key transfer successful output should be given.</p>
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Appendix P.1.6 Growth: MP/DP

S T E P #	<p>This procedure will reference steps to configure an MP/DP on the new virtual machine for growth scenarios.</p> <p>Prerequisites:</p> <ul style="list-style-type: none"> • NEW Virtual Machine Created • TPD/DSR software installed <p>Check off (√) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
1 <input type="checkbox"/>	<p>NOAM VIP GUI: Configure the MP/DP</p>	<p>Configure the MP/DP by executing the steps referenced in the following procedures:</p> <ul style="list-style-type: none"> • <u>DSR MP</u>: Procedure 32(Steps 1-2, 7-14, 15-16(Optional), 17) • <u>SDS DP</u>: Procedure 51
2 <input type="checkbox"/>	<p>NOAM VIP: Execute the key revocation Script on the Active NOAM (RADIUS)</p>	<p>If the RADIUS key has never been revoked, skip this step (If RADIUS was never configured on any site in the network, the RADIUS key would have most likely never been revoked. Check with your system administrator)</p> <p>Execute the following commands to execute the key revocation script on active NOAM server to copy key file to new MP server created:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <pre>\$ cd /usr/TKLC/dsr/bin/ \$./sharedKrevo -synchronize -server <new_MP_hostname></pre> </div> <p>Note: Key transfer successful output should be given.</p>

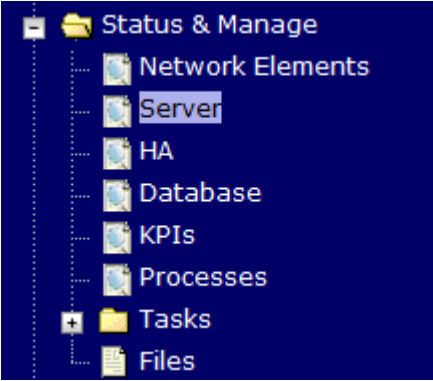
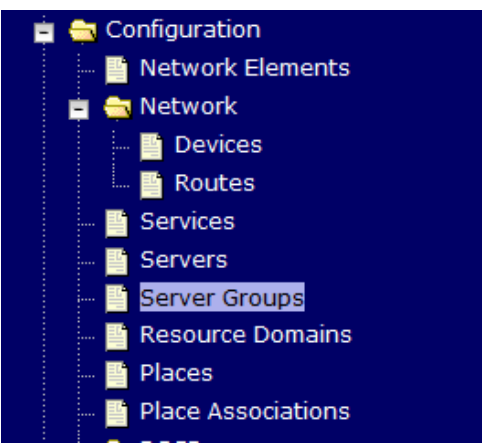
Appendix P.1.7 Growth: Query Server (SDS Only)

<p>S T E P #</p>	<p>This procedure will reference steps to configure a query server on the new virtual machine for growth scenarios.</p> <p>Prerequisites:</p> <ul style="list-style-type: none"> • NEW Virtual Machine Created • TPD/DSR software installed <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
<p>1</p> <p><input type="checkbox"/></p>	<p>SDS NOAM VIP GUI: Configure the query server</p>	<p>Configure the query server by executing the steps referenced in the following procedures:</p> <p><u>SDS query server:</u> Section 4.16.3</p>



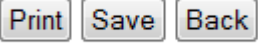
Appendix P.1.8 Post Growth Health Check

S T E P #	<p>This procedure will provide steps verify system status and log all alarms after Growth/De-growth.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
<p>1</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Login</p>	<p>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:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p><code>http://<Primary_NOAM_VIP_IP_Address></code></p> </div> <p>Login as the <i>guiadmin</i> user:</p> <div style="text-align: center;">  <p>The screenshot shows the Oracle System Login interface. At the top is the Oracle logo in red. Below it is the text 'Oracle System Login' and the date 'Fri Mar 20 12:29:52 2015 EDT'. In the center is a 'Log In' box with the prompt 'Enter your username and password to log in'. Inside this box are fields for 'Username' (containing 'guiadmin') and 'Password' (with masked characters). There is a 'Change password' checkbox and a 'Log In' button. Below the box is the text 'Welcome to the Oracle System Login.' and a disclaimer: 'Unauthorized access is prohibited. This Oracle system requires the use of Microsoft Internet Explorer 8.0, 9.0, or 10.0 with support for JavaScript and cookies.' At the bottom, it states 'Oracle and Java are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.'</p> </div>

Appendix P.1.8 Post Growth Health Check

<p>2</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Verify Server Status</p>	<p>Navigate to Main Menu -> Status & Manage -> Server</p>  <p>Verify all Server Status is Normal (Norm) for: Alarm (Alm), Database (DB), Replication Status, and Processes (Proc).</p> <table border="1"> <thead> <tr> <th>Appl State</th> <th>Alm</th> <th>DB</th> <th>Reporting Status</th> <th>Proc</th> </tr> </thead> <tbody> <tr> <td>Enabled</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> <tr> <td>Enabled</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> <tr> <td>Enabled</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> <tr> <td>Enabled</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> </tbody> </table>	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
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<p>3</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Verify Server Configuration</p>	<p>Navigate to Main Menu -> Configuration -> Server Groups</p>  <p>Verify the configuration data is correct for your network.</p>																									

Appendix P.1.8 Post Growth Health Check

<p>4 <input type="checkbox"/></p>	<p>NOAM VIP GUI: Log Current Alarms</p>	<p>Navigate to Main Menu -> Alarms & Events -> View Active</p>  <p>Click on the Report button</p>  <p>Save or Print this report, keep copies for future reference.</p>  <p>Compare this alarm report with those gathered in procedure Appendix Q.1</p>
<p>4 <input type="checkbox"/></p>	<p>SOAM VIP GUI: Repeat</p>	<p>Repeat Steps 1-3 for the SOAM</p>

Appendix P.1.9 Post Growth Backups

<p>S T E P #</p>	<p>This procedure will reference steps to backup all necessary items after a growth scenario.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
<p>1 <input type="checkbox"/></p>	<p>Backup TVOE</p>	<p>Backup all TVOE host configurations by executing Section 4.18.5 Backup TVOE Configuration</p>
<p>2 <input type="checkbox"/></p>	<p>Backup PMAC</p>	<p>Backup the PMAC application by executing Section 4.18.5</p>
<p>3 <input type="checkbox"/></p>	<p>Backup NOAM/SOAM databases</p>	<p>Backup the NOAM and SOAM Databases by executing Sections 4.18.6 and 4.18.7</p> <p>Note: Database backup on SDS SOAMs not required</p>

Appendix P.2: De-Growth (Oracle X6-2)


For De-growth scenarios where it is necessary to remove/delete DSR/SDS MP(SBR, SS7, IPFE)/DP servers, the following sequence of steps should be followed:

Step	Procedure(s)
Perform Backups	Appendix P.2.1
Perform system health check	Appendix P.2.2
Identify Servers which will be affected by the De-growth: <ul style="list-style-type: none"> DSR MP (SBR, SS7MP, IPFE)/ SDS DP 	
Remove identified servers from Server Group	Appendix P.2.3
Shutdown and remove the identified server's VM.	Appendix P.2.4
Post De-Growth Health Check	Appendix P.2.5
Post De-Growth Backups	Appendix P.2.6

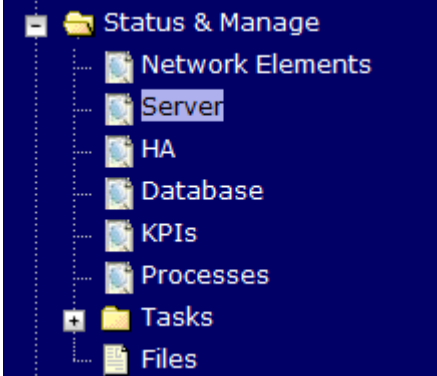
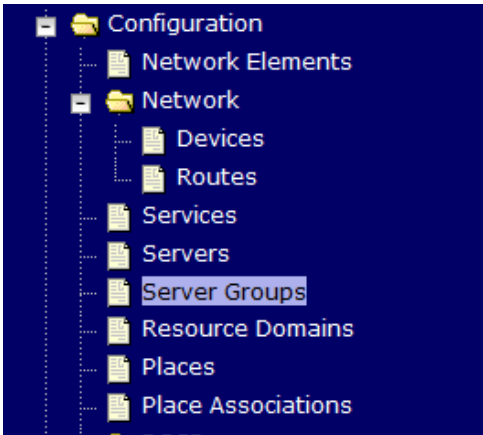
Appendix P.2.1 Perform Backups

S T E P #	This procedure will reference steps to backup all necessary items before a growth scenario.	
	Check off (√) each step as it is completed. Boxes have been provided for this purpose under each step number.	
	If this procedure fails, contact Appendix R: My Oracle Support (MOS) , and ask for assistance.	
	1 <input type="checkbox"/>	Backup TVOE
2 <input type="checkbox"/>	Backup PMAC	Backup the PMAC application by executing Section 4.18.5
3 <input type="checkbox"/>	Backup NOAM/SOAM databases	Backup the NOAM and SOAM Databases by executing Sections 4.18.6 and 4.18.7 Note: Database backup on SDS SOAMs not required


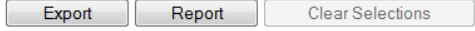

Appendix P.2.2 Perform Health Check

S T E P #	<p>This procedure will provide steps verify system status and log all alarms.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
1 <input type="checkbox"/>	<p>NOAM VIP GUI: Login</p>	<p>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:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p><code>http://<Primary_NOAM_VIP_IP_Address></code></p> </div> <p>Login as the <i>guiadmin</i> user:</p> 


Appendix P.2.2 Perform Health Check

<p>2</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Verify Server Status</p>	<p>Navigate to Main Menu -> Status & Manage -> Server</p>  <p>Verify all Server Status is Normal (Norm) for: Alarm (Alm), Database (DB), Replication Status, and Processes (Proc).</p> <table border="1"> <thead> <tr> <th>Appl State</th> <th>Alm</th> <th>DB</th> <th>Reporting Status</th> <th>Proc</th> </tr> </thead> <tbody> <tr> <td>Enabled</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> <tr> <td>Enabled</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> <tr> <td>Enabled</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> <tr> <td>Enabled</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> </tbody> </table> <p>Do not proceed to with Growth/De-Growth 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.</p> <p>If the Alarm (Alm) status is not Norm but only Minor alarms are present, it is acceptable to proceed. 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</p>	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
Appl State	Alm	DB	Reporting Status	Proc																							
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<p>3</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Verify Server Configuration</p>	<p>Navigate to Main Menu -> Configuration -> Server Groups</p>  <p>Verify the configuration data is correct for your network.</p>																									

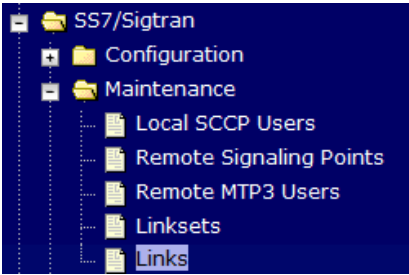
Appendix P.2.2 Perform Health Check

<p>4</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Log Current Alarms</p>	<p>Navigate to Main Menu -> Alarms & Events -> View Active</p>  <p>Click on the Report button</p>  <p>Save or Print this report, keep copies for future reference.</p> 
<p>5</p> <p><input type="checkbox"/></p>	<p>SOAM VIP GUI: Repeat For SOAM</p>	<p>Repeat Steps 1-4 for the SOAM</p>

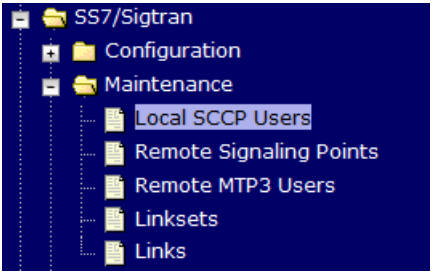
Appendix P.2.3 Removing Server from Server Group

<p>S T E P #</p>	<p>Once the server's that will be deleted have been identified, the server will first need to be removed from its server group.</p> <p>The following procedure will provide steps to remove a server from a server group.</p> <p>Warning: It is recommended that no more than one server from each server group be removed from a server group at a time.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
<p>1</p> <p><input type="checkbox"/></p>	<p>SOAM VIP GUI: Login</p>	<p style="text-align: center;">Execute this step if Removing SS7MP, otherwise skip to step 11</p> <p>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:</p> <div style="border: 1px solid black; padding: 2px; margin: 5px 0;"> <p><code>http://<Primary_SOAM_VIP_IP_Address></code></p> </div> <p>Login as the <i>guiadmin</i> user:</p> <div style="text-align: center;">  <p>The screenshot shows the Oracle System Login interface. At the top is the Oracle logo. Below it is the title 'Oracle System Login' and the date 'Fri Mar 20 12:29:52 2015 EDT'. A central box contains a 'Log In' form with fields for 'Username: guiadmin' and 'Password: [masked]', a 'Change password' checkbox, and a 'Log In' button. Below the form is a 'Welcome to the Oracle System Login.' message and a disclaimer: 'Unauthorized access is prohibited. This Oracle system requires the use of Microsoft Internet Explorer 8.0, 9.0, or 10.0 with support for JavaScript and cookies.' At the bottom, it states 'Oracle and Java are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.'</p> </div>

Appendix P.2.3 Removing Server from Server Group

<p>2</p> <p><input type="checkbox"/></p> <p>SOAM VIP GUI: Disable SS7-MP Links</p>	<p style="text-align: center;">Execute this step if Removing SS7MP, otherwise skip to step 11</p> <p>Navigate to Main Menu -> SS7/Sigtran -> Maintenance -> Links</p> <div style="border: 1px solid black; background-color: #000080; color: white; padding: 5px; margin: 5px 0;">  </div> <p>Disable the associated links of the identified SS7-MP:</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tbody> <tr><td>NE_IWF1_SOAMP</td><td>L13</td><td>LS13</td><td>IWF1-SS7-MP3</td><td>Disabled</td><td>Down</td></tr> <tr><td>NE_IWF1_SOAMP</td><td>L14</td><td>LS14</td><td>IWF1-SS7-MP4</td><td>Disabled</td><td>Down</td></tr> <tr><td>NE_IWF1_SOAMP</td><td>L15</td><td>LS15</td><td>IWF1-SS7-MP3</td><td>Disabled</td><td>Down</td></tr> <tr><td>NE_IWF1_SOAMP</td><td>L16</td><td>LS16</td><td>IWF1-SS7-MP4</td><td>Disabled</td><td>Down</td></tr> <tr><td>NE_IWF1_SOAMP</td><td>L17</td><td>LS17</td><td>IWF1-SS7-MP3</td><td>Disabled</td><td>Down</td></tr> <tr><td>NE_IWF1_SOAMP</td><td>L18</td><td>LS18</td><td>IWF1-SS7-MP3</td><td>Disabled</td><td>Down</td></tr> <tr><td>NE_IWF1_SOAMP</td><td>L19</td><td>LS19</td><td>IWF1-SS7-MP3</td><td>Disabled</td><td>Down</td></tr> <tr><td>NE_IWF1_SOAMP</td><td>L2</td><td>LS2</td><td>IWF1-SS7-MP2</td><td>Enabled</td><td>Up</td></tr> <tr style="background-color: #90EE90;"><td>NE_IWF1_SOAMP</td><td>L20</td><td>LS20</td><td>IWF1-SS7-MP3</td><td>Disabled</td><td>Down</td></tr> </tbody> </table> <p style="margin-top: 5px;"> <input type="button" value="Enable"/> <input type="button" value="Disable"/> </p>	NE_IWF1_SOAMP	L13	LS13	IWF1-SS7-MP3	Disabled	Down	NE_IWF1_SOAMP	L14	LS14	IWF1-SS7-MP4	Disabled	Down	NE_IWF1_SOAMP	L15	LS15	IWF1-SS7-MP3	Disabled	Down	NE_IWF1_SOAMP	L16	LS16	IWF1-SS7-MP4	Disabled	Down	NE_IWF1_SOAMP	L17	LS17	IWF1-SS7-MP3	Disabled	Down	NE_IWF1_SOAMP	L18	LS18	IWF1-SS7-MP3	Disabled	Down	NE_IWF1_SOAMP	L19	LS19	IWF1-SS7-MP3	Disabled	Down	NE_IWF1_SOAMP	L2	LS2	IWF1-SS7-MP2	Enabled	Up	NE_IWF1_SOAMP	L20	LS20	IWF1-SS7-MP3	Disabled	Down
NE_IWF1_SOAMP	L13	LS13	IWF1-SS7-MP3	Disabled	Down																																																		
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NE_IWF1_SOAMP	L16	LS16	IWF1-SS7-MP4	Disabled	Down																																																		
NE_IWF1_SOAMP	L17	LS17	IWF1-SS7-MP3	Disabled	Down																																																		
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NE_IWF1_SOAMP	L20	LS20	IWF1-SS7-MP3	Disabled	Down																																																		

Appendix P.2.3 Removing Server from Server Group

<p>3</p> <p><input type="checkbox"/></p>	<p>SOAM VIP GUI: Disable SS7-MP SCCP Users</p>	<p style="text-align: center;">Execute this step if Removing SS7MP, otherwise skip to step 11</p> <p>Navigate to Main Menu -> SS7/Sigtran -> Maintenance -> Local SCCP Users</p>  <p>Disable the associated local SCCP users of the identified SS7-MP:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>NE_IWF1_SOAMP</td> <td>10</td> <td>1-103-1</td> <td>ITUI</td> <td>MAPIWF</td> <td style="background-color: red;">Disabled</td> <td>20:18</td> </tr> <tr> <td>NE_IWF1_SOAMP</td> <td>8</td> <td>1-100-1</td> <td>ITUI</td> <td>MAPIWF</td> <td>Enabled</td> <td>20:14</td> </tr> <tr> <td>NE_IWF1_SOAMP</td> <td>7</td> <td>1-102-1</td> <td>ITUI</td> <td>MAPIWF</td> <td style="background-color: red;">Disabled</td> <td>20:18</td> </tr> <tr> <td>NE_IWF1_SOAMP</td> <td>7</td> <td>1-101-1</td> <td>ITUI</td> <td>MAPIWF</td> <td>Enabled</td> <td>20:15</td> </tr> <tr> <td>NE_IWF1_SOAMP</td> <td>11</td> <td>1-103-1</td> <td>ITUI</td> <td>MAPIWF</td> <td style="background-color: red;">Disabled</td> <td>20:18</td> </tr> <tr> <td>NE_IWF1_SOAMP</td> <td>5</td> <td>1-100-1</td> <td>ITUI</td> <td>MAPIWF</td> <td>Enabled</td> <td>20:14</td> </tr> <tr> <td>NE_IWF1_SOAMP</td> <td>8</td> <td>1-102-1</td> <td>ITUI</td> <td>MAPIWF</td> <td style="background-color: red;">Disabled</td> <td>20:18</td> </tr> </table> <p> <input type="button" value="Enable"/> <input type="button" value="Disable"/> </p>	NE_IWF1_SOAMP	10	1-103-1	ITUI	MAPIWF	Disabled	20:18	NE_IWF1_SOAMP	8	1-100-1	ITUI	MAPIWF	Enabled	20:14	NE_IWF1_SOAMP	7	1-102-1	ITUI	MAPIWF	Disabled	20:18	NE_IWF1_SOAMP	7	1-101-1	ITUI	MAPIWF	Enabled	20:15	NE_IWF1_SOAMP	11	1-103-1	ITUI	MAPIWF	Disabled	20:18	NE_IWF1_SOAMP	5	1-100-1	ITUI	MAPIWF	Enabled	20:14	NE_IWF1_SOAMP	8	1-102-1	ITUI	MAPIWF	Disabled	20:18
NE_IWF1_SOAMP	10	1-103-1	ITUI	MAPIWF	Disabled	20:18																																													
NE_IWF1_SOAMP	8	1-100-1	ITUI	MAPIWF	Enabled	20:14																																													
NE_IWF1_SOAMP	7	1-102-1	ITUI	MAPIWF	Disabled	20:18																																													
NE_IWF1_SOAMP	7	1-101-1	ITUI	MAPIWF	Enabled	20:15																																													
NE_IWF1_SOAMP	11	1-103-1	ITUI	MAPIWF	Disabled	20:18																																													
NE_IWF1_SOAMP	5	1-100-1	ITUI	MAPIWF	Enabled	20:14																																													
NE_IWF1_SOAMP	8	1-102-1	ITUI	MAPIWF	Disabled	20:18																																													

Appendix P.2.3 Removing Server from Server Group

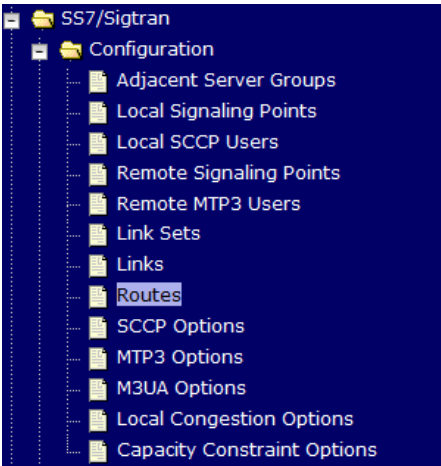
4

SOAM VIP GUI:

Delete SS7-MP Routes

Execute this step if Removing SS7MP, otherwise skip to step 11

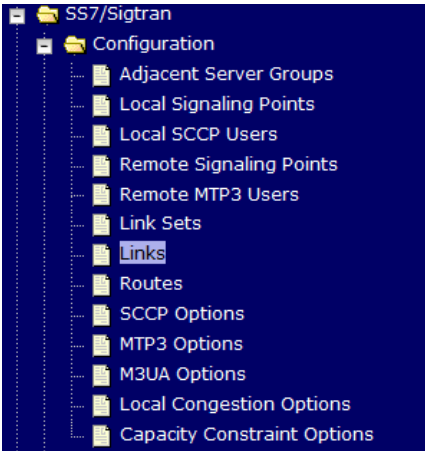
Navigate to **Main Menu -> SS7/Sigtran -> Configuration -> Routes**



Delete the associated routes of the identified SS7-MP:

NE_IWF1_SOAMP	ITUI	2-201-2	LS12	2-201-2
NE_IWF1_SOAMP	ITUI	2-202-2	LS14	2-202-2
NE_IWF1_SOAMP	ITUI	2-203-2	LS15	2-203-2
NE_IWF1_SOAMP	ITUI	2-203-2	LS16	2-203-2
NE_IWF1_SOAMP	ANSI	201-201-201	LS17	201-201-201
NE_IWF1_SOAMP	ANSI	202-202-202	LS18	202-202-202
NE_IWF1_SOAMP	ANSI	200-200-200	LS19	200-200-200
NE_IWF1_SOAMP	ANSI	203-203-203	LS20	203-203-203
NE_IWF1_SOAMP	ANSI	201-201-201	LS21	201-201-201
NE_IWF1_SOAMP	ANSI	202-202-202	LS22	202-202-202
NE_IWF1_SOAMP	ANSI	200-200-200	LS23	200-200-200

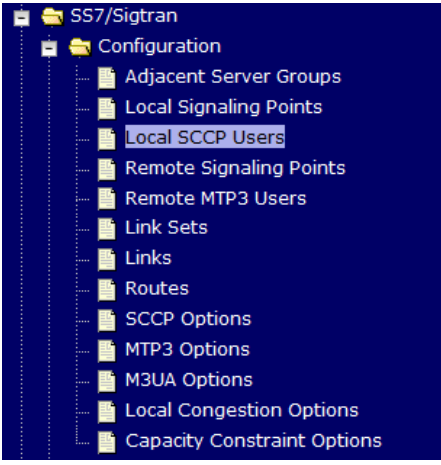
Appendix P.2.3 Removing Server from Server Group

