

**Oracle® Communications
User Data Repository**

Installation and Configuration Guide

Release 12.1

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CAUTION: Use only the Installation procedure included in the Install Kit.

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

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Call the CAS main number at 1-800-223-1711 (toll-free in the US), or call the Oracle Support hotline for your local country from the list at <http://www.oracle.com/us/support/contact/index.html>.

See more information on MOS in the Appendix section.

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1. INTRODUCTION

1.1 Purpose and Scope

This document describes how to install UDR(on HP Proliant hardware or Oracle hardware) product within a customer network. It makes use of AppWorks 6.0 network installation and is intended to cover the network configuration steps for NOAMP, SOAM, and MP servers which includes validation of configuration.

This document only describes the UDRproduct SW installation on the HP Proliant Blade/Server or OracleServer. It does not cover hardware installation, site survey, customer network configuration, IP assignments, customer router configurations, or the configuration of any device outside of the UDR cabinet.

1.2 References

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

1. Log into the Oracle Technology Network site at <http://docs.oracle.com>.
2. Select the tab “Find a product”
3. Type “User Data Repository”
4. Takes you to “CGBU Documentation”
5. Select “User Data Repository” followed by version
6. To download a file to your location, right-click the PDF link and select “Save Target As”

- [1] Acronym Guide, [CGBU_010512](#), latest revision
- [2] Site Survey (Domestic US), [CGBU_GM_0593](#), latest revision
- [3] Hardware Verification Plan, [CGBU_CS_4173](#), latest revision
- [4] Platform 7.0 Installation Guide, [CGBU_ENG_24_3541](#), latest revision
- [5] http://docs.oracle.com/cd/E57832_01/index.htm
- [6] UDR 12.1 Network Interconnect, E72704-01, latest revision
- [7] UDR 10.0 Base Hardware and Software Installation Procedure, E48809-01, latest revision
- [8] UDR 10.2 Installtion and Configuration Guide, E59313-02, latest revision
- [9] UDR 12.1 Software Upgrade Procedure E66200-01, latest revision
- [10] UDR 12.1 Dissaster Recovery Guide E66199-01, latest version
- [11] Oracle Firmware Upgrade Pack, Release Notes 3.1.x, E60195, latest revision
- [12] Oracle Firmware Upgrade Pack, Upgrade Guide 3.1.x, E60196, latest revision

1.3 Acronyms

An alphabetized list of acronyms used in the document:

Acronym	Meaning
Enablement	The business practice of providing support services (hardware, software, documentation, etc) that enable a 3 rd party entity to install, configuration, and maintain Oracle products for Oracle customers.
Gen9	ProLiantDL380Gen9 or ProLiantBL460Gen9
Geo-redundant Systems	This is the case where paired UDR sites do not share the same IMI network. It could also mean the same lab with different switches.
HA	High Availability
IMI	Internal Management Interface
IPM	Initial Product Manufacture – the process of installing TPD on hardware platform
NOAMP	Network Operations, Administration, Maintenance& Provisioning
SOAM	System Operations, Administration and Maintenance
MOS	My Oracle Support
MP	Message Processor
UDR	Oracle Communications User Data Repository
Oracle RMS	Oracle Server X5-2
RMS	Rack Mount Server
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.
SPR	Subscriber Profile Repository
TPD	Tekelec Platform Distribution (Linux OS)
UDR	User Data Repository
VIP	Virtual IP
VM	Virtual Machine
XMI	External Management Interface
XSI	External Signalling Interface

Table 1– Acronyms and Terminology

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 <input type="checkbox"/>	ServerX: Connect to the console of the server	Establish a connection to the server using cu on the terminal server/console. <code>\$cu -l /dev/ttyS7</code>
-------------------------------	--	--

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

1.5 Assumptions

This procedure assumes the following:

- The user has taken assigned values from the Customer network and used them to compile XML files (see Appendix N for each NOAMP and SOAM site's NE prior to attempting to execute this procedure).
- The user conceptually understands UDR topology and network configuration as described in the UDR Network Interconnect Guide [6].
- The user has at least an intermediate skill set with command prompt activities on an Open Systems computing environment such as Linux or TPD.

1.6 XML Files (for installing NE)

The XML files compiled for installation of each of the NOAMP and SOAM site's NE must be maintained and accessible for use in Disaster Recovery procedures. The Professional Services Engineer (PSE) will provide a copy of the XML files used for installation to the designated Customer Operations POC. The customer is ultimately responsible for maintaining and providing the XML files to My Oracle Support (MOS) if needed for use in Disaster Recovery operations. For more details on Disaster Recovery refer to UDR 12.1 Disaster Recovery Guide E66199-01, latest version.

1.7 How to use this Document

Although this document is primarily to be used as an initial installation guide, its secondary purpose is to be used as a reference for Disaster Recovery procedures [10]. When executing this document for either purpose, there are a few points which help to ensure that the user understands the author's intent. These points are as follows;

- 1) Before beginning a procedure, completely read the instructional text (it will appear immediately after the Section heading for each procedure) and all associated procedural WARNINGS or NOTES.
- 2) Before execution of a STEP within a procedure, completely read the left and right columns including any STEP specific WARNINGS or NOTES.

If a procedural STEP fails to execute successfully, STOP and contact My Oracle Support MOS Appendix S Contacting My Oracle Support (MOS) for assistance before attempting to continue.

2. GENERAL DESCRIPTION

This document defines the steps to execute the installation of the Oracle Communications User Data Repository (UDR) 12.1 application on HP Proliant Hardware BL-460 for C-Class Configurations, DL-380 for RMS deployments or Oracle X5-2s (RMS servers).

UDR12.1 installation paths are shown in the figures below. The general timeline for all processes to perform a software installation and configuration is also included below.

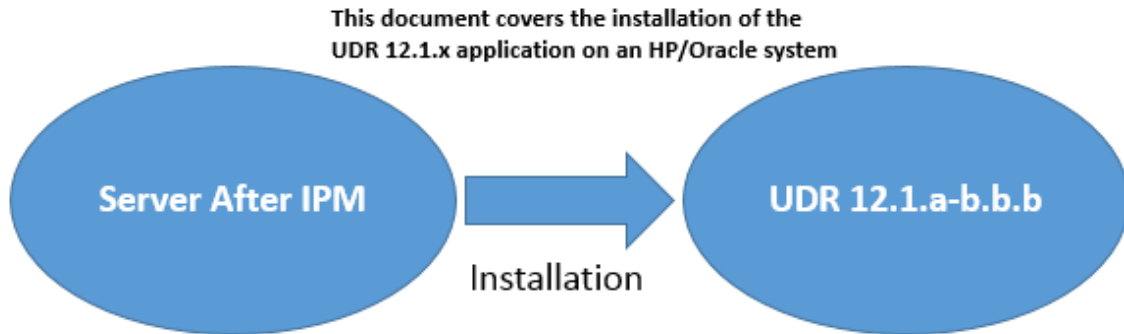


Figure 2. Initial Application Installation Path – Example shown

2.1 PRE-INSTALLATION SETUP

2.1.1 Installation Requirements

The following items/settings are required in order to perform installation for HP DL380, HP BL460 and Oracle X5-2 based UDR:

- A laptop or desktop computer equipped as follows:
 - 10/100 Base-TX Ethernet Interface.
 - Administrative privileges for the OS.
 - An approved web browser (currently Internet Explorer 7.x or 8.x)
- An IEEE compliant 10/100 Base-TX Ethernet Cable, RJ-45, Straight-Through.
- USB flash drive with at least 1GB of available space.
- TPD “root” and “admusr” user password.

NOTE: When using the iLO for SSH connectivity, supported terminal Emulations are **VT100 or higher** (i.e. VT-102, VT-220, VT-320).

2.1.2 Physical Connections

A connection to the VGA/Keyboard ports on the HP DL380 rear panel or a connection to the iLO is required to initiate and monitor the progress of UDR installation procedures. Blade installations require no physical connections as installation is carried out through a management server.

2.1.3 Access Alternatives for Application Install

This procedure may also be executed using one of the access methods described below:




Figure 3. DL 380 Layout



Figure 4. BL460C Gen 9(with storage array) Layout



Figure 5. Oracle RMS Layout

<p>One of the Access Methods shown to the right may be used to initiate and monitor installation.</p>	<input type="checkbox"/>	<p>Method 1) VGA Monitor and USB Keyboard.</p>
<p>NOTE: <i>Methods 3& 4 may only be used on an HP DL360 with an iLO that has been previously configured with a statically assigned IP address. It is not intended for use with a new, out-of-the-box server.</i></p>	<input type="checkbox"/>	<p>Method 2) Laptop +  KVM2USB Switch. http://www.epiphan.com/products/frame-grabbers/kvm2usb/</p>
	<input type="checkbox"/>	<p>Method 3) iLO VGA Redirection Window, IE8, Ethernet cable. (See Appendix A.1 Accessing the iLo VGA Redirection Window for HP)</p>
	<input type="checkbox"/>	<p>Method 4) iLO access via SSH, terminal program, Ethernet cable.</p>

2.1.4 Network Topologies

Various Topologies will be supported for this release. C-Class (Normal or Low Capacity) utilize Topologies (1,4) and Low Capacity RMS Configurations utilize Topology 7. Please refer to [6] for Topology details.

2.1.5 Activity Logging

All activity while connected to the system should be logged using a convention which notates the **Customer Name**, **Site/Node** location, **Server hostname** and the **Date**. All logs should be provided to Oracle for archiving post installation.

NOTE: *Parts of this procedure will utilize a VGA Monitor (or equivalent) as the active terminal. It is understood that logging is not possible during these times. The user is only expected to provide logs for those parts of the procedures where direct terminal capture is possible (i.e. SSH, serial, etc.).*

3. INSTALLATION MATRIX

3.1 Installing UDR on the Customer Network

Installing the UDR product is a task which requires multiple installations of varying types. The matrix below provides a guide to the user as to which procedures are to be performed on which site types. The user should be aware that this document only covers the necessary configuration required to complete product install. Refer to the online help or contact the MY ORACLE SUPPORT MOS FOR ASSISTANCE 8.11Appendix S with post installation configuration options.

NOTE:Although the NOAMP sites are fully redundant by function, we must distinguish between them during installation due to procedural changes based on the installation sequence. The user should be aware that any reference to the “NOAMP” site refers to the 1st installation of a NOAMP pair on the customer network while references to the “DR NOAMP” site refers to the 2nd NOAMP pair to be installed.

NormalC-ClassConfiguration(Topologies 1and 4 supported , refer to [6] for more details on the configurations):

Server Type		Procedure Number												
		1	2	3	10	11	12	13	14	15	16	17	18	20
<input type="checkbox"/>	NOAMP-A	✓	✗	✗	✓	✗	✗	✓	✗	✗	✗	✗	✓	✓
<input type="checkbox"/>	NOAMP-B	✓	✗	✗	✗	✓	✗	✓	✗	✗	✗	✗	✓	✗
<input type="checkbox"/>	DR NOAMP	✓	✗	✗	✗	✓	✗	✗	✓	✗	✗	✗	✓	✗
<input type="checkbox"/>	SOAM	✗	✓	✓	✗	✓	✓	✗	✓	✗	✗	✗	✗	✗
<input type="checkbox"/>	MP	✗	✓	✓	✗	✓	✓	✗	✓	✓	✓	✓	✗	✗

Table 2 - UDR Installation Matrix for NormalCapacity C-Class Configuration

Low Capacity C-Class Configuration(Topologies 1and 4 supported , refer to [6] for more details on the configurations) :

Server Type		Procedure Number											
		4	5	10	11	12	13	14	15	16	17	19	20
<input type="checkbox"/>	NOAMP-A	✓	✓	✓	✗	✗	✓	✗	✗	✗	✗	✓	✓
<input type="checkbox"/>	NOAMP-B	✓	✓	✗	✓	✗	✓	✗	✗	✗	✗	✓	✗
<input type="checkbox"/>	DR NOAMP	✓	✓	✗	✓	✗	✗	✓	✗	✗	✗	✓	✗
<input type="checkbox"/>	SOAM	✓	✓	✗	✓	✓	✗	✓	✗	✗	✗	✗	✗
<input type="checkbox"/>	MP	✓	✓	✗	✓	✓	✗	✓	✓	✓	✓	✗	✗

Table 3 - UDR Installation Matrix for Low Capacity C-Class Configuration

Low Capacity RMS/Low Capacity RMS with Low speed Disks Configuration (Topology 7 supported , refer to [6] for more details on the configurations):

Server Type		Procedure Number											
		6	7	10	11	12	13	14	15	16	17	19	20
<input type="checkbox"/>	NOAMP-A	✓	✓	✓	✗	✗	✓	✗	✗	✗	✗	✓	✓
<input type="checkbox"/>	NOAMP-B	✓	✓	✗	✓	✗	✓	✗	✗	✗	✗	✓	✗
<input type="checkbox"/>	DR NOAMP	✓	✓	✗	✓	✗	✗	✓	✗	✗	✗	✓	✗
<input type="checkbox"/>	SOAM	✓	✓	✗	✓	✓	✗	✓	✗	✗	✗	✗	✗
<input type="checkbox"/>	MP	✓	✓	✗	✓	✓	✗	✓	✓	✓	✓	✗	✗

Table 4 - UDR Installation Matrix for Low Capacity RMS Configuration

Low Capacity OracleRMS Configuration (Topology 7 supported , refer to [6] for more details on the configurations) :

Server Type		Procedure Number											
		8	9	10	11	12	13	14	15	16	17	19	20

Server Type		Procedure Number											
		8	9	10	11	12	13	14	15	16	17	19	20
<input type="checkbox"/>	NOAMP-A	✓	✓	✓	✗	✗	✓	✗	✗	✗	✗	✓	✓
<input type="checkbox"/>	NOAMP-B	✓	✓	✗	✓	✗	✓	✗	✗	✗	✗	✓	✗
<input type="checkbox"/>	DR NOAMP	✓	✓	✗	✓	✗	✗	✓	✗	✗	✗	✓	✗
<input type="checkbox"/>	SOAM	✓	✓	✗	✓	✓	✗	✓	✗	✗	✗	✗	✗
<input type="checkbox"/>	MP	✓	✓	✗	✓	✓	✗	✓	✓	✓	✓	✗	✗

Table 5 - UDR Installation Matrix for Low Capacity OracleRMS Configuration

3.2 UDR Installation List of Procedures

NormalCapacity C-Class Configuration

Procedure No :	Title :	Page No :
1	Install NOAMP Servers(NO and DR Network Elements)	18
2	Install SOAM / MP Host Servers(SO Network Elements)	23
3	Create, IPM and Install Application on all Virtual Machines(SO Network Elements)	24
10	Configuring NOAMP-AServer (1stNOAMPsite only)	88
11	Create Configuration for Remaining Servers (All Sites)	103
12	Configure XSI Networks (All SOAM Sites)	119
13	OAM Pairing for the Primary NOAMP Servers (1 st NOAMP site only)	123
14	OAM pairing for SOAM and DR sites (All SOAM and DR Sites)	138
15	Configuring MP Server Groups (All SOAM sites)	153
16	Configure MP Signaling Interfaces (All SOAM Sites)	161
17	Configure SPR Application on MP(All SOAM Sites)	170
18	Configure NOAMP Signaling Interfaces (All NOAM Sites)	176
20	Configure Services on Signaling Network	195

Table 6 - UDR Installation: List of Procedures for NormalCapacity C-Class Configuration

Low Capacity C-Class Configuration

Procedure No :	Title :	Page No :
4	Install NOAMP / SOAM / MP Servers	37
5	Create, IPM and Install Application on all Virtual Machines	39
10	Configuring NOAMP-AServer (1stNOAMPsite only)	88
11	Create Configuration for Remaining Servers (All Sites)	103
12	Configure XSI Networks (All SOAM Sites)	119
13	OAM Pairing for the Primary NOAMP Servers (1 st NOAMP site only)	123
14	OAM pairing for SOAM and DR sites (All SOAM and DR Sites)	138
15	Configuring MP Server Groups (All SOAM sites)	153
16	Configure MP Signaling Interfaces (All SOAM Sites)	161
17	Configure SPR Application on MP(All SOAM Sites)	170
19	Configure NOAMP Signaling Interfaces (virtual NOAMP servers on Low CapacitySystems)	187
20	Configure Services on Signaling Network	195

Table 7 - UDRInstallation: List of Procedures for Low Capacity C-Class Configuration

Low Capacity RMS and Low Capacity RMS with Low Speed Disks Configuration

Procedure No :	Title :	Page No :
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7	Create, IPM and Install Application on all Virtual Machines	54
10	Configuring NOAMP-AServer (1stNOAMPsite only)	88
11	Create Configuration for Remaining Servers (All Sites)	103
12	Configure XSI Networks (All SOAM Sites)	119
13	OAM Pairing for the Primary NOAMP Servers (1 st NOAMP site only)	123
14	OAM pairing for SOAM and DR sites (All SOAM and DR Sites)	138
15	Configuring MP Server Groups (All SOAM sites)	153
16	Configure MP Signaling Interfaces (All SOAM Sites)	161
17	Configure SPR Application on MP(All SOAM Sites)	170
19	Configure NOAMP Signaling Interfaces (virtual NOAMP servers on Low CapacitySystems)	187
20	Configure Services on Signaling Network	195

Table 8 - UDR Installation: List of Procedures for Low Capacity RMS Configuration

Low Capacity Oracle RMS Configuration

Procedure No :	Title :	Page No :
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Table 9 - UDR Installation: List of Procedures for Low Capacity RMS Configuration

4. NORMALCAPACITY C-CLASS CONFIGURATION SOFTWARE INSTALLATION PROCEDURE

The user should confirm that the server has been verified through the Hardware Verification Plan [3] before beginning this procedure. ProLiant BL460 Gen8, ProLiant BL460 Gen8+ or ProLiant BL460 Gen9 blades are supported for this procedure.

4.1 Install NOAMP Servers(NO and DR Network Elements)

This procedure will install Tekelec Platform Distribution (TPD) on the NO network elements.

Needed material:

- TPD Media

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

Procedure 1: Install NOAMP Servers (NO and DR Network Elements)

Step	Procedure	Result
1. <input type="checkbox"/>	Access the HP server's console.	Connect to the server's console using one of the access methods described in <i>Section 2.1.2</i> .
2. <input type="checkbox"/>	Update firmware	Confirm that the firmware is upgraded to latest version. For more information, please refer to Platform 7.0 docset [5].
3. <input type="checkbox"/>	Update BIOS settings	Follow steps defined in Appendix D.1 BIOS Settings to update BIOS settings.
4. <input type="checkbox"/>	Add images to management server.	Follow Appendix J Adding Software Images to PM&C Server to add TPD, TVOE and UDR software images.
5. <input type="checkbox"/>	Clean the Disk Array	Note: Execute only if previous install on the Blade. Follow steps defined in .. Appendix M.2 Removing Blade Disk Array Configuration (Sidecar) ... to clean the Disk Array
6. <input type="checkbox"/>	Install Operating System (TPD)	Follow steps defined in ... Appendix F.2 Installing Operating Systems with PM&C (BL460 Hardware) ... to install TPD software.

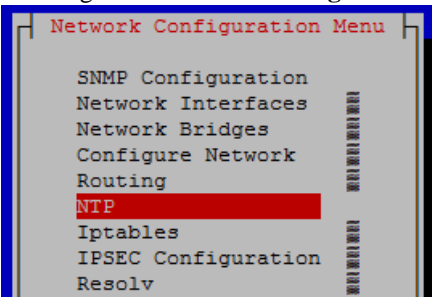
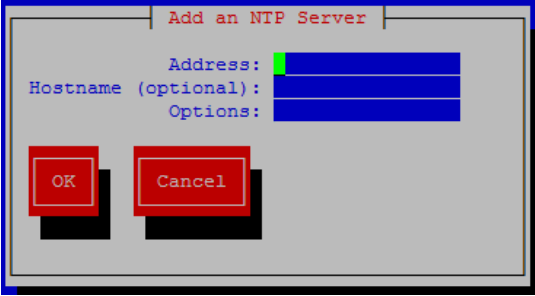
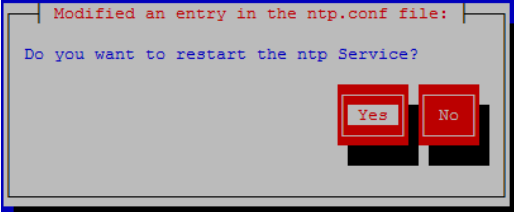
Note: The next five steps are only for the NOAMP-A and DR NOAMP-A servers. Once these steps are completed for both servers, **Section 0**

Install SOAM / MP Host Servers(SO Network Elements) may be run in parallel with this procedure.

Procedure 1: Install NOAMP Servers (NO and DR Network Elements)

Step	Procedure	Result
7. <input type="checkbox"/>	Access the HP server's console.	Connect to the server's console using one of the access methods described in <i>Section 2.1.2</i> .
8. <input type="checkbox"/>	Log into the server console as the "root" user.	CentOS release 5.6 (Final) Kernel 2.6.18-238.19.1.el5prere15.0.0_72.22.0 on an x86_64 hostname1260476221 login: root Password: <root_password>
9.	Verify the type of server hardware	# hardwareInfo grep Hardware Hardware ID: ProLiantBL460Gen8, ProLiantBL460Gen8+ or ProLiantBL460Gen9
10. <input type="checkbox"/>	Configure a temporary XMI IP so NTP can access the routed network.	Follow steps defined in ... Appendix B.1 Creating Temporary External XMI IP Address ... to define a temporary network. <i>Note:</i> The permanent IP assignment for this server will be made when its TKLCConfigData.sh script is applied later in this installation.
11. <input type="checkbox"/>	Enter Platform configuration menu	Enter platform configuration by running the following: # su - platcfg

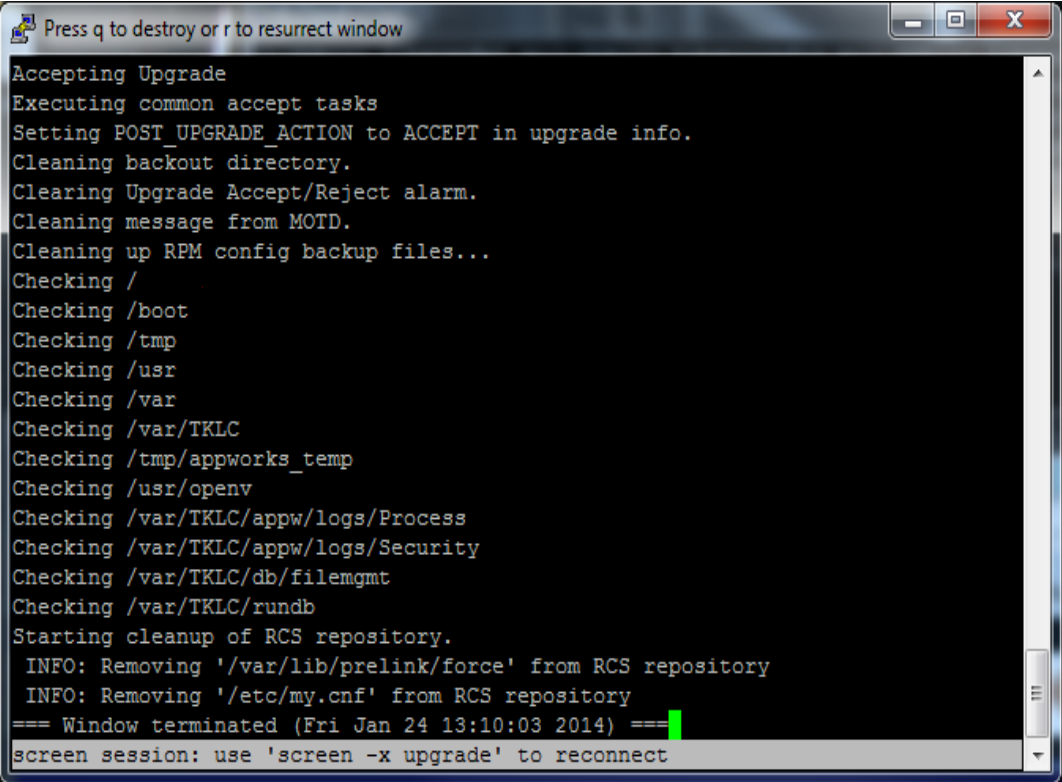
Procedure 1: Install NOAMP Servers (NO and DR Network Elements)

Step	Procedure	Result
<p>12.</p> <p><input type="checkbox"/></p>	<p>For NOAMP-A only:</p> <p><i>Enter Platform configuration menu</i></p>	<p>1. Navigate to Network Configuration > NTP.</p>  <p>2. Select Edit, then “Add a New NTP Server.”</p> <p>3. Enter the IP Address of the customer provided NTP server.</p>  <p>4. Select OK, then “Exit.”</p> <p>5. Select Yes to restart ntp Service.</p>  <p>6. Exit platcfg.</p>
<p>Note:The remainder of this procedure is for all NOAMP servers.</p>		
<p>13.</p> <p><input type="checkbox"/></p>	<p><i>Configure Disk Array</i></p>	<p>Follow steps defined in ...</p> <p>Appendix E.3 Configuring Blade Disk Array (NO Network Element Servers with Sidecar)</p> <p>... to configure the disk array.</p>

Procedure 1: Install NOAMP Servers (NO and DR Network Elements)

Step	Procedure	Result
<p>14.</p> <input type="checkbox"/>	<p>(Optional)</p> <p>Configure NetBackup Dedicated Interface</p> <p>(Only deployments with Net Backup)</p> <p>Dual Pass-Thru Modules</p>	<p>For c-Class Blade, Netbackup enabled systems equipped with <i>two</i> Pass Thru Modules:</p> <pre>#netAdm add --device=bond2 --type=Bonding --mode=active-backup \ --onboot=yes --bootproto=none --bondInterfaces="eth21,eth22" \ --address=<NetBackup_IP> --netmask=<NetBackup_NetMask></pre> <pre>#netAdm add --route=net --device=bond2 \ --address=<NetBackup_Network_Address> \ --netmask=<NetBackup_Network_NetMask> \ --gateway=<NetBackup_Network_Gateway_IP></pre> <p>[OPTIONAL] If this installation is using jumbo frames, set the ethernet interface MTU to the desired jumbo frame size:</p> <pre>#netAdm set --device=bond2 --MTU=<NetBackup_MTU_size></pre>
<p>15.</p> <input type="checkbox"/>	<p>(Optional)</p> <p>Configure Second NetBackup Interface</p> <p>(Only deployments with Net Backup)</p> <p>Single Pass-Thru Modules</p>	<p>For c-Class Blade, Netbackup enabled systems equipped with <i>a single</i> Pass Thru Module:</p> <p>For Blade systems with a <i>single</i> Pass Thru Module, <backup_device> will be : eth21</p> <pre>#netAdm set --device=<backup_device> --slave=no --onboot=yes \ --address=<NetBackup_IP> --netmask=<NetBackup_NetMask></pre> <pre>#netAdm add --route=net --device=<backup_device> \ --address=<NetBackup_Network_Address> \ --netmask=<NetBackup_Network_NetMask> \ --gateway=<NetBackup_Network_Gateway_IP></pre> <p>[OPTIONAL] If this installation is using jumbo frames, set the ethernet interface MTU to the desired jumbo frame size:</p> <pre>#netAdm set --device=<backup_device> --MTU=<NetBackup_MTU_size></pre>
<p>16.</p> <input type="checkbox"/>	<p>Install UDR application software.</p>	<p>Follow steps defined in ...</p> <p>Appendix F.2 Installing Operating Systems with PM&C (BL 460 hardware)</p> <p>... to install UDR software.</p>
<p>17.</p> <input type="checkbox"/>	<p>Access the HP server's console.</p>	<p>Connect to the server's console using one of the access methods described in <i>Section 2.1.2</i>.</p>

Procedure 1: Install NOAMP Servers (NO and DR Network Elements)

Step	Procedure	Result
18. <input type="checkbox"/>	Verify successful upgrade. Command will generate no output if no issues are found.	<pre># verifyUpgrade</pre> <p><i>NOTE: This command should return no output on a healthy system.</i></p>
19. <input type="checkbox"/>	Change directory	<pre># cd /var/TKLC/backout</pre>
20. <input type="checkbox"/>	Perform upgrade acceptance.	<pre># ./accept</pre>
21. <input type="checkbox"/>	Press the 'q' key to quit screen session wrapper from upgrade acceptance.	
<p>THIS PROCEDURE HAS BEEN COMPLETED</p>		

4.2 Install SOAM / MP Host Servers(SO Network Elements)

This procedure will install and configure the operating system on hardware that will host SOAM and MP VM Guests. A C-Class system can have two blades at a site that are configured the same and utilize the following procedure.