<p>5</p> <p><input type="checkbox"/></p> <p>SOAM VIP GUI: Delete SS7-MP Links</p>	<p style="text-align: center;">Execute this step if Removing SS7MP, otherwise skip to step 11</p> <p>Navigate to Main Menu -> SS7/Sigtran -> Configuration -> Links</p>  <p>Delete the associated links of the identified SS7-MP:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>NE_IWF1_SOAMP</td> <td>L12</td> <td>LS12</td> <td>P</td> </tr> <tr style="background-color: #e0ffe0;"> <td>NE_IWF1_SOAMP</td> <td>L13</td> <td>LS13</td> <td>P</td> </tr> <tr> <td>NE_IWF1_SOAMP</td> <td>L14</td> <td>LS14</td> <td>P</td> </tr> <tr> <td>NE_IWF1_SOAMP</td> <td>L15</td> <td>LS15</td> <td>P</td> </tr> <tr> <td>NE_IWF1_SOAMP</td> <td>L16</td> <td>LS16</td> <td>P</td> </tr> <tr> <td>NE_IWF1_SOAMP</td> <td>L17</td> <td>LS17</td> <td>P</td> </tr> <tr> <td>NE_IWF1_SOAMP</td> <td>L18</td> <td>LS18</td> <td>P</td> </tr> <tr> <td>NE_IWF1_SOAMP</td> <td>L19</td> <td>LS19</td> <td>P</td> </tr> <tr> <td>NE_IWF1_SOAMP</td> <td>L20</td> <td>LS20</td> <td>P</td> </tr> <tr> <td>NE_IWF1_SOAMP</td> <td>L21</td> <td>LS21</td> <td>P</td> </tr> <tr> <td>NE_IWF1_SOAMP</td> <td>L22</td> <td>LS22</td> <td>P</td> </tr> </table> <p style="text-align: center;"> <input type="button" value="Insert"/> <input type="button" value="Delete"/> <input type="button" value="Status"/> <input type="button" value="Report"/> </p>	NE_IWF1_SOAMP	L12	LS12	P	NE_IWF1_SOAMP	L13	LS13	P	NE_IWF1_SOAMP	L14	LS14	P	NE_IWF1_SOAMP	L15	LS15	P	NE_IWF1_SOAMP	L16	LS16	P	NE_IWF1_SOAMP	L17	LS17	P	NE_IWF1_SOAMP	L18	LS18	P	NE_IWF1_SOAMP	L19	LS19	P	NE_IWF1_SOAMP	L20	LS20	P	NE_IWF1_SOAMP	L21	LS21	P	NE_IWF1_SOAMP	L22	LS22	P
NE_IWF1_SOAMP	L12	LS12	P																																										
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NE_IWF1_SOAMP	L21	LS21	P																																										
NE_IWF1_SOAMP	L22	LS22	P																																										

Appendix P.2.3 Removing Server from Server Group

<p>6</p> <p><input type="checkbox"/></p> <p>SOAM VIP GUI: Delete SS7-MP Link Sets</p>	<p style="text-align: center;">Execute this step if Removing SS7MP, otherwise skip to step 11</p> <p>Navigate to Main Menu -> SS7/Sigtran -> Configuration -> Link Sets</p> <div style="border: 1px solid black; background-color: #000080; color: white; padding: 5px; margin: 5px 0;"> <p>SS7/Sigtran</p> <ul style="list-style-type: none"> Configuration <ul style="list-style-type: none"> Adjacent Server Groups Local Signaling Points Local SCCP Users Remote Signaling Points Remote MTP3 Users Link Sets Links Routes SCCP Options MTP3 Options M3UA Options Local Congestion Options Capacity Constraint Options </div> <p>Delete the associated link sets of the identified SS7-MP:</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tbody> <tr> <td>NE_IWF1_SOAMP</td> <td>LS20</td> <td>AS->SG</td> <td>ANSI_101_101_101</td> <td>ANSI</td> <td>All</td> <td>203-203-203</td> <td>----</td> </tr> <tr style="background-color: #90EE90;"> <td>NE_IWF1_SOAMP</td> <td>LS21</td> <td>AS->SG</td> <td>ANSI_112_112_112</td> <td>ANSI</td> <td>All</td> <td>201-201-201</td> <td>----</td> </tr> <tr> <td>NE_IWF1_SOAMP</td> <td>LS22</td> <td>AS->SG</td> <td>ANSI_112_112_112</td> <td>ANSI</td> <td>All</td> <td>202-202-202</td> <td>----</td> </tr> <tr> <td>NE_IWF1_SOAMP</td> <td>LS23</td> <td>AS->SG</td> <td>ANSI_112_112_112</td> <td>ANSI</td> <td>All</td> <td>200-200-200</td> <td>----</td> </tr> <tr> <td>NE_IWF1_SOAMP</td> <td>LS24</td> <td>AS->SG</td> <td>ANSI_112_112_112</td> <td>ANSI</td> <td>All</td> <td>203-203-203</td> <td>----</td> </tr> </tbody> </table> <p style="margin-top: 10px;"> <input type="button" value="Insert"/> <input type="button" value="Delete"/> <input type="button" value="Status"/> <input type="button" value="Report"/> </p>	NE_IWF1_SOAMP	LS20	AS->SG	ANSI_101_101_101	ANSI	All	203-203-203	----	NE_IWF1_SOAMP	LS21	AS->SG	ANSI_112_112_112	ANSI	All	201-201-201	----	NE_IWF1_SOAMP	LS22	AS->SG	ANSI_112_112_112	ANSI	All	202-202-202	----	NE_IWF1_SOAMP	LS23	AS->SG	ANSI_112_112_112	ANSI	All	200-200-200	----	NE_IWF1_SOAMP	LS24	AS->SG	ANSI_112_112_112	ANSI	All	203-203-203	----
NE_IWF1_SOAMP	LS20	AS->SG	ANSI_101_101_101	ANSI	All	203-203-203	----																																		
NE_IWF1_SOAMP	LS21	AS->SG	ANSI_112_112_112	ANSI	All	201-201-201	----																																		
NE_IWF1_SOAMP	LS22	AS->SG	ANSI_112_112_112	ANSI	All	202-202-202	----																																		
NE_IWF1_SOAMP	LS23	AS->SG	ANSI_112_112_112	ANSI	All	200-200-200	----																																		
NE_IWF1_SOAMP	LS24	AS->SG	ANSI_112_112_112	ANSI	All	203-203-203	----																																		

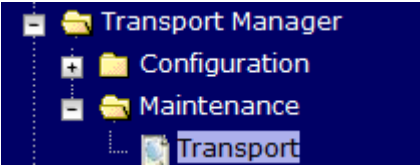
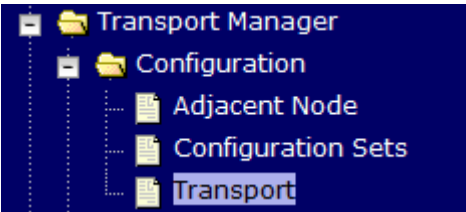
Appendix P.2.3 Removing Server from Server Group

<p>7</p> <p><input type="checkbox"/></p> <p>SOAM VIP GUI: Delete SS7-MP Local SCCP Users</p>	<p style="text-align: center;">Execute this step if Removing SS7MP, otherwise skip to step 11</p> <p>Navigate to Main Menu -> SS7/Sigtran -> Configuration -> Local SCCP Users</p>  <p>Delete the associated Local SCCP Users from the identified SS7-MP:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>NE_IWF1_SOAMP</td><td>11</td><td>ITUI</td><td>1-101-1</td><td>MAPIWF</td></tr> <tr><td>NE_IWF1_SOAMP</td><td>251</td><td>ITUI</td><td>1-101-1</td><td>MAPIWF</td></tr> <tr style="background-color: #90EE90;"><td>NE_IWF1_SOAMP</td><td>245</td><td>ANSI</td><td>101-101-101</td><td>MAPIWF</td></tr> <tr><td>NE_IWF1_SOAMP</td><td>246</td><td>ANSI</td><td>112-112-112</td><td>MAPIWF</td></tr> <tr><td>NE_IWF1_SOAMP</td><td>5</td><td>ITUI</td><td>1-102-1</td><td>MAPIWF</td></tr> <tr><td>NE_IWF1_SOAMP</td><td>6</td><td>ITUI</td><td>1-102-1</td><td>MAPIWF</td></tr> </table> <p style="text-align: center;"> <input type="button" value="Insert"/> <input type="button" value="Delete"/> <input type="button" value="Status"/> <input type="button" value="Report"/> </p>	NE_IWF1_SOAMP	11	ITUI	1-101-1	MAPIWF	NE_IWF1_SOAMP	251	ITUI	1-101-1	MAPIWF	NE_IWF1_SOAMP	245	ANSI	101-101-101	MAPIWF	NE_IWF1_SOAMP	246	ANSI	112-112-112	MAPIWF	NE_IWF1_SOAMP	5	ITUI	1-102-1	MAPIWF	NE_IWF1_SOAMP	6	ITUI	1-102-1	MAPIWF
NE_IWF1_SOAMP	11	ITUI	1-101-1	MAPIWF																											
NE_IWF1_SOAMP	251	ITUI	1-101-1	MAPIWF																											
NE_IWF1_SOAMP	245	ANSI	101-101-101	MAPIWF																											
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NE_IWF1_SOAMP	5	ITUI	1-102-1	MAPIWF																											
NE_IWF1_SOAMP	6	ITUI	1-102-1	MAPIWF																											


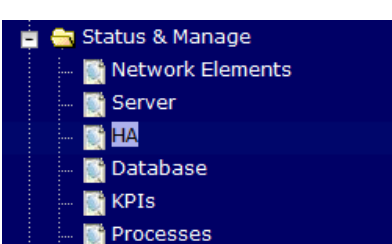
Appendix P.2.3 Removing Server from Server Group

<p>8</p> <p><input type="checkbox"/></p> <p>SOAM VIP GUI: Delete SS7-MP Local Signaling Points</p>	<p style="text-align: center;">Execute this step if Removing SS7MP, otherwise skip to step 11</p> <p>Navigate to Main Menu -> SS7/Sigtran -> Configuration -> Local Signaling Points</p> <div style="border: 1px solid black; background-color: #000080; color: white; padding: 5px; margin: 5px 0;"> <p>SS7/Sigtran</p> <ul style="list-style-type: none"> Configuration <ul style="list-style-type: none"> Adjacent Server Groups Local Signaling Points Local SCCP Users Remote Signaling Points Remote MTP3 Users Link Sets Links Routes SCCP Options MTP3 Options M3UA Options Local Congestion Options Capacity Constraint Options </div> <p>Delete the associated Local signaling points from the identified SS7-MP:</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td>NE_IWF1_SOAMP</td> <td>ITUL_1_102_1</td> <td>ITUI</td> <td>1-102-1</td> <td>----</td> <td>IWF1_SS7MP4</td> </tr> <tr> <td>NE_IWF1_SOAMP</td> <td>ITUL_1_103_1</td> <td>ITUI</td> <td>1-103-1</td> <td>----</td> <td>IWF1_SS7MP3</td> </tr> </table> <p style="text-align: center; margin-top: 10px;"> <input type="button" value="Insert"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/> <input type="button" value="Report"/> </p>	NE_IWF1_SOAMP	ITUL_1_102_1	ITUI	1-102-1	----	IWF1_SS7MP4	NE_IWF1_SOAMP	ITUL_1_103_1	ITUI	1-103-1	----	IWF1_SS7MP3
NE_IWF1_SOAMP	ITUL_1_102_1	ITUI	1-102-1	----	IWF1_SS7MP4								
NE_IWF1_SOAMP	ITUL_1_103_1	ITUI	1-103-1	----	IWF1_SS7MP3								

Appendix P.2.3 Removing Server from Server Group

<p>9</p> <p><input type="checkbox"/></p>	<p>SOAM VIP GUI: Disable SS7-MP transports</p>	<p align="center">Execute this step if Removing SS7MP, otherwise skip to step 11</p> <p>Navigate to Main Menu -> Transport Manager -> Maintenance -> Transport</p>  <p>Disable the associated transports from the identified SS7-MP:</p> <table border="1"> <tr> <td>NE_IWF1_SOAMP</td> <td>IWF1-SS7-MP3</td> <td>M3UA</td> <td>pc1110916_VM1_5</td> <td>SCTP</td> </tr> <tr> <td>NE_IWF1_SOAMP</td> <td>IWF1-SS7-MP4</td> <td>M3UA</td> <td>pc1110916_VM1_6</td> <td>SCTP</td> </tr> <tr> <td>NE_IWF1_SOAMP</td> <td>IWF1-SS7-MP3</td> <td>M3UA</td> <td>pc1110916_VM1_7</td> <td>SCTP</td> </tr> </table> <p> <input type="button" value="Enable"/> <input type="button" value="Disable"/> <input type="button" value="Block"/> </p>	NE_IWF1_SOAMP	IWF1-SS7-MP3	M3UA	pc1110916_VM1_5	SCTP	NE_IWF1_SOAMP	IWF1-SS7-MP4	M3UA	pc1110916_VM1_6	SCTP	NE_IWF1_SOAMP	IWF1-SS7-MP3	M3UA	pc1110916_VM1_7	SCTP
NE_IWF1_SOAMP	IWF1-SS7-MP3	M3UA	pc1110916_VM1_5	SCTP													
NE_IWF1_SOAMP	IWF1-SS7-MP4	M3UA	pc1110916_VM1_6	SCTP													
NE_IWF1_SOAMP	IWF1-SS7-MP3	M3UA	pc1110916_VM1_7	SCTP													
<p>10</p> <p><input type="checkbox"/></p>	<p>SOAM VIP GUI: Delete SS7-MP transports</p>	<p align="center">Execute this step if Removing SS7MP, otherwise skip to step 11</p> <p>Navigate to Main Menu -> Transport Manager -> Configuration -> Transport</p>  <p>Delete the associated transports from the identified SS7-MP:</p> <table border="1"> <tr> <td>NE_IWF1_SOAMP</td> <td>M3UA</td> <td>pc1110916_VM1_4</td> <td>SCTP</td> <td>Initiator</td> <td>IWF1-SS7-MP2</td> <td>10.196.229.70</td> </tr> <tr> <td>NE_IWF1_SOAMP</td> <td>M3UA</td> <td>pc1110916_VM1_4</td> <td>SCTP</td> <td>Initiator</td> <td>IWF1-SS7-MP3</td> <td>10.196.229.71</td> </tr> </table> <p> <input type="button" value="Insert"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/> <input type="button" value="Report"/> <input type="button" value="Status"/> </p>	NE_IWF1_SOAMP	M3UA	pc1110916_VM1_4	SCTP	Initiator	IWF1-SS7-MP2	10.196.229.70	NE_IWF1_SOAMP	M3UA	pc1110916_VM1_4	SCTP	Initiator	IWF1-SS7-MP3	10.196.229.71	
NE_IWF1_SOAMP	M3UA	pc1110916_VM1_4	SCTP	Initiator	IWF1-SS7-MP2	10.196.229.70											
NE_IWF1_SOAMP	M3UA	pc1110916_VM1_4	SCTP	Initiator	IWF1-SS7-MP3	10.196.229.71											

Appendix P.2.3 Removing Server from Server Group

<p>11</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Login</p>	<p>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:</p> <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 10px 0;"> <p><code>http://<Primary_NOAM_VIP_IP_Address></code></p> </div> <p>Login as the <i>guiadmin</i> user:</p> 																
<p>12</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Set Server to OOS</p>	<p>Navigate to Main Menu -> Status & Manage -> HA</p>  <p>Click Edit</p> <p>Set the server's <i>Max Allowed HA Role</i> to OOS</p> <table border="1"> <thead> <tr> <th>ime</th> <th>Max Allowed HA Role</th> </tr> </thead> <tbody> <tr> <td>NOAM-1</td> <td>Active</td> </tr> <tr> <td>NOAM-2</td> <td>Active</td> </tr> <tr> <td>SOAM-1</td> <td>Standby</td> </tr> <tr> <td>SOAM-2</td> <td>Spare</td> </tr> <tr> <td></td> <td>Observer</td> </tr> <tr> <td></td> <td>OOS</td> </tr> <tr> <td></td> <td>ACTIVE</td> </tr> </tbody> </table> <p>Click Ok</p>	ime	Max Allowed HA Role	NOAM-1	Active	NOAM-2	Active	SOAM-1	Standby	SOAM-2	Spare		Observer		OOS		ACTIVE
ime	Max Allowed HA Role																	
NOAM-1	Active																	
NOAM-2	Active																	
SOAM-1	Standby																	
SOAM-2	Spare																	
	Observer																	
	OOS																	
	ACTIVE																	

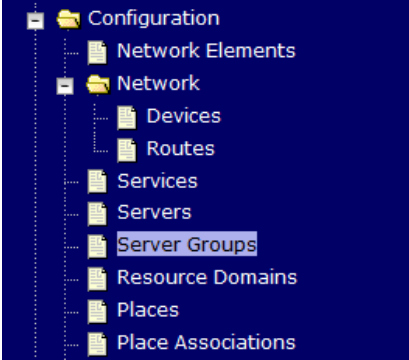
Appendix P.2.3 Removing Server from Server Group

13

□

**NOAM
VIP GUI:**
Remove
Server
From
Server
Group

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



Select the server group for which the server from **step 2** that was placed OOS.


Click **Edit**

Uncheck the server from **step 2** from the *SG Inclusion* column:

	Value	Description
Group Name	DAMP	Unique identifier used to I and must not start with a c
	C	Select one of the Levels s
	Oahu_SOAM	Select an existing Server C
on	DSR (multi-active cluster)	Select one of the Function
Replication Connection Count	1	Specify the number of TCF 8.]
SG Inclusion		
DAMP-1	<input type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare
DAMP-2	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare
segment		
VIP Address		<input type="button" value="Add"/>

Click **Ok**

Appendix P.2.4 Deleting Server/Server Group

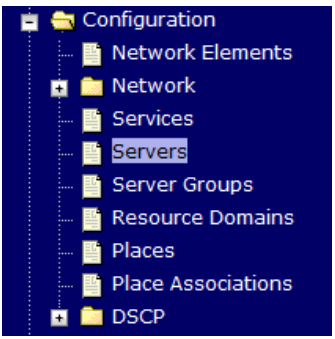
<p>S T E P #</p>	<p>Once the server has been removed from the server group, it is now safe to delete the server. The server group can also be deleted if there are no more servers associated with it.</p> <p>The following procedure will provide steps to delete a server, and delete a server group .</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
<p>1</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Login</p>	<p>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:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p><code>http://<Primary_NOAM_VIP_IP_Address></code></p> </div> <p>Login as the <i>guiadmin</i> user:</p> <div style="text-align: center;">  <p>The screenshot shows the Oracle System Login interface. At the top is the Oracle logo in red. Below it, the text 'Oracle System Login' is displayed on the left, and the date 'Fri Mar 20 12:29:52 2015 EDT' is on the right. A central box titled 'Log In' contains the instruction 'Enter your username and password to log in'. Below this are two input fields: 'Username: guiadmin' and 'Password: ●●●●●●'. There is a 'Change password' checkbox and a 'Log In' button. At the bottom of the page, there is a 'Welcome to the Oracle System Login.' message, a warning about unauthorized access, and a footer with trademark information.</p> </div>

Appendix P.2.4 Deleting Server/Server Group

2

NOAM
VIP GUI:
Delete the
Server

Navigate to **Main Menu -> Configuration -> Servers**



Select the server that has been previously removed from the server group

Main Menu: Configuration -> Servers

Filter	Hostname	Role	System ID	Server Group	Network Element	Location
	Oahu-DSR-NOAM-1	Network OAM&P	Oahu-DSR-NOAM-1	OahuNOAM	Oahu1	Oahu-3
	Oahu-DSR-NOAM-2	Network OAM&P	Oahu-DSR-NOAM-2	OahuNOAM	Oahu1	
	Oahu-DSR-SOAM-1	System OAM	Oahu-DSR-SOAM-1	OahuSOAM	Oahu1	Oahu-3
	Oahu-DSR-SOAM-2	System OAM	Oahu-DSR-SOAM-2	OahuSOAM	Oahu1	Oahu-1
	Oahu-DSR-DAMP-1	MP		OahuDAMP	Oahu1	Oahu-2
	Oahu-DSR-DAMP-2	MP		OahuDAMP	Oahu1	Oahu-2
	Oahu-DSR-IPFE-1	MP			Oahu1	Oahu-2
	Oahu-DSR-DR-NOAM-1	Network OAM&P	Oahu-DSR-DR-NOAM-1	OahuDRNOAM	Oahu1	
	Oahu-DSR-DR-NOAM-2	Network OAM&P	Oahu-DSR-DR-NOAM-2	OahuDRNOAM	Oahu1	
	Oahu-DSR-SOAM-Sp	System OAM	Oahu-DSR-SOAM-Sp	OahuSOAM	Oahu1	

Select Delete

Confirm Deletion

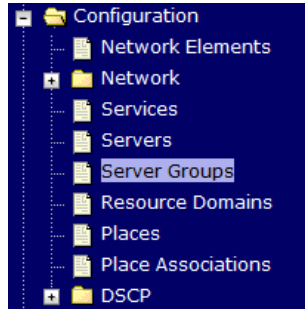
Delete Server(s) : Oahu-DSR-IPFE-1?

3

**NOAM
VIP GUI:**
Delete
Server
Group

If all servers have been removed from a server group, it is now safe to delete the server group.

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

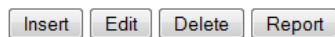


Select the empty server group

Main Menu: Configuration -> Server Groups

Server Group Name	Level	Parent	Function	Connection Count	Servers																
OahuDAMP	C	OahuSOAM	DSR (multi-active cluster)	1	<table border="1"> <thead> <tr> <th>NE</th> <th>Server</th> <th>HA Role Pref</th> <th>VIPs</th> </tr> </thead> <tbody> <tr> <td>Oahu1</td> <td>Oahu-DSR-DAMP-1</td> <td></td> <td></td> </tr> <tr> <td>Oahu1</td> <td>Oahu-DSR-DAMP-2</td> <td></td> <td></td> </tr> </tbody> </table>	NE	Server	HA Role Pref	VIPs	Oahu1	Oahu-DSR-DAMP-1			Oahu1	Oahu-DSR-DAMP-2						
NE	Server	HA Role Pref	VIPs																		
Oahu1	Oahu-DSR-DAMP-1																				
Oahu1	Oahu-DSR-DAMP-2																				
OahuDRNOAM	A	NONE	DSR (active/standby pair)	1	<table border="1"> <thead> <tr> <th>NE</th> <th>Server</th> <th>HA Role Pref</th> <th>VIPs</th> </tr> </thead> <tbody> <tr> <td>Oahu1</td> <td>Oahu-DSR-DR-NOAM-1</td> <td></td> <td>10.240.108.15</td> </tr> <tr> <td>Oahu1</td> <td>Oahu-DSR-DR-NOAM-2</td> <td></td> <td>10.240.108.15</td> </tr> </tbody> </table>	NE	Server	HA Role Pref	VIPs	Oahu1	Oahu-DSR-DR-NOAM-1		10.240.108.15	Oahu1	Oahu-DSR-DR-NOAM-2		10.240.108.15				
NE	Server	HA Role Pref	VIPs																		
Oahu1	Oahu-DSR-DR-NOAM-1		10.240.108.15																		
Oahu1	Oahu-DSR-DR-NOAM-2		10.240.108.15																		
OahuPFE	C	OahuSOAM	IP Front End	1	<table border="1"> <thead> <tr> <th>NE</th> <th>Server</th> <th>HA Role Pref</th> <th>VIPs</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	NE	Server	HA Role Pref	VIPs												
NE	Server	HA Role Pref	VIPs																		
OahuNOAM	A	NONE	DSR (active/standby pair)	1	<table border="1"> <thead> <tr> <th>NE</th> <th>Server</th> <th>HA Role Pref</th> <th>VIPs</th> </tr> </thead> <tbody> <tr> <td>Oahu1</td> <td>Oahu-DSR-NOAM-1</td> <td></td> <td>10.240.108.12</td> </tr> <tr> <td>Oahu1</td> <td>Oahu-DSR-NOAM-2</td> <td></td> <td>10.240.108.12</td> </tr> </tbody> </table>	NE	Server	HA Role Pref	VIPs	Oahu1	Oahu-DSR-NOAM-1		10.240.108.12	Oahu1	Oahu-DSR-NOAM-2		10.240.108.12				
NE	Server	HA Role Pref	VIPs																		
Oahu1	Oahu-DSR-NOAM-1		10.240.108.12																		
Oahu1	Oahu-DSR-NOAM-2		10.240.108.12																		
OahuSOAM	B	OahuNOAM	DSR (active/standby pair)	1	<table border="1"> <thead> <tr> <th>NE</th> <th>Server</th> <th>HA Role Pref</th> <th>VIPs</th> </tr> </thead> <tbody> <tr> <td>Oahu1</td> <td>Oahu-DSR-SOAM-1</td> <td></td> <td>10.240.108.22</td> </tr> <tr> <td>Oahu1</td> <td>Oahu-DSR-SOAM-2</td> <td></td> <td>10.240.108.22</td> </tr> <tr> <td>Oahu1</td> <td>Oahu-DSR-SOAM-Sp</td> <td>SPARE</td> <td>10.240.108.22</td> </tr> </tbody> </table>	NE	Server	HA Role Pref	VIPs	Oahu1	Oahu-DSR-SOAM-1		10.240.108.22	Oahu1	Oahu-DSR-SOAM-2		10.240.108.22	Oahu1	Oahu-DSR-SOAM-Sp	SPARE	10.240.108.22
NE	Server	HA Role Pref	VIPs																		
Oahu1	Oahu-DSR-SOAM-1		10.240.108.22																		
Oahu1	Oahu-DSR-SOAM-2		10.240.108.22																		
Oahu1	Oahu-DSR-SOAM-Sp	SPARE	10.240.108.22																		

Select **Delete**




Confirm Deletion

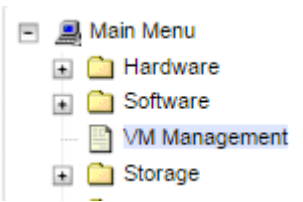
Delete Server Group : OahuPFE?