Requirements:

- **Procedure 1:** Install NOAMP Servers(NO and DR Network Elements) must be complete

Needed material:

- TVOE Media

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

Procedure 2: Install SOAM / MP Servers (SO Network Elements)

Step	Procedure	Result
1. <input type="checkbox"/>	Access the HP server's console.	Connect to the HP server's console using one of the access methods described in <i>Section 2.1.2</i> .
2. <input type="checkbox"/>	Update firmware	Confirm that the firmware is upgraded to the latest version. For more information, please refer to Platform 7.0 docset [5].
3. <input type="checkbox"/>	Update BIOS settings	Follow steps defined in Appendix D.1 BIOS Settings to update BIOS settings.
4. <input type="checkbox"/>	Add image to management server.	Follow Appendix J Adding Software Images to PM&C Server to add TVOE image.
5. <input type="checkbox"/>	Install Operating System (TVOE)	Follow steps defined in ... Appendix F.2 Installing Operating Systems with PM&C (BL460 Hardware) ... to install TVOE software.
6.	Check the type of server hardware	# hardwareInfo grep Hardware Hardware ID: ProLiantBL460Gen8or ProLiantBL460Gen8+ or ProLiantBL460Gen9
7. <input type="checkbox"/>	Configure TVOE network	Follow steps defined in ... Appendix L.1 Configure TVOE Network ... to configure TVOE network.
THIS PROCEDURE HAS BEEN COMPLETED		

4.3 Create, IPM and Install Application on all Virtual Machines(SO Network Elements)

This procedure will create Virtual Machines (VMs) for SO and MP servers, install the TPD Operating System on each VM, and install the UDR application on each VM. It details the create/IPM/install for a single VM and should be repeated for every VM. A C-Class system can have two blades at a site that are configured the same and utilize the following procedure.

Requirements:


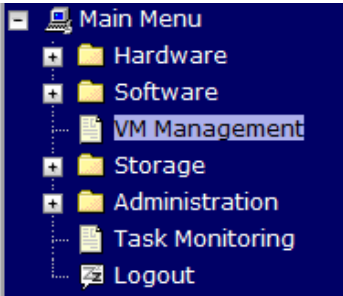
- **Procedure 2:**

Oracle Communications User Data Repository Installation and Configuration Guide

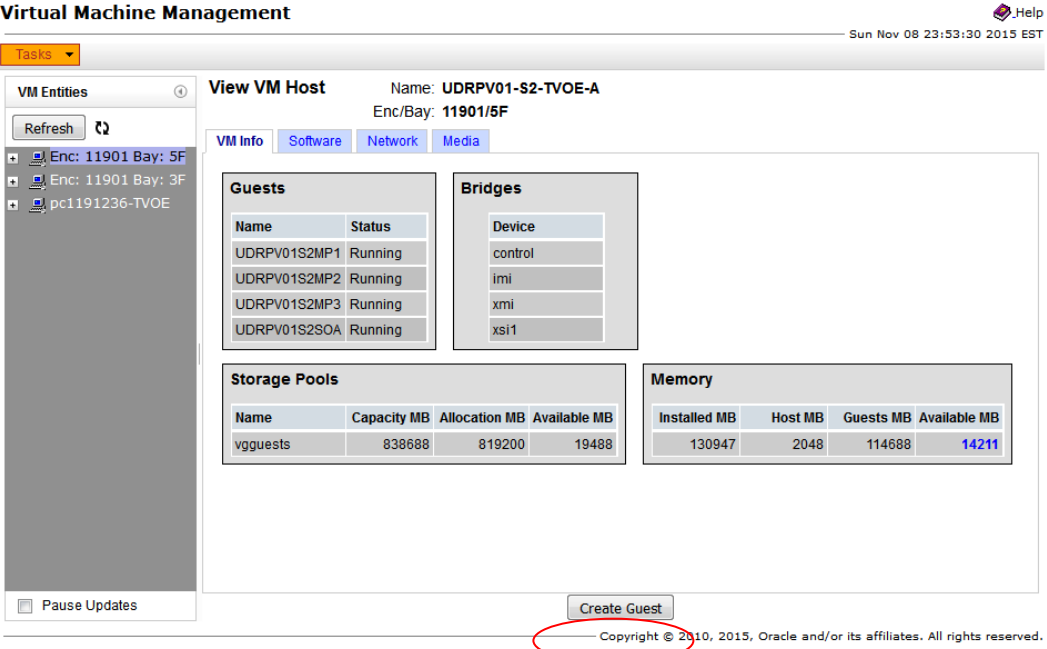
- **Install SOAM / MP Host Servers(SO Network Elements)** has been completed.

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

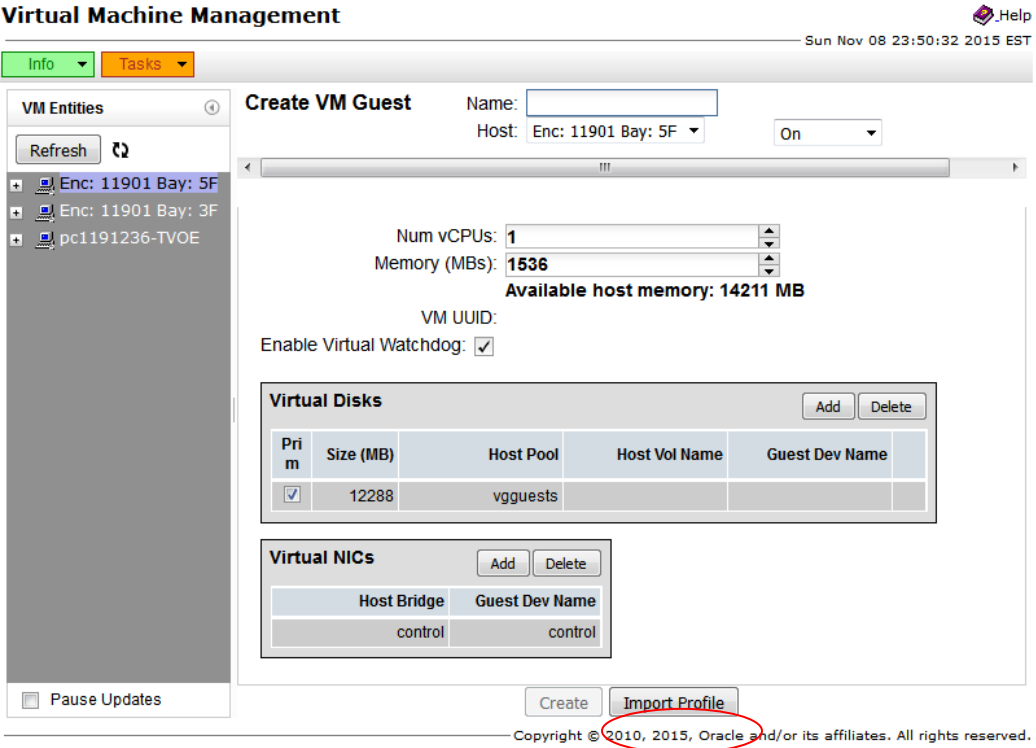
Procedure 3: Create, IPM and Install Application on all Virtual Machines (SO Network Elements)

Step	Procedure	Result
Blade deployments (ex: ProLiantBL460cGen8) will use only one IP to access the PM&C that manages the entire enclosure for this UDR site.		
<p>1.</p> <input type="checkbox"/>	<p>Add image to management server.</p>	<p>Follow Appendix J Adding Software Images to PM&C Server to add TPD and UDR software images to this PM&C repository.</p> <p><i>Note: Images may already exist if this is a blade deployment, with SOAM/MP blades controlled by the same PM&C as the NOAMP.</i></p>
<p>2.</p> <input type="checkbox"/>	<p>PM&C GUI: Login to PM&C GUI</p>	<p>Open web browser and enter: <a href="http://<pmac_management_network_ip>">http://<pmac_management_network_ip> Login as pmacadmin user.</p> 
<p>3.</p> <input type="checkbox"/>	<p>PM&C GUI: Navigate to VM Management menu</p>	<p>Navigate to the VM Management menu</p> 

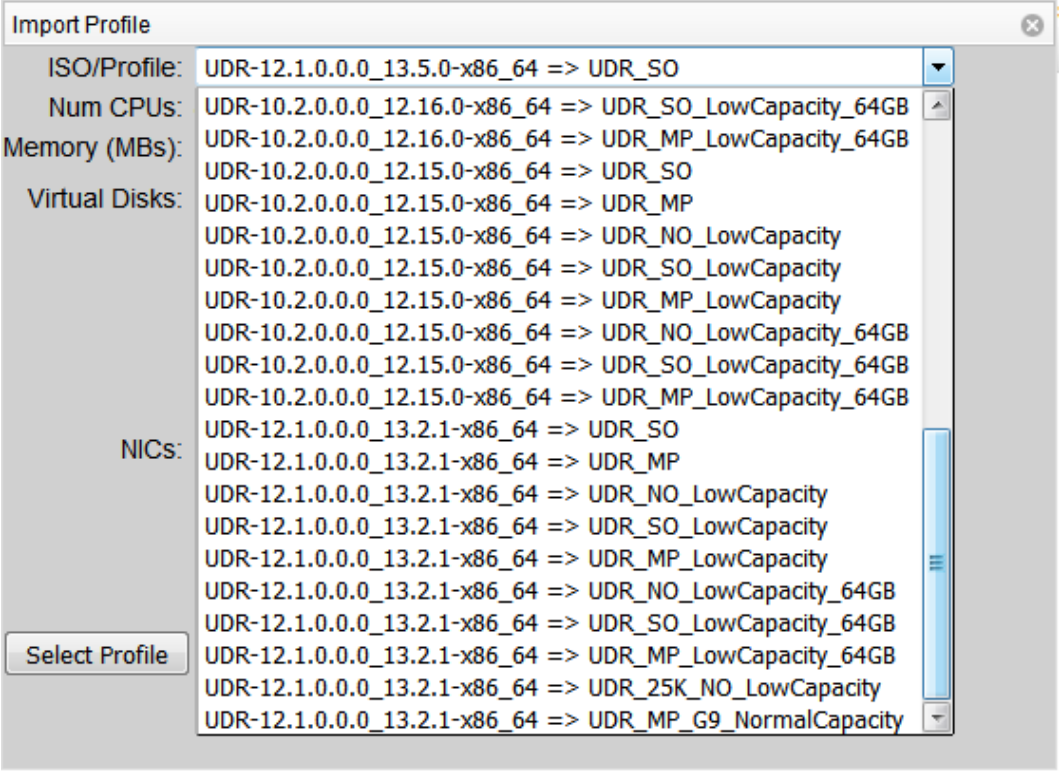
Procedure 3: Create, IPM and InstallApplication on all Virtual Machines (SO Network Elements)

Step	Procedure	Result
<p>4.</p> <p><input type="checkbox"/></p>	<p>PM&C GUI:</p> <p>Select the desired Server and create the VM Guest</p>	<p>Select the TVOE blade 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>The screenshot shows the Oracle VM Management interface. On the left, under 'VM Entities', three servers are listed: 'Enc: 11901 Bay: 5F', 'Enc: 11901 Bay: 3F', and 'pc1191236-TVOE'. The 'View VM Host' section shows details for 'UDRPV01-S2-TVOE-A' (Enc/Bay: 11901/5F). It includes tabs for 'VM Info', 'Software', 'Network', and 'Media'. Below these are sections for 'Guests' (listing UDRPV01S2MP1-3 and SOA), 'Bridges' (listing control, imi, xmi, xsi1), 'Storage Pools' (listing vgguests), and 'Memory' (listing installed, host, and guest memory). A 'Create Guest' button is circled in red at the bottom right of the main content area.</p> <p>Click Create Guest.</p> <ul style="list-style-type: none"> • Check-off the associated Check Box as addition is completed for the VM. • For Gen 9 Normal Capacity configuration on 12.x release, 3 MPs per server are required, thus additional 2 MPs have to be created for Gen 9 Normal Capacity configuration on 12.x release. <p><input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B</p> <p><input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4</p> <p><input type="checkbox"/> MP-5 (Gen 9 configuration, 12.x release)</p> <p><input type="checkbox"/> MP-6 (Gen 9 configuration, 12.x release)</p>

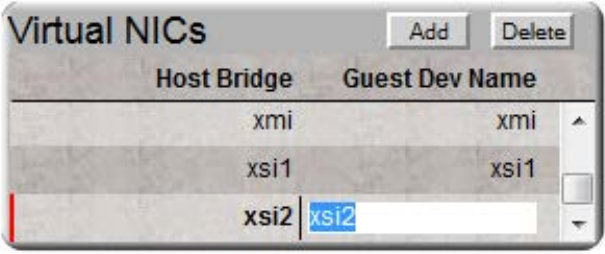
Procedure 3: Create, IPM and InstallApplication on all Virtual Machines (SO Network Elements)

Step	Procedure	Result
<p>5.</p> <p><input type="checkbox"/></p>	<p>PM&C GUI:</p> <p>Click on the Import Profile dialogue button</p>	<p>A “Create VM Guest” window is displayed that is similar to the below:</p>  <p>Click “Import Profile” button.</p> <ul style="list-style-type: none"> • Check-off the associated Check Box as addition is completed for the VM. <p><input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B</p> <p><input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4</p> <p><input type="checkbox"/> MP-5 (Gen 9 configuration, 12.x release)</p> <p><input type="checkbox"/> MP-6 (Gen 9 configuration, 12.x release)</p>

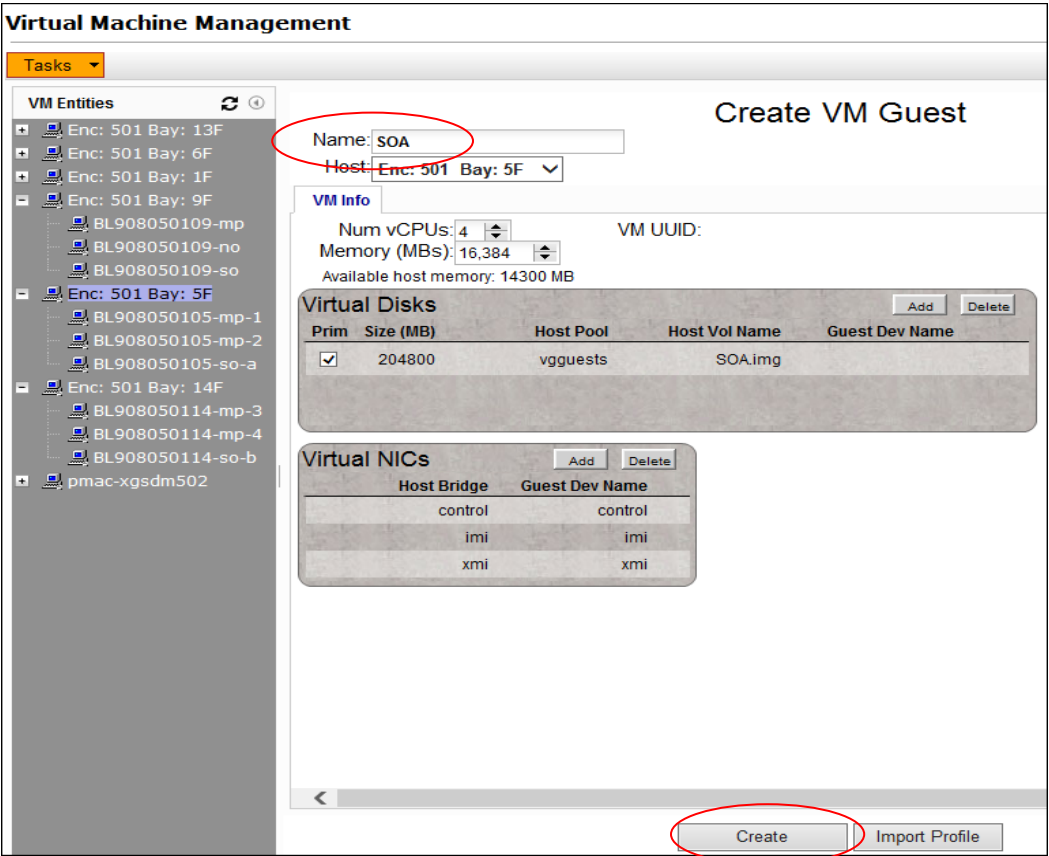
Procedure 3: Create, IPM and InstallApplication on all Virtual Machines (SO Network Elements)

Step	Procedure	Result
<p>6.</p> <p><input type="checkbox"/></p>	<p>PM&C GUI:</p> <p>Select the desired ISO/Profile value</p>	<p>Select the desired ISO/Profile.</p> <ul style="list-style-type: none"> - If creating a VM for a SOAM server, use the “UDR_SO” profile. - If creating a VM for an MP: <ul style="list-style-type: none"> - Use the “UDR_MP_G9_NormalCapacity” profile for Gen 9 configuration. - Use the “UDR_MP” profile for Gen 8 configuration.  <p>Click “Select Profile” button.</p> <ul style="list-style-type: none"> • Check-off the associated Check Box as addition is completed for the VM. <p><input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B</p> <p><input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4</p> <p><input type="checkbox"/> MP-5 (Gen 9 configuration, 12.x release)</p> <p><input type="checkbox"/> MP-6 (Gen 9 configuration, 12.x release)</p>




Procedure 3: Create, IPM and InstallApplication on all Virtual Machines (SO Network Elements)

Step	Procedure	Result
<p>7.</p> <p><input type="checkbox"/></p>	<p>PM&C GUI:</p> <p><i>Customize the NICs list to suit your deployment</i></p>	<p>The default Virtual NICs are configured for a deployment with two XSI networks.</p> <ul style="list-style-type: none"> - If your deployment has only a single XSI network, select the row for “xsi2” by clicking on it then click the Delete button:  <ul style="list-style-type: none"> - If your deployment has more than two XSI networks, click the Add button, select them from the Host Bridge drop box and type in the same name into Guest Dev Name. - Check-off the associated Check Box as addition is completed for the VM. <p><input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B</p> <p><input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4</p> <p><input type="checkbox"/> MP-5 (Gen 9 configuration, 12.x release)</p> <p><input type="checkbox"/> MP-6 (Gen 9 configuration, 12.x release)</p>


Procedure 3: Create, IPM and InstallApplication on all Virtual Machines (SO Network Elements)

Step	Procedure	Result
<p>8.</p> <p><input type="checkbox"/></p>	<p>PM&C GUI:</p> <p>Override the VM Guest Name to make it unique for the site</p>	<p>A “Create VM Guest” window is displayed that is similar to the below..</p>  <p>Override the Name field to something like: SOA, SOB, MP1 or MP2, etc (Don't use hyphens in the name). You could also include a location within the Name value such as SOMRSVNCA. (This will not become the ultimate hostname. It is just an internal tag for the VM host manager.)</p> <p>Click Create button</p> <ul style="list-style-type: none"> Record the Site VM Guest Name of each VM that is added in the space provided below: Check-off the associated Check Box as addition is completed for the VM. <p><input type="checkbox"/> SOAM-A: _____ <input type="checkbox"/> SOAM-B: _____</p> <p><input type="checkbox"/> MP-1: _____ <input type="checkbox"/> MP-2: _____</p> <p><input type="checkbox"/> MP-3: _____ <input type="checkbox"/> MP-4: _____</p> <p><input type="checkbox"/> MP-5 (Gen 9 configuration, 12.x release): _____</p> <p><input type="checkbox"/> MP-6 (Gen 9 configuration, 12.x release): _____</p>

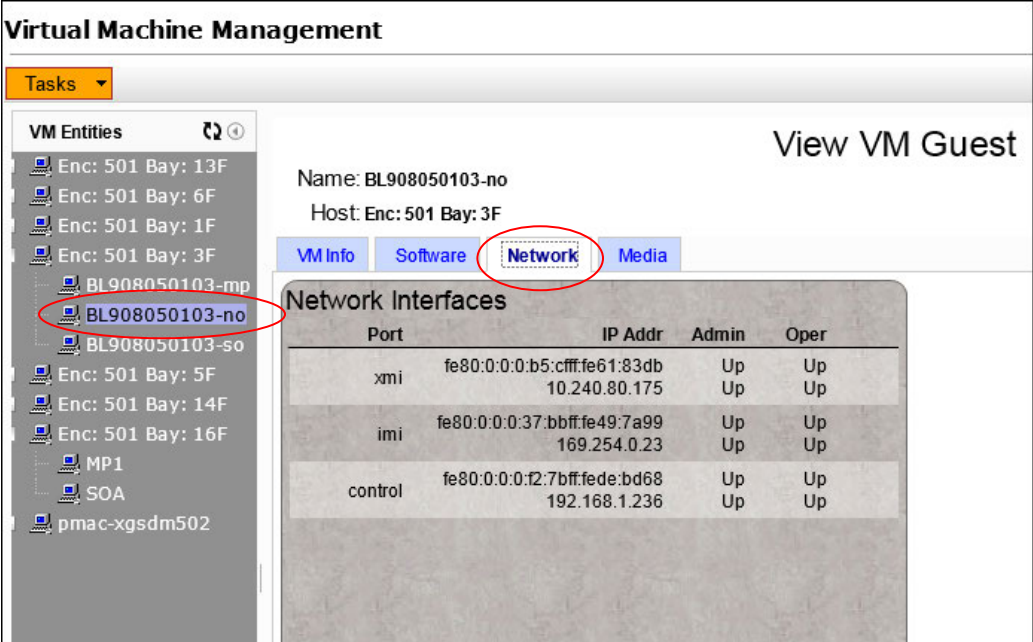
Procedure 3: Create, IPM and InstallApplication on all Virtual Machines (SO Network Elements)

Step	Procedure	Result
<p>9.</p> <p><input type="checkbox"/></p>	<p>PM&C GUI:</p> <p>Select...</p> <p>Main Menu →Task Monitoring</p> <p>...as shown on the right.</p>	<div style="border: 1px solid black; padding: 5px;"> <p> The linked image cannot be displayed. The file may have been moved, renamed, or deleted. Verify that the link points to the correct file and location.</p> </div> <div style="border: 1px solid black; padding: 5px;"> <p> The linked image cannot be displayed. The file may have been moved, renamed, or deleted. Verify that the link points to the correct file and location.</p> </div> <div style="border: 1px solid black; padding: 5px;"> <p> The linked image cannot be displayed. The file may have been moved, renamed, or deleted. Verify that the link points to the correct file and location.</p> </div> <ul style="list-style-type: none"> • Check-off the associated Check Box as addition is completed for the VM. <p><input type="checkbox"/>SOAM-A <input type="checkbox"/> SOAM-B</p> <p><input type="checkbox"/>MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/>MP-3 <input type="checkbox"/> MP-4</p> <p><input type="checkbox"/> MP-5 (Gen 9 configuration, 12.x release)</p> <p><input type="checkbox"/>MP-6 (Gen 9 configuration, 12.x release)</p>

Procedure 3: Create, IPM and InstallApplication on all Virtual Machines (SO Network Elements)

Step	Procedure	Result																		
<p>10.</p> <input type="checkbox"/>	<p>PM&C GUI:</p> <p>Verify that Create VM task successfully completes.</p> <p>The user should see a screen similar to the one on the right with Progress value of 100%.</p>	<p>Verify that the Virtual Machine successfully created.</p>  <table border="1"> <thead> <tr> <th colspan="6">Tasks</th> </tr> <tr> <th>ID</th> <th>Task</th> <th>Target</th> <th>Status</th> <th>Start Time</th> <th>Progress</th> </tr> </thead> <tbody> <tr> <td>13</td> <td>VirtAction: Create</td> <td>RMS: pc9040833-no-a Guest: NO-A</td> <td>Guest creation completed (NO-A)</td> <td>2012-07-06 19:05:02</td> <td>100%</td> </tr> </tbody> </table> <ul style="list-style-type: none"> Check-off the associated Check Box as addition is completed for the VM. <p><input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B</p> <p><input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4</p> <p><input type="checkbox"/> MP-5 (Gen 9 configuration, 12.x release)</p> <p><input type="checkbox"/> MP-6 (Gen 9 configuration, 12.x release)</p>	Tasks						ID	Task	Target	Status	Start Time	Progress	13	VirtAction: Create	RMS: pc9040833-no-a Guest: NO-A	Guest creation completed (NO-A)	2012-07-06 19:05:02	100%
Tasks																				
ID	Task	Target	Status	Start Time	Progress															
13	VirtAction: Create	RMS: pc9040833-no-a Guest: NO-A	Guest creation completed (NO-A)	2012-07-06 19:05:02	100%															
<p>Note: The steps above may be completed for each VM Guest that this PM&C administers before proceeding on to the next step. This way you may install and upgrade multiple VM Guests in parallel. A C-Class system can have two blades at a site that are virtualized.</p>																				
<p>11.</p> <input type="checkbox"/>	<p><i>Install Operating System (TPD)</i></p>	<p>Follow steps defined in ...</p> <p>Appendix F.2 Installing Operating Systems with PM&C (BL460 Hardware)</p> <p>... to install TPD software on VM Guests.</p> <ul style="list-style-type: none"> Check-off the associated Check Box as addition is completed for the VM. <p><input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B</p> <p><input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4</p> <p><input type="checkbox"/> MP-5 (Gen 9 configuration)</p> <p><input type="checkbox"/> MP-6 (Gen 9 configuration)</p>																		

Procedure 3: Create, IPM and InstallApplication on all Virtual Machines (SO Network Elements)

Step	Procedure	Result																									
<p>12.</p> <p><input type="checkbox"/></p>	<p>PM&C GUI:</p> <p><i>Get and record control IP address of VM Guest</i></p>	<p>Navigate to the VM Management menu</p> <p>Select the VM Guest Name from the VM Entities list, and click “Network”tab</p>  <p>Virtual Machine Management</p> <p>Tasks ▾</p> <p>VM Entities</p> <ul style="list-style-type: none"> Enc: 501 Bay: 13F Enc: 501 Bay: 6F Enc: 501 Bay: 1F Enc: 501 Bay: 3F BL908050103-mp BL908050103-no BL908050103-so Enc: 501 Bay: 5F Enc: 501 Bay: 14F Enc: 501 Bay: 16F MP1 SOA pmac-xgsdm502 <p>Name: BL908050103-no Host: Enc: 501 Bay: 3F</p> <p>VM Info Software Network Media</p> <p>Network Interfaces</p> <table border="1"> <thead> <tr> <th>Port</th> <th>IP Addr</th> <th>Admin</th> <th>Oper</th> </tr> </thead> <tbody> <tr> <td rowspan="2">xmi</td> <td>fe80:0:0:b5:cfff:fe61:83db</td> <td>Up</td> <td>Up</td> </tr> <tr> <td>10.240.80.175</td> <td>Up</td> <td>Up</td> </tr> <tr> <td rowspan="2">imi</td> <td>fe80:0:0:0:37:bbff:fe49:7a99</td> <td>Up</td> <td>Up</td> </tr> <tr> <td>169.254.0.23</td> <td>Up</td> <td>Up</td> </tr> <tr> <td rowspan="2">control</td> <td>fe80:0:0:0:f2:7bff:fedc:bd68</td> <td>Up</td> <td>Up</td> </tr> <tr> <td>192.168.1.236</td> <td>Up</td> <td>Up</td> </tr> </tbody> </table> <p>Derermine control IP address of VM Guest and record it.</p> <ul style="list-style-type: none"> Record the Site control IP Address of each VM that is added in the space provided below: Check-off the associated Check Box as addition is completed for the VM. <p><input type="checkbox"/> SOAM-A: _____ <input type="checkbox"/> SOAM-B: _____</p> <p><input type="checkbox"/> MP-1: _____ <input type="checkbox"/> MP-2: _____</p> <p><input type="checkbox"/> MP-3: _____ <input type="checkbox"/> MP-4: _____</p> <p><input type="checkbox"/> MP-5(Gen 9 configuration, 12.x release): _____</p> <p><input type="checkbox"/> MP-6 (Gen 9 configuration, 12.x release): _____</p>	Port	IP Addr	Admin	Oper	xmi	fe80:0:0:b5:cfff:fe61:83db	Up	Up	10.240.80.175	Up	Up	imi	fe80:0:0:0:37:bbff:fe49:7a99	Up	Up	169.254.0.23	Up	Up	control	fe80:0:0:0:f2:7bff:fedc:bd68	Up	Up	192.168.1.236	Up	Up
Port	IP Addr	Admin	Oper																								
xmi	fe80:0:0:b5:cfff:fe61:83db	Up	Up																								
	10.240.80.175	Up	Up																								
imi	fe80:0:0:0:37:bbff:fe49:7a99	Up	Up																								
	169.254.0.23	Up	Up																								
control	fe80:0:0:0:f2:7bff:fedc:bd68	Up	Up																								
	192.168.1.236	Up	Up																								

Procedure 3: Create, IPM and InstallApplication on all Virtual Machines (SO Network Elements)

Step	Procedure	Result
<p>13.</p> <input type="checkbox"/>	<p>Install UDR application software.</p>	<p>Follow steps defined in ...</p> <p>Appendix G.2 Installing UDR Application with PM&C</p> <p>... to install UDR software.</p> <ul style="list-style-type: none"> • Check-off the associated Check Box as addition is completed for the VM. <p><input type="checkbox"/>SOAM-A <input type="checkbox"/> SOAM-B</p> <p><input type="checkbox"/>MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/>MP-3 <input type="checkbox"/> MP-4</p> <p><input type="checkbox"/> MP-5 (Gen 9 configuration, 12.x release)</p> <p><input type="checkbox"/>MP-6 (Gen 9 configuration, 12.x release)</p>
<p>Repeat Steps 4 - 13 for each Virtual Machine to install its operating system and application software.</p>		
<p>14.</p> <input type="checkbox"/>	<p>Perform upgrade acceptance.</p>	<p>Follow steps defined in ...</p> <p>Appendix H : Accept Application Installation on PM&C Managed Servers</p> <p>... to accept upgrade.</p>
<p>15.</p> <input type="checkbox"/>	<p>Access the Active NOAMP server's console.</p>	<p>Connect to the server's console using one of the access methods described in <i>Section 2.1.2</i>.</p>
<p>16.</p> <input type="checkbox"/>	<p>Log into the server console as the "root" user.</p>	<pre>CentOS release 5.6 (Final) Kernel 2.6.18-238.19.1.el5prere15.0.0_72.22.0 on an x86_64 hostname1260476221 login: root Password: <root_password></pre>
<p>17.</p> <input type="checkbox"/>	<p>NOAMP:</p> <p>Transfer file to TVOE Host</p>	<pre># scp /var/TKLC/db/filemgmt/udrInitConfig.sh \ admusr@<tvoe_host_name>:/var/tmp admusr@<tvoe_host_name> ' spassword: <admusr_password></pre> <ul style="list-style-type: none"> • Check-off the associated Check Box as addition is completed for the TVOE host. <p>Gen-8 Configuration:</p> <p><input type="checkbox"/>TVOE Host (SOAM-A / MP-1 / MP-2)</p> <p><input type="checkbox"/>TVOE Host (SOAM-B /MP-3 / MP-4)</p> <p>Gen-9 Configuration, 12.x Release:</p> <p><input type="checkbox"/>TVOE Host (SOAM-A / MP-1 / MP-2 / MP-3)</p> <p><input type="checkbox"/>TVOE Host (SOAM-B /MP-4 / MP-5 / MP-6)</p>

Procedure 3: Create, IPM and InstallApplication on all Virtual Machines (SO Network Elements)

Step	Procedure	Result
<p>18.</p> <input type="checkbox"/>	<p>TVOE Host:</p> <p>1)SSH to server.</p> <p>2) Log into the server as the "admusr" user..</p>	<pre># ssh admusr@<tvoe_host_name></pre> <pre>admusr@<tvoe_host_name> / spassword: <admusr_password></pre> <ul style="list-style-type: none"> • Check-off the associated Check Box as addition is completed for the TVOE host. <p>Gen-8 Configuration:</p> <p><input type="checkbox"/> TVOE Host (SOAM-A / MP-1 / MP-2)</p> <p><input type="checkbox"/> TVOE Host (SOAM-B /MP-3 / MP-4)</p> <p>Gen-9 Configuration, 12.x Release:</p> <p><input type="checkbox"/> TVOE Host (SOAM-A / MP-1 / MP-2 / MP-3)</p> <p><input type="checkbox"/> TVOE Host (SOAM-B /MP-4 / MP-5 / MP-6)</p>
<p>19.</p> <input type="checkbox"/>	<p>TVOE host:</p> <p>Switch to root user.</p>	<pre>[admusr@hostname1326744539 ~]\$ su -</pre> <pre>password: <root_password></pre> <ul style="list-style-type: none"> • Check-off the associated Check Box as addition is completed for the TVOE host. <p>Gen-8 Configuration:</p> <p><input type="checkbox"/> TVOE Host (SOAM-A / MP-1 / MP-2)</p> <p><input type="checkbox"/> TVOE Host (SOAM-B /MP-3 / MP-4)</p> <p>Gen-9 Configuration, 12.x Release:</p> <p><input type="checkbox"/> TVOE Host (SOAM-A / MP-1 / MP-2 / MP-3)</p> <p><input type="checkbox"/> TVOE Host (SOAM-B /MP-4 / MP-5 / MP-6)</p>
<p>20.</p> <input type="checkbox"/>	<p>TVOE host:</p> <p>Change directory.</p>	<pre># cd /var/tmp</pre> <ul style="list-style-type: none"> • Check-off the associated Check Box as addition is completed for the TVOE host. <p>Gen-8 Configuration:</p> <p><input type="checkbox"/> TVOE Host (SOAM-A / MP-1 / MP-2)</p> <p><input type="checkbox"/> TVOE Host (SOAM-B /MP-3 / MP-4)</p> <p>Gen-9 Configuration, 12.x Release:</p> <p><input type="checkbox"/> TVOE Host (SOAM-A / MP-1 / MP-2 / MP-3)</p> <p><input type="checkbox"/> TVOE Host (SOAM-B /MP-4 / MP-5 / MP-6)</p>

Procedure 3: Create, IPM and InstallApplication on all Virtual Machines (SO Network Elements)

Step	Procedure	Result
<p>21.</p> <input type="checkbox"/>	<p>TVOE host:</p> <p>Update script permissions.</p>	<pre># chmod 555 udrInitConfig.sh</pre> <ul style="list-style-type: none"> Check-off the associated Check Box as addition is completed for the TVOE host. <p>Gen-8 Configuration:</p> <p><input type="checkbox"/> TVOE Host (SOAM-A / MP-1 / MP-2)</p> <p><input type="checkbox"/> TVOE Host (SOAM-B /MP-3 / MP-4)</p> <p>Gen-9 Configuration, 12.x Release:</p> <p><input type="checkbox"/> TVOE Host (SOAM-A / MP-1 / MP-2 / MP-3)</p> <p><input type="checkbox"/> TVOE Host (SOAM-B /MP-4 / MP-5 / MP-6)</p>
<p>22.</p> <input type="checkbox"/>	<p>TVOE host:</p> <p>Run configuration script as root.</p>	<pre># ./udrInitConfig.sh</pre> <p>Verify no failures are reported. A trace to display the settings for all VM Guests on this server should be shown in output.</p> <p>In case of failures, save the log file /var/TKLC/log/udrVMCf/udrInitConfig.log.</p> <ul style="list-style-type: none"> Check-off the associated Check Box as addition is completed for the TVOE host. <p>Gen-8 Configuration:</p> <p><input type="checkbox"/> TVOE Host (SOAM-A / MP-1 / MP-2)</p> <p><input type="checkbox"/> TVOE Host (SOAM-B /MP-3 / MP-4)</p> <p>Gen-9 Configuration, 12.x Release:</p> <p><input type="checkbox"/> TVOE Host (SOAM-A / MP-1 / MP-2 / MP-3)</p> <p><input type="checkbox"/> TVOE Host (SOAM-B /MP-4 / MP-5 / MP-6)</p>
<p>23.</p> <input type="checkbox"/>	<p>TVOE host:</p> <p>Reboot the server.</p>	<pre># init 6</pre> <ul style="list-style-type: none"> Check-off the associated Check Box as addition is completed for the TVOE host. <p>Gen-8 Configuration:</p> <p><input type="checkbox"/> TVOE Host (SOAM-A / MP-1 / MP-2)</p> <p><input type="checkbox"/> TVOE Host (SOAM-B /MP-3 / MP-4)</p> <p>Gen-9 Configuration, 12.x Release:</p> <p><input type="checkbox"/> TVOE Host (SOAM-A / MP-1 / MP-2 / MP-3)</p> <p><input type="checkbox"/> TVOE Host (SOAM-B /MP-4 / MP-5 / MP-6)</p>
<p>THIS PROCEDURE HAS BEEN COMPLETED</p>		

5. LOW CAPACITY C-CLASS SOFTWARE INSTALLATION PROCEDURE

The user should confirm that the server has been verified through the Hardware Verification Plan [3] before beginning this procedure. ProLiantBL460Gen8, ProLiantBL460Gen8+ or ProLiantBL460Gen9 are supported for this procedure.

The following Low Capacity C-Class configurations will be supported and can utilize the procedures in this section:

- **One server per site system**
This includes all UDR software running on a TVOE virtualization environment. This configuration will be supported for lab testing systems only.

- **Two server per site system**
This includes all UDR software running on a TVOE virtualization environment in each server, resulting in a fully-virtualized, fully-redundant HA configuration. This can be deployed either as a single site or as a geo-redundant deployment, with two servers at each site.

5.1 Install NOAMP / SOAM / MP Servers

This procedure will install and configure the operating system on hardware that will host NOAMP, SOAM and MP VM Guests.

Needed material:

- TVOE Media

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

Procedure 4: Install NOAMP / SOAM / MP Servers

Step	Procedure	Result
1. <input type="checkbox"/>	Access the HP server's console.	Connect to the HP server's console using one of the access methods described in <i>Section 2.1.2</i> .
2. <input type="checkbox"/>	Update firmware	Confirm that the firmware is upgraded to latest version. For more information, please refer to Platform 7.0 docset [5].
3. <input type="checkbox"/>	Update BIOS settings	Follow steps defined in Appendix D.1 BIOS Settings to update BIOS settings.
4. <input type="checkbox"/>	Add image to management server.	Follow Appendix J Adding Software Images to PM&C Server to add TVOE image.
5. <input type="checkbox"/>	Clean the Disk Array	Note: Execute only if previous install on the Blade. Follow steps defined in .. Appendix M.2 Removing Blade Disk Array Configuration (Sidecar) ... to clean the Disk Array

Procedure 4: Install NOAMP / SOAM / MP Servers

Step	Procedure	Result									
6. <input type="checkbox"/>	<i>Install Operating System (TVOE)</i>	Follow steps defined in ... Appendix F.2 Installing Operating Systems with PM&C (BL460 Hardware) ... to install TVOE software.									
7.	<i>Verify the type of server hardware</i>	# hardwareInfo grep Hardware Hardware ID: ProLiantBL460Gen8, ProLiantBL460Gen8+ or ProLiantBL460Gen9									
8. <input type="checkbox"/>	<i>Configure TVOE network</i>	Follow steps defined in ... Appendix L.1 Configure TVOE Network for Normal or Low Capacity C-Class Configurations ... to configure TVOE network.									
9. <input type="checkbox"/>	<i>Configure Disk Array on the TVOE Host</i>	Follow steps defined in ... Appendix E.3 Configuring Blade Disk Array (NO Network Element Servers with Sidecar) ... to configure the disk array.									
10. <input type="checkbox"/>	<i>Configure a logical storage pool from TVOE Host</i>	<p>a. Create a file names as “configStorageBlade” through vi command.</p> <pre>[root@BL908050101-tvoe ~]# vi /home/admusr/configStorageBlade</pre> <p>Add the line below in the file</p> <pre>vg --name="stripePool_vg" --members="sdb" --virtstoragepool</pre> <p>b. Create storage pool</p> <pre>[root@BL908050101-tvoe ~]# /usr/TKLC/plat/sbin/storageMgr configStorageBlade</pre> <p>c. Verify pool is listed below</p> <pre>[root@BL908050101-tvoe ~]# virsh pool-list</pre> <table border="1"> <thead> <tr> <th>Name</th> <th>State</th> <th>Autostart</th> </tr> </thead> <tbody> <tr> <td>stripePool_vg</td> <td>active</td> <td>yes</td> </tr> <tr> <td>vgguests</td> <td>active</td> <td>yes</td> </tr> </tbody> </table>	Name	State	Autostart	stripePool_vg	active	yes	vgguests	active	yes
Name	State	Autostart									
stripePool_vg	active	yes									
vgguests	active	yes									
THIS PROCEDURE HAS BEEN COMPLETED											

5.2 Create, IPM and Install Application on all Virtual Machines


This procedure will create Virtual Machines (VMs) for NOAMP, SOAM and MP servers, install the TPD Operating System on each VM and install the UDR application on each VM. It details the create/IPM/install for a single VM and should be repeated for every VM. A Low capacity C-Class blade is configured with 1 NOAMP, 1 SOAM and 1 MP.

Requirements:

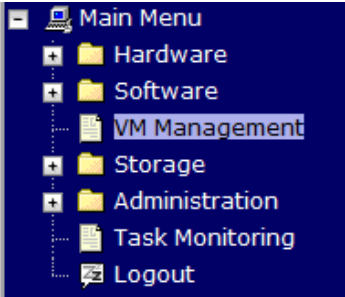
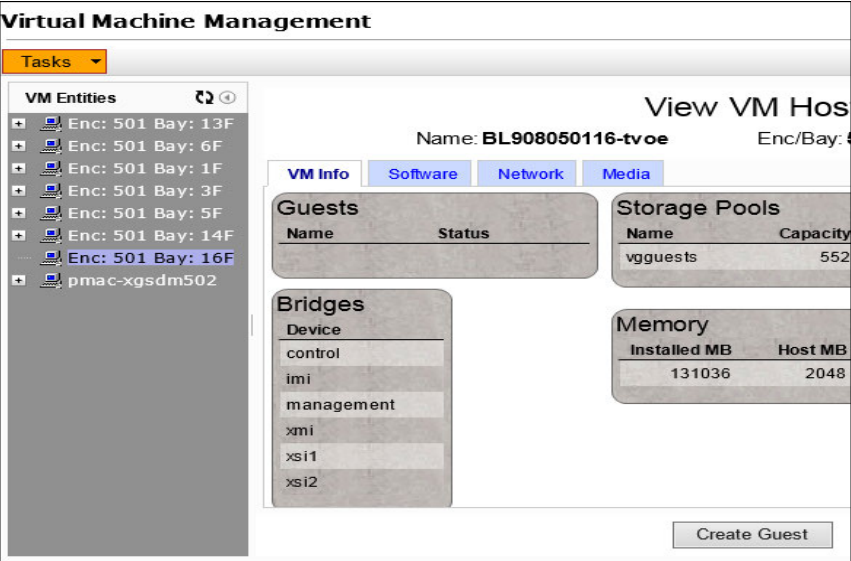
- **Procedure 4: Install NOAMP / SOAM / MP Host Servers** has been completed.

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

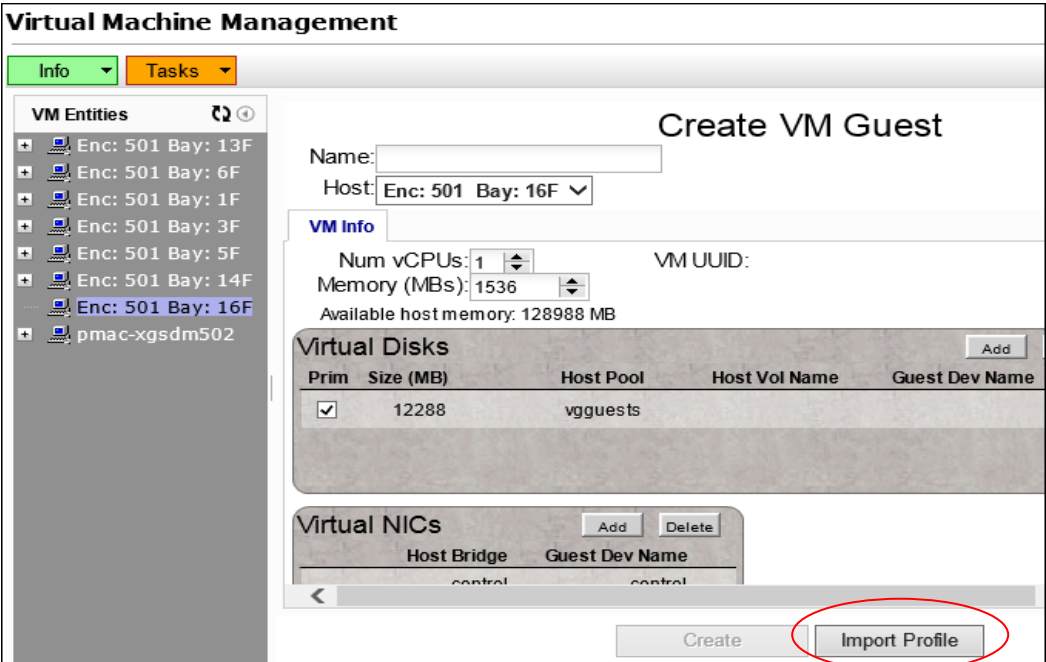
Procedure 5: Create, IPM and Install Application on all Virtual Machines

Step	Procedure	Result
Blade deployments (ex: ProLiantBL460cGen8) will use only one IP to access the PM&C that manages the entire enclosure for this UDR site.		
1. <input type="checkbox"/>	Add image to management server.	Follow Appendix J Adding Software Images to PM&C Server to add TPD and UDR software images to this PM&C repository. <i>Note: Images may already exist if this is a blade deployment, with SOAM/MP blades controlled by the same PM&C as the NOAMP.</i>
2. <input type="checkbox"/>	PM&C GUI: Login to PM&C GUI	Open web browser and enter: <a href="http://<pmac_management_network_ip>">http://<pmac_management_network_ip> Login as pmacadmin user. 

Procedure 5: Create, IPM and Install Application on all Virtual Machines

Step	Procedure	Result
<p>3.</p> <p><input type="checkbox"/></p>	<p>PM&C GUI:</p> <p>Navigate to VM Management menu</p>	 <p>The screenshot shows a dark blue menu with the following items: Main Menu, Hardware, Software, VM Management (highlighted with a white border), Storage, Administration, Task Monitoring, and Logout.</p>
<p>4.</p> <p><input type="checkbox"/></p>	<p>PM&C GUI:</p> <p>Select the desired server and create the VM Guest</p>	<p>Select the TVOE blade 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>The screenshot shows the 'Virtual Machine Management' interface. On the left, there is a 'VM Entities' list with several entries, including 'Enc: 501 Bay: 16F' which is selected. The main area displays configuration for 'View VM Host' with name 'BL908050116-tvoe'. It includes sections for 'Guests', 'Storage Pools', and 'Bridges'. A 'Create Guest' button is visible at the bottom right.</p> <p>Click Create Guest.</p> <ul style="list-style-type: none"> • Check-off the associated Check Box as addition is completed for the VM. <p><input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B</p> <p><input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2</p>

Procedure 5: Create, IPM and Install Application on all Virtual Machines

Step	Procedure	Result
<p>5.</p> <p><input type="checkbox"/></p>	<p>PM&C GUI:</p> <p>Click on the Import Profile dialogue button</p>	<p>A “Create VM Guest” window is displayed that is similar to the below:</p>  <p>Click “Import Profile” button.</p> <ul style="list-style-type: none"> • Check-off the associated Check Box as addition is completed for the VM. <p><input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B</p> <p><input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2</p>

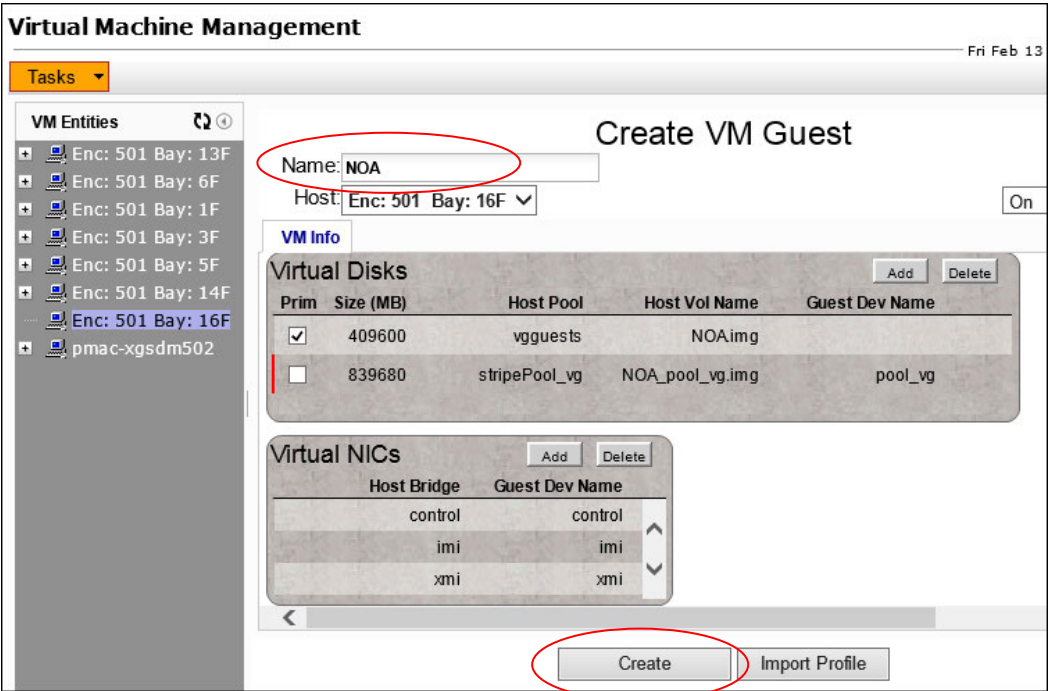
Procedure 5: Create, IPM and Install Application on all Virtual Machines