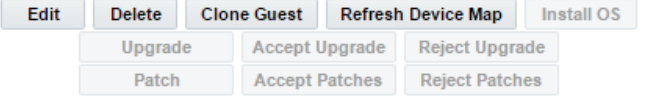
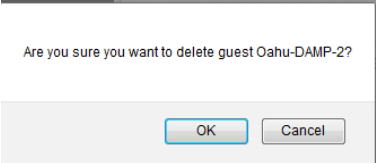
Appendix P.2.5 Deleting the server VM

<p>S T E P #</p>	<p>Once the server's that are being deleted have been identified, placed in OOS, and removed the from the server group. It is now safe to shut down and delete the VM for which the server is located.</p> <p>The following procedure will provide steps to remove a VM from a TVOE Host</p> <p>Warning: It is recommended that a careful approach be taken with this procedure and that the server to VM mapping be confirmed before proceeding.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
<p>1</p> <p><input type="checkbox"/></p>	<p>PMAC GUI: Login</p>	<p>Open web browser and navigate to the PMAC GUI, Login as guiadmin user:</p> <p><input type="text" value="https://<pmac_network_ip>"/></p> 


Appendix P.2.5 Deleting the server VM

<p>2</p> <p>☐</p>	<p>PMAC GUI: Shutdown the VM</p>	<p>Navigate to Main Menu -> VM Management</p>  <p>Expand the view (<i>if needed</i>) of the Rack Mount Server for which the server you are moving/deleting is located.</p> <p>Shutdown the VM by setting the <i>Current Power State</i> to Shutdown:</p> <p>Current Power State: Running</p> <p>Set Power State: On Change</p> <p>Guest Name (Required): On AC</p> <p>Host: Shutdown VOE_1</p> <p>Number of vCPUs: Destroy</p> <p>Click Change</p> <p>Select OK for the following prompt:</p> <div> <p>It may not always be possible to shutdown a guest or to do so in a timely manner. You may monitor the power state and opt to destroy the guest rather than shut it down. Are you sure you want to attempt to shutdown this guest?</p> <p>OK Cancel</p> </div> <p>The <i>Current Power State</i> should now display Shutdown:</p> <p>Current Power State: Shut Down</p> <p>Set Power State: On Change</p>
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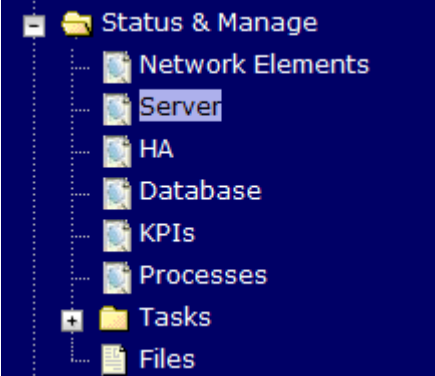
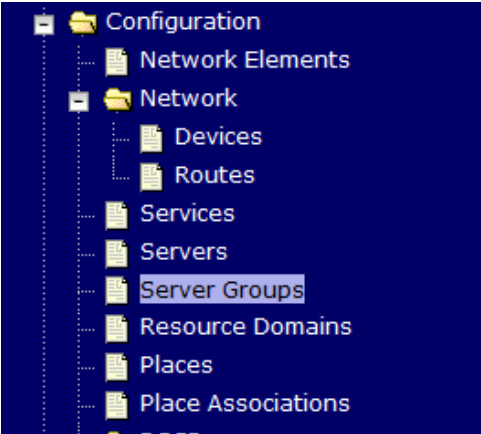
Appendix P.2.5 Deleting the server VM

3 <input type="checkbox"/>	PMAC GUI: Delete the VM	<p>Once the server has been shutdown, select the VM from step 2. Verify the <i>current power state</i> is Shutdown as listed in step 2.</p> <p>Select Delete</p>  <p>Click OK to confirm deletion</p> 
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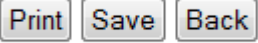
Appendix P.2.6 Post De-Growth Health Check

S T E P #	<p>This procedure will provide steps verify system status and log all alarms after De-growth.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
1 <input type="checkbox"/>	<p>NOAM VIP GUI: Login</p>	<p>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:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p><code>http://<Primary_NOAM_VIP_IP_Address></code></p> </div> <p>Login as the <i>guiadmin</i> user:</p> <div style="text-align: center;">  <p>The screenshot shows the Oracle System Login interface. At the top is the Oracle logo in red. Below it is the text 'Oracle System Login' and the date 'Fri Mar 20 12:29:52 2015 EDT'. A central box titled 'Log In' contains the text 'Enter your username and password to log in'. It has two input fields: 'Username: guiadmin' and 'Password: ●●●●●●'. There is a 'Change password' checkbox and a 'Log In' button. Below the box, it says 'Welcome to the Oracle System Login.' and a disclaimer: 'Unauthorized access is prohibited. This Oracle system requires the use of Microsoft Internet Explorer 8.0, 9.0, or 10.0 with support for JavaScript and cookies.' At the bottom, it states 'Oracle and Java are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.'</p> </div>

Appendix P.2.6 Post De-Growth Health Check

<p>2</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Verify Server Status</p>	<p>Navigate to Main Menu -> Status & Manage -> Server</p>  <p>Verify all Server Status is Normal (Norm) for: Alarm (Alm), Database (DB), Replication Status, and Processes (Proc).</p> <table border="1"> <thead> <tr> <th>Appl State</th> <th>Alm</th> <th>DB</th> <th>Reporting Status</th> <th>Proc</th> </tr> </thead> <tbody> <tr> <td>Enabled</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> <tr> <td>Enabled</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> <tr> <td>Enabled</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> <tr> <td>Enabled</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> </tbody> </table>	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
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																							
<p>3</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Verify Server Configuration</p>	<p>Navigate to Main Menu -> Configuration -> Server Groups</p>  <p>Verify the configuration data is correct for your network.</p>																									

Appendix P.2.6 Post De-Growth Health Check

<p>4</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Log Current Alarms</p>	<p>Navigate to Main Menu -> Alarms & Events -> View Active</p>  <p>Click on the Report button</p>  <p>Save or Print this report, keep copies for future reference.</p>  <p>Compare this alarm report with those gathered in procedure Appendix Q.1</p>
<p>5</p> <p><input type="checkbox"/></p>	<p>SOAM VIP GUI: Repeat</p>	<p>Repeat Steps 1-4 for the SOAM</p>

Appendix P.2.7 Post De-Growth Backups

<p>S T E P #</p>	<p>This procedure will reference steps to backup all necessary items after a De-growth scenario.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
<p>1</p> <p><input type="checkbox"/></p>	<p>Backup TVOE</p>	<p>Backup all TVOE host configurations by executing Section 4.18.5 Backup TVOE Configuration</p>
<p>2</p> <p><input type="checkbox"/></p>	<p>Backup PMAC</p>	<p>Backup the PMAC application by executing Section 4.18.5</p>
<p>3</p> <p><input type="checkbox"/></p>	<p>Backup NOAM/SOAM databases</p>	<p>Backup the NOAM and SOAM Databases by executing Sections 4.18.6 and 4.18.7</p> <p>Note: Database backup on SDS SOAMs not required</p>

Appendix P.3: Re-Shuffle (Oracle X6-2)

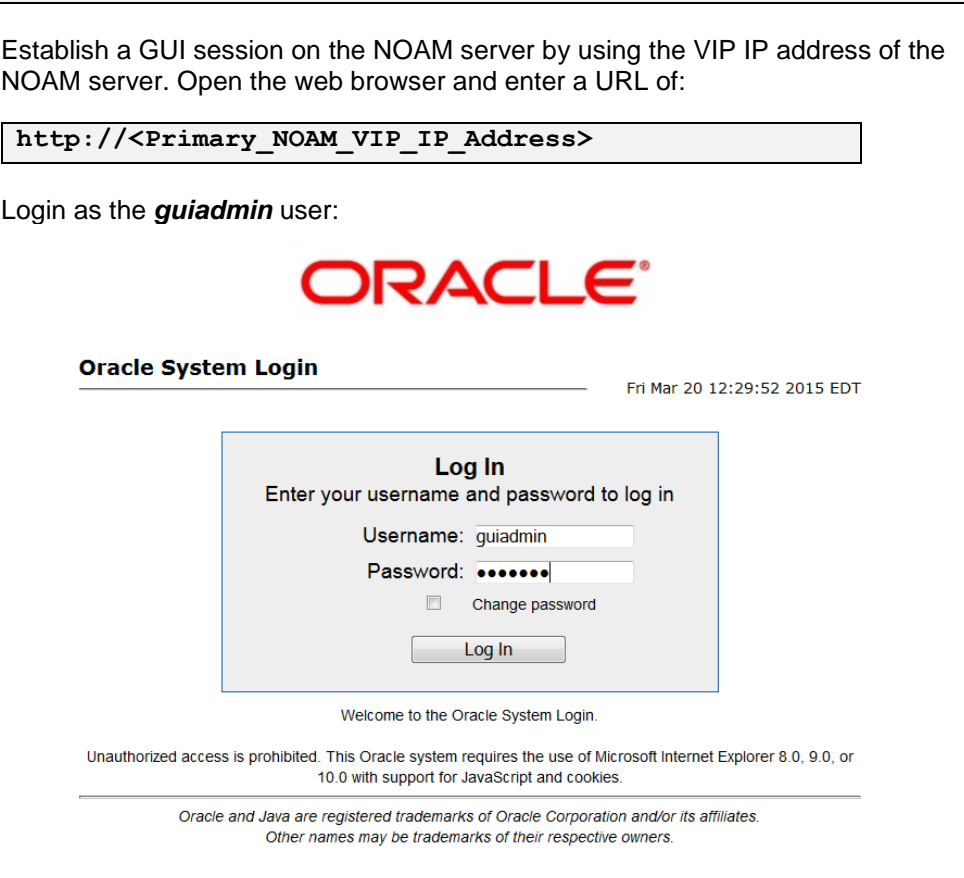
For Growth/De-growth scenarios where it is necessary to move or re-shuffle DSR/SDS servers to different TVOE hosts, the following sequence of steps should be followed:

Step	Procedure(s)
Perform Backups	Appendix P.3.1
Perform system health check	Appendix P.3.2
Add new rack mount server if necessary (Oracle X6-2)	Appendix P.3.3
Identify Servers which will be affected by the Growth: <ul style="list-style-type: none"> • NOAM • SOAM • DSR MP (SBR, SS7MP, IPFE)/ SDS DP • Query Server • PMAC 	
Remove identified servers from Server Group	Appendix P.3.4
Shutdown and remove the identified server's VM.	Appendix P.3.5
Identify the new Rack Mount Server for which the previously removed server will be placed.	
Create and Configure the VMs on the new Rack Mount Servers	Appendix P.3.6
Configure Servers in new VM locations	NOAM/DR-NOAM (DSR/SDS): Appendix P.3.7 SOAM (DSR/SDS): Appendix P.3.8 MP/DP (DSR/SDS): Appendix P.3.9 Query Server (SDS): Appendix P.3.10 iDIH: Appendix P.3.11 PMAC: Appendix P.3.12 Redundant PMAC: Appendix P.3.13
Post Move/Re-Shuffle Health Check	Appendix P.3.14
Post Move/Re-Shuffle Backups	Appendix P.3.15

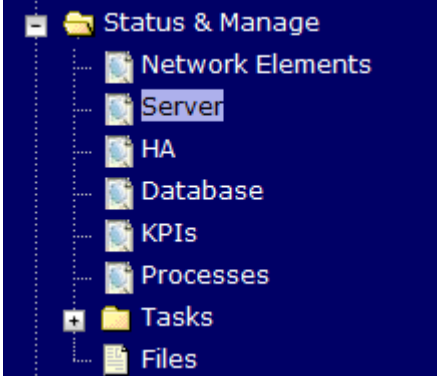
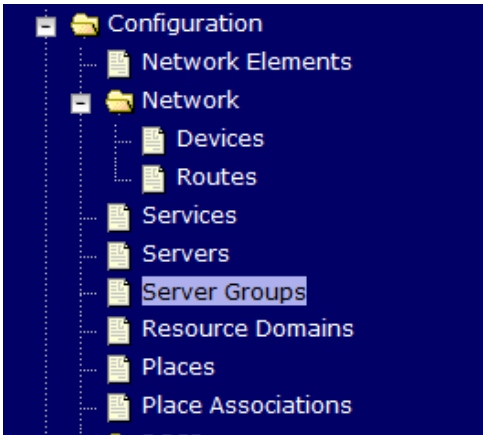
Appendix P.3.1 Perform Backups

S T E P #	<p>This procedure will reference steps to backup all necessary items before a Re-Shuffle scenario.</p> <p>Check off (√) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
1 <input type="checkbox"/>	Backup TVOE	Backup all TVOE host configurations by executing Section 4.18.5 Backup TVOE Configuration
2 <input type="checkbox"/>	Backup PMAC	Backup the PMAC application by executing Section 4.18.6 Backup PMAC Application
3 <input type="checkbox"/>	Backup NOAM/SOAM databases	<p>Backup the NOAM and SOAM Databases by executing Sections 4.18.7 Backup NOAM Database and 4.18.8 Backup SOAM Database</p> <p>Note: Database backup on SDS SOAMs not required</p>


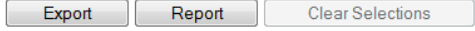

Appendix P.3.2 Perform Health Check

S T E P #	<p>This procedure will provide steps verify system status and log all alarms.</p> <p>Check off (√) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
<p>1</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Login</p>	<p>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:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p><code>http://<Primary_NOAM_VIP_IP_Address></code></p> </div> <p>Login as the <i>guiadmin</i> user:</p> <div style="text-align: center;">  </div>

Appendix P.3.2 Perform Health Check

<p>2</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Verify Server Status</p>	<p>Navigate to Main Menu -> Status & Manage -> Server</p>  <p>Verify all Server Status is Normal (Norm) for: Alarm (Alm), Database (DB), Replication Status, and Processes (Proc).</p> <table border="1"> <thead> <tr> <th>Appl State</th> <th>Alm</th> <th>DB</th> <th>Reporting Status</th> <th>Proc</th> </tr> </thead> <tbody> <tr> <td>Enabled</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> <tr> <td>Enabled</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> <tr> <td>Enabled</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> <tr> <td>Enabled</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> </tbody> </table> <p>Do not proceed to with Growth/De-Growth 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.</p> <p>If the Alarm (Alm) status is not Norm but only Minor alarms are present, it is acceptable to proceed. 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</p>	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
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																							
<p>3</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Verify Server Configuration</p>	<p>Navigate to Main Menu -> Configuration -> Server Groups</p>  <p>Verify the configuration data is correct for your network.</p>																									


Appendix P.3.2 Perform Health Check

<p>4</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Log Current Alarms</p>	<p>Navigate to Main Menu -> Alarms & Events -> View Active</p>  <p>Click on the Report button</p>  <p>Save or Print this report, keep copies for future reference.</p> 
<p>5</p> <p><input type="checkbox"/></p>	<p>SOAM VIP GUI: Repeat For SOAM</p>	<p>Repeat Steps 1-4 for the SOAM</p>

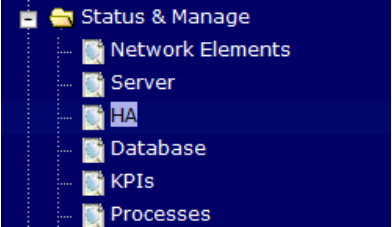
Appendix P.3.3 Adding a new TVOE Server

S T E P #	<p>This procedure will provide steps to add a new rack mount server if necessary.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
1 <input type="checkbox"/>	<p>Add/Configure Additional Rack Mount Servers</p>	<p>Follow the steps in Section 4.7 and Section 4.8 to install and configure TVOE on additional rack mount servers.</p>


Appendix P.3.4 Placing Server in OOS

<p>S T E P #</p>	<p>Once the server's that will be moved has been identified, the server will first need to be placed in HA OOS.</p> <p>This procedure will provide steps to place the server in OOS HA state.</p> <p>Warning: It is recommended that no more than one server from each server be placed in OOS at a time.</p> <p>Warning: For NOAM and SOAM servers, during the process of moving/"Re-Shuffling"; these servers are done one at a time.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>
<p>1 <input type="checkbox"/></p>	<p>NOAM VIP GUI: Login</p> <p>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:</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p><code>http://<Primary_NOAM_VIP_IP_Address></code></p> </div> <p>Login as the <i>guiadmin</i> user:</p> <div style="text-align: center;">  <p>The screenshot shows the Oracle System Login interface. At the top is the Oracle logo. Below it is the text 'Oracle System Login' and the date 'Fri Mar 20 12:29:52 2015 EDT'. A central box contains a 'Log In' form with fields for 'Username' (containing 'guiadmin') and 'Password' (masked with dots). There is a 'Change password' checkbox and a 'Log In' button. Below the form, it says 'Welcome to the Oracle System Login.' and 'Unauthorized access is prohibited. This Oracle system requires the use of Microsoft Internet Explorer 8.0, 9.0, or 10.0 with support for JavaScript and cookies.' At the bottom, it states 'Oracle and Java are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.'</p> </div>

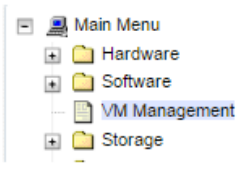
Appendix P.3.4 Placing Server in OOS

<p>2</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Set Server to OOS</p>	<p>Navigate to Main Menu -> Status & Manage -> HA</p>  <p>Click Edit</p> <p>Set the server's <i>Max Allowed HA Role</i> to OOS</p> <table border="1"><thead><tr><th>ime</th><th>Max Allowed HA Role</th></tr></thead><tbody><tr><td>NOAM-1</td><td>Active</td></tr><tr><td>NOAM-2</td><td>Active</td></tr><tr><td>SOAM-1</td><td>Spare</td></tr><tr><td>SOAM-2</td><td>OOS</td></tr></tbody></table> <p>Click Ok</p> <p><input type="button" value="Ok"/> <input type="button" value="Cancel"/></p>	ime	Max Allowed HA Role	NOAM-1	Active	NOAM-2	Active	SOAM-1	Spare	SOAM-2	OOS
ime	Max Allowed HA Role											
NOAM-1	Active											
NOAM-2	Active											
SOAM-1	Spare											
SOAM-2	OOS											

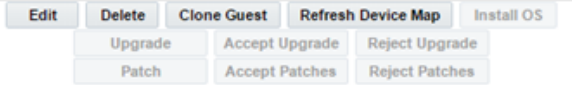
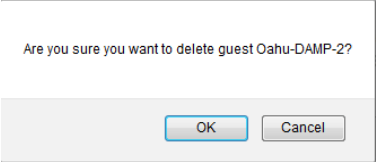
Appendix P.3.5 Deleting the server VM

<p>S T E P #</p>	<p>Once the server's that are being deleted or moved have been identified, and placed in OOS. It is now safe to shut down and delete the VM for which the server is located.</p> <p>The following procedure will provide steps to remove a VM from a TVOE Host</p> <p>Warning: It is recommended that a careful approach be taken with this procedure and that the server to VM mapping be confirmed before proceeding.</p> <p>Check off (√) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
<p>1</p> <p><input type="checkbox"/></p>	<p>PMAC GUI: Login</p>	<p>Open web browser and navigate to the PMAC GUI, Login as guiadmin user:</p> <p><input type="text" value="https://<pmac_network_ip>"/></p> 

Appendix P.3.5 Deleting the server VM

<p>2</p> <p>☐</p>	<p>PMAC GUI: Shutdown the VM</p>	<p>Navigate to Main Menu -> VM Management</p>  <p>Expand the view (<i>if needed</i>) of the Rack Mount Server for which the server you are moving/deleting is located.</p> <p>Shutdown the VM by setting the <i>Current Power State</i> to Shutdown:</p> <p>Current Power State: Running</p> <p>Set Power State: On Change</p> <p>est Name (Required): On AC</p> <p>Host: Shutdown VOE_1</p> <p>Number of vCPUs: Destroy</p> <p>Click Change</p> <p>Select OK for the following prompt:</p> <div><p>It may not always be possible to shutdown a guest or to do so in a timely manner. You may monitor the power state and opt to destroy the guest rather than shut it down. Are you sure you want to attempt to shutdown this guest?</p><p>OK Cancel</p></div> <p>The <i>Current Power State</i> should now display Shutdown:</p> <p>Current Power State: Shut Down</p> <p>Set Power State: On Change</p>
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Appendix P.3.5 Deleting the server VM

3 <input type="checkbox"/>	PMAC GUI: Delete the VM	<p>Once the server has been shutdown, select the VM from step 2. Verify the <i>current power state</i> is Shutdown as listed in step 2.</p> <p>Select Delete</p>  <p>Click OK to confirm deletion</p> 
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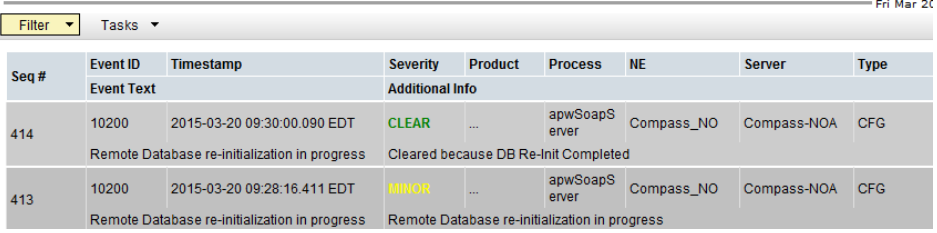
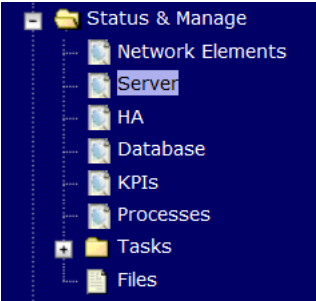
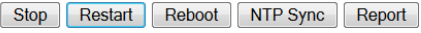
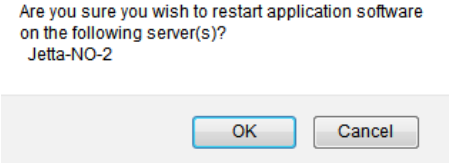
Appendix P.3.6 Moving/Re-Shuffle: Creating/Configuring Virtual Machines

S T E P #	<p>Before starting this procedure, it is assumed the server has been identified, placed in OOS, and its corresponding VM deleted. This procedure will reference steps to create the new VM, load the software, and configure the server.</p> <p>Note: Before beginning this procedure, it is recommended that proper VM mapping has been determined to maintain performance efficiency as mentioned in Section 4.9.</p> <p>Note: It is assumed that the PMAC already contains the needed TPD, DSR, and SDS ISO software. If necessary, execute Procedure 13.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
1 <input type="checkbox"/>	PMAC GUI: Create Virtual Machine	To create a virtual machine for all applicable servers, follow the steps outlined in Section 4.11 .
2 <input type="checkbox"/>	TVOE HOST: Execute CPU Pinning	Execute Section 4.12 to allocate CPU resources on each new VM added.
3 <input type="checkbox"/>	PMAC GUI: Install Software	To install TPD and DSR ISOs on all applicable servers, follow the steps outlined in Section 4.13