Step	Procedure	Result																									
<p>6.</p> <p><input type="checkbox"/></p>	<p>PM&C GUI:</p> <p>Select the desired ISO/Profile value</p>	<p>Select the desired ISO/Profile.</p> <p>Gen 8 Low Capacity Configuration:</p> <ul style="list-style-type: none"> - If creating a VM for a NOAMP server, use the “UDR_NO_LowCapacity” profile. - If creating a VM for a SOAM server, use the “UDR_SO_LowCapacity” profile. - If creating a VM for an MP, use the “UDR_MP_LowCapacity” profile. <p>Gen 9 Low Capacity Configuration:</p> <ul style="list-style-type: none"> - If creating a VM for a NOAMP server, use the “UDR_25K_NO_LowCapacity” profile. - If creating a VM for a SOAM server, use the “UDR_SO_LowCapacity” profile. - If creating a VM for an MP, use the “UDR_MP_LowCapacity” profile. <div style="border: 1px solid #ccc; padding: 5px; margin: 10px 0;"> <p>Import Profile ✕</p> <p>ISO/Profile: UDR-12.1.0.0.0_13.4.0-x86_64 => UDR_25K_NO_LowCapacity ▾</p> <p>Num CPUs: 28</p> <p>Memory (MBs): 131072</p> <p>Virtual Disks:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 5%;">Prim</th> <th style="width: 20%;">Size (MB)</th> <th style="width: 25%;">Pool</th> <th style="width: 15%;">TPD Dev</th> <th style="width: 35%;"></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">✓</td> <td style="text-align: center;">409600</td> <td style="text-align: center;">vgguests</td> <td></td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">839680</td> <td style="text-align: center;">stripePool_vg</td> <td style="text-align: center;">pool_vg</td> <td></td> </tr> </tbody> </table> <p>NICs:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">Bridge</th> <th style="width: 50%;">TPD Dev</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">control</td> <td style="text-align: center;">control</td> </tr> <tr> <td style="text-align: center;">imi</td> <td style="text-align: center;">imi</td> </tr> <tr> <td style="text-align: center;">xmi</td> <td style="text-align: center;">xmi</td> </tr> <tr> <td style="text-align: center;">xsi1</td> <td style="text-align: center;">xsi1</td> </tr> </tbody> </table> <p style="text-align: center; margin-top: 10px;"><input type="button" value="Select Profile"/></p> </div> <p>Click “Select Profile” button.</p> <ul style="list-style-type: none"> • Check-off the associated Check Box as addition is completed for the VM. <p><input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B</p> <p><input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2</p>	Prim	Size (MB)	Pool	TPD Dev		✓	409600	vgguests				839680	stripePool_vg	pool_vg		Bridge	TPD Dev	control	control	imi	imi	xmi	xmi	xsi1	xsi1
Prim	Size (MB)	Pool	TPD Dev																								
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imi	imi																										
xmi	xmi																										
xsi1	xsi1																										

Procedure 5: Create, IPM and Install Application on all Virtual Machines

Step	Procedure	Result								
<p>7.</p> <p><input type="checkbox"/></p>	<p>PM&C GUI:</p> <p><i>Customize the NICs list to suit your deployment</i></p>	<p>The default Virtual NICs are configured for a deployment with one XSI network (for NOAMPs) or two XSI networks (for MPs).</p> <ul style="list-style-type: none"> - If your deployment has only a single XSI network, select the row for “xsi2” (if it’s present) by clicking on it then click the Delete button: <div style="border: 1px solid gray; padding: 5px; margin: 10px 0;"> <p>Virtual NICs Add Delete</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;">Host Bridge</th> <th style="width: 70%;">Guest Dev Name</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">xmi</td> <td style="text-align: center;">xmi</td> </tr> <tr> <td style="text-align: center;">xsi1</td> <td style="text-align: center;">xsi1</td> </tr> <tr> <td style="text-align: center;">xsi2</td> <td style="text-align: center;">xsi2</td> </tr> </tbody> </table> </div> <ul style="list-style-type: none"> - If your deployment has more than two XSI networks, click the Add button, select them from the Host Bridge drop box and type in the same name into Guest Dev Name. - Check-off the associated Check Box as addition is completed for the VM. <p><input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B</p> <p><input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2</p>	Host Bridge	Guest Dev Name	xmi	xmi	xsi1	xsi1	xsi2	xsi2
Host Bridge	Guest Dev Name									
xmi	xmi									
xsi1	xsi1									
xsi2	xsi2									

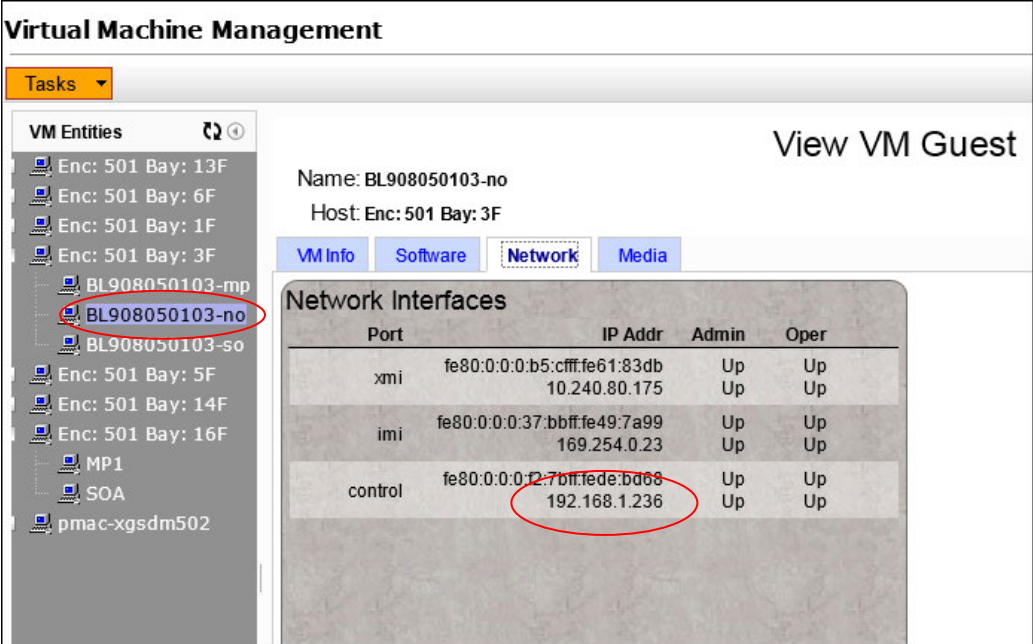
Procedure 5: Create, IPM and Install Application on all Virtual Machines

Step	Procedure	Result
<p>8.</p> <p><input type="checkbox"/></p>	<p>PM&C GUI:</p> <p>Override the VM Guest Name to make it unique for the site</p>	<p>A “Create VM Guest” window is displayed that is similar to the below.</p>  <p>Override the Name field to something like: NOA, NOB, SOA, SOB, MP1 or MP2, etc. (Don’t use hyphens in the name). You could also include a location within the Name value such as SOMRSVNCA. (This will not become the ultimate hostname. It is just an internal tag for the VM host manager.)</p> <p>NOTE: For 64GB Blades only, please adjust the Disk Partition sizes as following (see “Virtual Disks” section in the screen shot above and update the “vgguests row” for each server VM):</p> <p>NOAMP = 309600 MB SOAM = 102400 MB MP = 102400 MB</p> <p>Click Create button</p> <ul style="list-style-type: none"> Record the Site VM Guest Name of each VM that is added in the space provided below: Check-off the associated Check Box as addition is completed for the VM. <p><input type="checkbox"/> NOAMP-A _____ <input type="checkbox"/> NOAMP-B _____</p> <p><input type="checkbox"/> SOAM-A: _____ <input type="checkbox"/> SOAM-B: _____</p> <p><input type="checkbox"/> MP-1: _____ <input type="checkbox"/> MP-2: _____</p>

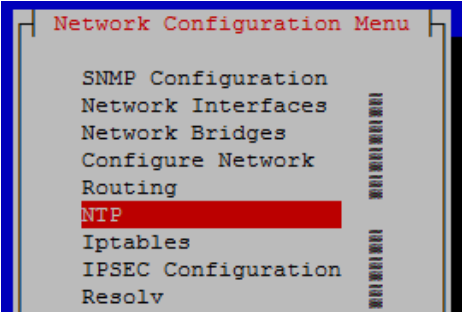
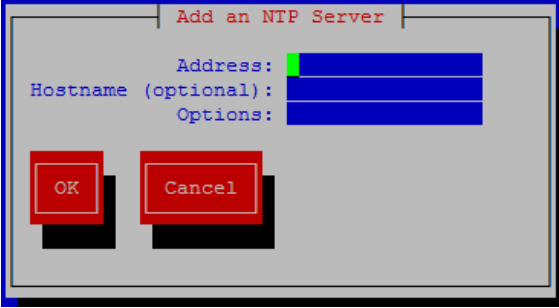
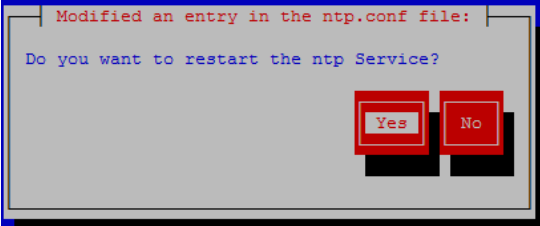
Procedure 5: Create, IPM and Install Application on all Virtual Machines

Step	Procedure	Result																					
<p>9.</p> <p><input type="checkbox"/></p>	<p>PM&C GUI:</p> <p>Select...</p> <p>Main Menu</p> <p>→Task Monitoring</p> <p>...as shown on the right.</p>	<p>Background Task Monitoring</p> <p>Filter ▾</p> <table border="1"> <thead> <tr> <th>ID</th> <th>Task</th> <th>Target</th> <th>Status</th> <th>Running Time</th> <th>Start Time</th> <th>Progress</th> </tr> </thead> <tbody> <tr> <td>1190</td> <td>VirtAction: Create</td> <td>Enc:501 Bay:16F Guest: MP1</td> <td>Guest creation completed (MP1)</td> <td>0:00:06</td> <td>2015-02-16 10:55:59</td> <td>100%</td> </tr> <tr> <td>1187</td> <td>VirtAction: Create</td> <td>Enc:501 Bay:16F Guest: SOA</td> <td>Guest creation completed (SOA)</td> <td>0:00:06</td> <td>2015-02-16 10:37:23</td> <td>100%</td> </tr> </tbody> </table> <ul style="list-style-type: none"> Check-off the associated Check Box as addition is completed for the VM. <p><input type="checkbox"/>NOAMP-A <input type="checkbox"/>NOAMP-B <input type="checkbox"/>SOAM-A <input type="checkbox"/> SOAM-B</p> <p><input type="checkbox"/>MP-1 <input type="checkbox"/> MP-2</p>	ID	Task	Target	Status	Running Time	Start Time	Progress	1190	VirtAction: Create	Enc:501 Bay:16F Guest: MP1	Guest creation completed (MP1)	0:00:06	2015-02-16 10:55:59	100%	1187	VirtAction: Create	Enc:501 Bay:16F Guest: SOA	Guest creation completed (SOA)	0:00:06	2015-02-16 10:37:23	100%
ID	Task	Target	Status	Running Time	Start Time	Progress																	
1190	VirtAction: Create	Enc:501 Bay:16F Guest: MP1	Guest creation completed (MP1)	0:00:06	2015-02-16 10:55:59	100%																	
1187	VirtAction: Create	Enc:501 Bay:16F Guest: SOA	Guest creation completed (SOA)	0:00:06	2015-02-16 10:37:23	100%																	
<p>10.</p> <p><input type="checkbox"/></p>	<p>PM&C GUI:</p> <p>Verify that Create VM task successfully completes.</p> <p>The user should see a screen similar to the one on the right with Progress value of 100%.</p>	<p>Verify that the Virtual Machine successfully created.</p> <table border="1"> <thead> <tr> <th>ID</th> <th>Task</th> <th>Target</th> <th>Status</th> <th>Start Time</th> <th>Progress</th> </tr> </thead> <tbody> <tr> <td>13</td> <td>VirtAction: Create</td> <td>RMS: pc9040833-no-a Guest: NO-A</td> <td>Guest creation completed (NO-A)</td> <td>2012-07-06 19:05:02</td> <td>100%</td> </tr> </tbody> </table> <ul style="list-style-type: none"> Check-off the associated Check Box as addition is completed for the VM. <p><input type="checkbox"/>NOAMP-A <input type="checkbox"/>NOAMP-B <input type="checkbox"/>SOAM-A <input type="checkbox"/> SOAM-B</p> <p><input type="checkbox"/>MP-1 <input type="checkbox"/> MP-2</p>	ID	Task	Target	Status	Start Time	Progress	13	VirtAction: Create	RMS: pc9040833-no-a Guest: NO-A	Guest creation completed (NO-A)	2012-07-06 19:05:02	100%									
ID	Task	Target	Status	Start Time	Progress																		
13	VirtAction: Create	RMS: pc9040833-no-a Guest: NO-A	Guest creation completed (NO-A)	2012-07-06 19:05:02	100%																		
<p>Note: The steps above may be completed for each VM Guest that this PM&C administers before proceeding on to the next step. This way you may install and upgrade multiple VM Guests in parallel. A low capacity C-Class system has two blades at a site.</p>																							
<p>11.</p> <p><input type="checkbox"/></p>	<p><i>Install Operating System (TPD)</i></p>	<p>Follow steps defined in ...</p> <p>Appendix F.2 Installing Operating Systems with PM&C (BL460 Hardware)</p> <p>... to install TPD software on VM Guests.</p> <ul style="list-style-type: none"> Check-off the associated Check Box as addition is completed for the VM. <p><input type="checkbox"/>NOAMP-A <input type="checkbox"/>NOAMP-B <input type="checkbox"/>SOAM-A <input type="checkbox"/> SOAM-B</p> <p><input type="checkbox"/>MP-1 <input type="checkbox"/> MP-2</p>																					

Procedure 5: Create, IPM and Install Application on all Virtual Machines

Step	Procedure	Result
<p>12.</p> <p><input type="checkbox"/></p>	<p>PM&C GUI:</p> <p>Get and record control IP address of VM Guest</p>	<p>Navigate to the VM Management menu</p> <p>Select the VM Guest Name from the VM Entities list, and click “Network”tab</p>  <p>Derermine control IP address of VM Guest and record it.</p> <ul style="list-style-type: none"> Record the Site control IP Address of each VM that is added in the space provided below: Check-off the associated Check Box as addition is completed for the VM. <p><input type="checkbox"/>NOAMP-A _____ <input type="checkbox"/>NOAMP-B _____</p> <p><input type="checkbox"/>SOAM-A: _____ <input type="checkbox"/> SOAM-B: _____</p> <p><input type="checkbox"/>MP-1: _____ <input type="checkbox"/> MP-2: _____</p>
<p>13.</p> <p><input type="checkbox"/></p>	<p>For NOAMPs only:</p> <p>Prepare NOAMP for installation of UDR application software</p> <p>Connect to the NOAMP server Control IPaddress</p>	<p>Manually configure XMI network on the NOAMPs only; the below steps must be executed before installing UDR:</p> <pre>[root@hostname1260476221 ~] #netAdm set --device=xmi --onboot=yes --netmask=<XMI_NETMASK> --address=<XMI_IP_Address_for_NOAMP_A></pre> <p>Interface xmi updated</p> <pre>[root@hostname1260476221 ~]# netAdm add --device=xmi --route=default --gateway=<XMI_IP_Address_for_default_gateway></pre> <p>Route to xmi added</p> <p>Restart the network by running the following:</p> <pre>root@hostname1260476221 ~] # service network restart</pre>

Procedure 5: Create, IPM and Install Application on all Virtual Machines

Step	Procedure	Result
<p>14.</p> <p><input type="checkbox"/></p>	<p>For NOAMP-A only:</p> <p><i>Enter Platform configuration menu</i></p>	<p>Enter platform configuration by running the following:</p> <pre>#su - platcfg</pre>
<p>15.</p> <p><input type="checkbox"/></p>	<p>For NOAMP-A only:</p> <p>Configure NTP for NOAMP-A</p>	<ol style="list-style-type: none"> Navigate to Network Configuration > NTP.  <ol style="list-style-type: none"> Select Edit, then “Add a New NTP Server.” Enter the IP Address of the TVOE Host.  <ol style="list-style-type: none"> Select OK, then “Exit.” Select Yes to restart ntp Service.  <ol style="list-style-type: none"> Delete any default NTP servers (example in Appendix L.6). Exit platcfg.

Procedure 5: Create, IPM and Install Application on all Virtual Machines

Step	Procedure	Result
<p>16.</p> <div style="border: 1px solid black; width: 20px; height: 20px; margin-bottom: 5px;"></div>	<p><i>Prepare NOAMP for installation of UDR application software</i></p> <p><i>Connect to the NOAMP server Control IPaddress</i></p>	<p>Note: Create a Logical volume from NOAMP VM Guest before installing UDR Application on the NOAMP VM Guest.</p> <p>Create a logical volume from NOAMP VM Guest:</p> <pre>root@hostname1260476221 ~] # vgcreate stripe_vg /dev/pool_vg Volume group "stripe_vg" successfully created</pre> <p>Create a logical volume rundb:</p> <pre>root@hostname1260476221 ~] # lvcreate -L 385G --alloc anywhere --name rundb stripe_vg Logical volume "rundb" created</pre> <p>Make filesystem on rundb:</p> <pre>root@hostname1260476221 ~] # mkfs -t ext4 /dev/stripe_vg/rundb mke2fs 1.41.12 (17-May-2010) Filesystem label= OS type: Linux Block size=4096 (log=2) Fragment size=4096 (log=2) Stride=64 blocks, Stripe width=192 blocks 45883392 inodes, 183502848 blocks 9175142 blocks (5.00%) reserved for the super user First data block=0 Maximum filesystem blocks=4294967296 5601 block groups 32768 blocks per group, 32768 fragments per group 8192 inodes per group Superblock backups stored on blocks: 32768, 98304, 163840, 229376, 294912, 819200, 884736, 1605632, 2654208, 4096000, 7962624, 11239424, 20480000, 23887872, 71663616, 78675968</pre> <p>Allocating group tables: done Writing inode tables: done Creating journal (32768 blocks): done Writing superblocks and filesystem accounting information: done</p>

Procedure 5: Create, IPM and Install Application on all Virtual Machines

Step	Procedure	Result
<p>17.</p> <input type="checkbox"/>	<p>Install UDR application software.</p>	<p>Follow steps defined in ...</p> <p>Appendix G.2 Installing UDR Application with PM&C</p> <p>... to install UDR software.</p> <ul style="list-style-type: none"> • Check-off the associated Check Box as addition is completed for the VM. <p><input type="checkbox"/>NOAMP-A <input type="checkbox"/>NOAMP-B <input type="checkbox"/>SOAM-A <input type="checkbox"/> SOAM-B</p> <p><input type="checkbox"/>MP-1 <input type="checkbox"/> MP-2</p>
<p>Repeat Steps 4 - 17 for each Virtual Machine to install its operating system and application software.</p>		
<p>18.</p> <input type="checkbox"/>	<p>Perform upgrade acceptance.</p>	<p>Follow steps defined in ...</p> <p>Appendix HAccept Application Installation on PM&C Managed Servers</p> <p>... to accept upgrade.</p>
<p>19.</p> <input type="checkbox"/>	<p>Access the NOAMPserver's console.</p>	<p>Connect to the server's console using one of the access methods described in <i>Section 2.1.2</i>.</p>
<p>20.</p> <input type="checkbox"/>	<p>Log into the server console as the "root" user.</p>	<p>CentOS release 5.6 (Final) Kernel 2.6.18-238.19.1.el5prere15.0.0_72.22.0 on an x86_64</p> <p>hostname1260476221 login: root</p> <p>Password: <root_password></p>
<p>21.</p> <input type="checkbox"/>	<p>NOAMP:</p> <p>Transfer file to TVOE Host</p>	<pre># scp /var/TKLC/db/filemgmt/udrInitConfig.sh \ admusr@<tvoe_host_name>:/var/tmp</pre> <p>admusr@<tvoe_host_name> 'spassword: <admusr_password></p> <ul style="list-style-type: none"> • Check-off the associated Check Box as addition is completed for the TVOE host. <p><input type="checkbox"/>TVOE Host (NOAMP-A / SOAM-A / MP-1)</p> <p><input type="checkbox"/>TVOE Host (NOAMP-B / SOAM-B /MP-2)</p>

Procedure 5: Create, IPM and Install Application on all Virtual Machines

Step	Procedure	Result
<p>22.</p> <input type="checkbox"/>	<p><i>Login to TVOE Host:</i></p> <p>1)SSH to server.</p> <p>2) Log into the server as the "admusr" user.</p>	<pre># ssh admusr@<tvoe_host_name></pre> <pre>admusr@<tvoe_host_name> / spassword: <admusr_password></pre> <ul style="list-style-type: none"> • Check-off the associated Check Box as addition is completed for the TVOE host. <p><input type="checkbox"/>TVOE Host (NOAMP-A / SOAM-A / MP-1)</p> <p><input type="checkbox"/>TVOE Host (NOAMP-B / SOAM-B /MP-2)</p>
<p>23.</p> <input type="checkbox"/>	<p>TVOE host:</p> <p><i>Switch to root user.</i></p>	<pre>[admusr@hostname1326744539 ~]\$ su -</pre> <pre>password: <root_password></pre> <ul style="list-style-type: none"> • Check-off the associated Check Box as addition is completed for the TVOE host. <p><input type="checkbox"/>TVOE Host (NOAMP-A / SOAM-A / MP-1)</p> <p><input type="checkbox"/>TVOE Host (NOAMP-B / SOAM-B /MP-2)</p>
<p>24.</p> <input type="checkbox"/>	<p>TVOE host:</p> <p><i>Change directory.</i></p>	<pre># cd /var/tmp</pre> <ul style="list-style-type: none"> • Check-off the associated Check Box as addition is completed for the TVOE host. <p><input type="checkbox"/>TVOE Host (NOAMP-A / SOAM-A / MP-1)</p> <p><input type="checkbox"/>TVOE Host (NOAMP-B / SOAM-B /MP-2)</p>
<p>25.</p> <input type="checkbox"/>	<p>TVOE host:</p> <p><i>Update script permissions.</i></p>	<pre># chmod 555 udrInitConfig.sh</pre> <ul style="list-style-type: none"> • Check-off the associated Check Box as addition is completed for the TVOE host. <p><input type="checkbox"/>TVOE Host (NOAMP-A / SOAM-A / MP-1)</p> <p><input type="checkbox"/>TVOE Host (NOAMP-B / SOAM-B /MP-2)</p>

Procedure 5: Create, IPM and Install Application on all Virtual Machines

Step	Procedure	Result
<p>26.</p> <input type="checkbox"/>	<p>TVOE host:</p> <p><i>Run configuration script as root.</i></p>	<p># <code>./udrInitConfig.sh</code></p> <p>Verify no failures are reported. A trace to display the settings for all VM Guests on this server should be shown in output.</p> <p>In case of failures, save the log file /var/TKLC/log/udrVMCfg/udrInitConfig.log.</p> <ul style="list-style-type: none"> • Check-off the associated Check Box as addition is completed for the TVOE host. <p><input type="checkbox"/> TVOE Host (NOAMP-A / SOAM-A / MP-1)</p> <p><input type="checkbox"/> TVOE Host (NOAMP-B / SOAM-B /MP-2)</p>
<p>27.</p> <input type="checkbox"/>	<p>TVOE host:</p> <p>Reboot the server.</p>	<p># <code>init 6</code></p> <ul style="list-style-type: none"> • Check-off the associated Check Box as addition is completed for the TVOE host. <p><input type="checkbox"/> TVOE Host (NOAMP-A / SOAM-A / MP-1)</p> <p><input type="checkbox"/> TVOE Host (NOAMP-B / SOAM-B /MP-2)</p>
<p>THIS PROCEDURE HAS BEEN COMPLETED</p>		

6. LOW CAPACITY RMS AND LOW CAPACITY RMS WITH LOW SPEED DRIVES CONFIGURATION SOFTWARE INSTALLATION PROCEDURE

The user should confirm that the server has been verified through the Hardware Verification Plan [3] before beginning this procedure.

The following HP RMS configurations will be supported and can utilize the procedures in this section:

- **1-RMS sever per site system**
This includes all UDR software running on a TVOE virtualization environment. This configuration will be supported for lab testing systems only.
- **2-RMS server per site system**
This includes all UDR software running on a TVOE virtualization environment in each server, resulting in a fully-virtualized, fully-redundant HA configuration. This can be deployed either as a single site or as a geo-redundant deployment, with 2 RMS servers at each site.

6.1 Install NOAMP /SOAM / MP Servers

This procedure will install and configure the operating system on hardware that will host NOAMP, SOAM and MP VM Guests. ProLiantDL380Gen8, ProLiantDL380Gen8+ or ProLiantDL380Gen9 are supported for this procedure.

Needed material:

- TVOE Media

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

Procedure 6: Install NOAMP/ SOAM / MP Servers

Step	Procedure	Result
1. <input type="checkbox"/>	<i>Access the HP server's console.</i>	Connect to the HP server's console using one of the access methods described in <i>Section 2.1.2</i> .
2. <input type="checkbox"/>	<i>Verify the type of server hardware</i>	# <code>hardwareInfo grep Hardware</code> Hardware ID: ProLiantDL380Gen8, ProLiantDL380Gen8+ or ProLiantDL380Gen9
3. <input type="checkbox"/>	<i>Update firmware</i>	Confirm that the firmware is upgraded to latest version. For more information, please refer to Platform 7.0 docset [5].
4. <input type="checkbox"/>	<i>Update BIOS settings</i>	Follow steps defined in Appendix D.1 BIOS Settings to update BIOS settings.

Procedure 6: Install NOAMP/ SOAM / MP Servers

Step	Procedure	Result
<p>5. <input type="checkbox"/></p>	<p><i>Clean the Disk Array</i></p>	<p>Note: Execute only if previous install on the RMS server.</p> <p>Follow steps defined in ...</p> <p>Appendix M.1: Removing RMS Disk Array Configuration for HP</p> <p>... to clean the Disk Array</p>
<p>6. <input type="checkbox"/></p>	<p><i>Install Operating System (TVOE)</i></p>	<p>Follow steps defined in ...</p> <p>Appendix F.1 Installing Operating Systems with ILO(<i>DL380 hardware</i>)</p> <p>... to install TVOE software.</p>
<p>7. <input type="checkbox"/></p>	<p><i>Configure TVOE network</i></p>	<p>Follow steps defined in ...</p> <p>Appendix L.2 Configure TVOE Network for Topology 7</p> <p>... to configure TVOE network.</p>
<p>8. <input type="checkbox"/></p>	<p><i>Configure Disk Array</i></p>	<p>Follow steps defined in ...</p> <p>RMS Disk Array: Appendix E.1 Configuring Disk Array (NO Network Element Servers)</p> <p>RMS Disk Array with Low Speed Drives: Appendix E.2 Configuring RMS Disk Array with Low Speed Drives (NOAMP NE Servers)</p> <p>... to configure the disk array.</p>

Procedure 6: Install NOAMP/ SOAM / MP Servers

Step	Procedure	Result									
9. <input type="checkbox"/>	Configure a logical storage pool	<p>a. Create the file name “configStorageBlade” through vi command.</p> <pre>[root@pc9000714-tvoe ~]# vi configStorageBlade</pre> <p>Add the line below in the file</p> <p>For Low Capacity RMS Configuration:</p> <pre>vg --name="stripePool_vg" --members="sdb,sdc,sdd" --virtstoragepool</pre> <p>For Low Capacity RMS with Low Speed Disks Configuration:</p> <pre>vg --name="stripePool_vg" --members="sdb,sdc" --virtstoragepool</pre> <p>b. Create storage pool</p> <pre>[root@pc9000714-tvoe ~]# /usr/TKLC/plat/sbin/storageMgr configStorageBlade</pre> <p>c. Verify pool is listed below</p> <pre>[root@pc9000714-tvoe ~]# virsh pool-list</pre> <table border="1"> <thead> <tr> <th>Name</th> <th>State</th> <th>Autostart</th> </tr> </thead> <tbody> <tr> <td>stripePool_vg</td> <td>active</td> <td>yes</td> </tr> <tr> <td>vgguests</td> <td>active</td> <td>yes</td> </tr> </tbody> </table>	Name	State	Autostart	stripePool_vg	active	yes	vgguests	active	yes
Name	State	Autostart									
stripePool_vg	active	yes									
vgguests	active	yes									
10. <input type="checkbox"/>	Deploy PM&C	Follow steps defined in Appendix I.1 Deploying PM&C on TVOE Server.									
11. <input type="checkbox"/>	Configure PM&C application	Follow steps defined in Appendix I.2 Configure PM&C Application.									
12. <input type="checkbox"/>	Configure Cabinet	Follow steps defined in Appendix I.3 Add Cabinet to PM&C System Inventory.									
13. <input type="checkbox"/>	Configure RMS	Follow steps defined in Appendix I.4 Add Rack Mount Server to PM&C System Inventory.									
THIS PROCEDURE HAS BEEN COMPLETED											

6.2 Create, IPM and Install Application on all Virtual Machines

Oracle Communications User Data Repository Installation and Configuration Guide

This procedure will create Virtual Machines (VMs) for NOAMP, SOAM and MP servers, install the TPD Operating System on each VM, and install the UDR application on each VM. It details the create/IPM/install for a single VM and should be repeated for every VM.

Requirements:

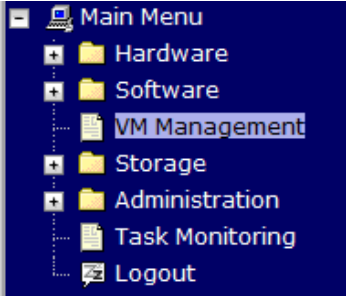
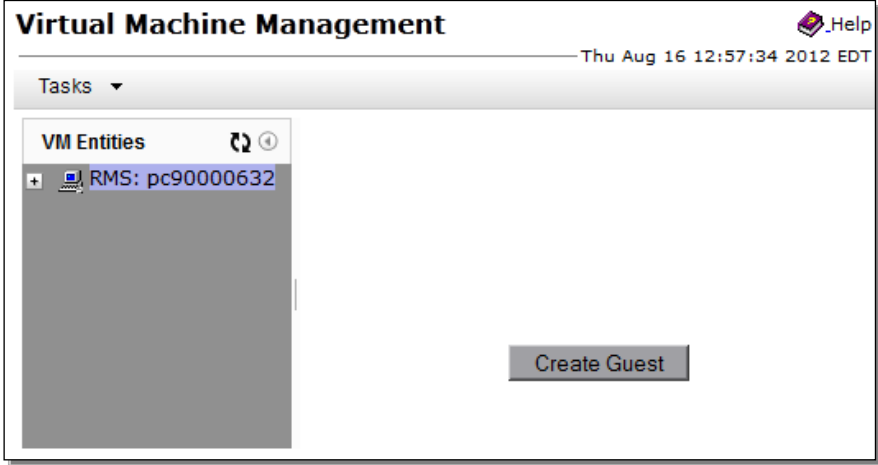
- **Procedure 6:** Install NOAMP /SOAM / MP Servers has been completed.

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

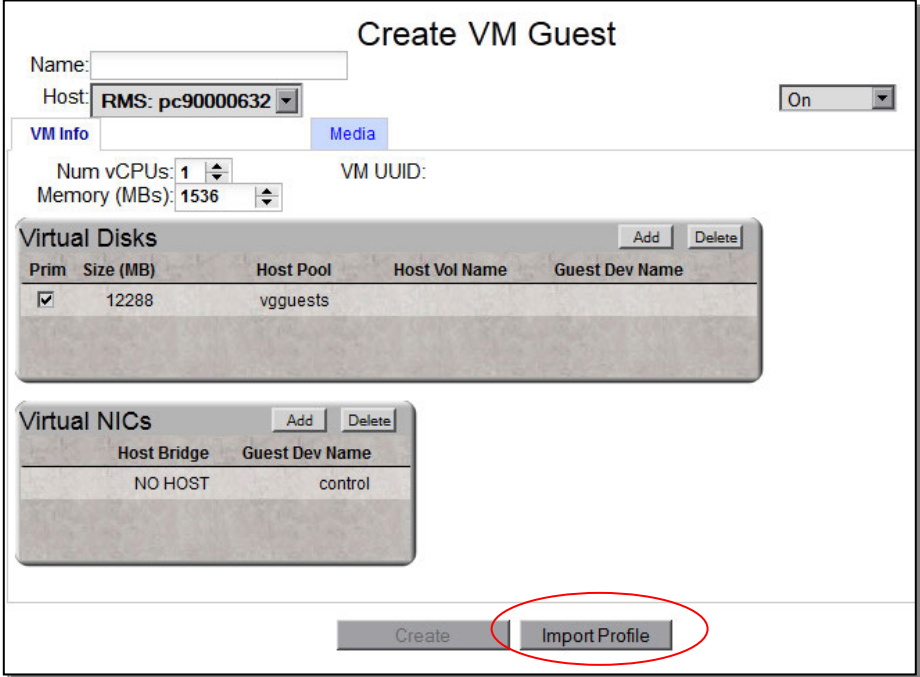
Procedure 7: Create, IPM and Install Application on all Virtual Machines

Step	Procedure	Result
Rack Mount Server deployments (ex: ProLiantDL380pGen8) will use two IP addresses per SO Network Element to access the PM&C deployed on each member RMS.		
1. <input type="checkbox"/>	Add image to management server.	Follow Appendix J Adding Software Images to PM&C Server to add TPD and UDR software images to this PM&C repository.
2. <input type="checkbox"/>	PM&C GUI: Login to PM&C GUI	<p>Open web browser and enter: <a href="http://<pmac_management_network_ip>">http://<pmac_management_network_ip> Login as pmacadmin user.</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>Oracle and Java are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.</p> <p>Copyright © 2010, 2015, Oracle and/or its affiliates. All rights reserved.</p>

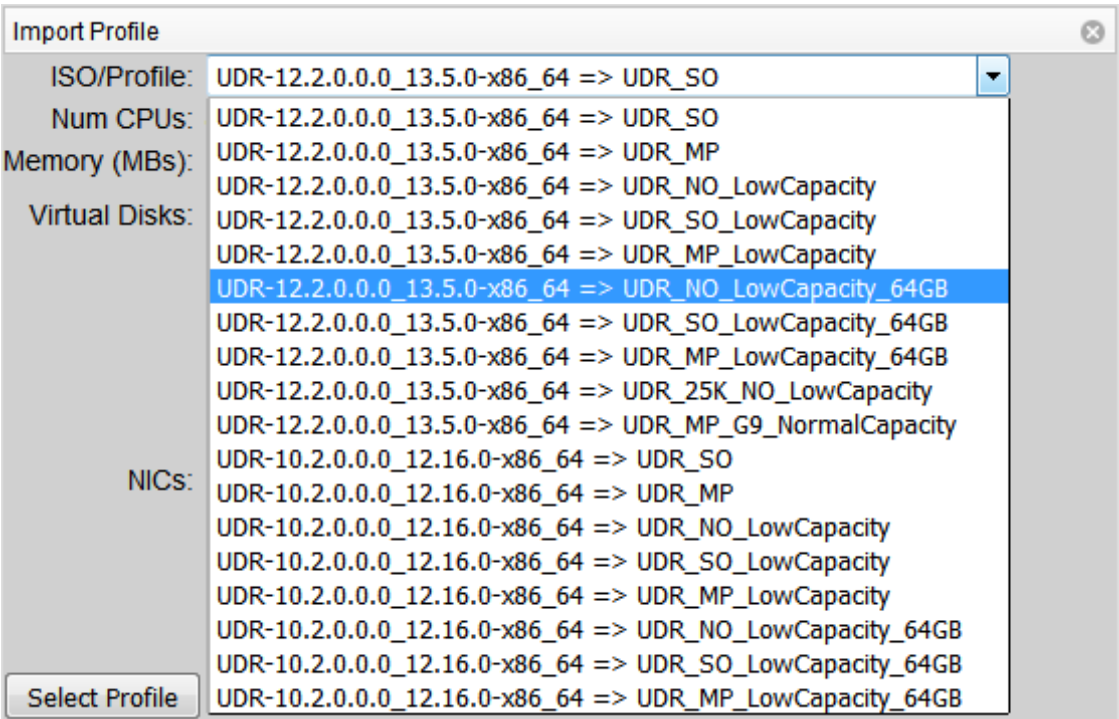
Procedure 7: Create, IPM and Install Application on all Virtual Machines

Step	Procedure	Result
<p>3.</p> <input type="checkbox"/>	<p>PM&C GUI:</p> <p>Navigate to VM Management menu</p>	<p>Navigate to the VM Management menu</p>  <p>The screenshot shows a dark blue sidebar menu with the following items: Main Menu, Hardware, Software, VM Management (highlighted), Storage, Administration, Task Monitoring, and Logout.</p>
<p>4.</p> <input type="checkbox"/>	<p>PM&C GUI:</p> <p>Select the desired Server and create the VM Guest</p>	<p>Select the 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>The screenshot shows the 'Virtual Machine Management' interface. It includes a 'Tasks' dropdown, a 'VM Entities' list with 'RMS: pc90000632' selected, and a 'Create Guest' button.</p> <p>Click Create Guest.</p> <ul style="list-style-type: none"> • Check-off the associated Check Box as addition is completed for the VM. <p><input type="checkbox"/>NOAMP-A <input type="checkbox"/>NOAMP-B <input type="checkbox"/>SOAM-A <input type="checkbox"/> SOAM-B</p> <p><input type="checkbox"/>MP-1 <input type="checkbox"/> MP-2</p>

Procedure 7: Create, IPM and Install Application on all Virtual Machines

Step	Procedure	Result
<p>5.</p> <p><input type="checkbox"/></p>	<p>PM&C GUI:</p> <p><i>Click on the Import Profile dialogue button</i></p>	<p>A “Create VM Guest” window is displayed that is similar to the below:</p>  <p>Click “Import Profile” button.</p> <ul style="list-style-type: none"> • Check-off the associated Check Box as addition is completed for the VM. <p><input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B</p> <p><input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2</p>

Procedure 7: Create, IPM and Install Application on all Virtual Machines

Step	Procedure	Result
<p>6.</p> <p><input type="checkbox"/></p>	<p>PM&C GUI:</p> <p>Select the desired <i>ISO/Profile</i> value</p>	<p>Select the desired ISO/Profile.</p> <p>Low Capacity RMS Configuration:</p> <ul style="list-style-type: none"> - If creating a VM for a NOAMP server, use the “UDR_NO_LowCapacity” profile. - If creating a VM for a SOAM server, use the “UDR_SO_LowCapacity” profile. - If creating a VM for an MP, use the “UDR_MP_LowCapacity” profile. <p>Low Capacity RMS with Low Speed Drives Configuration:</p> <ul style="list-style-type: none"> - If creating a VM for a NOAMP server, use the profile “UDR_NO_LowCapacity_64GB”. <p>Note: If available memory is 128GB, increase RAM allocated to NOAMP VM guest from 44GB to 100GB as specified in Step 7 - If creating a VM for a SOAM server, use the “UDR_SO_LowCapacity_64GB” profile. - If creating a VM for an MP, use the “UDR_MP_LowCapacity_64GB” profile.  <p>Click “Select Profile” button.</p> <ul style="list-style-type: none"> • Check-off the associated Check Box as addition is completed for the VM. <p><input type="checkbox"/>NOAMP-A <input type="checkbox"/>NOAMP-B <input type="checkbox"/>SOAM-A <input type="checkbox"/> SOAM-B</p> <p><input type="checkbox"/>MP-1 <input type="checkbox"/> MP-2</p> </p>


NOTE: Step 7 is for correcting the RAM allocation to NOAM VM Guest only in Low Capacity RMS with Low Speed Disks if total available RAM is 64 GB

Procedure 7: Create, IPM and Install Application on all Virtual Machines

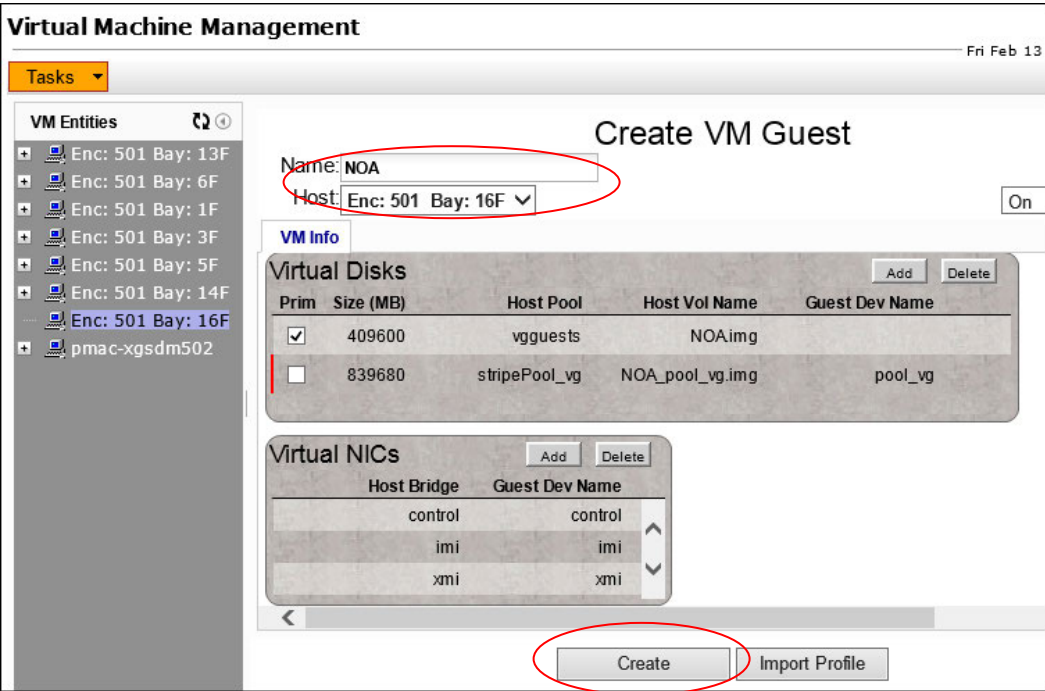
Step	Procedure	Result
7.	<p>PM&C GUI:</p> <p><i>Change value of Memory (MBs) to 43 GB for NOAM VM guest.</i></p>	<p>For Low Capacity RMS with Low Speed Disk Configuration if total RAM is 64GB</p> <p>Num vCPUs: <input type="text" value="14"/></p> <p>Memory (MBs): <input type="text" value="44,032"/></p> <p>Available host memory: 14211 MB</p> <p>VM UUID:</p> <p>Enable Virtual Watchdog: <input checked="" type="checkbox"/></p>

NOTE: Step 8 is for increasing RAM allocation to NOAM VM Guest only in Low Capacity RMS with Low Speed Disks if total available RAM is 128 GB

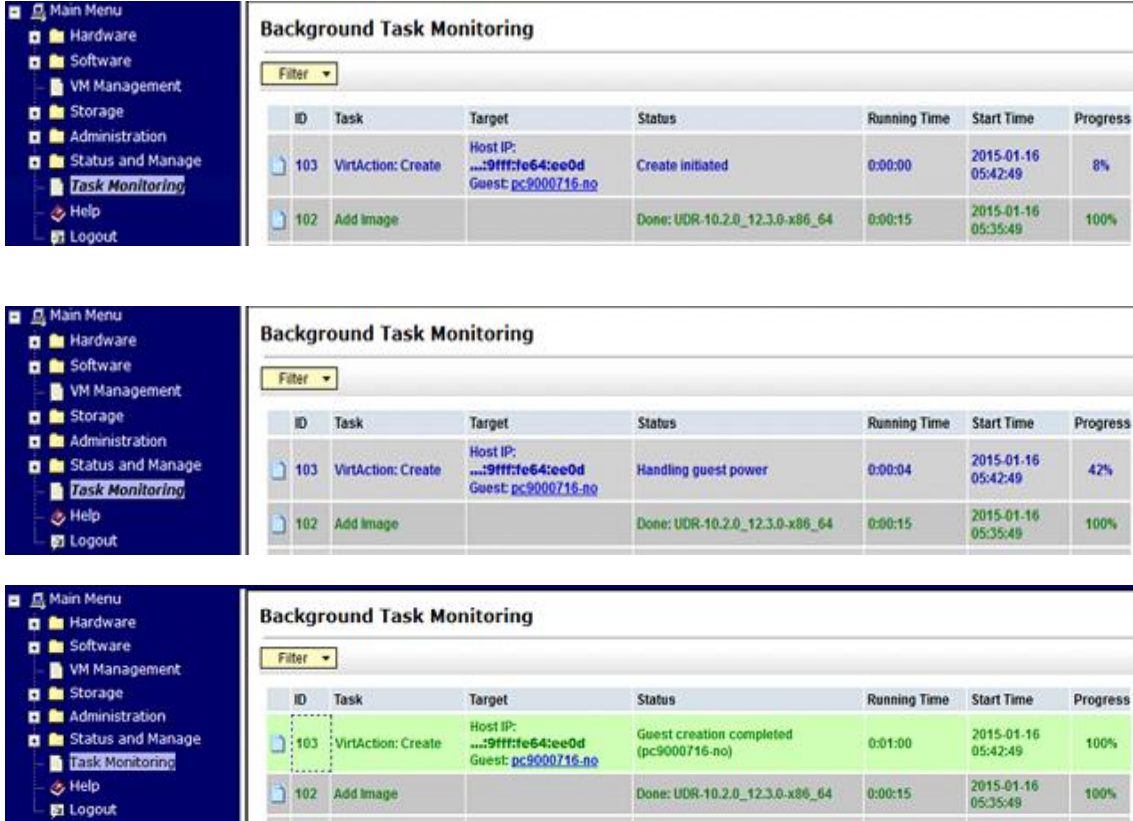

8.	<p>PM&C GUI:</p> <p><i>Change value of Memory (MBs) to 100 GB for NOAM VM guest.</i></p>	<p>For Low Capacity RMS with Low Speed Disks Configuration if total RAM is 128GB.</p> <p>Num vCPUs: <input type="text" value="14"/></p> <p>Memory (MBs): <input type="text" value="102,400"/></p>
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9.	<p>PM&C GUI:</p> <p><input type="checkbox"/> <i>Customize the NICs list to suit your deployment</i></p>	<p>The default Virtual NICs are configured for a deployment with one XSI network (for NOAMPs) or two XSI networks (for MPs).</p> <ul style="list-style-type: none"> - If your deployment has only a single XSI network, select the row for “xsi2” by clicking on it then click the Delete button:  <ul style="list-style-type: none"> - If your deployment has more than two XSI networks, click the Add button, select them from the Host Bridge drop box and type in the same name into Guest Dev Name. • Check-off the associated Check Box as addition is completed for the VM. <p><input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B</p> <p><input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2</p>
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Procedure 7: Create, IPM and Install Application on all Virtual Machines

Step	Procedure	Result
<p>10.</p> <p><input type="checkbox"/></p>	<p>PM&C GUI:</p> <p>Override the VM Guest Name to make it unique for the site</p>	<p>A “Create VM Guest” window is displayed that is similar to the below.</p>  <p>Override the Name field to something like: NOA, NOB, SOA, SOB, MP1 or MP2, etc. (Don't use hyphens in the name) You could also include a location within the Name value such as SOMRSVNCA. (This will not become the ultimate hostname. It is just an internal tag for the VM host manager.)</p> <p>Click Create button</p> <ul style="list-style-type: none"> Record the Site VM Guest Name of each VM that is added in the space provided below: Check-off the associated Check Box as addition is completed for the VM. <p><input type="checkbox"/>NOAMP-A: _____ <input type="checkbox"/>NOAMP-B _____</p> <p><input type="checkbox"/>SOAM-A: _____ <input type="checkbox"/> SOAM-B: _____</p> <p><input type="checkbox"/>MP-1: _____ <input type="checkbox"/> MP-2: _____</p>

Procedure 7: Create, IPM and Install Application on all Virtual Machines

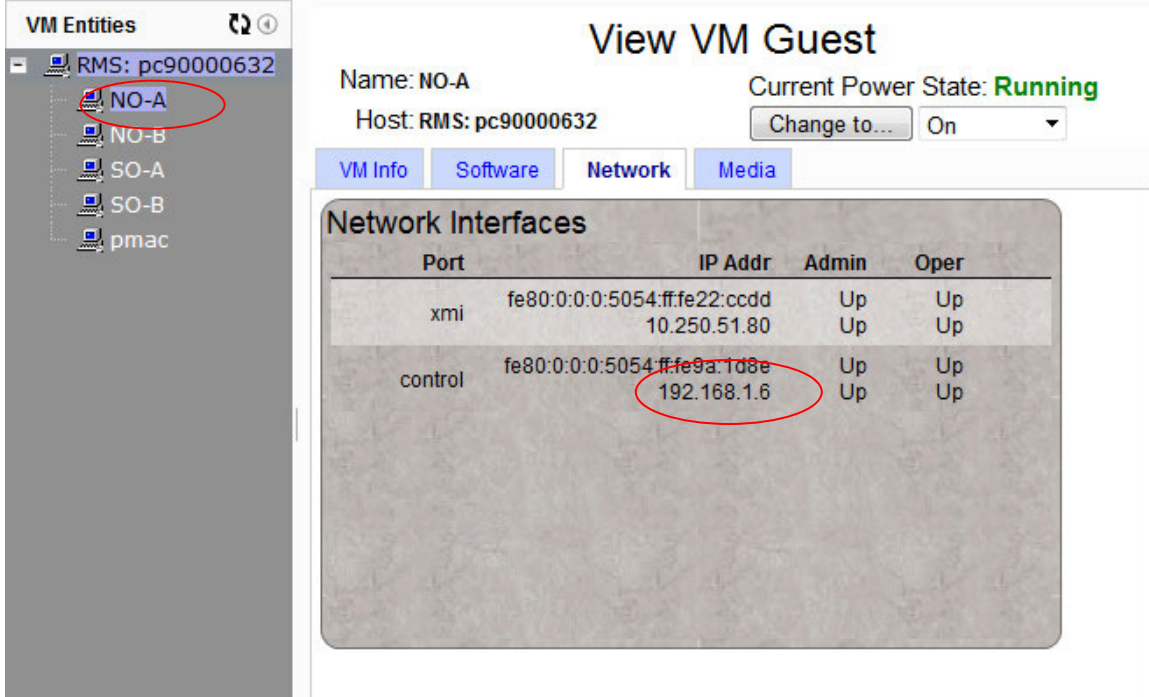
Step	Procedure	Result
<p>11.</p> <p><input type="checkbox"/></p>	<p>PM&C GUI:</p> <p>Select...</p> <p>Main Menu →Task Monitoring</p> <p>...as shown on the right.</p>	 <p>• Check-off the associated Check Box as addition is completed for the VM.</p> <p><input type="checkbox"/>NOAMP-A <input type="checkbox"/>NOAMP-B <input type="checkbox"/>SOAM-A <input type="checkbox"/> SOAM-B</p> <p><input type="checkbox"/>MP-1 <input type="checkbox"/> MP-2</p>
<p>12.</p> <p><input type="checkbox"/></p>	<p>PM&C GUI:</p> <p>Verify that Create VM task successfully completes.</p> <p>The user should see a screen similar to the one on the right with Progress value of 100%.</p>	 <p>• Check-off the associated Check Box as addition is completed for the VM.</p> <p><input type="checkbox"/>NOAMP-A <input type="checkbox"/>NOAMP-B <input type="checkbox"/>SOAM-A <input type="checkbox"/> SOAM-B</p> <p><input type="checkbox"/>MP-1 <input type="checkbox"/> MP-2</p>

Note: The steps above may be completed for each VM Guest that this PM&C administers before proceeding on to the next step. This way you may install and upgrade multiple VM Guests in parallel.

Procedure 7: Create, IPM and Install Application on all Virtual Machines

Step	Procedure	Result
<p>13.</p> <input type="checkbox"/>	<p><i>Install Operating System (TPD)</i></p>	<p>Follow steps defined in ...</p> <p>Appendix F.2 Installing Operating Systems with PM&C (BL460 Hardware)</p> <p>... to install TPD software on VM Guests.</p> <ul style="list-style-type: none"> • Check-off the associated Check Box as addition is completed for the VM. <p><input type="checkbox"/>NOAMP-A <input type="checkbox"/>NOAMP-B <input type="checkbox"/>SOAM-A <input type="checkbox"/> SOAM-B</p> <p><input type="checkbox"/>MP-1 <input type="checkbox"/> MP-2</p>

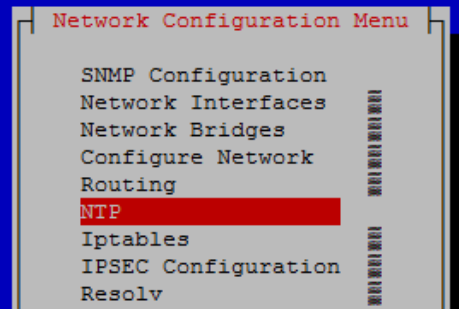
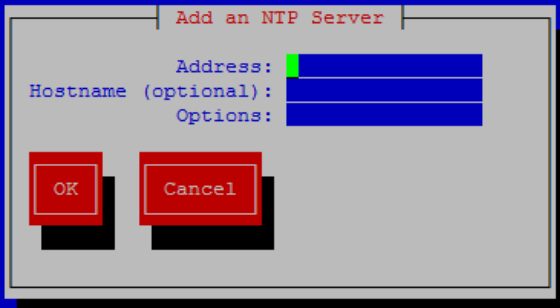
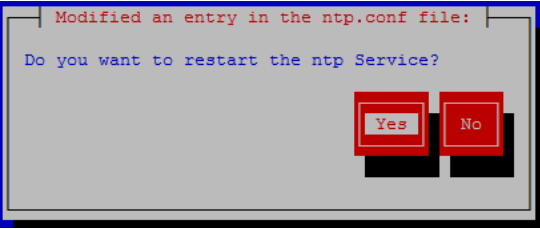
Procedure 7: Create, IPM and Install Application on all Virtual Machines

Step	Procedure	Result
<p>14.</p> <p><input type="checkbox"/></p>	<p>PM&C GUI:</p> <p><i>Get and record control IP address of VM Guest</i></p>	<p>Navigate to the VM Management menu</p> <p>Select the VM Guest Name from the VM Entities list, and click “Network” tab</p>  <p>Determine control IP address of VM Guest and record it.</p> <ul style="list-style-type: none"> Record the Site control IP Address of each VM that is added in the space provided below: Check-off the associated Check Box as addition is completed for the VM. <p><input type="checkbox"/>NOAMP-A: _____ <input type="checkbox"/>NOAMP-B _____</p> <p><input type="checkbox"/>SOAM-A: _____ <input type="checkbox"/>SOAM-B: _____</p> <p><input type="checkbox"/>MP-1: _____ <input type="checkbox"/>MP-2: _____</p>

Procedure 7: Create, IPM and Install Application on all Virtual Machines

Step	Procedure	Result
<p>15.</p> <div style="border: 1px solid black; width: 20px; height: 20px; margin: 5px 0;"></div>	<p>For NOAMP-A only:</p> <p><i>Prepare NOAMP for installation of UDR application software</i></p> <p><i>Connect to the NOAMP server Control IPaddress</i></p>	<p>Manually configure XMI network on the first NOAMP guest only, (NOA); the below steps must be executed before installing UDR:</p> <pre>[root@hostname1260476221 ~] # netAdm set --device=xmi --onboot=yes --netmask=<XMI_NETMASK> --address=<XMI_IP_Address_for_NOAMP_A></pre> <p>Interface xmi updated</p> <pre>[root@hostname1260476221 ~] # netAdm add --device=xmi --route=default --gateway=<XMI_IP_Address_for_default_gateway></pre> <p>Route to xmi added</p>
<p>16.</p> <div style="border: 1px solid black; width: 20px; height: 20px; margin: 5px 0;"></div>	<p>For NOAMP-A only:</p> <p>Enter Platform configuration menu</p>	<p>Enter platform configuration by running the following:</p> <pre>#su - platcfg</pre>

Procedure 7: Create, IPM and Install Application on all Virtual Machines

Step	Procedure	Result
<p>17.</p> <p><input type="checkbox"/></p>	<p>For NOAMP-A only:</p> <p>Configure NTP for NOAMP-A</p>	<ol style="list-style-type: none"> 1. Navigate to Network Configuration > NTP.  2. Select Edit, then “Add a New NTP Server.” 3. Enter the IP Address of the TVOE Host.  4. Select OK, then “Exit.” 5. Select Yes to restart ntp Service.  6. Delete any default NTP servers (example in Appendix L.6). 7. Exit platcfg.