Appendix P.3.7 Moving/Re-Shuffle: NOAM/DR-NOAM

<p>S T E P #</p>	<p>This procedure will reference steps to configure an NOAM/DR-NOAM on the new virtual machine for VM re-shuffling scenarios.</p> <p>Prerequisites:</p> <ul style="list-style-type: none"> • NOAM/DR-NOAM has been Identified • Placed in OOS • OLD Virtual Machine Deleted • NEW Virtual Machine Created • TPD/DSR software installed <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>
<p>1 <input type="checkbox"/></p>	<p>NOAM VIP GUI: Configure the 2nd NOAM/DR-NOAM</p> <p>Configure the 2nd NOAM/DR-NOAM by executing the steps referenced in the following procedures:</p> <p><u>DSR NOAM: Procedure 23.</u> : Steps 1-2, 4-7, 8(<i>Optional-NetBackup</i>), 9</p> <p><u>DSR DR-NOAM: Procedure 26:</u> Steps 4-8, 9(<i>Optional-NetBackup</i>), 10</p> <p><u>SDS NOAM: Procedure 41:</u> Steps 1-2, 4-7, 8(<i>Optional-NetBackup</i>), 9</p> <p><u>SDS DR-NOAM: Procedure 44:</u> Steps 4-8, 9(<i>Optional-NetBackup</i>), 10</p>
<p>2 <input type="checkbox"/></p>	<p>NOAM VIP: Establish GUI Session</p> <p>Establish a GUI session on the NOAM by using the XMI VIP address:</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p><code>https://<NOAM_VIP_IP_Address></code></p> </div> <p>Login as user guiadmin.</p> <div style="text-align: center;">  <p>The screenshot shows the Oracle System Login interface. At the top is the Oracle logo. Below it, the text 'Oracle System Login' is displayed on the left, and the date 'Fri Mar 20 12:29:52 2015 EDT' is on the right. A central box contains a 'Log In' form with the instruction 'Enter your username and password to log in'. The form has fields for 'Username: guiadmin' and 'Password: ●●●●●●', a 'Change password' checkbox, and a 'Log In' button. Below the form, it says 'Welcome to the Oracle System Login.' At the bottom, there is a disclaimer: 'Unauthorized access is prohibited. This Oracle system requires the use of Microsoft Internet Explorer 8.0, 9.0, or 10.0 with support for JavaScript and cookies.' and a footer: 'Oracle and Java are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.'</p> </div>

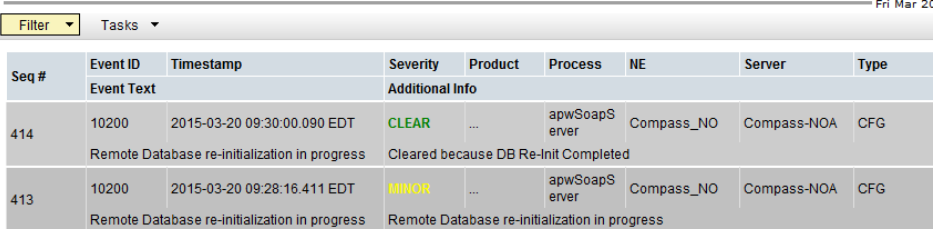
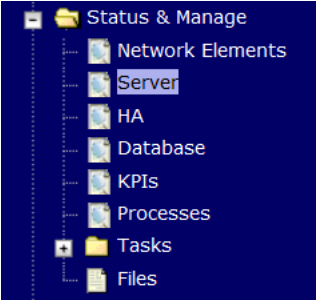
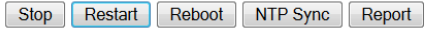
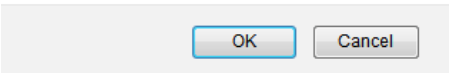
Appendix P.3.7 Moving/Re-Shuffle: NOAM/DR-NOAM

<p>3</p> <p><input type="checkbox"/></p>	<p>NOAM VIP: Wait for Remote Database Alarm to Clear</p>	<p>Wait for the alarm Remote Database re-initialization in progress to be cleared before proceeding.</p> <p>Navigate to Main menu->Alarms & Events->View Active</p> <p>Main Menu: Alarms & Events -> View History (Filtered)</p> 
<p>4</p> <p><input type="checkbox"/></p>	<p>NOAM GUI: Restart 2nd NOAM/DR-NOAM Server</p>	<p>Navigate to Main menu -> Status & Manage -> Server</p>  <p>Select the 2nd NOAM/DR-NOAM server.</p> <p>Select the Restart button.</p>  <p>Answer OK to the confirmation popup.</p>  <p>Wait for restart to complete. Wait approximately 3-5 minutes before proceeding.</p>
<p>5</p> <p><input type="checkbox"/></p>	<p>NOAM GUI: Activate Optional Features</p>	<p>If there are any optional features currently activated, the feature activation procedures will need to be run again. Refer to Section 3.3.</p>


Appendix P.3.8 Moving/Re-Shuffle: SOAM

<p>S T E P #</p>	<p>This procedure will reference steps to configure an SOAM on the new virtual machine for VM re-shuffling scenarios.</p> <p>Prerequisites:</p> <ul style="list-style-type: none"> • SOAM has been Identified • Placed in OOS • OLD Virtual Machine Deleted • NEW Virtual Machine Created • TPD/DSR software installed <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
<p>1 <input type="checkbox"/></p>	<p>NOAM VIP GUI: Configure the SOAM</p>	<p>Configure the SOAM by executing the steps referenced in the following procedures:</p> <p><u>DSR SOAM: Procedure 293:</u> Steps 1-3, 5-9, 11 (<i>Optional-NetBackup</i>)</p> <p><u>SDS DP SOAM: Procedure 46. 52:</u> Steps 1-3, 5-9</p>
<p>2 <input type="checkbox"/></p>	<p>NOAM VIP: Establish GUI Session</p>	<p>Establish a GUI session on the NOAM by using the XMI VIP address:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p><a href="https://<NOAM_VIP_IP_Address>">https://<NOAM_VIP_IP_Address></p> </div> <p>Login as user guiadmin.</p> <div style="text-align: center;">  <p>The screenshot shows the Oracle System Login page. At the top is the Oracle logo in red. Below it is the text 'Oracle System Login' and the date 'Fri Mar 20 12:29:52 2015 EDT'. A central box titled 'Log In' contains the instruction 'Enter your username and password to log in'. It has two input fields: 'Username: guiadmin' and 'Password: ●●●●●●'. There is a 'Change password' checkbox and a 'Log In' button. Below the box, it says 'Welcome to the Oracle System Login.' and a disclaimer: 'Unauthorized access is prohibited. This Oracle system requires the use of Microsoft Internet Explorer 8.0, 9.0, or 10.0 with support for JavaScript and cookies.' At the bottom, it states 'Oracle and Java are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.'</p> </div>

Appendix P.3.8 Moving/Re-Shuffle: SOAM

<p>3</p> <p><input type="checkbox"/></p>	<p>NOAM VIP: Wait for Remote Database Alarm to Clear</p>	<p>Wait for the alarm Remote Database re-initialization in progress to be cleared before proceeding.</p> <p>Navigate to Main menu->Alarms & Events->View Active</p> <p>Main Menu: Alarms & Events -> View History (Filtered)</p> 
<p>4</p> <p><input type="checkbox"/></p>	<p>NOAM GUI: Restart the SOAM Server</p>	<p>Navigate to Main menu -> Status & Manage -> Server</p>  <p>Select the SOAM server.</p> <p>Select the Restart button.</p>  <p>Answer OK to the confirmation popup.</p>  <p>Wait for restart to complete. Wait approximately 3-5 minutes before proceeding.</p>
<p>5</p> <p><input type="checkbox"/></p>	<p>NOAM GUI: Activate Optional Features</p>	<p>If there are any optional features currently activated, the feature activation procedures will need to be run again. Refer to Section 3.3.</p>


Appendix P.3.9 Moving/Re-Shuffle: MP/DP

<p>S T E P #</p>	<p>This procedure will reference steps to configure an MP/DP on the new virtual machine for VM re-shuffling scenarios.</p> <p>Prerequisites:</p> <ul style="list-style-type: none"> • MP/DP has been Identified • Placed in OOS • OLD Virtual Machine Deleted • NEW Virtual Machine Created • TPD/DSR software installed <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
<p>1</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Configure the MP/DP</p>	<p>Configure the MP/DP by executing the steps referenced in the following procedures:</p> <p><u>DSR MP: Procedure 32:</u> Steps 1-2, 7, 9, 10-12, 13-14(Optional), 15</p> <p><u>SDS DP: Procedure 51:</u> Steps 1-2, 5-9</p>
<p>2</p> <p><input type="checkbox"/></p>	<p>NOAM VIP: Establish GUI Session</p>	<p>Establish a GUI session on the NOAM by using the XMI VIP address:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p><code>https://<NOAM_VIP_IP_Address></code></p> </div> <p>Login as user guiadmin.</p> <div style="text-align: center;">  <p>The screenshot shows the Oracle System Login interface. At the top is the Oracle logo. Below it is the text 'Oracle System Login' and the date 'Fri Mar 20 12:29:52 2015 EDT'. A central box titled 'Log In' contains the instruction 'Enter your username and password to log in'. It has two input fields: 'Username: guiadmin' and 'Password: ●●●●●●'. There is a 'Change password' checkbox and a 'Log In' button. Below the box, it says 'Welcome to the Oracle System Login.' and a disclaimer: 'Unauthorized access is prohibited. This Oracle system requires the use of Microsoft Internet Explorer 8.0, 9.0, or 10.0 with support for JavaScript and cookies.' At the bottom, it states 'Oracle and Java are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.'</p> </div>

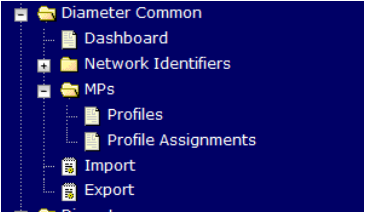
Appendix P.3.9 Moving/Re-Shuffle: MP/DP

<p>3</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: [PCA ONLY] Edit the MP Server Group and add Preferred Spares for Site Redundancy (Optional)</p>	<p>If Two Site Redundancy for the Policy and Charging SBR Server Group is wanted, add a MP server that is physically located in a separate site (location) to the Server Group by clicking the Include in SG checkbox and also check the Preferred Spare checkbox.</p> <table border="1"> <thead> <tr> <th>Server</th> <th>SG Inclusion</th> <th>Preferred HA Role</th> </tr> </thead> <tbody> <tr> <td>LabF123SBRsp1</td> <td><input checked="" type="checkbox"/> Include in SG</td> <td><input checked="" type="checkbox"/> Preferred Spare</td> </tr> </tbody> </table> <p>If Three Site Redundancy for the SBR MP Server Group is wanted, add two SBR MP servers that are both physically located in separate sites (<i>location</i>) to the Server Group by clicking the Include in SG checkbox and also check the Preferred Spare checkbox for both servers.</p> <p>Note: The Preferred Spare servers should be different sites from the original server and should not be in the same site. There should be servers from three separate sites (locations).</p> <table border="1"> <thead> <tr> <th>Server</th> <th>SG Inclusion</th> <th>Preferred HA Role</th> </tr> </thead> <tbody> <tr> <td>LabF123SBRsp1</td> <td><input checked="" type="checkbox"/> Include in SG</td> <td><input checked="" type="checkbox"/> Preferred Spare</td> </tr> <tr> <td>LabF123SBRsp2</td> <td><input checked="" type="checkbox"/> Include in SG</td> <td><input checked="" type="checkbox"/> Preferred Spare</td> </tr> </tbody> </table> <p>For more information about Site Redundancy for Policy and Charging SBR Server Groups, see the Terminology section.</p> <p>Select OK to save</p>	Server	SG Inclusion	Preferred HA Role	LabF123SBRsp1	<input checked="" type="checkbox"/> Include in SG	<input checked="" type="checkbox"/> Preferred Spare	Server	SG Inclusion	Preferred HA Role	LabF123SBRsp1	<input checked="" type="checkbox"/> Include in SG	<input checked="" type="checkbox"/> Preferred Spare	LabF123SBRsp2	<input checked="" type="checkbox"/> Include in SG	<input checked="" type="checkbox"/> Preferred Spare																																							
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<p>4</p> <p><input type="checkbox"/></p>	<p>NOAM VIP: Wait for Remote Database Alarm to Clear</p>	<p>Wait for the alarm Remote Database re-initialization in progress to be cleared before proceeding.</p> <p>Navigate to Main menu->Alarms & Events->View Active</p> <p>Main Menu: Alarms & Events -> View History (Filtered)</p> <p style="text-align: right;">Fri Mar 20</p> <table border="1"> <thead> <tr> <th>Seq #</th> <th>Event ID</th> <th>Timestamp</th> <th>Severity</th> <th>Product</th> <th>Process</th> <th>NE</th> <th>Server</th> <th>Type</th> </tr> <tr> <th colspan="3">Event Text</th> <th colspan="6">Additional Info</th> </tr> </thead> <tbody> <tr> <td>414</td> <td>10200</td> <td>2015-03-20 09:30:00.090 EDT</td> <td>CLEAR</td> <td>...</td> <td>apwSoapServer</td> <td>Compass_NO</td> <td>Compass-NOA</td> <td>CFG</td> </tr> <tr> <td colspan="3">Remote Database re-initialization in progress</td> <td colspan="6">Cleared because DB Re-Init Completed</td> </tr> <tr> <td>413</td> <td>10200</td> <td>2015-03-20 09:28:16.411 EDT</td> <td>MINOR</td> <td>...</td> <td>apwSoapServer</td> <td>Compass_NO</td> <td>Compass-NOA</td> <td>CFG</td> </tr> <tr> <td colspan="3">Remote Database re-initialization in progress</td> <td colspan="6">Remote Database re-initialization in progress</td> </tr> </tbody> </table>	Seq #	Event ID	Timestamp	Severity	Product	Process	NE	Server	Type	Event Text			Additional Info						414	10200	2015-03-20 09:30:00.090 EDT	CLEAR	...	apwSoapServer	Compass_NO	Compass-NOA	CFG	Remote Database re-initialization in progress			Cleared because DB Re-Init Completed						413	10200	2015-03-20 09:28:16.411 EDT	MINOR	...	apwSoapServer	Compass_NO	Compass-NOA	CFG	Remote Database re-initialization in progress			Remote Database re-initialization in progress					
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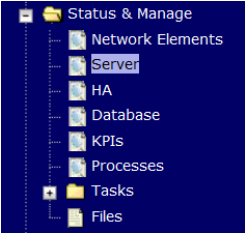
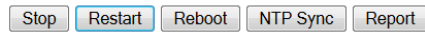
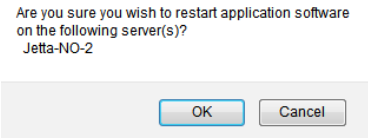
Appendix P.3.9 Moving/Re-Shuffle: MP/DP

5 <input type="checkbox"/>	SOAM VIP GUI: Login	<p>If not already done, establish a GUI session on the SOAM server by using the VIP IP address of the SOAM server.</p> <p>Open the web browser and enter a URL of:</p> <div style="border: 1px solid black; padding: 2px;"><code>https://<Primary_SOAM_VIP_IP_Address></code></div> <p>Login to the SOAM GUI as the <i>guiadmin</i> user:</p> <div style="text-align: center;"><p>The screenshot shows the Oracle System Login interface. At the top is the Oracle logo. Below it, the text 'Oracle System Login' is followed by a horizontal line and the date 'Fri Mar 20 12:29:52 2015 EDT'. In the center is a 'Log In' box with the instruction 'Enter your username and password to log in'. It contains a 'Username' field with 'guiadmin' entered, a 'Password' field with seven dots, a 'Change password' checkbox, and a 'Log In' button. Below the box, it says 'Welcome to the Oracle System Login.' At the bottom, there is a disclaimer: 'Unauthorized access is prohibited. This Oracle system requires the use of Microsoft Internet Explorer 8.0, 9.0, or 10.0 with support for JavaScript and cookies.' and a footer: 'Oracle and Java are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.'</p></div>
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Appendix P.3.9 Moving/Re-Shuffle: MP/DP

6	<p>SOAM VIP GUI: Assign Profiles to DA-MPs from SOAM GUI.</p>	<p>Navigate to Main Menu -> Diameter Common ->MPs -> Profiles Assignments</p>  <p>Refer to the DA-MP section. (If the site has both DSR and MAP-IWF server groups, you will see both a DA-MP section and an SS7-MP section)</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">DA-MP</th> <th style="text-align: left;">MP Profile</th> </tr> </thead> <tbody> <tr><td>MultiApp3-DA-MP1</td><td>VM:10K_MPS</td></tr> <tr><td>MultiApp3-DA-MP10</td><td>VM:10K_MPS</td></tr> <tr><td>MultiApp3-DA-MP2</td><td>VM:10K_MPS</td></tr> <tr><td>MultiApp3-DA-MP3</td><td>VM:10K_MPS</td></tr> <tr><td>MultiApp3-DA-MP4</td><td>VM:10K_MPS</td></tr> <tr><td>MultiApp3-DA-MP5</td><td>VM:10K_MPS</td></tr> <tr><td>MultiApp3-DA-MP6</td><td>VM:10K_MPS</td></tr> <tr><td>MultiApp3-DA-MP7</td><td>VM:10K_MPS</td></tr> <tr><td>MultiApp3-DA-MP8</td><td>VM:10K_MPS</td></tr> <tr><td>MultiApp3-DA-MP9</td><td>VM:10K_MPS</td></tr> <tr><td colspan="2"> </td></tr> <tr> <th style="text-align: left;">SS7-MP</th> <th style="text-align: left;">MP Profile</th> </tr> <tr> <td>MultiApp3-SS7-MP1</td> <td>VM:MD-IWF</td> </tr> </tbody> </table> <p>For each MP, select the proper profile assignment based on the function each MP will serve:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Profile Name</th> <th style="text-align: left;">Description</th> </tr> </thead> <tbody> <tr> <td>VM:10K_MPS (Oracle X6-2)</td> <td>Virtualized DA-MP on TVOE Guest running relay, session, and database applications</td> </tr> <tr> <td>VM:MD-IWF</td> <td>Virtualized SS7-MP on TVOE Guest running MD-IWF applications</td> </tr> </tbody> </table> <p>When finished, press the Assign button</p>	DA-MP	MP Profile	MultiApp3-DA-MP1	VM:10K_MPS	MultiApp3-DA-MP10	VM:10K_MPS	MultiApp3-DA-MP2	VM:10K_MPS	MultiApp3-DA-MP3	VM:10K_MPS	MultiApp3-DA-MP4	VM:10K_MPS	MultiApp3-DA-MP5	VM:10K_MPS	MultiApp3-DA-MP6	VM:10K_MPS	MultiApp3-DA-MP7	VM:10K_MPS	MultiApp3-DA-MP8	VM:10K_MPS	MultiApp3-DA-MP9	VM:10K_MPS			SS7-MP	MP Profile	MultiApp3-SS7-MP1	VM:MD-IWF	Profile Name	Description	VM:10K_MPS (Oracle X6-2)	Virtualized DA-MP on TVOE Guest running relay, session, and database applications	VM:MD-IWF	Virtualized SS7-MP on TVOE Guest running MD-IWF applications
DA-MP	MP Profile																																			
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MultiApp3-DA-MP5	VM:10K_MPS																																			
MultiApp3-DA-MP6	VM:10K_MPS																																			
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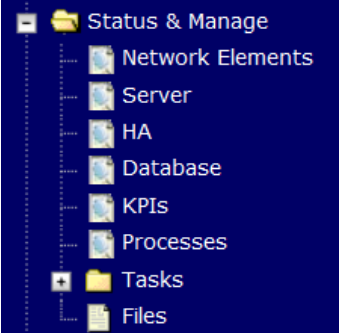
Appendix P.3.9 Moving/Re-Shuffle: MP/DP

<p>7</p> <p>☐</p>	<p>NOAM GUI: Restart the MP/DP Server</p>	<p>Navigate to Main menu -> Status & Manage -> Server</p>  <p>Select the MP/DP server.</p> <p>Select the Restart button.</p>  <p>Answer OK to the confirmation popup.</p>  <p>Wait for restart to complete. Wait approximately 3-5 minutes before proceeding.</p>
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Appendix P.3.10 Moving/Re-Shuffle: Query Server (SDS Only)

<p>S T E P #</p>	<p>This procedure will reference steps to configure a query server on the new virtual machine for VM re-shuffling scenarios.</p> <p>Prerequisites:</p> <ul style="list-style-type: none"> • Query server has been Identified • Placed in OOS • OLD Virtual Machine Deleted • NEW Virtual Machine Created • TPD/DSR software installed <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
<p>1 <input type="checkbox"/></p>	<p>SDS NOAM VIP GUI: Configure the query server</p>	<p>Configure the query server by executing the steps referenced in the following procedures:</p> <p><u>SDS query server: Procedure 46.</u> : Steps 1-2, 4-8</p>
<p>2 <input type="checkbox"/></p>	<p>SDS NOAM VIP: Establish GUI Session</p>	<p>Establish a GUI session on the NOAM by using the XMI VIP address:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p><a href="https://<NOAM_VIP_IP_Address>">https://<NOAM_VIP_IP_Address></p> </div> <p>Login as user <i>guiadmin</i>.</p> <div style="text-align: center;">  <p>The screenshot shows the Oracle System Login page. At the top is the Oracle logo in red. Below it is the text 'Oracle System Login' and the date 'Fri Mar 20 12:29:52 2015 EDT'. A central box contains a 'Log In' form with fields for 'Username: guiadmin' and 'Password: ●●●●●●', a 'Change password' checkbox, and a 'Log In' button. Below the form is the text 'Welcome to the Oracle System Login.' and a disclaimer: 'Unauthorized access is prohibited. This Oracle system requires the use of Microsoft Internet Explorer 8.0, 9.0, or 10.0 with support for JavaScript and cookies.' At the bottom, it states 'Oracle and Java are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.'</p> </div>

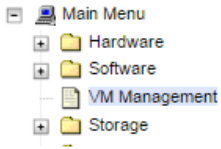
Appendix P.3.10 Moving/Re-Shuffle: Query Server (SDS Only)

<p>3</p> <p><input type="checkbox"/></p>	<p>SDS NOAM VIP GUI: Wait for Remote Database Alarm to Clear</p>	<p>Wait for the alarm Remote Database re-initialization in progress to be cleared before proceeding.</p> <p>Navigate to Main menu->Alarms & Events->View Active</p> <p>Main Menu: Alarms & Events -> View History (Filtered)</p> <p style="text-align: right;">Fri Mar 20</p> <p>Filter Tasks</p> <table border="1"> <thead> <tr> <th>Seq #</th> <th>Event ID</th> <th>Timestamp</th> <th>Severity</th> <th>Product</th> <th>Process</th> <th>NE</th> <th>Server</th> <th>Type</th> </tr> </thead> <tbody> <tr> <td>414</td> <td>10200</td> <td>2015-03-20 09:30:00.090 EDT</td> <td>CLEAR</td> <td>...</td> <td>apwSoapServer</td> <td>Compass_NO</td> <td>Compass-NOA</td> <td>CFG</td> </tr> <tr> <td></td> <td></td> <td>Remote Database re-initialization in progress</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Cleared because DB Re-Init Completed</td> </tr> <tr> <td>413</td> <td>10200</td> <td>2015-03-20 09:28:16.411 EDT</td> <td>MINOR</td> <td>...</td> <td>apwSoapServer</td> <td>Compass_NO</td> <td>Compass-NOA</td> <td>CFG</td> </tr> <tr> <td></td> <td></td> <td>Remote Database re-initialization in progress</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Remote Database re-initialization in progress</td> </tr> </tbody> </table>	Seq #	Event ID	Timestamp	Severity	Product	Process	NE	Server	Type	414	10200	2015-03-20 09:30:00.090 EDT	CLEAR	...	apwSoapServer	Compass_NO	Compass-NOA	CFG			Remote Database re-initialization in progress						Cleared because DB Re-Init Completed	413	10200	2015-03-20 09:28:16.411 EDT	MINOR	...	apwSoapServer	Compass_NO	Compass-NOA	CFG			Remote Database re-initialization in progress						Remote Database re-initialization in progress
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		Remote Database re-initialization in progress						Remote Database re-initialization in progress																																							
<p>4</p> <p><input type="checkbox"/></p>	<p>SDS NOAM VIP GUI: Restart query server</p>	<p>Navigate to Main menu->Status & Manage->Server.</p>  <p>Select the query server.</p> <p>Select the Restart button.</p> <p> <input type="button" value="Stop"/> <input type="button" value="Restart"/> <input type="button" value="Reboot"/> <input type="button" value="NTP Sync"/> <input type="button" value="Report"/> </p> <p>Answer OK to the confirmation popup. Wait for restart to complete.</p>																																													

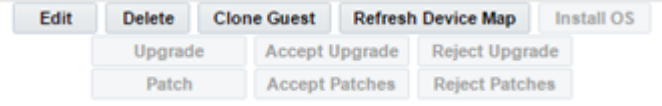
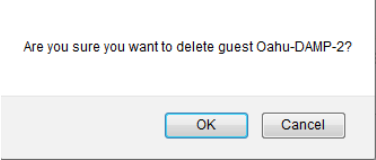
Appendix P.3.11 Moving/Re-Shuffle: iDIH

<p>S T E P #</p>	<p>This procedure will reference steps to configure/Re-deploy iDIH on a set of new virtual machines for VM re-shuffling sceneries.</p> <p>IMPORTANT: If moving/Re-shuffling the Oracle VM/Server, it is important to note that doing so will remove all historical trace data. However, moving/Re-Shuffling of the Application and mediation VMs can be done without affecting historical trace data.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
<p>1</p> <p><input type="checkbox"/></p>	<p>PMAC GUI: Login</p>	<p>Open web browser and navigate to the PMAC GUI, Login as guiadmin user:</p> <p><input type="text" value="https://<pmac_network_ip>"/></p> 

Appendix P.3.11 Moving/Re-Shuffle: iDIH

<p>2</p> <p>☐</p>	<p>PMAC GUI: Shutdown the VM</p>	<p>Navigate to Main Menu -> VM Management</p>  <p>Expand the view (<i>if needed</i>) of the Rack Mount Server for which the server you are moving/deleting is located.</p> <p>Shutdown the VM by setting the <i>Current Power State</i> to Shutdown:</p> <p>Current Power State: Running</p> <p>Set Power State: On Change</p> <p>est Name (Required): On AC</p> <p>Host: Shutdown VOE_1</p> <p>Number of vCPUs: Destroy</p> <p>Click Change</p> <p>Select OK for the following prompt:</p> <div><p>It may not always be possible to shutdown a guest or to do so in a timely manner. You may monitor the power state and opt to destroy the guest rather than shut it down. Are you sure you want to attempt to shutdown this guest?</p><p>OK Cancel</p></div> <p>The <i>Current Power State</i> should now display Shutdown:</p> <p>Current Power State: Shut Down</p> <p>Set Power State: On Change</p>
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Appendix P.3.11 Moving/Re-Shuffle: iDIH

<p>3 <input type="checkbox"/></p>	<p>PMAC GUI: Delete the VM</p>	<p>Once the server has been shutdown, select the VM from step 2. Verify the <i>current power state</i> is Shutdown as listed in step 2.</p> <p>Select Delete</p>  <p>Click OK to confirm deletion</p> 
<p>4 <input type="checkbox"/></p>	<p>PMAC Server: Navigate to guest-dropin directory</p>	<pre>\$ cd /var/TKLC/smac/guest-dropin/</pre>
<p>5 <input type="checkbox"/></p>	<p>PMAC Server: Edit the IDIH fdc file</p>	<p>Edit the existing idih_fdc_file_name.xml (or create a new) file configured in Procedure 55 <i>step 7</i></p> <p>Change the Rack Mount Server to which the VM being Moved/Re-shuffled will be placed by changing the < tvoehost > item for the applicable VM (< tvoeguest id >).</p> <p>Note: It may also be necessary to change the XMI, IMI, and default route IP addresses depending on the location of the rack mount server.</p> <p>IMPORTANT: If moving/Re-shuffling the Oracle VM/Server, it is important to note that doing so will remove all historical trace data. However, moving/Re-Shuffling of the Application and mediation VMs can be done without affecting historical trace data.</p>

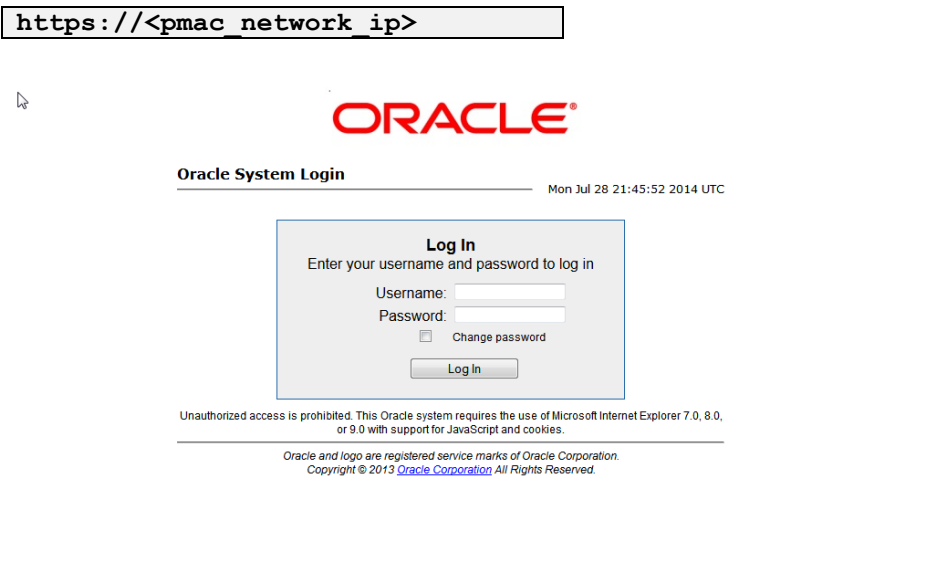
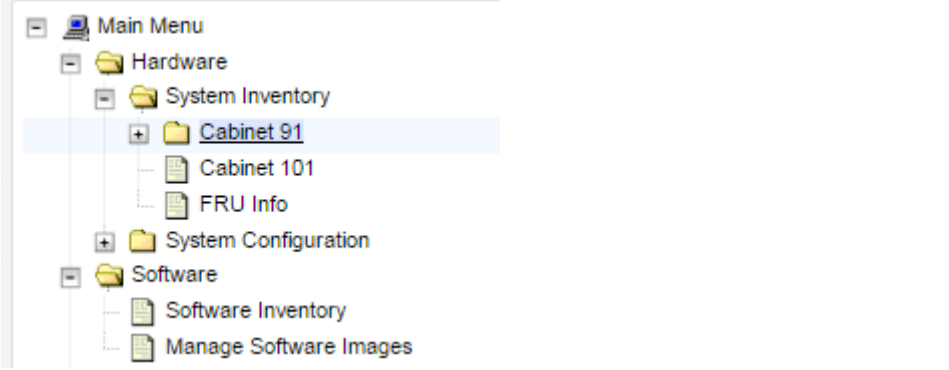
Appendix P.3.12 Moving/Re-Shuffle: PMAC

S T E P #	<p>This procedure will reference steps to configure the PMAC on a new virtual machine for VM re-shuffling scenarios.</p> <p>Prerequisites: Database backup of the PMAC server is available</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
1 <input type="checkbox"/>	PMAC: Backup PMAC Database	Backup the PMAC database by following Section 4.18.6 Backup PMAC Application
2 <input type="checkbox"/>	PMAC TVOE HOST: Login	Establish an SSH session to the PMAC's TVOE host, login as admusr .
3 <input type="checkbox"/>	PMAC TVOE HOST: Verify PMAC location	<p>Verify the location of the PMAC VM using virsh:</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo /usr/bin/virsh list Id Name State ----- 2 PM&C running</pre>
4 <input type="checkbox"/>	PMAC TVOE HOST: Remove Existing PMAC Guest	<p>Delete the PMAC Guest:</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo guestMgr -remove <PMAC_Name></pre>
5 <input type="checkbox"/>	New PMAC TVOE HOST: Deploy PMAC on new TVOE Host	Once the TVOE host for the new PMAC location has been identified, execute Section 4.3 to deploy the new PMAC
6 <input type="checkbox"/>	PMAC: Login	Establish an SSH session to the PMAC server, login as admusr .

Appendix P.3.12 Moving/Re-Shuffle: PMAC

7 <input type="checkbox"/>	Restore PMAC Backup image to the TVOE host	<p>From the remote backup location, copy the backup file to the deployed PMAC. There are too many possible backup scenarios to cover them all here.</p> <p>The example below is a simple scp from a redundant PM&C backup location. If using IPv6 addresses, command requires shell escapes, e.g. admsur@[<ipV6addr>]:/<file></p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo /usr/bin/scp -p \ admsur@<remoteserver>:/var/TKLC/smac/backup/*.pef \ /var/TKLC/smac/backup/</pre> <p>Note: It is important to copy the correct backup file to use in the restore. The latest backup may not be the backup which contains the system data of interest. This could be the case if the automatic backup, which is scheduled in the morning, is performed on the newly installed PMAC prior to the restoration of the data.</p>
8 <input type="checkbox"/>	PMAC: Verify no Alarms are present	<p>Verify no alarms are present by executing the following command:</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo /usr/TKLC/plat/bin/alarmMgr --alarmStatus</pre>
9 <input type="checkbox"/>	Restore the PMAC Data from Backup	<p>Restore the PMAC data from backup by executing the following command:</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo /usr/TKLC/smac/bin/pmacadm restore PM&C Restore been successfully initiated as task ID 1</pre> <p>Note: By default, PMAC restore used the most recent file in /var/TKLC/smac/backup that starts with 'backupPmac'. If the name of the file copied to the system uses a different name or is not the most recent, then provide the name using the <code>--fileName</code> parameter</p> <p>To check the status of the background task, issue the following command:</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo /usr/TKLC/smac/bin/pmaccli getBgTasks</pre> <p>Note: The result will eventually display <i>PMAC Restore successful</i>.</p>

Appendix P.3.12 Moving/Re-Shuffle: PMAC

<p>10</p> <p><input type="checkbox"/></p>	<p>PMAC GUI: Login</p>	<p>Open web browser and navigate to the PMAC GUI, Login as guiadmin user:</p> <p><code>https://<pmac_network_ip></code></p> 
<p>11</p> <p><input type="checkbox"/></p>	<p>PMAC GUI: Verify Restore Task completed</p>	<p>Navigate to Task Monitoring</p> <p>Verify the restore background task completed successfully.</p> <p>Note: After the restore is complete, you should see “Add Enclosure” tasks start for all previously provisioning servers. These should be allowed to complete before continuing.</p> <p>Note: After the restore is complete, you may see some tasks mentioning ISO images being deleted. This is normal behavior, ISO images will be added in the next step.</p>
<p>12</p> <p><input type="checkbox"/></p>	<p>PMAC GUI: Verify System Inventory</p>	<p>Navigate to Main Menu -> System Inventory</p>  <p>Verify previously provisioned enclosures are present</p>


Appendix P.3.12 Moving/Re-Shuffle: PMAC

<p>13</p> <p><input type="checkbox"/></p>	<p>PMAC: Verify PMAC</p>	<p>Perform a system health check on the PMAC</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo /usr/TKLC/plat/bin/alarmMgr --alarmStatus</pre> <p>This command should return no output on a healthy system.</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo /usr/TKLC/smac/bin/sentry status</pre> <p>All Processes should be running, displaying output similar to the following:</p> <pre>PM&C Sentry Status ----- sentryd started: Mon Jul 23 17:50:49 2012 Current activity mode: ACTIVE Process PID Status StartTS NumR ----- ----- smacTalk 9039 running Tue Jul 24 12:50:29 2012 2 smacMon 9094 running Tue Jul 24 12:50:29 2012 2 hpiPortAudit 9137 running Tue Jul 24 12:50:29 2012 2 snmpEventHandler 9176 running Tue Jul 24 12:50:29 2012 2 Fri Aug 3 13:16:35 2012 Command Complete.</pre>
<p>14</p> <p><input type="checkbox"/></p>	<p>PMAC: Add ISO images to the PMAC</p>	<p>Re-add any needed ISO images to the PMAC by executing procedure <i>“Install TVOE on Additional Rack Mount Servers”</i> Steps 2-3</p>

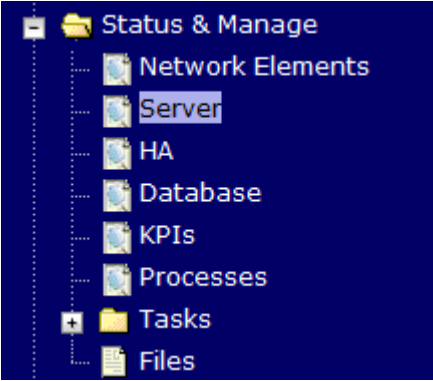
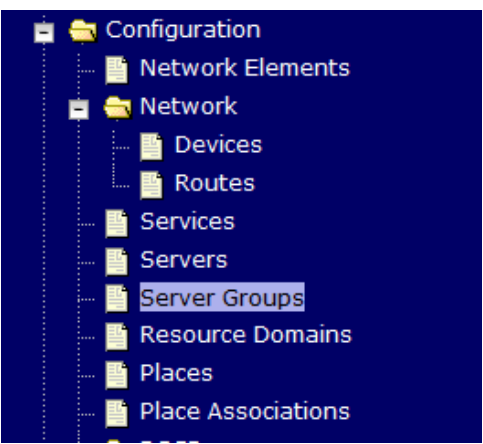
Appendix P.3.13 Moving/Re-Shuffle: Redundant PMAC

S T E P #	<p>This procedure will reference steps to configure the redundant PMAC on a new virtual machine for VM re-shuffling scenarios.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
2 <input type="checkbox"/>	Redundant PMAC TVOE HOST: Login	<p>Establish an SSH session to the redundant PMAC's TVOE host, login as <i>admusr</i>.</p>
3 <input type="checkbox"/>	Redundant PMAC TVOE HOST: Verify PMAC location	<p>Verify the location of the redundant PMAC VM using virsh:</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo /usr/bin/virsh list Id Name State ----- 2 Redundant-PM&C running</pre>
4 <input type="checkbox"/>	Redundant PMAC TVOE HOST: Remove Existing PMAC Guest	<p>If an error was made use the following command to delete the PMAC Guest and then re-deploy the guest again:</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo guestMgr -remove <PMAC_Name></pre>
5 <input type="checkbox"/>	New Redundant PMAC TVOE HOST: Deploy Redundant PMAC on new TVOE Host	<p>Once the TVOE host for the redundant PMAC location has been identified, execute Section 4.10 to deploy the redundant PMAC</p>



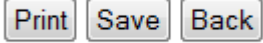
Appendix P.3.14 Post Moving/Re-Shuffle Health Check

S T E P #	<p>This procedure will provide steps verify system status and log all alarms after Growth/De-growth.</p> <p>Check off (√) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
1 <input type="checkbox"/>	<p>NOAM VIP GUI: Login</p>	<p>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:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p><code>http://<Primary_NOAM_VIP_IP_Address></code></p> </div> <p>Login as the <i>guiadmin</i> user:</p> 

Appendix P.3.14 Post Moving/Re-Shuffle Health Check

<p>2</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Verify Server Status</p>	<p>Navigate to Main Menu -> Status & Manage -> Server</p>  <p>Verify all Server Status is Normal (Norm) for: Alarm (Alm), Database (DB), Replication Status, and Processes (Proc).</p> <table border="1"> <thead> <tr> <th>Appl State</th> <th>Alm</th> <th>DB</th> <th>Reporting Status</th> <th>Proc</th> </tr> </thead> <tbody> <tr> <td>Enabled</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> <tr> <td>Enabled</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> <tr> <td>Enabled</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> <tr> <td>Enabled</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> </tbody> </table>	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
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																							
<p>3</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Verify Server Configuration</p>	<p>Navigate to Main Menu -> Configuration -> Server Groups</p>  <p>Verify the configuration data is correct for your network.</p>																									

Appendix P.3.14 Post Moving/Re-Shuffle Health Check

<p>4</p> <p><input type="checkbox"/></p>	<p>NOAM VIP GUI: Log Current Alarms</p>	<p>Navigate to Main Menu -> Alarms & Events -> View Active</p>  <p>Click on the Report button</p>  <p>Save or Print this report, keep copies for future reference.</p>  <p>Compare this alarm report with those gathered in procedure <i>Appendix Q.1</i></p>
<p>5</p> <p><input type="checkbox"/></p>	<p>SOAM VIP GUI: Repeat</p>	<p>Repeat Steps 1-4 for the SOAM</p>

Appendix P.3.15 Post Move/Re-Shuffle Backups

S T E P #	<p>This procedure will reference steps to backup all necessary items after a Re-Shuffle scenario.</p> <p>Check off (√) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
1 <input type="checkbox"/>	Backup TVOE	Backup all TVOE host configurations by executing Section 4.18.5 Backup TVOE Configuration
2 <input type="checkbox"/>	Backup PMAC	Backup the PMAC application by executing Section 4.18.5
3 <input type="checkbox"/>	Backup NOAM/SOAM databases	Backup the NOAM and SOAM Databases by executing Sections 4.18.6 and 4.18.7 Note: Database backup on SDS SOAMs not required

Appendix Q: Non-HA Lab Node Instructions (Oracle X6-2 Non-HA Lab Node Only)

This appendix contains deviations required during Oracle X6-2 RMS Non-HA Lab node installation to be followed, and are mainly applicable during VM creation procedures. The rest of the installation steps are similar to “DSR Rack Mount Server” installation mentioned in this document.

- FUNCTIONALITY ARISING OUT OF OR RELATED TO THE IMPLEMENTATION OR USE OF A MATED PAIR. EXCEPT AS EXPRESSLY STATED HEREIN, ORACLE EXPRESSLY DISCLAIMS ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED, OR STATUTORY, INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR THAT THE NON-HA LAB NODE NODE WILL OPERATE OR UNINTERRUPTED OR ERROR-FREE; and
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Note:

1. Non-HA Lab Node install include NOAM-Active/Standby, SOAM-Active/Standby, 1 IPFE, 1 DAMP, 1 SBR (B), 1 SBR(S), 1-SS7MP, 1-IDIH_Mediation, 1-IDIH_Application and 1-IDIH_Database and for SDS NOAM-Active/Standby, SOAM-Active/Standby, 1 Query Server, 1 DP.
2. Before starting with TVOE installation as per Procedure 3, Procedure 70 shall be followed to create vgguests logical volume with RAID10 spanning across multiple HDDs.

The following steps covers the deviations during PMAC deployment and VM creations and provide the CPU, RAM and Hard Disk information that will override the default values when importing profile during VM creations. These changes are required to place all VMs onto a single Oracle X6-2 server.

Appendix Q.1 PMAC Deployment: Procedure 6 Deviation

Appendix Q.1 PMAC Deployment: Procedure 6 Deviation

S T E P #	<p>This procedure will deploy PMAC on the TVOE Host</p> <p>Prerequisite: First RMS Network Configuration (PMAC Host) has been completed.</p> <p>Needed material:</p> <ul style="list-style-type: none"> - PMAC Media on USB Drive or ISO <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>
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Appendix Q.1 PMAC Deployment: Procedure 6 Deviation

<p>1 <input type="checkbox"/></p>	<p>1st RMS iLO/iLOM: Login and Launch the Integrated Remote Console</p>	<p>Log in to iLO/iLOM; follow Appendix C: TVOE iLO/iLOM GUI Access for instructions on how to access the iLO/iLOM GUI.</p> <pre style="border: 1px solid black; padding: 5px;">https://<management_server_iLO_ip></pre>
<p>2 <input type="checkbox"/></p>	<p>TVOE iLO/iLOM: Mount the PMAC Media to the TVOE Server</p>	<p>Use following option to mount the PMAC Media:</p> <p>If using a USB media, insert the PMAC USB into a USB port and execute the following to mount the ISO:</p> <pre style="border: 1px solid black; padding: 5px;">\$ ls /media/*/*.iso /media/sdd1/872-2586-101-5.7.0_57.3.0-PM&C-x86_64.iso</pre> <p>Use the output of the previous command to populate the next command</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo mount -o loop /media/sdb1/872-2586-101-5.7.0_57.3.0-PM&C-x86_64.iso /mnt/upgrade</pre> <p>Note: If the media validation fails, the media is not valid and should not be used.</p>
<p>3 <input type="checkbox"/></p>	<p>TVOE iLO/iLOM: Deploy PMAC</p>	<p>Using the PMAC-deploy script, deploy the PMAC instance using the configuration captured during the site survey.</p> <pre style="border: 1px solid black; padding: 5px;">\$ cd /mnt/upgrade/upgrade</pre> <p>If deploying PMAC without NetBackup feature, run the following command:</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo ./pmac-deploy --guest=<PMAC_Name> --hostname=<PMAC_Name> --controlBridge=control --controlIP=<PMAC_Control_ip_address> --controlNM=<PMAC_Control_netmask> --managementBridge=management --managementIP=<PMAC_Management_ip_address> --managementNM=<PMAC_Management_netmask/prefix> --routeGW=<PMAC_Management_gateway_address> --ntpserver=<TVOE_Management_server_ip_address> --imageSizeGB=20 --isoimagesVolSize=20</pre> <p>The PMAC will deploy and boot. The management and control network will come up based on the settings that were provided to the PMAC-deploy script.</p> <p>Note: This step takes between 5 and 10 minutes.</p>

Appendix Q.1 PMAC Deployment: Procedure 6 Deviation

<p>4 <input type="checkbox"/></p>	<p>TVOE iLO/iLOM: Unmount the Media</p>	<p>The media should auto-unmount, if it does not, unmount the media using the following command:</p> <pre style="border: 1px solid black; padding: 5px;">\$ cd / \$ sudo /bin/umount /mnt/upgrade</pre> <p>Remove the media from the drive.</p>
<p>5 <input type="checkbox"/></p>	<p>TVOE iLO/iLOM: SSH into the Management Server</p>	<p>Using an SSH client such as putty, ssh to the TVOE host as admusr.</p> <p>Login using virsh, and wait until you see the login prompt :</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo /usr/bin/virsh list Id Name State ----- 2 PM&C running</pre> <pre style="border: 1px solid black; padding: 5px;">\$ sudo /usr/bin/virsh console <PM&C></pre> <p>[Output Removed]</p> <pre>Starting ntdMgr: [OK] Starting atd: [OK] 'TPD Up' notification(s) already sent: [OK] upstart: Starting tpdProvd... upstart: tpdProvd started. CentOS release 6.2 (Final) Kernel 2.6.32-220.17.1.el6prere16.0.0_80.14.0.x86_64 on an x86_64 PM&Cdev7 login:</pre>
<p>6 <input type="checkbox"/></p>	<p>Virtual PMAC: Verify the PMAC is configured correctly on first boot</p>	<p>Establish an SSH session to the PMAC, login as admusr.</p> <p>Run the following command (there should be no output):</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo /bin/ls /usr/TKLC/plat/etc/deployment.d/</pre>
<p>7 <input type="checkbox"/></p>	<p>TVOE iLO/iLOM: Error doing verification, if error is outputted</p>	<p>If an error was made use the following command to delete the PMAC Guest and then re-deploy the guest again:</p> <pre style="border: 1px solid black; padding: 5px;">\$ sudo guestMgr --remove <PMAC_Name></pre>

Appendix Q.1 PMAC Deployment: Procedure 6 Deviation

8 <input type="checkbox"/>	Virtual PMAC: Set the PMAC time zone	Determine the Time Zone to be used for the PMAC Note: Valid time zones can be found in Appendix I: List of Frequently used Time Zones Run <pre>\$ sudo set_pmac_tz.pl <time zone></pre> Example: <pre>\$ sudo set_pmac_tz.pl America/New_York</pre> Verify that the time zone has been updated: <pre>\$ sudo date</pre>
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Appendix Q.2 Create DSR/SDS NOAM Guest VMs: Procedure 14 Deviation

Appendix Q.2 Create DSR/SDS NOAM Guest VMs: Procedure 14 Deviation

<p>S T E P #</p>	<p>This procedure will provide the steps needed to create a DSR/SDS NOAM virtual machine (referred to as a “guest”) on a TVOE RMS. It must be repeated for every DSR and SDS NOAM server you wish to install.</p> <p>Prerequisite: TVOE has been installed and configured on the target RMS</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>
<p>1 <input type="checkbox"/></p>	<p>PMAC GUI: Login</p> <p>Open web browser and enter:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p><code>https://<PMAC_Mgmt_Network_IP></code></p> </div> <p>Login as <i>guiadmin</i> user:</p>  <p>The screenshot shows the Oracle System Login interface. At the top is the Oracle logo in red. Below it, the text 'Oracle System Login' is displayed on the left, and 'Mon Jul 28 21:45:52 2014 UTC' is on the right. In the center is a 'Log In' box with the instruction 'Enter your username and password to log in'. Inside this box are fields for 'Username:' and 'Password:', a 'Change password' checkbox, and a 'Log In' button. At the bottom of the page, there is a disclaimer: 'Unauthorized access is prohibited. This Oracle system requires the use of Microsoft Internet Explorer 7.0, 8.0, or 9.0 with support for JavaScript and cookies.' and a copyright notice: 'Oracle and logo are registered service marks of Oracle Corporation. Copyright © 2013 Oracle Corporation. All Rights Reserved.'</p>

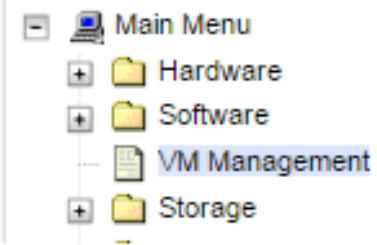
Appendix Q.2 Create DSR/SDS NOAM Guest VMs: Procedure 14 Deviation

2

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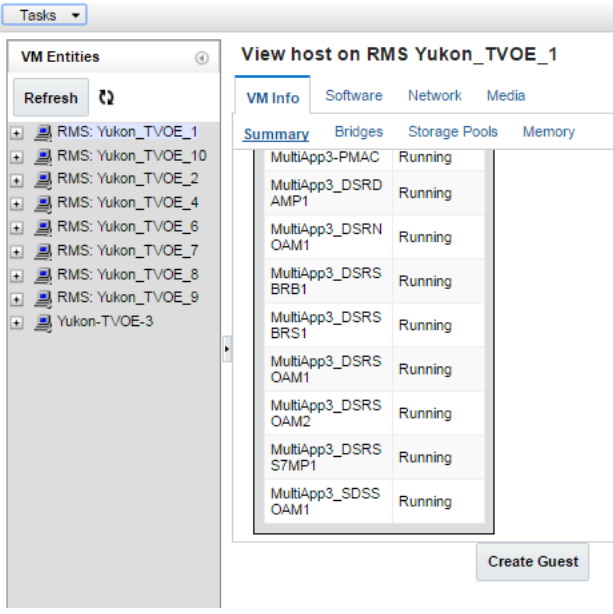
PMAC GUI:
 Navigate to VM Management of the Target Server

Navigate to **Main Menu -> VM Management**



Select the TVOE rack mounted server from the **VM Entities** listing on the left side of the screen. The selected server's guest machine configuration will then be displayed in the remaining area of the window.