Procedure 7: Create, IPM and Install Application on all Virtual Machines

Step	Procedure	Result																		
<p>18.</p> <div style="border: 1px solid black; width: 20px; height: 20px; margin-left: 10px;"></div>	<p><i>Prepare NOAMP for installation of UDR application software</i></p> <p><i>Connect to the NOAMP server Control IPaddress</i></p>	<p>Create a logical volume from NOAMP VM Guest:</p> <pre>root@hostname1260476221 ~] # vgcreate stripe_vg /dev/pool_vg Volume group "stripe_vg" successfully created</pre> <p>Create a logical volume rundb:</p> <pre>root@hostname1260476221 ~] # lvcreate -L 385G --alloc anywhere --name rundb stripe_vg Logical volume "rundb" created</pre> <p>Make filesystem on rundb:</p> <pre>root@hostname1260476221 ~] # mkfs -t ext4 /dev/stripe_vg/rundb mke2fs 1.41.12 (17-May-2010) Filesystem label= OS type: Linux Block size=4096 (log=2) Fragment size=4096 (log=2) Stride=64 blocks, Stripe width=192 blocks 45883392 inodes, 183502848 blocks 9175142 blocks (5.00%) reserved for the super user First data block=0 Maximum filesystem blocks=4294967296 5601 block groups 32768 blocks per group, 32768 fragments per group 8192 inodes per group Superblock backups stored on blocks: 32768, 98304, 163840, 229376, 294912, 819200, 884736, 1605632, 2654208, 4096000, 7962624, 11239424, 20480000, 23887872, 71663616, 78675968</pre> <p>Allocating group tables: done Writing inode tables: done Creating journal (32768 blocks): done Writing superblocks and filesystem accounting information: done</p>																		
<p>19.</p> <div style="border: 1px solid black; width: 20px; height: 20px; margin-left: 10px;"></div>	<p><i>Verify the logical volume created successfully</i></p>	<pre>#lvs stripe_vg</pre> <table border="1"> <thead> <tr> <th>LV</th> <th>VG</th> <th>Attr</th> <th>LSize</th> <th>Pool</th> <th>Origin</th> <th>Data%</th> <th>Move</th> <th>Log</th> </tr> </thead> <tbody> <tr> <td>rundb</td> <td>stripe_vg</td> <td>-wa-ao----</td> <td>385.01g</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	LV	VG	Attr	LSize	Pool	Origin	Data%	Move	Log	rundb	stripe_vg	-wa-ao----	385.01g					
LV	VG	Attr	LSize	Pool	Origin	Data%	Move	Log												
rundb	stripe_vg	-wa-ao----	385.01g																	

Procedure 7: Create, IPM and Install Application on all Virtual Machines

Step	Procedure	Result
<p>20. <input type="checkbox"/></p>	<p><i>Install UDR application software.</i></p>	<p>Follow steps defined in ...</p> <p>Appendix G.2 Installing UDR Application with PM&C</p> <p>... to install UDR software.</p> <ul style="list-style-type: none"> • Check-off the associated Check Box as addition is completed for the VM. <input type="checkbox"/>NOAMP-A <input type="checkbox"/>NOAMP-B <input type="checkbox"/>SOAM-A <input type="checkbox"/>SOAM-B <p><input type="checkbox"/>MP-1 <input type="checkbox"/>MP-2</p>
<p>Repeat Steps 4 - 20 for each Virtual Machine to install its operating system and application software.</p>		
<p>21. <input type="checkbox"/></p>	<p><i>Perform upgrade acceptance.</i></p>	<p>Follow steps defined in ...</p> <p>Appendix H Accept Application Installation on PM&C Managed Servers</p> <p>... to accept upgrade.</p>
<p>22. <input type="checkbox"/></p>	<p><i>Access the NOAMP server's console.</i></p>	<p>Connect to the server's console using one of the access methods described in <i>Section 2.1.2</i>.</p>
<p>23. <input type="checkbox"/></p>	<p>Log into the server console as the "root" user.</p>	<pre>CentOS release 5.6 (Final) Kernel 2.6.18-238.19.1.el5prere15.0.0_72.22.0 on an x86_64 hostname1260476221 login:root Password: <root_password></pre>
<p>24. <input type="checkbox"/></p>	<p>NOAMP: <i>Transfer file to TVOE Host</i></p>	<pre># scp /var/TKLC/db/filemgmt/udrInitConfig.sh \ admusr@<tvoe_host_name>:/var/tmp admusr@<tvoe_host_name>'s password:<admusr_password></pre> <ul style="list-style-type: none"> • Check-off the associated Check Box as addition is completed for the TVOE host. <p><input type="checkbox"/>TVOE Host (NOAMP-A / SOAM-A / MP-1)</p> <p><input type="checkbox"/>TVOE Host (NOAMP-B / SOAM-B /MP-2)</p>

Procedure 7: Create, IPM and Install Application on all Virtual Machines

Step	Procedure	Result
<p>25.</p> <input type="checkbox"/>	<p>Login to TVOE Host:</p> <p>1) SSH to server.</p> <p>2) Log into the server as the "admusr" user..</p>	<pre># ssh admusr@<tvoe_host_name></pre> <pre>admusr@<tvoe_host_name>'s password:<admusr_password></pre> <ul style="list-style-type: none"> • Check-off the associated Check Box as addition is completed for the TVOE host. <p><input type="checkbox"/> TVOE Host (NOAMP-A / SOAM-A / MP-1)</p> <p><input type="checkbox"/> TVOE Host (NOAMP-B / SOAM-B /MP-2)</p>
<p>26.</p> <input type="checkbox"/>	<p>TVOE host:</p> <p>Switch to root user.</p>	<pre>[admusr@hostname1326744539 ~]\$ su -</pre> <pre>password: <root_password></pre> <ul style="list-style-type: none"> • Check-off the associated Check Box as addition is completed for the TVOE host. <p><input type="checkbox"/> TVOE Host (NOAMP-A / SOAM-A / MP-1)</p> <p><input type="checkbox"/> TVOE Host (NOAMP-B / SOAM-B /MP-2)</p>
<p>27.</p> <input type="checkbox"/>	<p>TVOE host:</p> <p>Change directory.</p>	<pre># cd /var/tmp</pre> <ul style="list-style-type: none"> • Check-off the associated Check Box as addition is completed for the TVOE host. <p><input type="checkbox"/> TVOE Host (NOAMP-A / SOAM-A / MP-1)</p> <p><input type="checkbox"/> TVOE Host (NOAMP-B / SOAM-B /MP-2)</p>
<p>28.</p> <input type="checkbox"/>	<p>TVOE host:</p> <p>Update script permissions.</p>	<pre># chmod 555 udrInitConfig.sh</pre> <ul style="list-style-type: none"> • Check-off the associated Check Box as addition is completed for the TVOE host. <p><input type="checkbox"/> TVOE Host (NOAMP-A / SOAM-A / MP-1)</p> <p><input type="checkbox"/> TVOE Host (NOAMP-B / SOAM-B /MP-2)</p>

Procedure 7: Create, IPM and Install Application on all Virtual Machines

Step	Procedure	Result
<p>29.</p> <input type="checkbox"/>	<p>TVOE host:</p> <p>Run configuration script as root.</p>	<pre># ./udrInitConfig.sh</pre> <p>Verify no failures are reported. A trace to display the settings for all VM Guests on this server should be shown in output.</p> <p>In case of failures, save the log file /var/TKLC/log/udrVMCfg/udrInitConfig.log</p> <ul style="list-style-type: none"> • Check-off the associated Check Box as addition is completed for the TVOE host. <p><input type="checkbox"/>TVOE Host (NOAMP-A / SOAM-A / MP-1)</p> <p><input type="checkbox"/>TVOE Host (NOAMP-B / SOAM-B /MP-2)</p>
<p>30.</p> <input type="checkbox"/>	<p>TVOE host:</p> <p>Reboot the server.</p>	<pre># init 6</pre> <ul style="list-style-type: none"> • Check-off the associated Check Box as addition is completed for the TVOE host. <p><input type="checkbox"/>TVOE Host (NOAMP-A / SOAM-A / MP-1)</p> <p><input type="checkbox"/>TVOE Host (NOAMP-B / SOAM-B /MP-2)</p>
<p>THIS PROCEDURE HAS BEEN COMPLETED</p>		

7. LOW CAPACITY ORACLERMS CONFIGURATION SOFTWARE INSTALLATION PROCEDURE

The user should confirm that the server has been verified through the Hardware Verification Plan [3] before beginning this procedure.

The following Oracle RMS Configurations will be supported and can utilize the procedures in this section:

- 1-RMS sever per site system**
 This includes all UDR software running on a TVOE virtualization environment. This configuration will be supported only for lab testing systems.
- 2-RMS server per site system**
 This includes all UDR software running on a TVOE virtualization environment in each server, resulting in a fully-virtualized, fully-redundant HA configuration. This can be deployed either as a single site or as a geo-redundant deployment, with 2 RMS servers at each site.

7.1 Install NOAMP /SOAM / MP Servers

This procedure will install and configure the operating system on hardware that will host NOAMP, SOAM and MP VM Guests. OracleServer X5-2s (Hardware ID: ORACLESERVERX5-2)are supported for this procedure.

Needed material:

- TVOE Media

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

Procedure 8: Install NOAMP/ SOAM / MP Servers

Step	Procedure	Result
1. <input type="checkbox"/>	Access the Oracle RMS server's console.	Connect to the Oracle RMSserver's console usingAppendix0 Accessing the iLo VGA Redirection Window for Oracle Accessing the iLo VGA Redirection Window for OracleRMS Servers or Appendix A.3Accessing the iLo Console for Oracle RMS Servers.
2. <input type="checkbox"/>	Verify the type of server hardware	# hardwareInfo grep Hardware Hardware ID:ORACLESERVERX5-2
3. <input type="checkbox"/>	Update firmware	Follow steps defined in ... Appendix D.2 Oracle RMS Firmware Upgrade ... to update firmware.
4. <input type="checkbox"/>	Update BIOS settings	Follow steps defined in AppendixD.3 BIOS Settings for Oracle RMS Servers ... to update BIOS settings.

Procedure 8: Install NOAMP/ SOAM / MP Servers

Step	Procedure	Result
<p>5. <input type="checkbox"/></p>	<p><i>Clean the Disk Array</i></p>	<p>Note: Execute only if previous install on the Oracle RMS Server.</p> <p>Follow steps defined in ..</p> <p>Appendix M.3Removing RMS Disk Array Configuration for Oracle Servers</p> <p>... to clean the Disk Array</p>
<p>6. <input type="checkbox"/></p>	<p><i>Install Operating System (TVOE)</i></p>	<p>Follow steps defined in ...</p> <p>Appendix F.3Installing Operating Systems with ILO for Oracle</p> <p>... to install TVOE software.</p>
<p>7. <input type="checkbox"/></p>	<p><i>Configure TVOE network</i></p>	<p>If this Oracle RMS has 8 ports, follow steps defined in ...</p> <p>Appendix L.2 Configure TVOE Network for Topology 7 (HP RMS & Oracle RMS with 8 ports)</p> <p>If this Oracle RMS has 6 ports, follow steps defined in ...</p> <p>Appendix L.3Configure TVOE Network for Topology 7 (Oracle RMS with 6 ports)</p> <p>If the Oracle RMS has only 4 ports, follow steps defined in ...</p> <p>Appendix L.4 Configure TVOE Network for Topology 7 (Oracle RMS with 4 ports)</p> <p>... to configure TVOE network.</p>
<p>8. <input type="checkbox"/></p>	<p><i>Configure Disk Array</i></p>	<p>Follow steps defined in ...</p> <p>Appendix E.4Configuring Oracle RMS Disk Array (NO Network Element Servers)</p> <p>... to configure the disk array.</p>

Procedure 8: Install NOAMP/ SOAM / MP Servers

Step	Procedure	Result									
9. <input type="checkbox"/>	Configure a logical storage pool	<p>a. Create the file name “configStorageBlade” through vi command.</p> <pre>[root@pc9000714-tvoe ~]# vi configStorageBlade</pre> <p>Add the line below in the file</p> <pre>vg --name="stripePool_vg" --members="sdb" --virtstoragepool</pre> <p>b. Create storage pool</p> <pre>[root@pc9000714-tvoe ~]# /usr/TKLC/plat/sbin/storageMgr configStorageBlade</pre> <p>c. Verify pool is listed below</p> <pre>[root@pc9000714-tvoe ~]# virsh pool-list</pre> <table border="1"> <thead> <tr> <th>Name</th> <th>State</th> <th>Autostart</th> </tr> </thead> <tbody> <tr> <td>stripePool_vg</td> <td>active</td> <td>yes</td> </tr> <tr> <td>vgguests</td> <td>active</td> <td>yes</td> </tr> </tbody> </table>	Name	State	Autostart	stripePool_vg	active	yes	vgguests	active	yes
Name	State	Autostart									
stripePool_vg	active	yes									
vgguests	active	yes									
10. <input type="checkbox"/>	Deploy PM&C	Follow steps defined in Appendix I.1 Deploying PM&C on TVOE Server.									
11. <input type="checkbox"/>	Configure PM&C application	Follow steps defined in Appendix I.2 Configure PM&C Application.									
12. <input type="checkbox"/>	Configure Cabinet	Follow steps defined in Appendix I.3 Add Cabinet to PM&C System Inventory.									
13. <input type="checkbox"/>	Configure RMS	Follow steps defined in Appendix I.4 Add Rack Mount Server to PM&C System Inventory.									
THIS PROCEDURE HAS BEEN COMPLETED											

7.2 Create, IPM and Install Application on all Virtual Machines

This procedure will create Virtual Machines (VMs) for NOAMP, SOAM and MP servers, install the TPD Operating System on each VM, and install the UDR application on each VM. It details the create/IPM/install for a single VM and should be repeated for every VM.


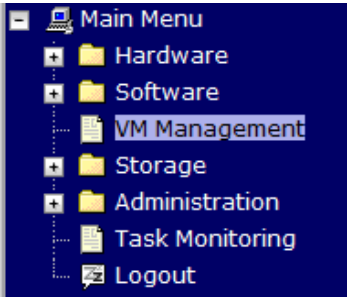
Requirements:

- **Procedure 8:** Install NOAMP /SOAM / MP Servers has been completed.

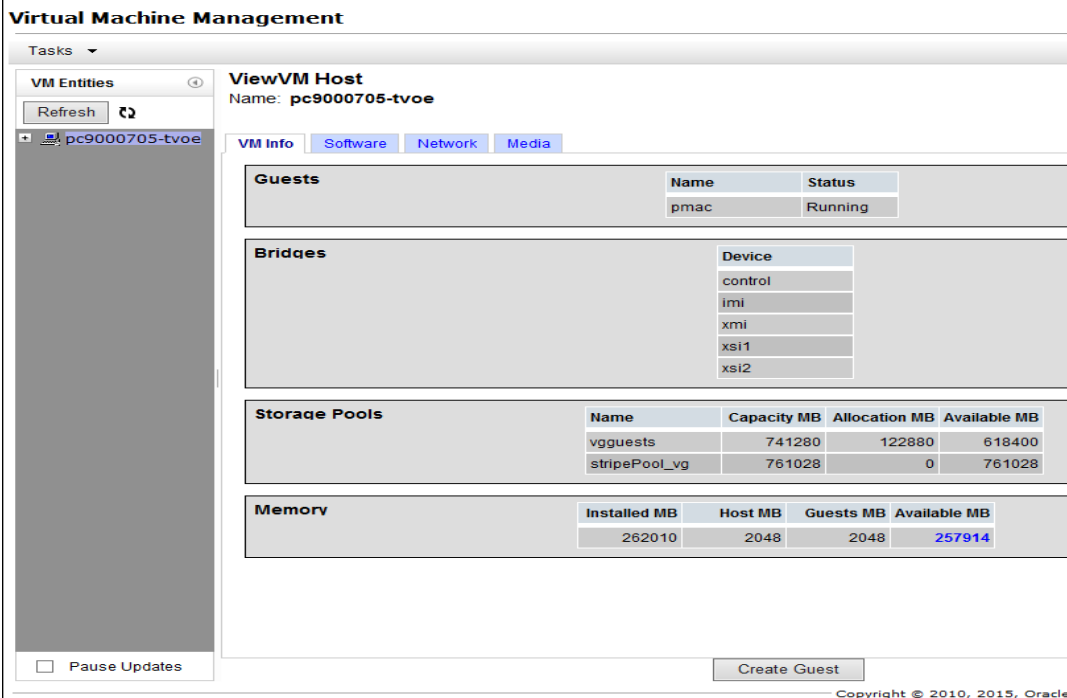
Oracle Communications User Data Repository Installation and Configuration Guide

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

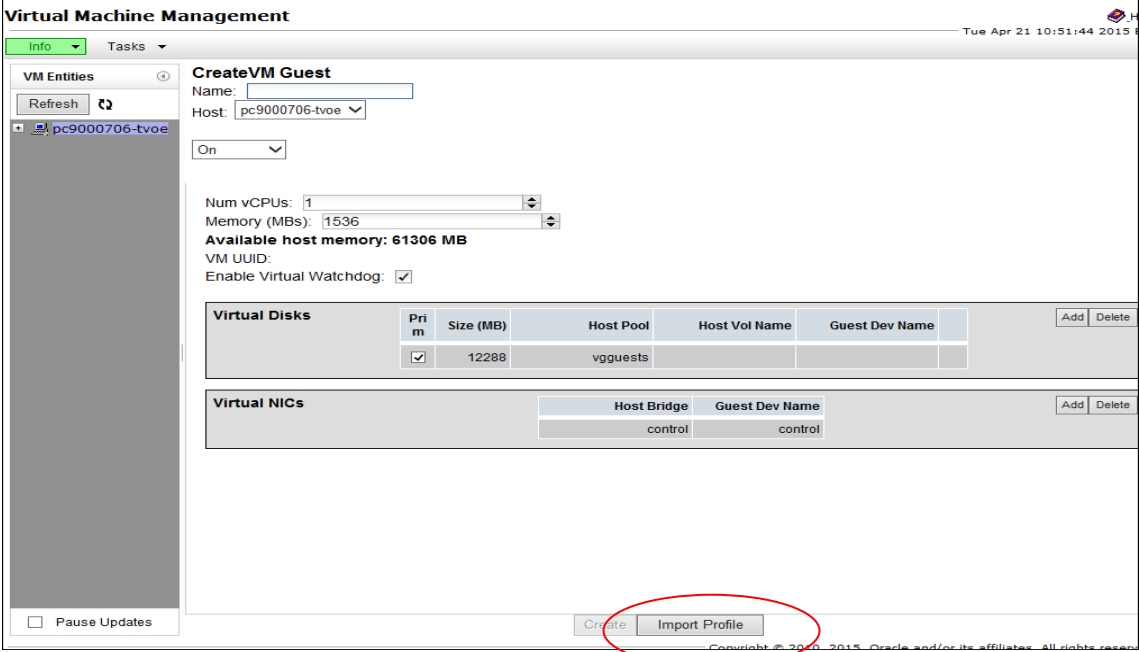
Procedure 9: Create, IPM and Install Application on all Virtual Machines

Step	Procedure	Result
1. <input type="checkbox"/>	Add image to management server.	Follow Appendix J Adding Software Images to PM&C Server to add TPD and UDR software images to this PM&C repository.
2. <input type="checkbox"/>	PM&C GUI: Login to PM&C GUI	<p>Open web browser and enter: <a href="http://<pmac_management_network_ip>">http://<pmac_management_network_ip> Login as pmacadmin user.</p> 
3. <input type="checkbox"/>	PM&C GUI: Navigate to VM Management menu	<p>Navigate to the VM Management menu</p> 

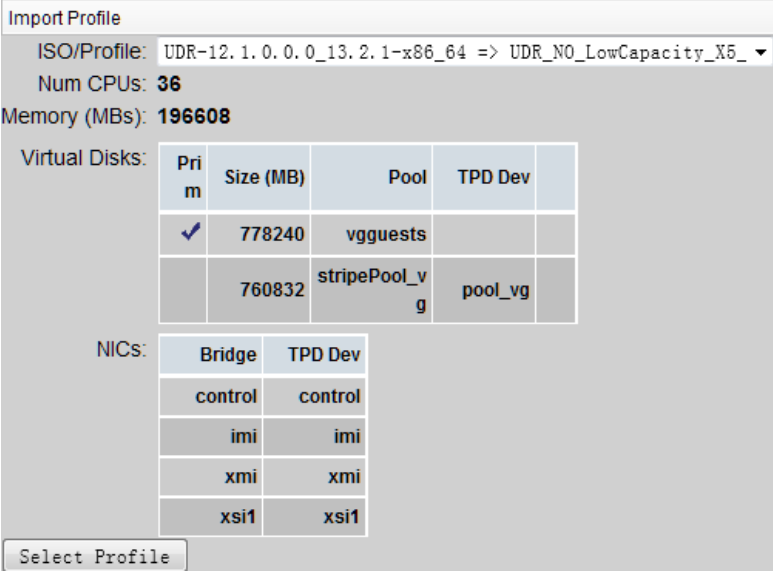
Procedure 9: Create, IPM and Install Application on all Virtual Machines

Step	Procedure	Result
<p>4.</p> <input type="checkbox"/>	<p>PM&C GUI:</p> <p>Select the desired Server and create the VM Guest</p>	<p>Select the desired 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> <ul style="list-style-type: none"> • Check-off the associated Check Box as addition is completed for the VM. <p> <input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B <input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4 </p>

Procedure 9: Create, IPM and Install Application on all Virtual Machines

Step	Procedure	Result
<p>5.</p> <div style="border: 1px solid black; width: 20px; height: 20px; margin-left: 5px;"></div>	<p>PM&C GUI:</p> <p><i>Click on the Import Profile dialogue button</i></p>	<p>A “Create VM Guest” window is displayed that is similar to the below:.</p>  <p>Click “Import Profile” button.</p> <ul style="list-style-type: none"> • Check-off the associated Check Box as addition is completed for the VM. <p><input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B</p> <p><input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4</p>

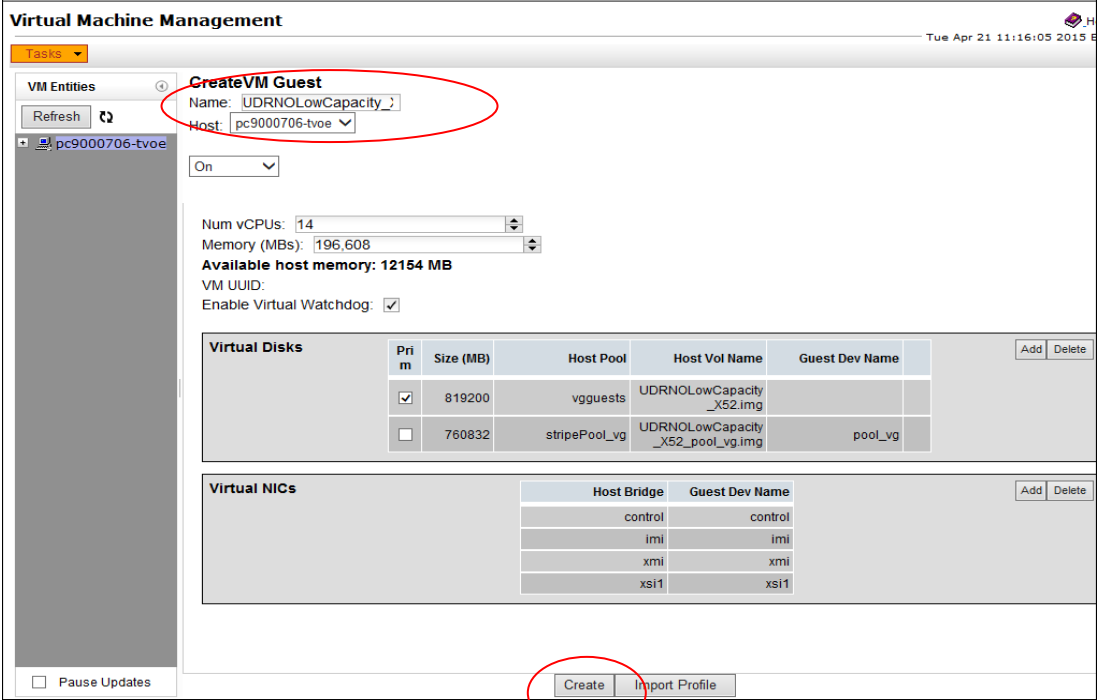
Procedure 9: Create, IPM and Install Application on all Virtual Machines