Main Menu: VM Management

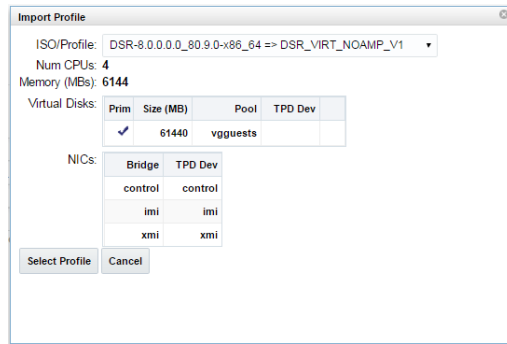


Click **Create Guest**

Appendix Q.2 Create DSR/SDS NOAM Guest VMs: Procedure 14 Deviation

3 **PMAC GUI:**
Configure VM
Guest
Parameters
(Part 1)

Select **Import Profile**



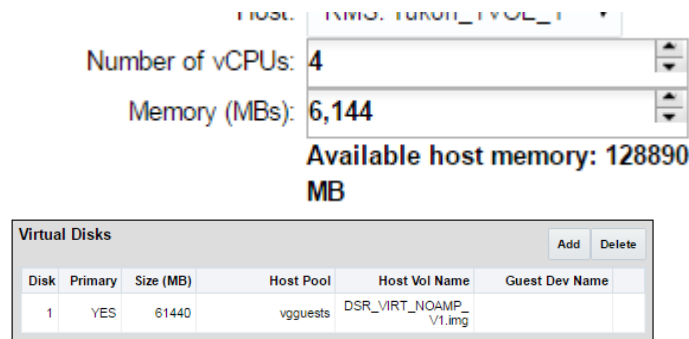
From the **“ISO/Profile”** drop-down box, select the entry that matches depending on the hardware that your NOAM VM TVOE server is running:

DSR or SDS?	NOAM VM TVOE Hardware Type(s)	Choose Profile (<Application ISO NAME>)->
DSR	Oracle X6-2	DSR_VIRT_NOAMP_V1
SDS	Oracle X6-2	SDS_VIRT_NOAM_V1

Note: Application_ISO_NAME is the name of the DSR Application ISO to be installed on this NOAM

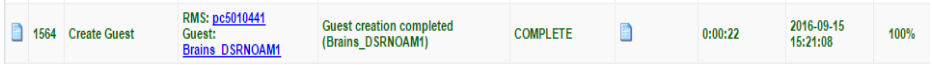
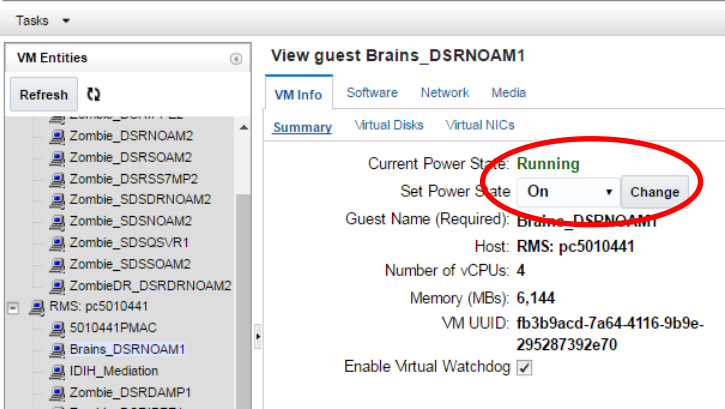
Click and Update the Num vCPUs, Memory(MBs) and Virtual Disks->Size (MB) defaults values with below table values :

DSR or SDS?	NOAM VM TVOE Hardware Type(s)	Profile Parameters (No. Of CPU, RAM, Virtual Disk)
DSR	Oracle X6-2	No. of CPUs : 2 Memory (MBs) : 6144 MB Virtual Disks : 61440 MB
SDS	Oracle X6-2	No. of CPUs : 4 Memory (MBs) : 12288 MB Virtual Disks : 102400 MB




Press **Create**

Appendix Q.2 Create DSR/SDS NOAM Guest VMs: Procedure 14 Deviation

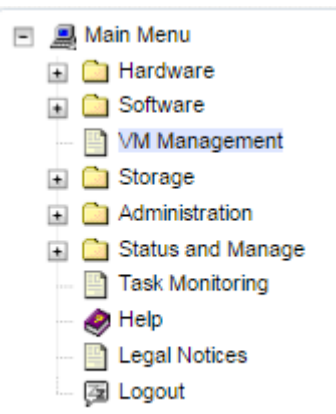
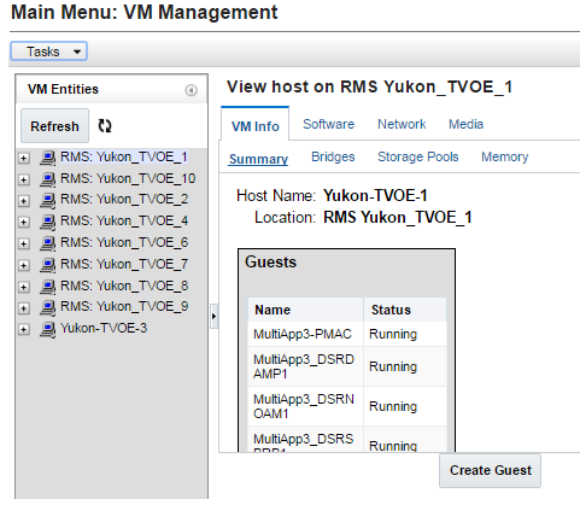
<p>4</p> <p><input type="checkbox"/></p>	<p>PMAC GUI: Wait for Guest Creation to Complete</p>	<p>Navigate to Main Menu -> Task Monitoring to monitor the progress of the guest creation task. A separate task will appear for each guest creation that you have launched.</p> <p>Wait or refresh the screen until you see that the guest creation task has completed successfully.</p> 
<p>5</p> <p><input type="checkbox"/></p>	<p>PMAC GUI: Verify Guest Machine is Running</p>	<p>Navigate to Main Menu -> VM Management</p> <p>Select the TVOE server on which the guest machine was just created.</p> <p>Look at the list of guests present and verify that you see a guest that matches the name you configured and that its status is “Running”.</p> <p>Main Menu: VM Management</p>  <p>VM Creation for this guest is complete.</p>
<p>6</p> <p><input type="checkbox"/></p>	<p>PMAC GUI: Repeat for remaining NOAM VMs</p>	<p>Repeat from Steps 2-5 for any remaining NOAM VMs (for instance, the standby NOAM) that must be created.</p>

Appendix Q.3 Create DSR/SDS SOAM Guest VMs: Procedure 15 Deviation

Appendix Q.3 Create DSR/SDS SOAM Guest VMs: Procedure 15 Deviation

<p>S T E P #</p>	<p>This procedure will provide the steps needed to create a DSR/SDS SOAM virtual machine (referred to as a “guest”) on a TVOE RMS. It must be repeated for every DSR and SDS SOAM server you wish to install.</p> <p>Prerequisite: TVOE has been installed and configured on the target RMS</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>
<p>1</p> <p><input type="checkbox"/></p> <p>PMAC GUI: Login</p>	<p>Open web browser and enter:</p> <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <p><a href="https://<PMAC_Mgmt_Network_IP>">https://<PMAC_Mgmt_Network_IP></p> </div> <p>Login as <i>guiadmin</i> user:</p> 

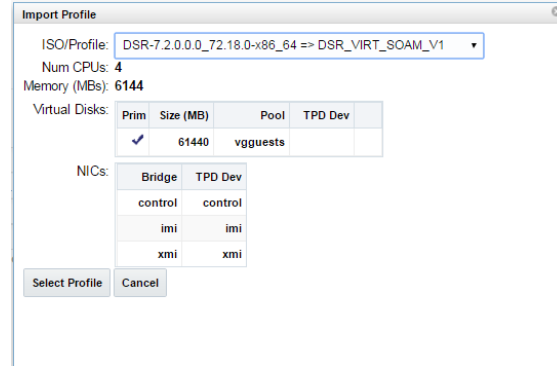
Appendix Q.3 Create DSR/SDS SOAM Guest VMs: Procedure 15 Deviation

2	<p>PMAC GUI: Navigate to VM Management of the Target Server</p>	<p>Navigate to Main Menu -> VM Management</p>  <p>Select the TVOE rack mounted server from the VM Entities listing on the left side of the screen. The selected server's guest machine configuration will then be displayed in the remaining area of the window.</p>  <p>Click Create Guest</p>
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Appendix Q.3 Create DSR/SDS SOAM Guest VMs: Procedure 15 Deviation

3 **PMAC GUI:**
Configure VM
Guest
Parameters
(Part 1)

Select **Import Profile**



From the **“ISO/Profile”** drop-down box, select the entry that matches depending on the hardware that your SOAM VM TVOE server is running:

DSR or SDS?	SOAM VM TVOE Hardware Type(s)	Choose Profile (<Application ISO NAME>)->
DSR	Oracle X6-2	DSR_VIRT_SOAM_V1
SDS	Oracle X6-2	SDS_VIRT_DP-SOAM_V1

Note: Application_ISO_NAME is the name of the DSR Application ISO to be installed on this SOAM

Click and Update the Num vCPUs, Memory(MBs) and Virtual Disks->Size (MB) defaults values with below table values :

DSR or SDS?	SOAM VM TVOE Hardware Type(s)	Profile Parameters (No. Of CPU, RAM, Virtual Disk)
DSR	Oracle X6-2	Num of CPUs : 2 Memory (MBs) : 6144 MB Virtual Disks : 61440 MB
SDS	Oracle X6-2	Num of CPUs : 2 Memory (MBs) : 10240 MB Virtual Disks : 61440 MB

Number of vCPUs: 4

Memory (MBs): 6,144

View guest **Zombie_DSRSOAM1**


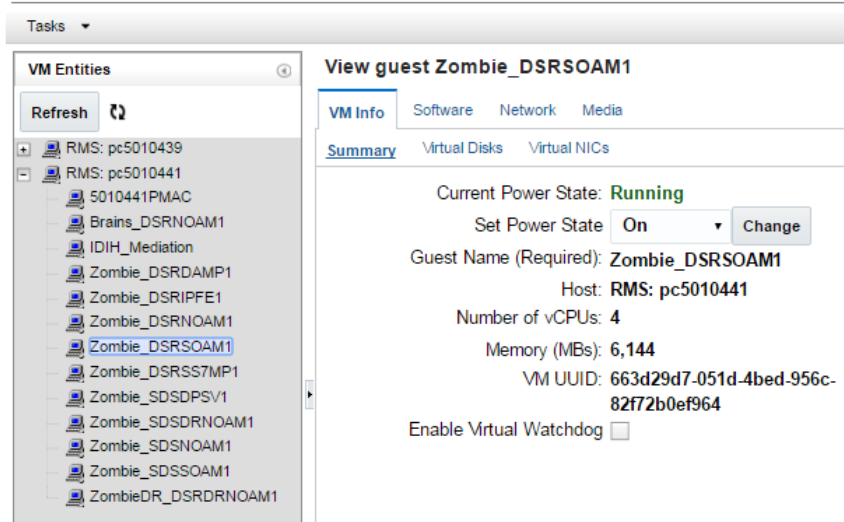
VM Info | Software | Network | Media

Summary | **Virtual Disks** | Virtual NICs

Virtual Disks					
Primary	Size (MB)	Host Pool	Host Vol Name	Guest Dev Name	
YES	61440	vgguests	Zombie_DSRSOAM1.i mg	PRIMARY	...


Press **Create**

Appendix Q.3 Create DSR/SDS SOAM Guest VMs: Procedure 15 Deviation

<p>4</p> <p><input type="checkbox"/></p>	<p>PMAC GUI: Wait for Guest Creation to Complete</p>	<p>Navigate to Main Menu -> Task Monitoring to monitor the progress of the guest creation task. A separate task will appear for each guest creation that you have launched.</p> <p>Wait or refresh the screen until you see that the guest creation task has completed successfully.</p> 
<p>5</p> <p><input type="checkbox"/></p>	<p>PMAC GUI: Verify Guest Machine is Running</p>	<p>Navigate to Main Menu -> VM Management</p> <p>Select the TVOE server on which the guest machine was just created.</p> <p>Look at the list of guests present and verify that you see a guest that matches the name you configured and that its status is “Running”.</p> <p>Main Menu: VM Management</p>  <p>VM Creation for this guest is complete.</p>
<p>6</p> <p><input type="checkbox"/></p>	<p>PMAC GUI: Repeat for remaining SOAM VMs</p>	<p>Repeat from Steps 2-5 for any remaining SOAM VMs (for instance, the standby SOAM) that must be created.</p>

Appendix Q.4 Create MP/SBR/DP Guest VMs: Procedure 16 Deviation

Appendix Q.4 Create MP/SBR/DP Guest VMs: Procedure 16 Deviation

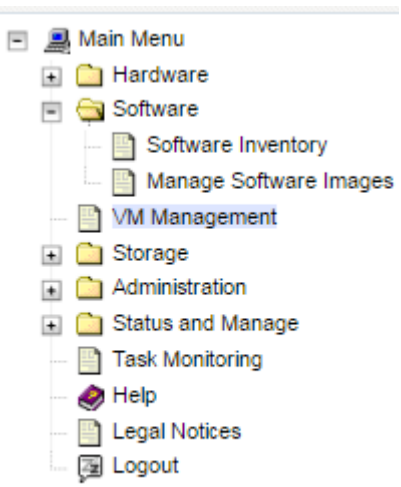
<p>S T E P #</p>	<p>This procedure will provide the steps needed to create a DA-MP, SS7-MP, SBR, or IPFE virtual machine (referred to as a “guest”) on a TVOE server. It must be repeated for every server you wish to install.</p> <p>Prerequisite: TVOE has been installed and configured on the target RMS</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>
<p>1 <input type="checkbox"/></p>	<p>PMAC GUI: Login</p> <p>Open web browser and enter:</p> <div style="border: 1px solid black; padding: 2px; margin: 5px 0;"> <p><code>https://<PMAC_Mgmt_Network_IP></code></p> </div> <p>Login as <i>guiadmin</i> user:</p> 

Appendix Q.4 Create MP/SBR/DP Guest VMs: Procedure 16 Deviation

2

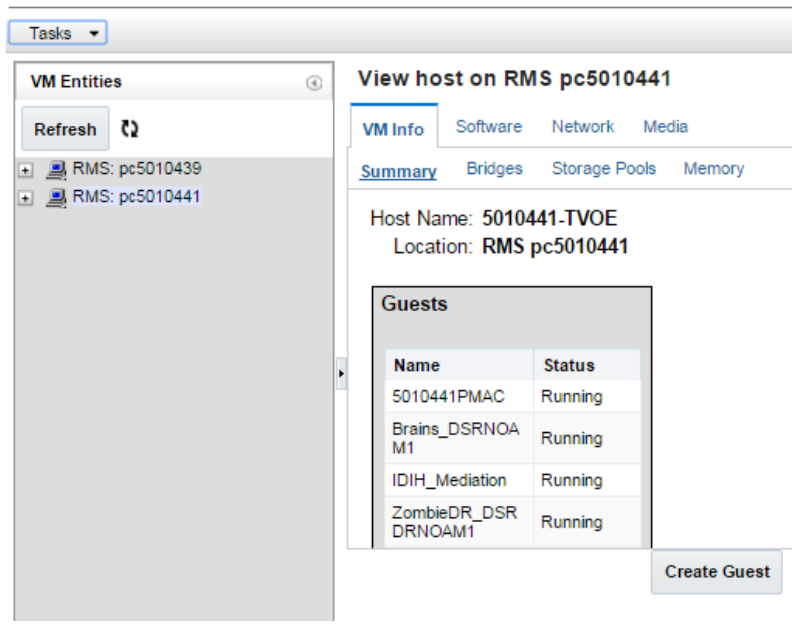
PMAC GUI:
 Navigate to VM Management of the Target Server

Navigate to **Main Menu -> VM Management**



Select the TVOE rack mounted server from the **VM Entities** listing on the left side of the screen. The selected server's guest machine configuration will then be displayed in the remaining area of the window.

Main Menu: VM Management



Click **Create Guest**

Appendix Q.4 Create MP/SBR/DP Guest VMs: Procedure 16 Deviation

3 <input type="checkbox"/>	PMAC GUI: Configure VM Guest Parameters (Part 1)	<p>For the next step, the DSR/SDS VM profile will need to be configured, use the table below to determine the VM profile based on application, hardware type, and server type.</p> <p>From the “ISO/Profile” drop-down box, select the entry that matches depending on the hardware and function that your MP/ DP VM TVOE server is running</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">DSR or SDS?</th> <th style="text-align: center;">NOAM VM TVOE Hardware Type(s)</th> <th style="text-align: center;">Function</th> <th style="text-align: center;">Choose Profile (<Application ISO NAME>→)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">DSR</td> <td style="text-align: center;">Oracle X6-2</td> <td style="text-align: center;">DA-MP</td> <td style="text-align: center;">DSR_VIRT_DAMP_V1</td> </tr> <tr> <td style="text-align: center;">DSR</td> <td style="text-align: center;">Oracle X6-2</td> <td style="text-align: center;">SS7-MP</td> <td style="text-align: center;">DSR_VIRT_SS7MP_V1</td> </tr> <tr> <td style="text-align: center;">DSR</td> <td style="text-align: center;">Oracle X6-2</td> <td style="text-align: center;">IPFE</td> <td style="text-align: center;">DSR_VIRT_IPFE_V1</td> </tr> <tr> <td style="text-align: center;">DSR</td> <td style="text-align: center;">Oracle X6-2</td> <td style="text-align: center;">Session SBR (PCA Only)</td> <td style="text-align: center;">DSR_VIRT_SBR_SESSSION_V1</td> </tr> <tr> <td style="text-align: center;">DSR</td> <td style="text-align: center;">Oracle X6-2</td> <td style="text-align: center;">Binding SBR (PCA Only)</td> <td style="text-align: center;">DSR_VIRT_SBR_BINDING_V1</td> </tr> <tr> <td style="text-align: center;">SDS</td> <td style="text-align: center;">Oracle X6-2</td> <td style="text-align: center;">DP</td> <td style="text-align: center;">SDS_VIRT_DP_V1</td> </tr> </tbody> </table> <p>Note: Application_ISO_NAME is the name of the DSR or SDS Application ISO to be installed on this MP, DP, or SBR</p>	DSR or SDS?	NOAM VM TVOE Hardware Type(s)	Function	Choose Profile (<Application ISO NAME>→)	DSR	Oracle X6-2	DA-MP	DSR_VIRT_DAMP_V1	DSR	Oracle X6-2	SS7-MP	DSR_VIRT_SS7MP_V1	DSR	Oracle X6-2	IPFE	DSR_VIRT_IPFE_V1	DSR	Oracle X6-2	Session SBR (PCA Only)	DSR_VIRT_SBR_SESSSION_V1	DSR	Oracle X6-2	Binding SBR (PCA Only)	DSR_VIRT_SBR_BINDING_V1	SDS	Oracle X6-2	DP	SDS_VIRT_DP_V1
DSR or SDS?	NOAM VM TVOE Hardware Type(s)	Function	Choose Profile (<Application ISO NAME>→)																											
DSR	Oracle X6-2	DA-MP	DSR_VIRT_DAMP_V1																											
DSR	Oracle X6-2	SS7-MP	DSR_VIRT_SS7MP_V1																											
DSR	Oracle X6-2	IPFE	DSR_VIRT_IPFE_V1																											
DSR	Oracle X6-2	Session SBR (PCA Only)	DSR_VIRT_SBR_SESSSION_V1																											
DSR	Oracle X6-2	Binding SBR (PCA Only)	DSR_VIRT_SBR_BINDING_V1																											
SDS	Oracle X6-2	DP	SDS_VIRT_DP_V1																											

Appendix Q.4 Create MP/SBR/DP Guest VMs: Procedure 16 Deviation

4

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PMAC GUI:
Configure VM
Guest
Parameters
(Part 2)

Select **Import Profile**

Chose the profile based on the information from **Step 3**

Import Profile

ISO/Profile: DSR-8.0.0.0.0_80.11.0-x86_64 => DSR_VIRT_DAMP_V1

Num CPUs: 12

Memory (MBs): 24576

Virtual Disks:

Prim	Size (MB)	Pool	TPD Dev
✓	61440	vgguests	

NICs:

Bridge	TPD Dev
control	control
imi	imi
xmi	xmi
xsi1	xsi1
xsi2	xsi2

Press **Select Profile**.

If an SBR replication interface (DSR ONLY), or additional XSI (xsi3 and/or xsi4) interfaces have been configured, add the virtual NIC by clicking **Add** on the following screen:

Note: If an SBR replication network has been defined, and if there are SS7-MPs present, SS7-MPs will also need to be configured with this replication network for ComAgent replication.