Step	Procedure	Result
<p>6.</p> <p><input type="checkbox"/></p>	<p>PM&C GUI:</p> <p>Select the desired ISO/Profile value</p>	<p>Select the desired ISO/Profile.</p> <p>For Oracle RMS, we need to create 2 MPs.</p> <p>-If creating a VM for NOAMP server, use the “UDR_NO_LowCapacity_X5_2” profile -If creating a VM for SOAM server, use the “UDR_SO_LowCapacity_X5_2” profile -If creating a VM for MP server, use the “UDR_MP_LowCapacity_X5_2” profile</p>  <p>Click “Select Profile” button.</p> <ul style="list-style-type: none"> • Check-off the associated Check Box as addition is completed for the VM. <p><input type="checkbox"/>NOAMP-A <input type="checkbox"/>NOAMP-B <input type="checkbox"/>SOAM-A <input type="checkbox"/> SOAM-B</p> <p><input type="checkbox"/>MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/>MP-3 <input type="checkbox"/> MP-4</p>

Procedure 9: Create, IPM and Install Application on all Virtual Machines

Step	Procedure	Result												
<p>7.</p> <p><input type="checkbox"/></p>	<p>PM&C GUI:</p> <p><i>Customize the NICs list to suit your deployment</i></p>	<p>The default Virtual NICs are configured for a deployment with one XSI network (for NOAMPs) or two XSI networks (for MPs).</p> <ul style="list-style-type: none"> - If your deployment has only a single XSI network for MPs, select the row for “xsi2” by clicking on it then click the Delete button: <div style="border: 1px solid gray; padding: 5px; margin: 10px 0;"> <p>Virtual NICs Add Delete</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;">Host Bridge</th> <th style="width: 40%;">Guest Dev Name</th> <th style="width: 30%;"></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">xmi</td> <td style="text-align: center;">xmi</td> <td style="text-align: center;">▲</td> </tr> <tr> <td style="text-align: center;">xsi1</td> <td style="text-align: center;">xsi1</td> <td style="text-align: center;">□</td> </tr> <tr style="background-color: #e0e0e0;"> <td style="text-align: center;">xsi2</td> <td style="text-align: center;">xsi2</td> <td style="text-align: center;">▼</td> </tr> </tbody> </table> </div> <ul style="list-style-type: none"> - If your deployment has more than two XSI networks, click the Add button, select them from the Host Bridge drop box and type in the same name into Guest Dev Name. • Check-off the associated Check Box as addition is completed for the VM. <p> <input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B <input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4 </p>	Host Bridge	Guest Dev Name		xmi	xmi	▲	xsi1	xsi1	□	xsi2	xsi2	▼
Host Bridge	Guest Dev Name													
xmi	xmi	▲												
xsi1	xsi1	□												
xsi2	xsi2	▼												

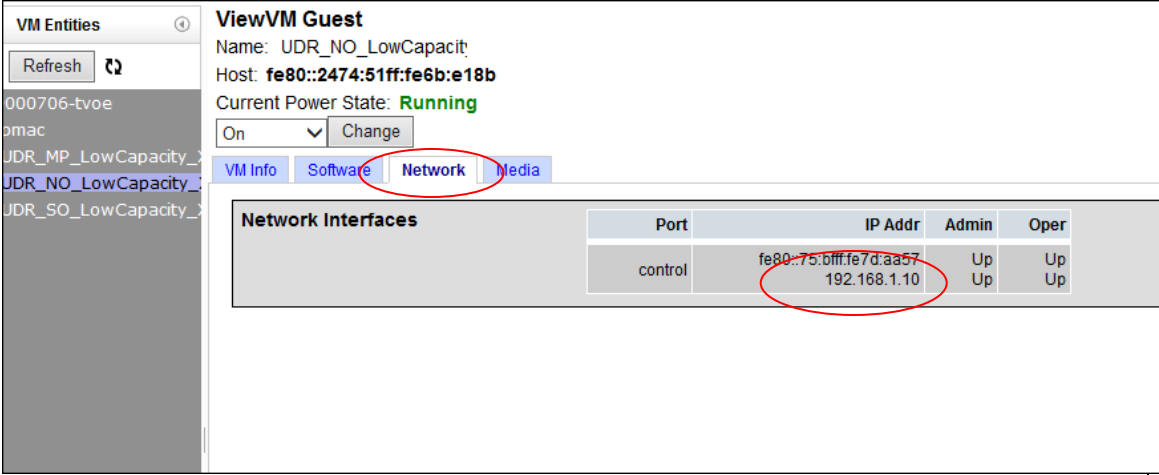
Procedure 9: Create, IPM and Install Application on all Virtual Machines

Step	Procedure	Result
<p>8.</p> <p><input type="checkbox"/></p>	<p>PM&C GUI:</p> <p>Override the VM Guest Name to make it unique for the site</p>	<p>A “Create VM Guest” window is displayed that is similar to the below (Ex for NOAMP):</p>  <p>Override the Name field to something like: NOA, NOB, SOA, SOB, MP1 or MP2, etc. (Don't use hyphens in the name) You could also include a location within the Name value such as SOMRSVNCA. (This will not become the ultimate hostname. It is just an internal tag for the VM host manager.)</p> <p>Click Create button</p> <ul style="list-style-type: none"> Record the Site VM Guest Name of each VM that is added in the space provided below: Check-off the associated Check Box as addition is completed for the VM. <p> <input type="checkbox"/> NOAMP-A: _____ <input type="checkbox"/> NOAMP-B: _____ <input type="checkbox"/> SOAM-A: _____ <input type="checkbox"/> SOAM-B: _____ <input type="checkbox"/> MP-1: _____ <input type="checkbox"/> MP-2: _____ <input type="checkbox"/> MP-3: _____ <input type="checkbox"/> MP-4: _____ </p>

Procedure 9: Create, IPM and Install Application on all Virtual Machines

Step	Procedure	Result																																																
9.	<p>PM&C GUI:</p> <p>Select...</p> <p>Main Menu → Task Monitoring</p> <p>...as shown on the right.</p>	<p>Background Task Monitoring Tue Apr 21 10:51</p> <p>Filter ▾</p> <table border="1"> <thead> <tr> <th>ID</th> <th>Task</th> <th>Target</th> <th>Status</th> <th>State</th> <th>Running Time</th> <th>Start Time</th> <th>Progress</th> </tr> </thead> <tbody> <tr> <td>7</td> <td>VirtAction: Create</td> <td>Host IP: ...:51ff:fe6b:e18b Guest: UDR_NO_LowCapacity_X52</td> <td>Guest creation completed (UDR_NO_LowCapacity_X52)</td> <td>COMPLETE</td> <td>0:00:10</td> <td>2015-04-21 10:49:53</td> <td>100%</td> </tr> </tbody> </table> <hr/> <p>Background Task Monitoring Tue Apr 21 10:56</p> <p>Filter ▾</p> <table border="1"> <thead> <tr> <th>ID</th> <th>Task</th> <th>Target</th> <th>Status</th> <th>State</th> <th>Running Time</th> <th>Start Time</th> <th>Progress</th> </tr> </thead> <tbody> <tr> <td>9</td> <td>VirtAction: Create</td> <td>Host IP: ...:51ff:fe6b:e18b Guest: UDR_SO_LowCapacity_X52</td> <td>Guest creation completed (UDR_SO_LowCapacity_X52)</td> <td>COMPLETE</td> <td>0:00:06</td> <td>2015-04-21 10:56:39</td> <td>100%</td> </tr> </tbody> </table> <hr/> <p>Background Task Monitoring Tue Apr 21 11:01</p> <p>Filter ▾</p> <table border="1"> <thead> <tr> <th>ID</th> <th>Task</th> <th>Target</th> <th>Status</th> <th>State</th> <th>Running Time</th> <th>Start Time</th> <th>Progress</th> </tr> </thead> <tbody> <tr> <td>10</td> <td>VirtAction: Create</td> <td>Host IP: ...:51ff:fe6b:e18b Guest: UDR_MP_LowCapacity_X52</td> <td>Guest creation completed (UDR_MP_LowCapacity_X52)</td> <td>COMPLETE</td> <td>0:00:08</td> <td>2015-04-21 11:09:51</td> <td>100%</td> </tr> </tbody> </table> <ul style="list-style-type: none"> Check-off the associated Check Box as addition is completed for the VM. <p> <input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B <input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4 </p>	ID	Task	Target	Status	State	Running Time	Start Time	Progress	7	VirtAction: Create	Host IP: ...:51ff:fe6b:e18b Guest: UDR_NO_LowCapacity_X52	Guest creation completed (UDR_NO_LowCapacity_X52)	COMPLETE	0:00:10	2015-04-21 10:49:53	100%	ID	Task	Target	Status	State	Running Time	Start Time	Progress	9	VirtAction: Create	Host IP: ...:51ff:fe6b:e18b Guest: UDR_SO_LowCapacity_X52	Guest creation completed (UDR_SO_LowCapacity_X52)	COMPLETE	0:00:06	2015-04-21 10:56:39	100%	ID	Task	Target	Status	State	Running Time	Start Time	Progress	10	VirtAction: Create	Host IP: ...:51ff:fe6b:e18b Guest: UDR_MP_LowCapacity_X52	Guest creation completed (UDR_MP_LowCapacity_X52)	COMPLETE	0:00:08	2015-04-21 11:09:51	100%
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10.	<p>PM&C GUI:</p> <p>Verify that Create VM task successfully completes.</p> <p>The user should see a screen similar to the one on the right with Progress value of 100%.</p>	<p>Verify that the Virtual Machine successfully created.</p> <p>Background Task Monitoring Tue Apr 21 10:51</p> <p>Filter ▾</p> <table border="1"> <thead> <tr> <th>ID</th> <th>Task</th> <th>Target</th> <th>Status</th> <th>State</th> <th>Running Time</th> <th>Start Time</th> <th>Progress</th> </tr> </thead> <tbody> <tr> <td>7</td> <td>VirtAction: Create</td> <td>Host IP: ...:51ff:fe6b:e18b Guest: UDR_NO_LowCapacity_X52</td> <td>Guest creation completed (UDR_NO_LowCapacity_X52)</td> <td>COMPLETE</td> <td>0:00:10</td> <td>2015-04-21 10:49:53</td> <td>100%</td> </tr> </tbody> </table> <ul style="list-style-type: none"> Check-off the associated Check Box as addition is completed for the VM. <p> <input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B <input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4 </p>	ID	Task	Target	Status	State	Running Time	Start Time	Progress	7	VirtAction: Create	Host IP: ...:51ff:fe6b:e18b Guest: UDR_NO_LowCapacity_X52	Guest creation completed (UDR_NO_LowCapacity_X52)	COMPLETE	0:00:10	2015-04-21 10:49:53	100%																																
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		<p>Note: Steps 4 -10 may be completed for each VM Guest that this PM&C administers before proceeding on to the next step. This way you may install and upgrade multiple VM Guests in parallel.</p>																																																

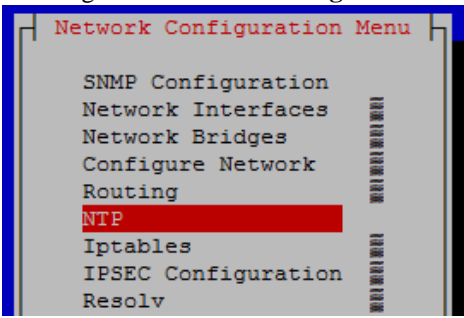
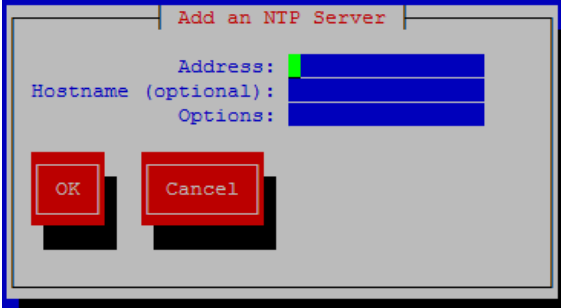
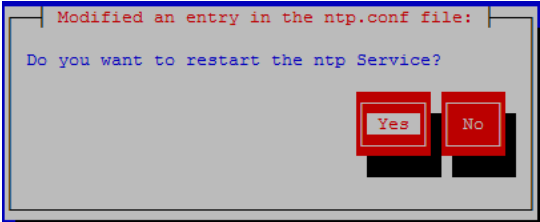
Procedure 9: Create, IPM and Install Application on all Virtual Machines

Step	Procedure	Result
<p>11.</p> <input type="checkbox"/>	<p><i>Install Operating System (TPD)</i></p>	<p>Follow steps defined in ...</p> <p>Appendix F.2 Installing Operating Systems with PM&C (BL460 Hardware)</p> <p>... to install TPD software on VM Guests.</p> <ul style="list-style-type: none"> • Check-off the associated Check Box as addition is completed for the VM. <p><input type="checkbox"/>NOAMP-A <input type="checkbox"/>NOAMP-B <input type="checkbox"/>SOAM-A <input type="checkbox"/> SOAM-B</p> <p><input type="checkbox"/>MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/>MP-3 <input type="checkbox"/> MP-4</p>
<p>12.</p> <input type="checkbox"/>	<p>PM&C GUI:</p> <p><i>Get and record control IP address of VM Guest</i></p>	<p>Navigate to the VM Management menu</p> <p>Select the VM Guest Name from the VM Entities list, and click “Network” tab</p>  <p>Determine control IP address of VM Guest and record it.</p> <ul style="list-style-type: none"> • Record the Site control IP Address of each VM that is added in the space provided below: • Check-off the associated Check Box as addition is completed for the VM. <p><input type="checkbox"/>NOAMP-A: _____ <input type="checkbox"/>NOAMP-B _____</p> <p><input type="checkbox"/>SOAM-A: _____ <input type="checkbox"/> SOAM-B: _____</p> <p><input type="checkbox"/>MP-1: _____ <input type="checkbox"/> MP-2: _____</p> <p><input type="checkbox"/>MP-3: _____ <input type="checkbox"/> MP-4: _____</p>

Procedure 9: Create, IPM and Install Application on all Virtual Machines

Step	Procedure	Result
<p>13.</p> <input type="checkbox"/>	<p>For NOAMP-A only:</p> <p><i>Prepare NOAMP for installation of UDR application software</i></p> <p><i>Connect to the NOAMP server Control IPaddress</i></p>	<p>Manually configure XMI network on the first NOAMP guest only, (NOA); the below steps must be executed before installing UDR:</p> <pre>[root@hostname1260476221 ~] # netAdm set --device=xmi --onboot=yes --netmask=<XMI_NETMASK> --address=<XMI_IP_Address_for_NOAMP_A> Interface xmi updated [root@hostname1260476221 ~] # netAdm add --device=xmi --route=default --gateway=<XMI_IP_Address_for_default_gateway> Route to xmi added</pre>
<p>14.</p> <input type="checkbox"/>	<p>For NOAMP-A only:</p> <p>Enter Platform configuration menu</p>	<p>Enter platform configuration by running the following:</p> <pre>#su - platcfg</pre>

Procedure 9: Create, IPM and Install Application on all Virtual Machines

Step	Procedure	Result
15.	<p>For NOAMP-A only:</p> <p>Configure NTP for NOAMP-A</p>	<ol style="list-style-type: none"> 1. Navigate to Network Configuration >NTP.  2. Select Edit, then “Add a New NTP Server.” 3. Enter the IP Address of the TVOE Host.  4. Select OK, then “Exit.” 5. Select Yes to restart ntp Service.  6. Delete any default NTP servers (example in Appendix L.6). 7. Exit platcfg.

Procedure 9: Create, IPM and Install Application on all Virtual Machines

Step	Procedure	Result																
16.	<p>For all NOAMP Servers:</p> <p><i>Prepare NOAMP for installation of UDR application software</i></p> <p><i>Connect to the NOAMP server Control IPaddress</i></p>	<p>Create a logical volume from NOAMP VM Guest:</p> <pre>root@hostname1260476221 ~] # vgcreate stripe_vg /dev/pool_vg Volume group "stripe_vg" successfully created</pre> <p>Create a logical volume rundb:</p> <pre>root@hostname1260476221 ~] # lvcreate -L 385G --alloc anywhere --name rundb stripe_vg Logical volume "rundb" created</pre> <p>Make filesystem on rundb:</p> <pre>root@hostname1260476221 ~] # mkfs -t ext4 /dev/stripe_vg/rundb mke2fs 1.41.12 (17-May-2010) Filesystem label= OS type: Linux Block size=4096 (log=2) Fragment size=4096 (log=2) Stride=64 blocks, Stripe width=192 blocks 45883392 inodes, 183502848 blocks 9175142 blocks (5.00%) reserved for the super user First data block=0 Maximum filesystem blocks=4294967296 5601 block groups 32768 blocks per group, 32768 fragments per group 8192 inodes per group Superblock backups stored on blocks: 32768, 98304, 163840, 229376, 294912, 819200, 884736, 1605632, 2654208, 4096000, 7962624, 11239424, 20480000, 23887872, 71663616, 78675968 Allocating group tables: done Writing inode tables: done Creating journal (32768 blocks): done Writing superblocks and filesystem accounting information: done</pre>																
17.	<p><i>Verify the logical volume created successfully</i></p>	<pre># lvs stripe_vg</pre> <table border="1"> <thead> <tr> <th>LV</th> <th>VG</th> <th>Attr</th> <th>LSize</th> <th>Pool</th> <th>Origin</th> <th>Data%</th> <th>Move</th> </tr> </thead> <tbody> <tr> <td>rundb</td> <td>stripe_vg</td> <td>-wa-ao----</td> <td>385.01g</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	LV	VG	Attr	LSize	Pool	Origin	Data%	Move	rundb	stripe_vg	-wa-ao----	385.01g				
LV	VG	Attr	LSize	Pool	Origin	Data%	Move											
rundb	stripe_vg	-wa-ao----	385.01g															

Procedure 9: Create, IPM and Install Application on all Virtual Machines

Step	Procedure	Result
<p>18.</p> <input type="checkbox"/>	<p><i>Install UDR application software.</i></p>	<p>Follow steps defined in ...</p> <p>Appendix G.2 Installing UDR Application with PM&C</p> <p>... to install UDR software.</p> <ul style="list-style-type: none"> • Check-off the associated Check Box as addition is completed for the VM. <p><input type="checkbox"/>NOAMP-A <input type="checkbox"/>NOAMP-B <input type="checkbox"/>SOAM-A <input type="checkbox"/> SOAM-B</p> <p><input type="checkbox"/>MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/>MP-3 <input type="checkbox"/> MP-4</p>
<p>19.</p> <input type="checkbox"/>	<p>Repeat Steps 4–18 for each Virtual Machine to install its operating system and application software.</p>	
<p>20.</p> <input type="checkbox"/>	<p><i>Perform upgrade acceptance.</i></p>	<p>Follow steps defined in ...</p> <p>Appendix HAccept Application Installation on PM&C Managed Servers</p> <p>... to accept upgrade.</p>
<p>21.</p> <input type="checkbox"/>	<p><i>Access the NOAMP server's console.</i></p>	<p>Connect to the server's console using one of the access methods described in <i>Section 2.1.2</i>.</p>
<p>22.</p> <input type="checkbox"/>	<p>Log into the server console as the "root" user.</p>	<pre>CentOS release 5.6 (Final) Kernel 2.6.18-238.19.1.el5prere15.0.0_72.22.0 on an x86_64 hostname1260476221 login:root Password: <root_password></pre>
<p>23.</p> <input type="checkbox"/>	<p>NOAMP:</p> <p><i>Transfer file to TVOE Host</i></p>	<pre># scp /var/TKLC/db/filemgmt/udrInitConfig.sh \ admusr@<tvoe_host_name>:/var/tmp admusr@<tvoe_host_name>' spassword:<admusr_password></pre> <ul style="list-style-type: none"> • Check-off the associated Check Box as addition is completed for the TVOE host. <p><input type="checkbox"/>TVOE Host-A (NOAMP-A / SOAM-A / MP-1/MP-2)</p> <p><input type="checkbox"/>TVOE Host-B (NOAMP-B / SOAM-B /MP-3/MP-4)</p>

Procedure 9: Create, IPM and Install Application on all Virtual Machines

Step	Procedure	Result
<p>24.</p> <input type="checkbox"/>	<p><i>Login to TVOE Host:</i></p> <p>1)SSH to server.</p> <p>2) Log into the server as the "admusr" user..</p>	<pre># ssh admusr@<tvoe_host_name></pre> <pre>admusr@<tvoe_host_name>' spassword:<admusr_password></pre> <ul style="list-style-type: none"> • Check-off the associated Check Box as addition is completed for the TVOE host. <p><input type="checkbox"/>TVOE Host-A (NOAMP-A / SOAM-A / MP-1/MP-2)</p> <p><input type="checkbox"/>TVOE Host-B (NOAMP-B / SOAM-B /MP-3/MP-4)</p>
<p>25.</p> <input type="checkbox"/>	<p>TVOE host:</p> <p>Switch to root user.</p>	<pre>[admusr@hostname1326744539 ~]\$ su -</pre> <pre>password: <root_password></pre> <ul style="list-style-type: none"> • Check-off the associated Check Box as addition is completed for the TVOE host. <p><input type="checkbox"/>TVOE Host-A (NOAMP-A / SOAM-A / MP-1/MP-2)</p> <p><input type="checkbox"/>TVOE Host-B (NOAMP-B / SOAM-B /MP-3/MP-4)</p>
<p>26.</p> <input type="checkbox"/>	<p>TVOE host:</p> <p>Change directory.</p>	<pre># cd /var/tmp</pre> <ul style="list-style-type: none"> • Check-off the associated Check Box as addition is completed for the TVOE host. <p><input type="checkbox"/>TVOE Host-A (NOAMP-A / SOAM-A / MP-1/MP-2)</p> <p><input type="checkbox"/>TVOE Host-B (NOAMP-B / SOAM-B /MP-3/MP-4)</p>
<p>27.</p> <input type="checkbox"/>	<p>TVOE host:</p> <p>Update script permissions.</p>	<pre># chmod 555 udrInitConfig.sh</pre> <ul style="list-style-type: none"> • Check-off the associated Check Box as addition is completed for the TVOE host. <p><input type="checkbox"/>TVOE Host-A (NOAMP-A / SOAM-A / MP-1/MP-2)</p> <p><input type="checkbox"/>TVOE Host-B (NOAMP-B / SOAM-B /MP-3/MP-4)</p>

Procedure 9: Create, IPM and Install Application on all Virtual Machines

Step	Procedure	Result
<p>28.</p> <input type="checkbox"/>	<p>TVOE host:</p> <p>Run configuration script as root.</p>	<p># <code>./udrInitConfig.sh</code></p> <p>Verify no failures are reported. A trace to display the settings for all VM Guests on this server should be shown in output.</p> <p>In case of failures, save the log file /var/TKLC/log/udrVMCfg/udrInitConfig.log</p> <ul style="list-style-type: none"> • Check-off the associated Check Box as addition is completed for the TVOE host. <p><input type="checkbox"/>TVOE Host-A (NOAMP-A / SOAM-A / MP-1/MP-2)</p> <p><input type="checkbox"/>TVOE Host-B (NOAMP-B / SOAM-B / MP-3/MP-4)</p>
<p>29.</p> <input type="checkbox"/>	<p>TVOE host:</p> <p>Reboot the server.</p>	<p># <code>init 6</code></p> <ul style="list-style-type: none"> • Check-off the associated Check Box as addition is completed for the TVOE host. <p><input type="checkbox"/>TVOE Host-A (NOAMP-A / SOAM-A / MP-1/MP-2)</p> <p><input type="checkbox"/>TVOE Host-B (NOAMP-B / SOAM-B /MP-3/MP-4)</p>
<p>THIS PROCEDURE HAS BEEN COMPLETED</p>		

8. CONFIGURATION PROCEDURES

8.1 Configuring NOAMP-A Server (1st NOAMP site only)

This procedure does all steps that are necessary for configuring the first NOAMP server. This includes configuring a temporary interface to the NOAMP-A GUI, creating Network Elements for all required networks, configuring Services and creating/configuring the first NOAMP-A server.

Requirements:

- **Procedure 1: Install NOAMP Servers (NO and DR Network Elements)**
- **or Procedure 4: Install NOAMP / SOAM / MP Servers**
- **or Procedure 6: Install NOAMP / SOAM / MP Servers**
- **or Procedure 8: Install NOAMP / SOAM / MP Servers** has been completed.

Assumptions:

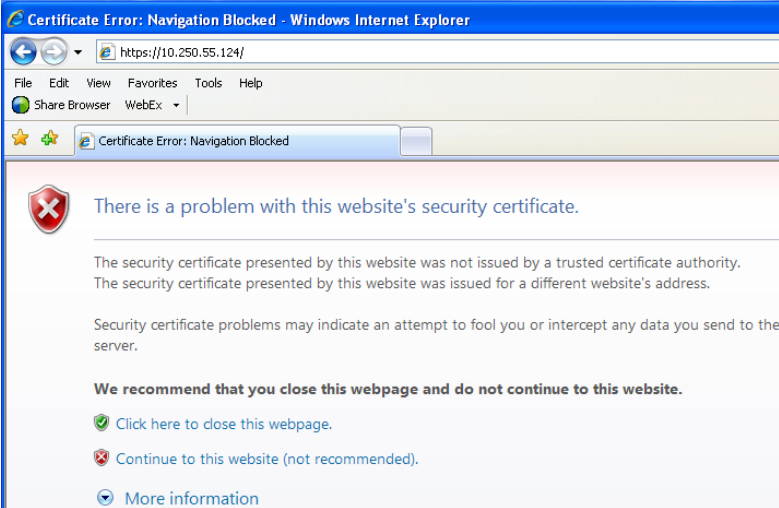

- This procedure assumes that the UDR Network Element XML file for the Primary Provisioning NOAMP site has previously been created, as described in **Appendix N: Creating an XML file for Installing UDR Network Elements**.
- This procedure assumes that the Network Element XML files are either on a USB flash drive or the laptop's hard drive. The steps are written as if the XML files are on a USB flash drive, but the files can exist on any accessible drive.