Virtual NICs

Host Bridge	Guest Dev Name
control	control
imi	imi
xmi	xmi
xsi1	xsi1
xsi2	xsi2
replication	replication

You can edit the name, if you wish. For instance: **“DSR_MP_A,” or DSR_MP_B”**. (This will not become the ultimate hostname. It is just an internal tag for the VM host manager.)

DSR - 7.4

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Appendix Q.4 Create MP/SBR/DP Guest VMs: Procedure 16 Deviation

5

PMAC GUI:
Configure VM Guest Parameters (Part 3)

Click and Update the Num vCPUs, Memory(MBs) and Virtual Disks->Size (MB) defaults values with below table values :

DSR or SDS?	NOAM VM TVOE Hardware Type(s)	Function	Profile Parameters (No. Of CPU, RAM, Virtual Disk)
DSR	Oracle X6-2	DA-MP	No. of CPUs : 6 Memory (MBs) : 24576 MB Virtual Disks : 61440 MB
DSR	Oracle X6-2	SS7-MP	No. of CPUs : 6 Memory (MBs) : 24576 MB Virtual Disks : 61440 MB
DSR	Oracle X6-2	IPFE	No. of CPUs : 2 Memory (MBs) : 16384 MB Virtual Disks : 61440 MB
DSR	Oracle X6-2	Session SBR (PCA Only)	No. of CPUs : 6 Memory (MBs) : 16384 MB Virtual Disks : 61440 MB
DSR	Oracle X6-2	Binding SBR (PCA Only)	No. of CPUs : 6 Memory (MBs) : 16384 MB Virtual Disks : 61440 MB
SDS	Oracle X6-2	DP	No. of CPUs : 2 Memory (MBs) : 10240 MB Virtual Disks : 61440 MB

Number of vCPUs:

Memory (MBs):

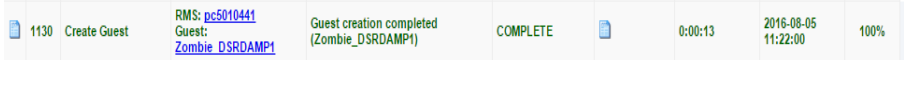
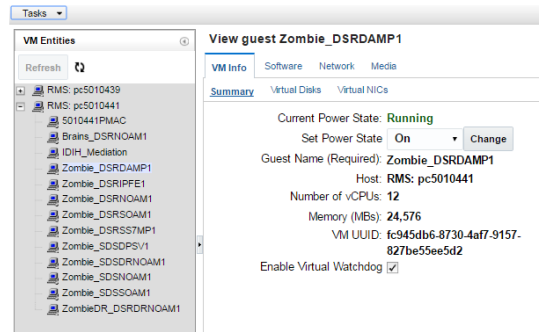
Available host memory: 110458 MB

Summary
Virtual Disks
Virtual NICs

Virtual Disks				
Primary	Size (MB)	Host Pool	Host Vol Name	Guest Dev Name
YES	61440	vgguests	DSR_VIRT_DAMP_V1.img	


Press Create

Appendix Q.4 Create MP/SBR/DP Guest VMs: Procedure 16 Deviation

<p>6</p> <p><input type="checkbox"/></p>	<p>PMAC GUI: Wait for Guest Creation to Complete</p>	<p>Navigate to Main Menu -> Task Monitoring to monitor the progress of the guest creation task. A separate task will appear for each guest creation that you have launched.</p> <p>Wait or refresh the screen until you see that the guest creation task has completed successfully.</p> 
<p>7</p> <p><input type="checkbox"/></p>	<p>PMAC GUI: Verify Guest Machine is Running</p>	<p>Navigate to Main Menu -> VM Management</p> <p>Select the TVOE server on which the guest machine was just created.</p> <p>Look at the list of guests present and verify that you see a guest that matches the name you configured and that its status is “Running”.</p> <p>Main Menu: VM Management</p>  <p>VM Creation for this guest is complete.</p>
<p>8</p> <p><input type="checkbox"/></p>	<p>PMAC GUI: Repeat for remaining MP VMs</p>	<p>Repeat from Step 2-7 for any remaining MP VMs that must be created.</p>

Appendix Q.5 Create SDS Query Server Guest VMs: Procedure 17 Deviation

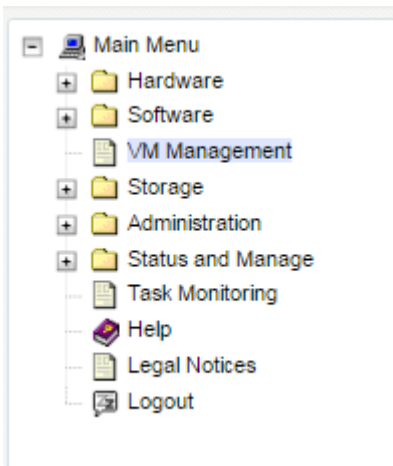
Appendix Q.5 Create SDS Query Server Guest VMs: Procedure 17 Deviation

S T E P #	<p>This procedure will provide the steps needed to create an SDS Query Server virtual machine (referred to as a “guest”) on a TVOE server. It must be repeated for every server you wish to install.</p> <p>Prerequisite: TVOE has been installed and configured on the target RMS</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
1 <input type="checkbox"/>	PMAC GUI: Login	<p>Open web browser and enter:</p> <div style="border: 1px solid black; padding: 2px; margin: 5px 0;"> <code>https://<PMAC_Mgmt_Network_IP></code> </div> <p>Login as guiadmin user:</p> 

Appendix Q.5 Create SDS Query Server Guest VMs: Procedure 17 Deviation

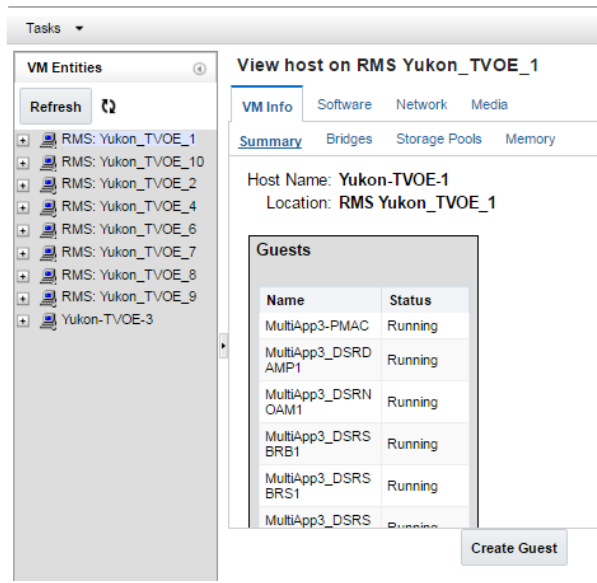
2 **PMAC GUI:**
 Navigate to VM Management of the Target Server

Navigate to Main Menu -> VM Management



Select the TVOE rack mounted server from the **VM Entities** listing on the left side of the screen. The selected server's guest machine configuration will then be displayed in the remaining area of the window.

Main Menu: VM Management



Click **Create Guest**

Appendix Q.5 Create SDS Query Server Guest VMs: Procedure 17 Deviation

3 **PMAC GUI:**
Configure VM Guest Parameters

Select **Import Profile**

From the **“ISO/Profile”** drop-down box, select the entry that matches depending on the hardware and function that your MP/ DP VM TVOE server is running

DSR or SDS?	NOAM VM TVOE Hardware Type(s)	Function	Choose Profile (<Application ISO NAME>→)
SDS	Oracle X6-2	Query Server	SDS_VIRT_QUERY-SERVER_V1

Note: Application_ISO_NAME is the name of the SDS Application ISO to be installed on this Query Server

Press **Select Profile**.

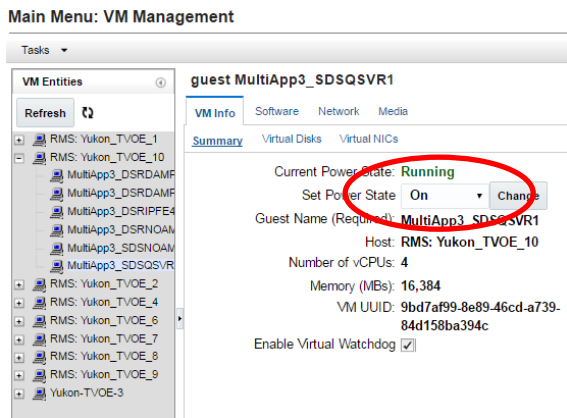
You can edit the name, if you wish. For instance: **“Query_Server_A,” or Query_Server_B”**. (This will not become the ultimate hostname. It is just an internal tag for the VM host manager.)

Click and Update the Num vCPUs, Memory(MBs) and Virtual Disks->Size (MB) defaults values with below table values :

DSR or SDS?	NOAM VM TVOE Hardware Type(s)	Function	Profile Parameters (No. Of CPU, RAM, Virtual Disk)
SDS	Oracle X6-2	Query Server	No. of CPUs : 2 Memory (MBs) : 16384 MB Virtual Disks : 61440 MB

Press **Create**

Appendix Q.5 Create SDS Query Server Guest VMs: Procedure 17 Deviation


<p>4</p> <p><input type="checkbox"/></p>	<p>PMAC GUI: Wait for Guest Creation to Complete</p>	<p>Navigate to Main Menu -> Task Monitoring to monitor the progress of the guest creation task. A separate task will appear for each guest creation that you have launched.</p> <p>Wait or refresh the screen until you see that the guest creation task has completed successfully.</p> <table border="1"> <thead> <tr> <th>ID</th> <th>Task</th> <th>Target</th> <th>Status</th> <th>State</th> <th>Task Output</th> <th>Running Time</th> <th>Start Time</th> <th>Progress</th> </tr> </thead> <tbody> <tr> <td>2242</td> <td>Create Guest</td> <td>RMS: Yukon_TVOE_10 Guest: MultiApp3_SDSQSVR1</td> <td>Guest creation completed (MultiApp3_SDSQSVR1)</td> <td>COMPLETE</td> <td></td> <td>0:01:09</td> <td>2016-08-27 06:45:50</td> <td>100%</td> </tr> </tbody> </table>	ID	Task	Target	Status	State	Task Output	Running Time	Start Time	Progress	2242	Create Guest	RMS: Yukon_TVOE_10 Guest: MultiApp3_SDSQSVR1	Guest creation completed (MultiApp3_SDSQSVR1)	COMPLETE		0:01:09	2016-08-27 06:45:50	100%
ID	Task	Target	Status	State	Task Output	Running Time	Start Time	Progress												
2242	Create Guest	RMS: Yukon_TVOE_10 Guest: MultiApp3_SDSQSVR1	Guest creation completed (MultiApp3_SDSQSVR1)	COMPLETE		0:01:09	2016-08-27 06:45:50	100%												
<p>5</p> <p><input type="checkbox"/></p>	<p>PMAC GUI: Verify Guest Machine is Running</p>	<p>Navigate to Main Menu -> VM Management</p> <p>Select the TVOE server on which the guest machine was just created.</p> <p>Look at the list of guests present and verify that you see a guest that matches the name you configured and that its status is “Running”.</p>  <p>VM Creation for this guest is complete.</p>																		
<p>6</p> <p><input type="checkbox"/></p>	<p>PMAC GUI: Repeat for remaining Query Server VMs</p>	<p>Repeat from Steps 2-5 for any remaining Query Server VMs that must be created.</p>																		

Appendix Q.6 IDIH Installation: Procedure 55 Deviation

Appendix Q.6 IDIH Installation: Procedure 55 Deviation

S T E P #	<p>This procedure will provide the steps to install and configure IDIH.</p> <p>Prerequisite: TVOE has been installed and configured on the target RMS</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>	
1 <input type="checkbox"/>	<p>TVOE Host: Load Application ISO</p>	<p>Note: If the IDIH ISO images have NOT yet been added to the PMAC, execute steps 1-4</p> <p>Add the Application ISO images (Mediation, Application, and Oracle) to the PMAC, this can be done in one of two ways:</p> <ol style="list-style-type: none"> 1. Attach the USB device containing the ISO to a USB port. 2. Copy the Application ISO file to the PMAC server into the /var/TKLC/smac/image/isoimages/home/smacftpusr/ directory as pmacftpusr user: <p>cd into the directory where your ISO image is located on the TVOE Host (<i>not on the PMAC server</i>)</p> <p>Using sftp, connect to the PMAC server</p> <pre style="border: 1px solid black; padding: 2px;">\$ sftp pmacftpusr@<pmac_management_network_ip> \$ put <image>.iso</pre> <p>After the image transfer is 100% complete, close the connection:</p> <pre style="border: 1px solid black; padding: 2px;">\$ quit</pre>

Appendix Q.6 IDIH Installation: Procedure 55 Deviation

2 <input type="checkbox"/>	PMAC GUI: Login	<p>Open web browser and enter:</p> <div style="border: 1px solid black; padding: 2px;"><code>https://<PMAC Mgmt Network IP></code></div> <p>Login as <i>guiadmin</i> user:</p> <div style="text-align: center;"><p>The screenshot shows the Oracle System Login interface. At the top is the Oracle logo in red. Below it, the text 'Oracle System Login' is displayed on the left, and the date and time 'Mon Jul 28 21:45:52 2014 UTC' are on the right. In the center, there is a 'Log In' box with the instruction 'Enter your username and password to log in'. This box contains fields for 'Username' and 'Password', a 'Change password' checkbox, and a 'Log In' button. At the bottom of the page, there is a disclaimer: 'Unauthorized access is prohibited. This Oracle system requires the use of Microsoft Internet Explorer 7.0, 8.0, or 9.0 with support for JavaScript and cookies.' and a copyright notice: 'Oracle and logo are registered service marks of Oracle Corporation. Copyright © 2013 Oracle Corporation All Rights Reserved.'</p></div>
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Appendix Q.6 IDIH Installation: Procedure 55 Deviation

3	<p>PMAC GUI: Attach the software Image to the PMAC Guest</p>	<p>If in Step 1 the ISO image was transferred directly to the PMAC guest via sftp, skip the rest of this step and continue with step 4. If the image is on a USB device, continue with this step.</p> <p>In the PMAC GUI, navigate to Main Menu -> VM Management. In the "VM Entities" list, select the PMAC guest. On the resulting "View VM Guest" page, select the Media tab.</p> <p>Under the Media tab, find the ISO image in the "Available Media" list, and click its Attach button. After a pause, the image will appear in the "Attached Media" list.</p> <div style="border: 1px solid #ccc; padding: 10px; margin: 10px 0;"> <p>View guest Zombie_DSRDAMP2</p> <p>VM Info Software Network Media</p> <hr/> <p>Attached Media Available Media</p> <hr/> <div style="border: 1px solid #ccc; padding: 5px;"> <p>Available Media</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Attach</th> <th style="width: 40%;">Label</th> <th style="width: 50%;">Image Path</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Attach</td> <td>3.2.0.0.0_88.23.0</td> <td>/var/TKLC/upgrade/Zombie_DSRDAMP2.iso</td> </tr> </tbody> </table> </div> </div> <div style="border: 1px solid #ccc; padding: 10px; margin: 10px 0;"> <p>View guest Zombie_DSRDAMP2</p> <p>VM Info Software Network Media</p> <hr/> <p>Attached Media Available Media</p> <hr/> <div style="border: 1px solid #ccc; padding: 5px;"> <p>Attached Media</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Attached</th> <th style="width: 90%;">Image Path</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Detach</td> <td>/var/TKLC/tvoe/mapping-isos/Zombie_DSRDAMP2.iso</td> </tr> </tbody> </table> </div> </div>	Attach	Label	Image Path	Attach	3.2.0.0.0_88.23.0	/var/TKLC/upgrade/Zombie_DSRDAMP2.iso	Attached	Image Path	Detach	/var/TKLC/tvoe/mapping-isos/Zombie_DSRDAMP2.iso
Attach	Label	Image Path										
Attach	3.2.0.0.0_88.23.0	/var/TKLC/upgrade/Zombie_DSRDAMP2.iso										
Attached	Image Path											
Detach	/var/TKLC/tvoe/mapping-isos/Zombie_DSRDAMP2.iso											

Appendix Q.6 IDIH Installation: Procedure 55 Deviation

<p>4</p> <p><input type="checkbox"/></p>	<p>PMAC GUI:Add Application Image</p>	<p>Navigate to Main Menu -> Software -> Manage Software Images</p> <p>Press Add Image button. Use the drop down to select the image.</p> <div style="border: 1px solid #ccc; padding: 5px; text-align: center;"> Add Image Edit Image Delete Selected </div> <p>If the image was supplied on a USB drive, it will appear as a virtual device ("device://..."). These devices are assigned in numerical order as USB images become available on the Management Server. The first virtual device is reserved for internal use by TVOE and PMAC; therefore, the iso image of interest is normally present on the second device, "device://dev/sr1". If one or more USB-based images were already present on the Management Server before you started this procedure, choose a correspondingly higher device number.</p> <p>If in Step 1 the image was transferred to PMAC via sftp it will appear in the list as a local file "/var/TKLC/...".</p> <p style="text-align: center;">Main Menu: Software -> Manage Software Images [Add Image]</p> <hr/> <p>Images may be added from any of these sources:</p> <ul style="list-style-type: none"> • Oracle-provided media in the PM&C host's CD/DVD drive (Refer to Note) • USB media attached to the PM&C's host (Refer to Note) • External mounts. Prefix the directory with "extfile://". • These local search paths: <ul style="list-style-type: none"> ◦ /var/TKLC/upgrade/*.iso ◦ /var/TKLC/smac/image/isoimages/home/smacftpusr/*.iso <p>Note: CD and USB images mounted on PM&C's VM host must first be made accessible to the PM&C \</p> <div style="border: 1px solid #ccc; padding: 5px;"> <p>Path: <input style="width: 100%;" type="text"/></p> <p>Description: <input style="width: 100%; height: 30px;" type="text"/></p> </div> <hr/> <div style="border: 1px solid #ccc; padding: 5px; text-align: center;"> Add New Image Cancel </div> <p>Select the appropriate path and Press Add New Image button.</p> <p>You may check the progress using the Task Monitoring link. Observe the green bar indicating success.</p> <p>Once the green bar is displayed, remove the IDIH Media from the optical drive of the management server.</p>
<p>5</p> <p><input type="checkbox"/></p>	<p>PMAC: Establish Terminal Session</p>	<p>Establish an SSH session to the PMAC. Login as admusr.</p>

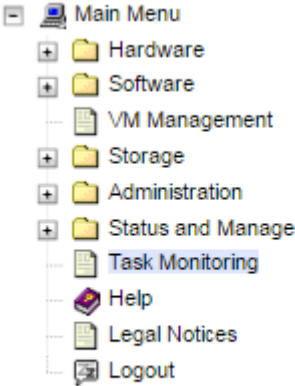
Appendix Q.6 IDIH Installation: Procedure 55 Deviation

6 <input type="checkbox"/>	PMAC: Copy the fdc.cfg template XML file to the guest-dropin Directory	Copy the vedsr_idih.xml.template XML file to the pmac guest-dropin directory. Execute the following command: <pre>\$ sudo cp /usr/TKLC/smac/html/TPD/mediation-7.1.0.0.0_x.x.x.x/vedsr_idih.xml.template /var/TKLC/smac/guest-dropin \$ cd /var/TKLC/smac/guest-dropin/ \$ sudo mv vedsr_idih.xml.template <idih_fdc_file_name>.xml</pre>
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Appendix Q.6 IDIH Installation: Procedure 55 Deviation

<p>7</p> <p><input type="checkbox"/></p>	<p>PMAC: Configure the fdc.cfg file</p>	<p>Configure the <idih_fdc_file_name>.xml template file. See Appendix M: IDIH Fast Deployment Configuration for a breakdown of the parameters and a sample XML configuration file.</p> <p>Update the software versions, hostnames, bond interfaces, network addresses, and network VLAN information for the TVOE host and IDIH guests that you are installing. Also modify CPU, RAM and Virtual Disk information as shown below :</p> <table border="1"> <thead> <tr> <th>IDIH</th> <th>Profile Parameters (No. Of CPU, RAM, Virtual Disk)</th> <th>XML Stanzas to Modify</th> </tr> </thead> <tbody> <tr> <td>IDIH-Mediation</td> <td> No. of CPUs: 2 Memory (MBs): 8192 MB Virtual Disks: 65536 MB </td> <td> <pre> <cpus>2</cpus> <memory>8192</memory> <vdisk> <hostvolname>MED.img</hostvolname> <hostpool>vgguests</hostpool> <size>65536</size> <primary>yes</primary> <guestdevname>PRIMARY</guestdevname> </vdisk> </pre> </td> </tr> <tr> <td>IDIH-Application</td> <td> No. of CPUs: 2 Memory (MBs): 8192 MB Virtual Disks : 65536 MB </td> <td> <pre> <cpus>2</cpus> <memory>8192</memory> <vdisk> <hostvolname>APP.img</hostvolname> <hostpool>vgguests</hostpool> <size>65536</size> <primary>yes</primary> <guestdevname>PRIMARY</guestdevname> </vdisk> </pre> </td> </tr> <tr> <td>IDIH-Database</td> <td> No. of CPUs: 4 Memory (MBs): 8192 MB Virtual Disks: 166926 MB (102400 MB for ORA_SDB and 65536 MB for ORA) </td> <td> <pre> <cpus>2</cpus> <memory>8192</memory> <vdisk> <hostvolname>ORA.img</hostvolname> <hostpool>vgguests</hostpool> <size>65536</size> <primary>yes</primary> <guestdevname>PRIMARY</guestdevname> </vdisk> <vdisk> <hostvolname>ORA_sdb.img</hostvolname> <hostpool>vgguests</hostpool> <size>102400</size> <primary>yes</primary> <guestdevname>PRIMARY</guestdevname> </vdisk> </pre> </td> </tr> </tbody> </table>	IDIH	Profile Parameters (No. Of CPU, RAM, Virtual Disk)	XML Stanzas to Modify	IDIH-Mediation	No. of CPUs: 2 Memory (MBs): 8192 MB Virtual Disks: 65536 MB	<pre> <cpus>2</cpus> <memory>8192</memory> <vdisk> <hostvolname>MED.img</hostvolname> <hostpool>vgguests</hostpool> <size>65536</size> <primary>yes</primary> <guestdevname>PRIMARY</guestdevname> </vdisk> </pre>	IDIH-Application	No. of CPUs: 2 Memory (MBs): 8192 MB Virtual Disks : 65536 MB	<pre> <cpus>2</cpus> <memory>8192</memory> <vdisk> <hostvolname>APP.img</hostvolname> <hostpool>vgguests</hostpool> <size>65536</size> <primary>yes</primary> <guestdevname>PRIMARY</guestdevname> </vdisk> </pre>	IDIH-Database	No. of CPUs: 4 Memory (MBs): 8192 MB Virtual Disks: 166926 MB (102400 MB for ORA_SDB and 65536 MB for ORA)	<pre> <cpus>2</cpus> <memory>8192</memory> <vdisk> <hostvolname>ORA.img</hostvolname> <hostpool>vgguests</hostpool> <size>65536</size> <primary>yes</primary> <guestdevname>PRIMARY</guestdevname> </vdisk> <vdisk> <hostvolname>ORA_sdb.img</hostvolname> <hostpool>vgguests</hostpool> <size>102400</size> <primary>yes</primary> <guestdevname>PRIMARY</guestdevname> </vdisk> </pre>
IDIH	Profile Parameters (No. Of CPU, RAM, Virtual Disk)	XML Stanzas to Modify												
IDIH-Mediation	No. of CPUs: 2 Memory (MBs): 8192 MB Virtual Disks: 65536 MB	<pre> <cpus>2</cpus> <memory>8192</memory> <vdisk> <hostvolname>MED.img</hostvolname> <hostpool>vgguests</hostpool> <size>65536</size> <primary>yes</primary> <guestdevname>PRIMARY</guestdevname> </vdisk> </pre>												
IDIH-Application	No. of CPUs: 2 Memory (MBs): 8192 MB Virtual Disks : 65536 MB	<pre> <cpus>2</cpus> <memory>8192</memory> <vdisk> <hostvolname>APP.img</hostvolname> <hostpool>vgguests</hostpool> <size>65536</size> <primary>yes</primary> <guestdevname>PRIMARY</guestdevname> </vdisk> </pre>												
IDIH-Database	No. of CPUs: 4 Memory (MBs): 8192 MB Virtual Disks: 166926 MB (102400 MB for ORA_SDB and 65536 MB for ORA)	<pre> <cpus>2</cpus> <memory>8192</memory> <vdisk> <hostvolname>ORA.img</hostvolname> <hostpool>vgguests</hostpool> <size>65536</size> <primary>yes</primary> <guestdevname>PRIMARY</guestdevname> </vdisk> <vdisk> <hostvolname>ORA_sdb.img</hostvolname> <hostpool>vgguests</hostpool> <size>102400</size> <primary>yes</primary> <guestdevname>PRIMARY</guestdevname> </vdisk> </pre>												

Appendix Q.6 IDIH Installation: Procedure 55 Deviation

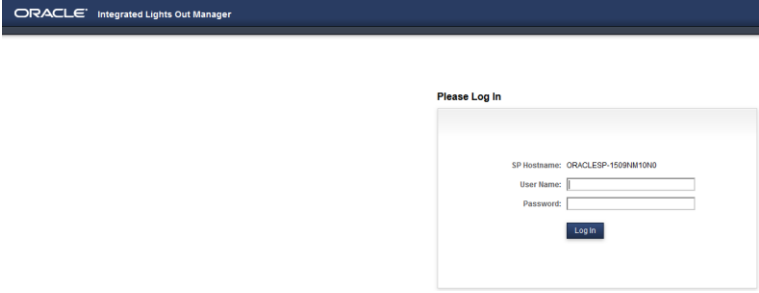
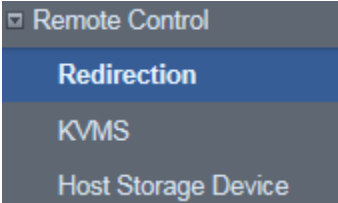
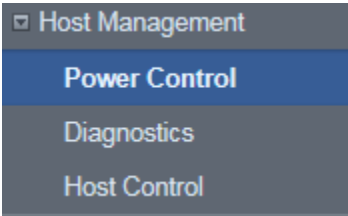
<p>8</p> <p><input type="checkbox"/></p>	<p>PMAC: Run the fdconfig.</p>	<p>Run the fdconfig configuration by executing the following commands:</p> <pre style="border: 1px solid black; padding: 5px;">\$ screen \$ sudo fdconfig config --file=<idih_fdc_file_name>.xml Example: \$sudo fdconfig config --file=tvoc-ferbrms4 01-22-15.xml</pre> <p>Note: This is a long duration command. If the screen command was run prior to executing the fdconfig, perform a “<i>screen -dr</i>” to resume the screen session in the event of a terminal timeout etc.</p>
<p>9</p> <p><input type="checkbox"/></p>	<p>PMAC GUI: Monitor the Configuration</p>	<p>If not already done so, establish a GUI session on the PMAC server.</p> <p>Navigate to Main Menu -> Task Monitoring</p>  <p>Monitor the IDIH configuration to completion.</p>

Appendix Q.7 RAID10 Logical Volume Creation Spanning Multiple HDDs (Oracle X6-2)

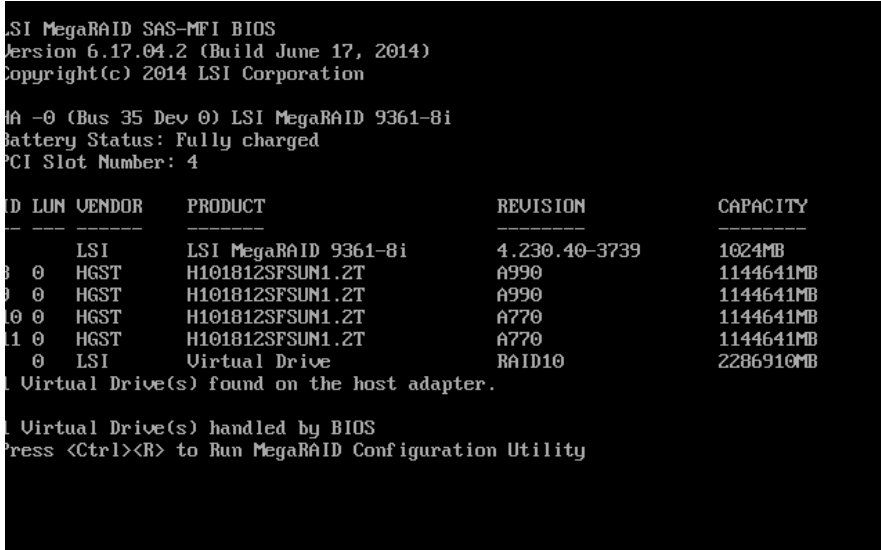
Appendix Q.7 RAID10 Logical Volume Creation Spanning Multiple HDDs (Oracle X6-2)

<p>S T E P #</p>	<p>This procedure will provide the steps needed to create a HD RAID10 volume by combining multiple HDD on Oracle X6-2.</p> <p>Prerequisite: Multiple HDD must be installed on the target RMS.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, contact Appendix R: My Oracle Support (MOS), and ask for assistance.</p>
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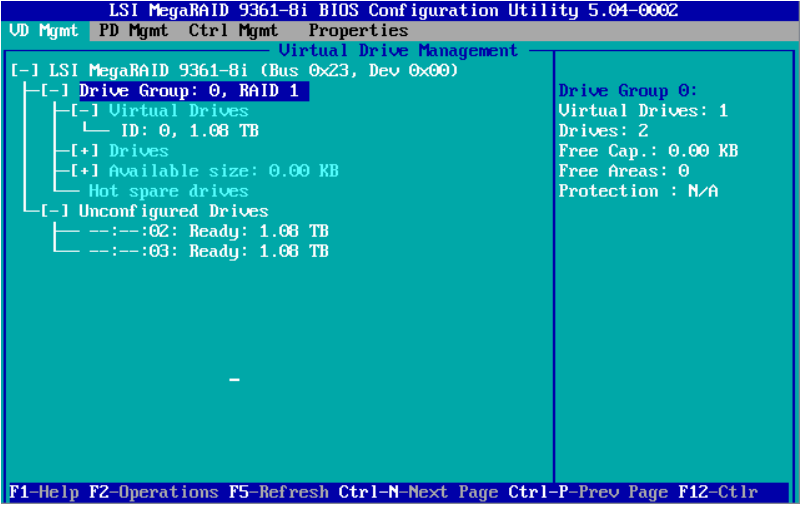
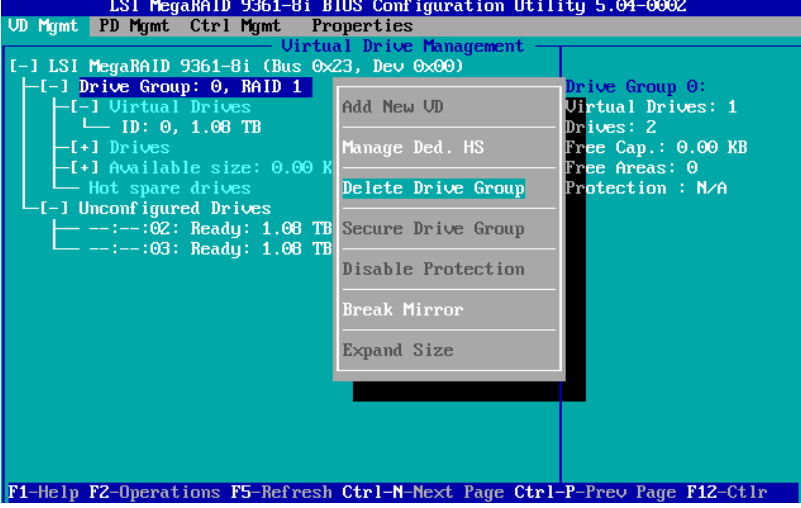
Appendix Q.7 RAID10 Logical Volume Creation Spanning Multiple HDDs (Oracle X6-2)

<p>1</p> <p><input type="checkbox"/></p>	<p>Oracle X6-2: Login</p>	<p>Login to the Oracle rack mount server ILOM:</p>  <p>The screenshot shows the Oracle Integrated Lights Out Manager (ILOM) login interface. At the top, it says 'ORACLE Integrated Lights Out Manager'. Below that, there is a 'Please Log In' section with a form containing 'SP Hostname: ORACLESP-1509NM10ND', 'User Name:' with an input field, and 'Password:' with an input field. A 'Log In' button is at the bottom of the form.</p>
<p>2</p> <p><input type="checkbox"/></p>	<p>ILOM GUI: Launch Remote Console</p>	<p>Navigate to Remote Control -> Redirection</p>  <p>The screenshot shows a menu with 'Remote Control' expanded. Under 'Remote Control', there are four options: 'Redirection' (highlighted in blue), 'KVMS', and 'Host Storage Device'.</p> <p>Click on Launch Remote Console.</p>
<p>3</p> <p><input type="checkbox"/></p>	<p>ILOM GUI: Power Cycle server</p>	<p>Navigate to Host Management -> Power Control</p>  <p>The screenshot shows a menu with 'Host Management' expanded. Under 'Host Management', there are four options: 'Power Control' (highlighted in blue), 'Diagnostics', and 'Host Control'.</p> <p>From the Settings window, select Power Cycle, then Save:</p>

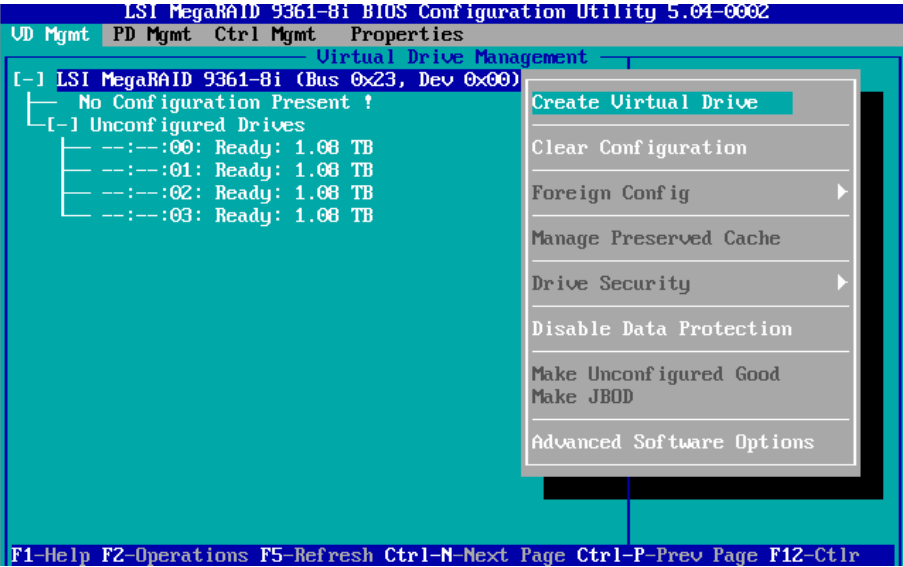
Appendix Q.7 RAID10 Logical Volume Creation Spanning Multiple HDDs (Oracle X6-2)

<p>4 ☐</p>	<p>ILOM GUI: Launch RAID BIOS configuration utility</p>	<p>Type CTRL+R during the boot process to launch the BIOS Configuration Utility. The LSI MegaRAID BIOS Configuration Utility appears.</p>  <pre> LSI MegaRAID SAS-MFI BIOS Version 6.17.04.2 (Build June 17, 2014) Copyright(c) 2014 LSI Corporation RA -0 (Bus 35 Dev 0) LSI MegaRAID 9361-8i Battery Status: Fully charged PCI Slot Number: 4 ID LUN VENDOR PRODUCT REVISION CAPACITY ----- LSI LSI MegaRAID 9361-8i 4.230.40-3739 1024MB 0 0 HGST H101812SFSUN1.2T A990 1144641MB 1 0 HGST H101812SFSUN1.2T A990 1144641MB 2 0 HGST H101812SFSUN1.2T A770 1144641MB 3 0 HGST H101812SFSUN1.2T A770 1144641MB 4 0 LSI Virtual Drive RAID10 2286910MB 1 Virtual Drive(s) found on the host adapter. 1 Virtual Drive(s) handled by BIOS Press <Ctrl><R> to Run MegaRAID Configuration Utility </pre>
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Appendix Q.7 RAID10 Logical Volume Creation Spanning Multiple HDDs (Oracle X6-2)

<p>5</p> <p>ILOM GUI:</p> <p>Delete the existing Drive Group if exists</p>	<p>Look under “Drive Group”. If there is a volume created that does not match the configuration you want.</p>  <p>Click F2. Select Delete Drive Group.</p>  <p>Select Yes.</p>
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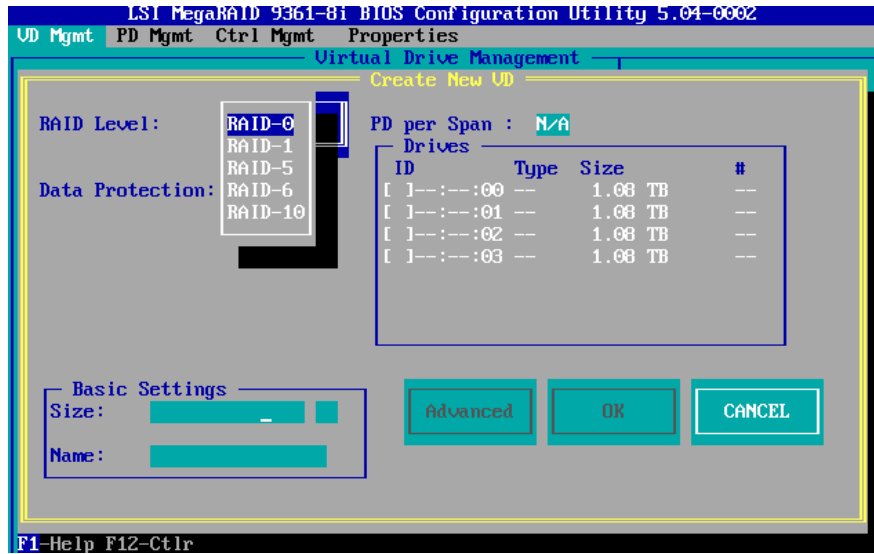
Appendix Q.7 RAID10 Logical Volume Creation Spanning Multiple HDDs (Oracle X6-2)

6	ILOM GUI: Create Virtual Drive	<p>Select the MegaRAID item and click F2</p>  <p>Select Create Virtual Drive.</p>
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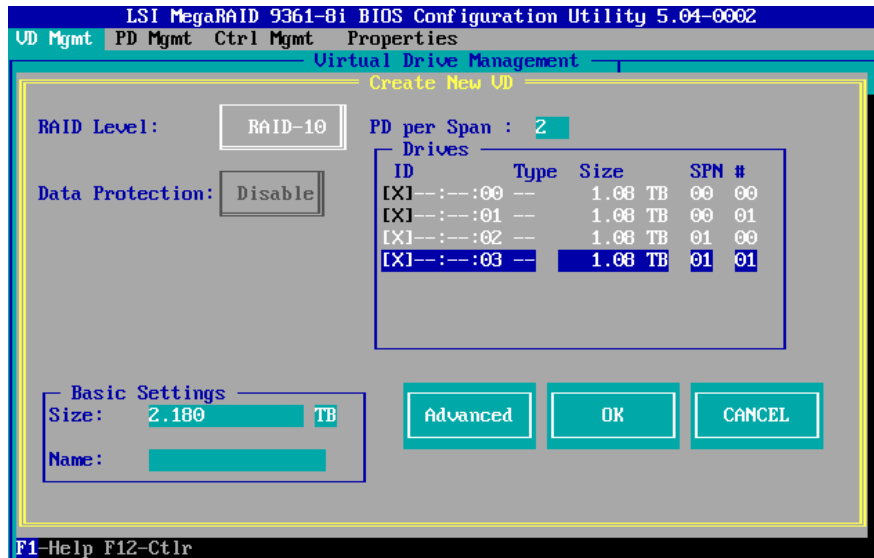
Appendix Q.7 RAID10 Logical Volume Creation Spanning Multiple HDDs (Oracle X6-2)

7 ILOM GUI:
 Select RAID level and assign drives

Select RAID level, RAID-10

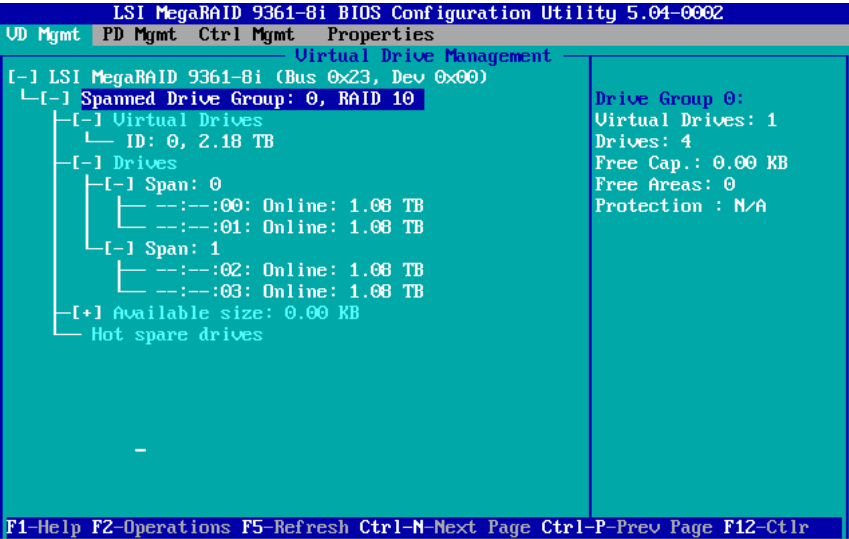
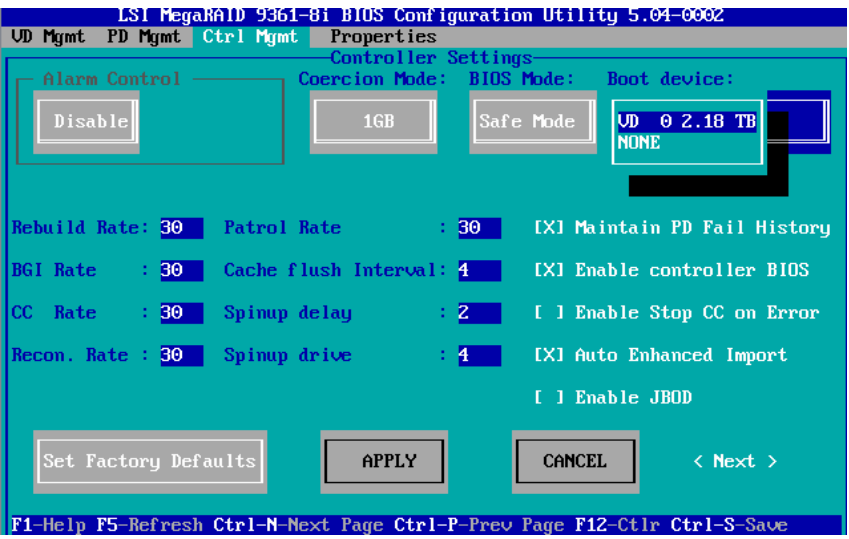


For each drive that you want in the logical drive, navigate to the drive and press **Enter** in its ID field to produce an X in the field.

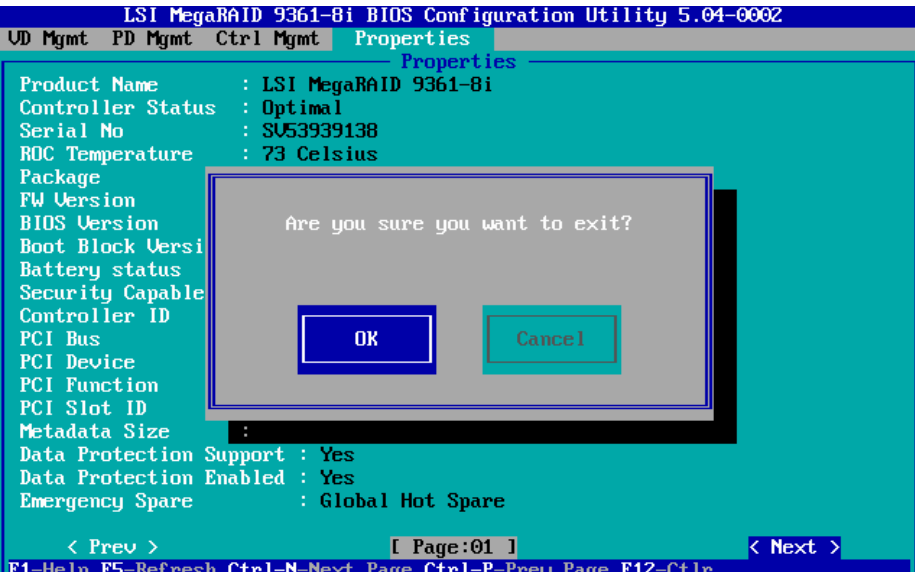



After selecting all the drives that you want included in the logical drive, use the arrow keys to navigate to the **OK** button, then press **Enter**, and **OK**.

Appendix Q.7 RAID10 Logical Volume Creation Spanning Multiple HDDs (Oracle X6-2)

<p>8</p> <p><input type="checkbox"/></p>	<p>ILOM GUI: Verify drive creation</p>	<p>Verify the logical drive creation by reviewing the drive groups on the main page of the BIOS Configuration Utility. Note the new drive group that is now displayed on the page.</p> 
<p>9</p> <p><input type="checkbox"/></p>	<p>ILOM GUI: Make drive bootable</p>	<p>Click Ctrl + N twice to select Ctrl Mgmt. From the Ctrl Mgmt page, use the arrow keys to navigate to the Boot device field, and press Enter. Select the drive to make it bootable.</p>  <p>Use the arrow keys to navigate to the Apply button, and then press Enter.</p> <p>Type CTRL+S to save the configuration.</p>

Appendix Q.7 RAID10 Logical Volume Creation Spanning Multiple HDDs (Oracle X6-2)

<p>10</p> <p><input type="checkbox"/></p>	<p>ILOM GUI: Exit configuration</p>	<p>Press Esc and click on OK.</p>  <p>The screenshot shows the LSI MegaRAID BIOS Configuration Utility interface. At the top, it says 'LSI MegaRAID 9361-8i BIOS Configuration Utility 5.04-0002'. Below this are menu options: 'UD Mgmt', 'PD Mgmt', 'Ctrl Mgmt', and 'Properties'. The 'Properties' menu is selected, displaying the following information: Product Name: LSI MegaRAID 9361-8i, Controller Status: Optimal, Serial No: SU53939138, ROC Temperature: 73 Celsius, Package, FW Version, BIOS Version, Boot Block Versi, Battery status, Security Capable, Controller ID, PCI Bus, PCI Device, PCI Function, PCI Slot ID, Metadata Size, Data Protection Support: Yes, Data Protection Enabled: Yes, and Emergency Spare: Global Hot Spare. At the bottom, there are navigation options: '< Prev >', 'Page:01', and '< Next >'. A dialog box is overlaid on the screen with the text 'Are you sure you want to exit?' and two buttons: 'OK' and 'Cancel'.</p>
<p>11</p> <p><input type="checkbox"/></p>	<p>ILOM GUI: Reboot</p>	<p>Press Ctrl + Alt + Delete to reboot</p>  <p>The screenshot shows a black screen with the text '** Press Control+Alt+Delete to reboot **' centered on it.</p> <p>Note Volume ID for X6-2 is: sda. This is used as input parameter when installing TVOE.</p>

Appendix R: 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 <https://www.oracle.com/us/support/contact/index.html>.

When calling, there are multiple layers of menu selections. Make the selections in the sequence shown below on the Support telephone menu:

- 1) For the first set of menu options, select 2, “New Service Request”. You will hear another set of menu options.
- 2) In this set of menu options, select 3, “Hardware, Networking and Solaris Operating System Support”. A third set of menu options begins.
- 3) In the third set of options, select 2, “Non-technical issue”. Then you will be connected to a live agent who can assist you with MOS registration and provide Support. Identifiers. Simply mention you are a Tekelec Customer new to MOS.