This procedure requires that the user connects to the UDR GUI prior to configuring the first UDR server. This can be done either by one of two procedures:

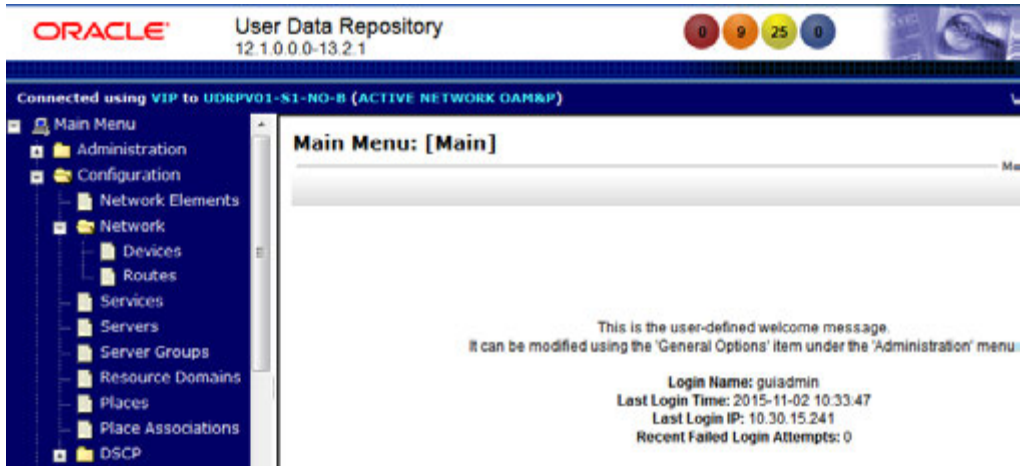
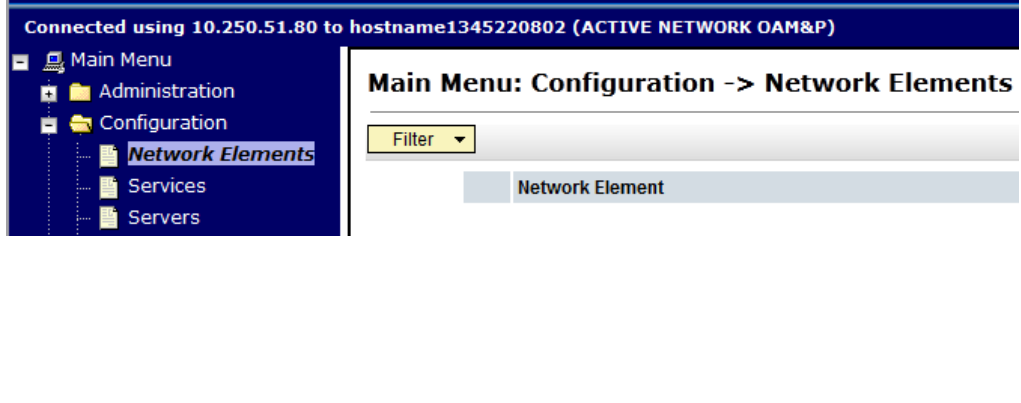
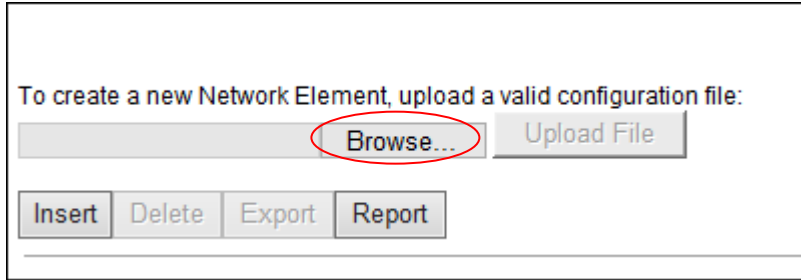
1. (If one was not created yet in previous procedure) **Configuring a Temporary External XMI IP Address**, as described in **Appendix B.1: Creating Temporary External XMI IP Address** or optionally
2. **Plugging a laptop into an unused, unconfigured port on the NOAMP-A server using a direct-connect Ethernet cable**, as described in **Appendix B.3: Establishing a Local Connection for Accessing UDR GUI (RMS only)**

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

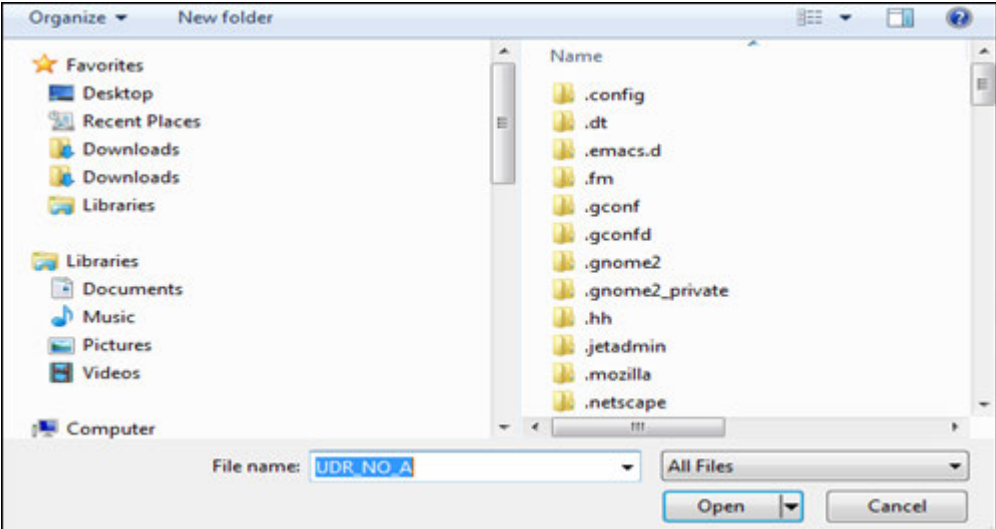
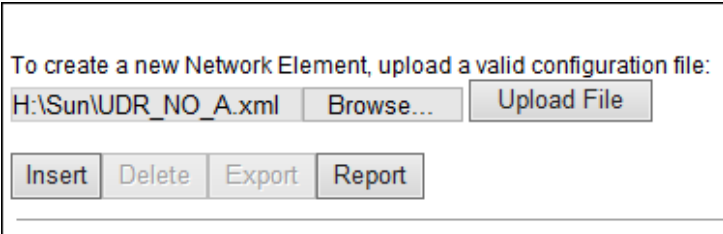
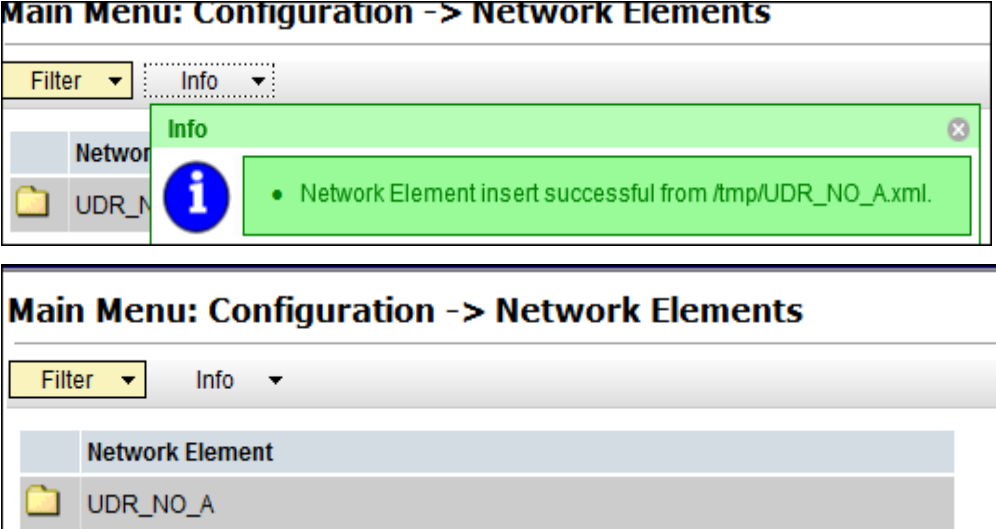
Procedure 10: Configuring NOAMP-A Server (1stNOAMPsite only)

Step	Procedure	Result
<p>1.</p> <p><input type="checkbox"/></p>	<p>NOAMPServer A:</p> <p>Launch an approved web browser and connect to the NOAMPServer A IP address</p> <p>NOTE: If presented with the “security certificate” warning screen shown to the right, choose the following option: “Continue to this website (not recommended)”.</p>	
<p>2.</p> <p><input type="checkbox"/></p>	<p>NOAMPServer A:</p> <p>The user should be presented the login screen shown on the right.</p> <p>Login to the GUI using the default user and password.</p>	

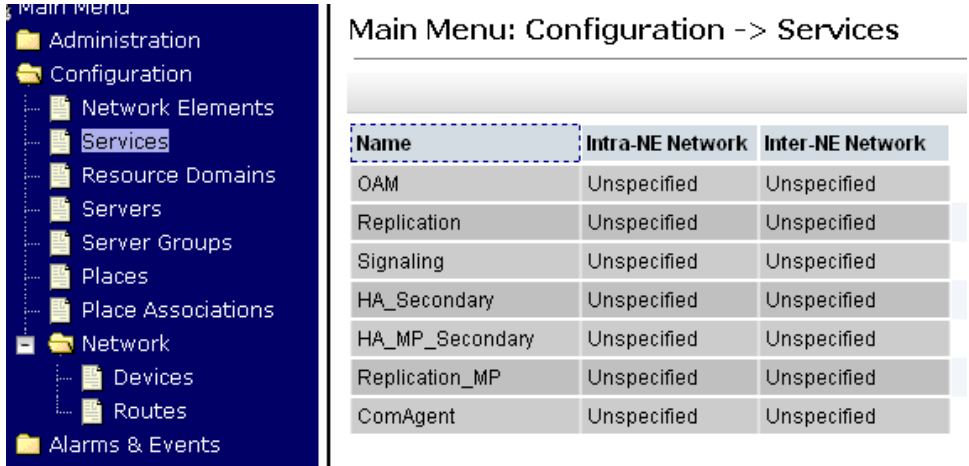
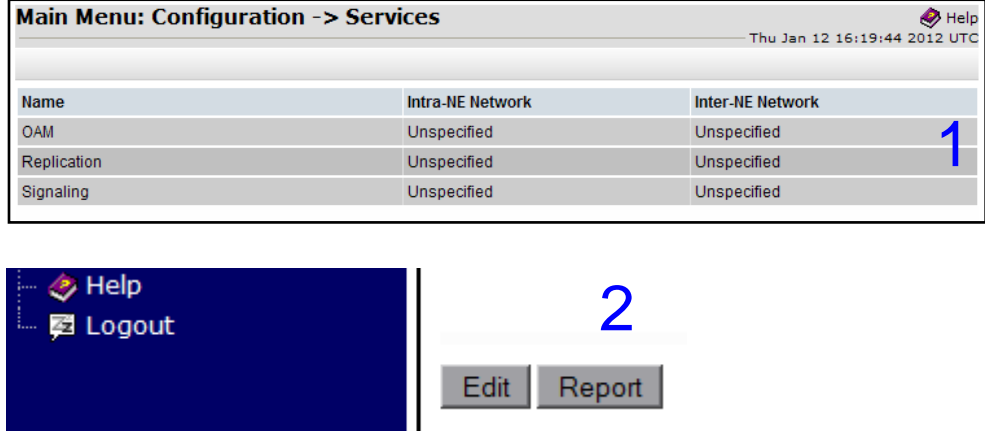
Procedure 10: Configuring NOAMP-A Server (1stNOAMPsite only)

Step	Procedure	Result
<p>3.</p> <p><input type="checkbox"/></p>	<p>NOAMP Server A:</p> <p>The user should be presented the UDR Main Menu as shown on the right.</p>	
<p>4.</p> <p><input type="checkbox"/></p>	<p>NOAMP Server A:</p> <p><i>Configuring Network Element</i></p> <p>Select...</p> <p>Main Menu → Configuration → Network Elements</p> <p>...as shown on the right.</p>	
<p>5.</p> <p><input type="checkbox"/></p>	<p>NOAMP Server A:</p> <p>From the Configuration / Network Elements screen...</p> <p>Select the “Browse” dialogue button (scroll to bottom left corner of screen).</p>	

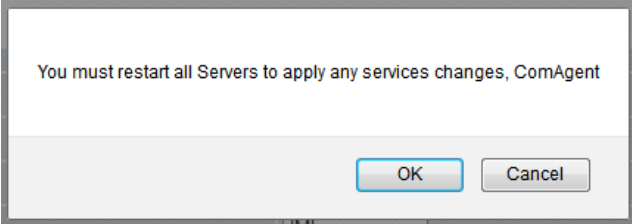

Procedure 10: Configuring NOAMP-A Server (1stNOAMPsite only)

Step	Procedure	Result
<p>6.</p> <p><input type="checkbox"/></p>	<p>NOAMP Server A:</p> <p>Note: This step assumes that the xml files were previously prepared, as described in Appendix N.</p> <p>1) Select the location containing the site .xml file.</p> <p>2) Select the .xml file and click the “Open” dialogue button.</p>	
<p>7.</p> <p><input type="checkbox"/></p>	<p>NOAMP Server A:</p> <p>Select the “Upload File” dialogue button (bottom left corner of screen).</p>	
<p>8.</p> <p><input type="checkbox"/></p>	<p>NOAMP Server A:</p> <p>If the values in the .xml file pass validation rules, the user receives a banner information message showing that the data has been successfully committed to the DB.</p> <p>Note: You may have to left mouse click the “Info” banner option in order to see the banner output.</p>	

Procedure 10: Configuring NOAMP-A Server (1stNOAMPsite only)

Step	Procedure	Result																								
<p>9.</p> <p><input type="checkbox"/></p>	<p>Select...</p> <p>Main Menu → Configuration → Services</p> <p>...as shown on the right.</p>	 <p>Main Menu: Configuration -> Services</p> <table border="1"> <thead> <tr> <th>Name</th> <th>Intra-NE Network</th> <th>Inter-NE Network</th> </tr> </thead> <tbody> <tr> <td>OAM</td> <td>Unspecified</td> <td>Unspecified</td> </tr> <tr> <td>Replication</td> <td>Unspecified</td> <td>Unspecified</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>Unspecified</td> <td>Unspecified</td> </tr> <tr> <td>ComAgent</td> <td>Unspecified</td> <td>Unspecified</td> </tr> </tbody> </table>	Name	Intra-NE Network	Inter-NE Network	OAM	Unspecified	Unspecified	Replication	Unspecified	Unspecified	Signaling	Unspecified	Unspecified	HA_Secondary	Unspecified	Unspecified	HA_MP_Secondary	Unspecified	Unspecified	Replication_MP	Unspecified	Unspecified	ComAgent	Unspecified	Unspecified
Name	Intra-NE Network	Inter-NE Network																								
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Replication_MP	Unspecified	Unspecified																								
ComAgent	Unspecified	Unspecified																								
<p>10.</p> <p><input type="checkbox"/></p>	<p>NOAMP Server A:</p> <p>1)The user will be presented with the “Services” configuration screen as shown on the right.</p> <p>2)Select the “Edit” dialogue button.</p>	 <p>Main Menu: Configuration -> Services</p> <p>Thu Jan 12 16:19:44 2012 UTC</p> <table border="1"> <thead> <tr> <th>Name</th> <th>Intra-NE Network</th> <th>Inter-NE Network</th> </tr> </thead> <tbody> <tr> <td>OAM</td> <td>Unspecified</td> <td>Unspecified</td> </tr> <tr> <td>Replication</td> <td>Unspecified</td> <td>Unspecified</td> </tr> <tr> <td>Signaling</td> <td>Unspecified</td> <td>Unspecified</td> </tr> </tbody> </table> <p>1</p> <p>2</p> <p>Edit Report</p>	Name	Intra-NE Network	Inter-NE Network	OAM	Unspecified	Unspecified	Replication	Unspecified	Unspecified	Signaling	Unspecified	Unspecified												
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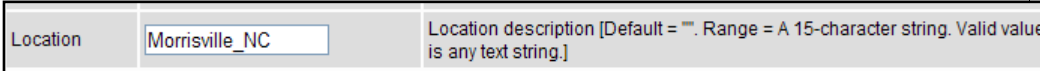
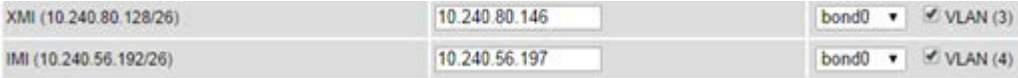
Procedure 10: Configuring NOAMP-A Server (1stNOAMPsite only)

Step	Procedure	Result																								
11. <input type="checkbox"/>	<p>NOAMP Server A:</p> <p>1)Set the services values as shown on the right.</p> <p>2)Select the “Apply” dialogue button.</p> <p>3)Select the “OK” dialogue button in the popup window.</p>	<p>Services</p> <table border="1"> <thead> <tr> <th>Name</th> <th>Intra-NE Network</th> <th>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>IMI</td> <td>XMI</td> </tr> <tr> <td>HA_MP_Secondary</td> <td>IMI</td> <td>XMI</td> </tr> <tr> <td>Replication_MP</td> <td>IMI</td> <td>XMI</td> </tr> <tr> <td>ComAgent</td> <td>IMI</td> <td>XMI</td> </tr> </tbody> </table> <p>Ok Apply Cancel</p>  <p>Note: Servers do not need to be restarted if this is a fresh installation.</p> <p>Note: ComAgent Service shall be configured to run on Signaling Network. Please configure as shown above and continue.ComAgent Service shall be configured again later as described in Section 8.11 Configure Services on Signaling Network.</p> <p>Note: ComAgent Service is used for NOAMP ↔ MP and MP ↔ MP communication.</p>	Name	Intra-NE Network	Inter-NE Network	OAM	IMI	XMI	Replication	IMI	XMI	Signaling	Unspecified	Unspecified	HA_Secondary	IMI	XMI	HA_MP_Secondary	IMI	XMI	Replication_MP	IMI	XMI	ComAgent	IMI	XMI
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12. <input type="checkbox"/>	<p>NOAMP Server A:</p> <p>The user will be presented with the “Services” configuration screen as shown on the right</p>	<table border="1"> <thead> <tr> <th>Name</th> <th>Intra-NE Network</th> <th>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>IMI</td> <td>XMI</td> </tr> <tr> <td>HA_MP_Secondary</td> <td>IMI</td> <td>XMI</td> </tr> <tr> <td>Replication_MP</td> <td>IMI</td> <td>XMI</td> </tr> <tr> <td>ComAgent</td> <td>IMI</td> <td>XMI</td> </tr> </tbody> </table>	Name	Intra-NE Network	Inter-NE Network	OAM	IMI	XMI	Replication	IMI	XMI	Signaling	Unspecified	Unspecified	HA_Secondary	IMI	XMI	HA_MP_Secondary	IMI	XMI	Replication_MP	IMI	XMI	ComAgent	IMI	XMI
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13. <input type="checkbox"/>	<p>NOAMP Server A:</p> <p>Configuring UDR Server</p> <p>Select...</p> <p>Main Menu → Configuration → Servers</p> <p>...as shown on the right.</p>																									

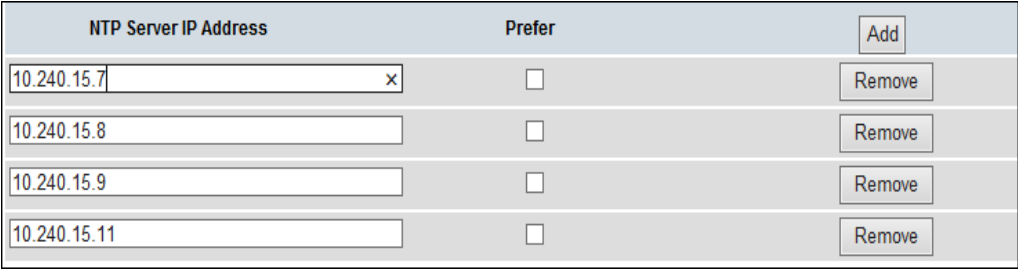
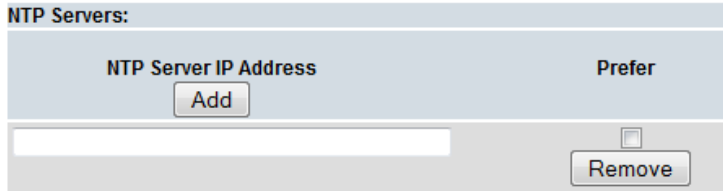
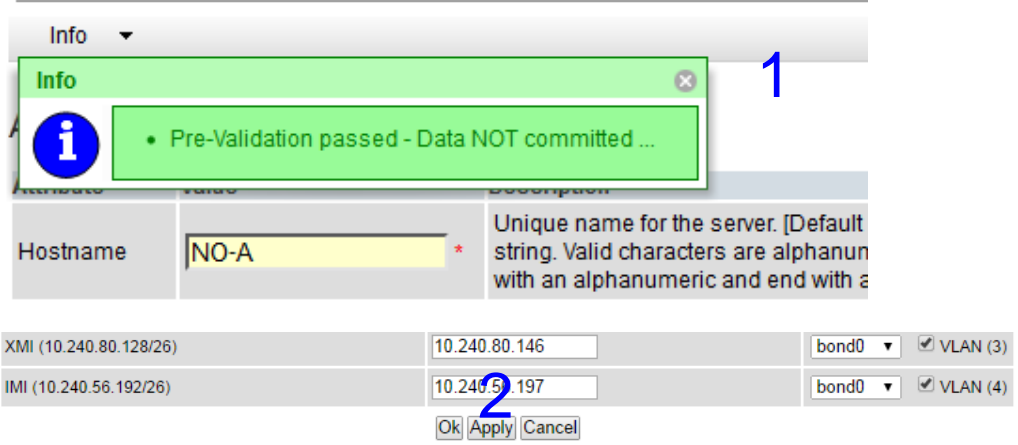
Procedure 10: Configuring NOAMP-A Server (1stNOAMPsite only)

Step	Procedure	Result
14. <input type="checkbox"/>	NOAMP Server A: Select the “Insert” dialogue button.	
15. <input type="checkbox"/>	NOAMP Server A: The user is now presented with the “Adding a new server” configuration screen.	
16. <input type="checkbox"/>	NOAMP Server A: Input the assigned “hostname” for the NOAMP-A Server.	
17. <input type="checkbox"/>	NOAMP Server A: Select “NETWORK OAM&P” for the server “Role” from the pull-down menu.	
18. <input type="checkbox"/>	NOAMP Server A: Input the “System ID” for the NOAMP Server.	
19. <input type="checkbox"/>	NOAMP Server A: Select the correct Hardware Profile from the pull-down menu.	<p>Select Hardware Profile:</p> <ul style="list-style-type: none"> • UDR DL380for RMS installations • BL 460 c-Class Blade for blade installations • UDR_NO_Low_Capacity for Virtual NO server installations • UDR SO for SO virtual server installations (not used in this procedure) • UDR MP for MP virtual server installations (not used in this procedure)

Procedure 10: Configuring NOAMP-A Server (1stNOAMPsite only)

Step	Procedure	Result												
<p>20.</p> <input type="checkbox"/>	<p>NOAMP Server A:</p> <p>Select the Network Element Name from the pull-down menu.</p> <p>NOTE:After the Network Element Name is selected, the Interfaces fields will be displayed.</p>	 <p>The screenshot shows a form field for 'Network Element Name' with a dropdown menu containing 'NO_UDR_VM' and a red asterisk. To the right, there is a label 'Select the network element'.</p>												
<p>21.</p> <input type="checkbox"/>	<p>NOAMP Server A:</p> <p>Enter the site location.</p> <p>NOTE:Location is an optional field.</p>	 <p>The screenshot shows a 'Location' field with the value 'Morrisville_NC' and a 'Location description' field with a placeholder text: 'Location description [Default = ". Range = A 15-character string. Valid value is any text string.]'.</p>												
<p>22.</p> <input type="checkbox"/>	<p>NOAMP Server A:</p> <p>1) Enter the XMI and IMI IP addresses for the UDR Server.</p> <p>2) Set XMI and IMI interfaces according to deployment type.</p>	<p>Normal Capacity Configuration:</p> <p>Set XMI and IMI Interfaces according to bond0. Check VLAN boxes.</p>  <p>The screenshot shows two rows of configuration for XMI and IMI. XMI (10.240.80.128/26) has IP 10.240.80.146 and is on bond0 with VLAN (3) checked. IMI (10.240.56.192/26) has IP 10.240.56.197 and is on bond0 with VLAN (4) checked.</p> <p>Low Capacity Configuration:</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>XMI (10.240.15.0/26)</td> <td>10.240.15.42</td> <td>xmi <input type="checkbox"/> VLAN (3)</td> </tr> <tr> <td>IMI (192.168.45.0/26)</td> <td>192.168.45.8</td> <td>imi <input type="checkbox"/> VLAN (405)</td> </tr> </tbody> </table> <p>Virtual NO on Low Capacity Configurations: set XMI to "xmi", IMI to "imi". VLAN boxes are not checked in this case.</p>	Interfaces:			Network	IP Address	Interface	XMI (10.240.15.0/26)	10.240.15.42	xmi <input type="checkbox"/> VLAN (3)	IMI (192.168.45.0/26)	192.168.45.8	imi <input type="checkbox"/> VLAN (405)
Interfaces:														
Network	IP Address	Interface												
XMI (10.240.15.0/26)	10.240.15.42	xmi <input type="checkbox"/> VLAN (3)												
IMI (192.168.45.0/26)	192.168.45.8	imi <input type="checkbox"/> VLAN (405)												

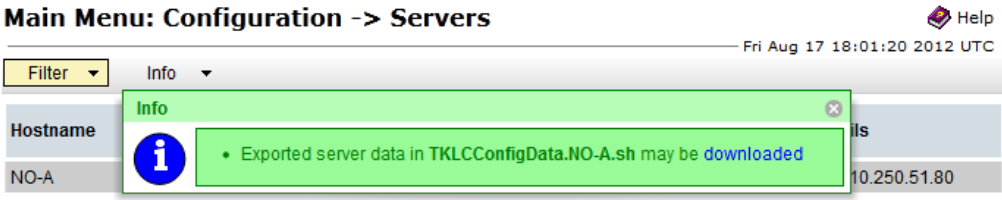
Procedure 10: Configuring NOAMP-A Server (1stNOAMPsite only)

Step	Procedure	Result																			
<p>23.</p> <p><input type="checkbox"/></p>	<p>NOAMP Server A:</p> <p>Click the “Add” button under NTP Servers and add the address of the customer supplied NTP server.</p>	 <table border="1"> <thead> <tr> <th>NTP Server IP Address</th> <th>Prefer</th> <th></th> </tr> </thead> <tbody> <tr> <td>10.240.15.7</td> <td><input type="checkbox"/></td> <td><input type="button" value="Remove"/></td> </tr> <tr> <td>10.240.15.8</td> <td><input type="checkbox"/></td> <td><input type="button" value="Remove"/></td> </tr> <tr> <td>10.240.15.9</td> <td><input type="checkbox"/></td> <td><input type="button" value="Remove"/></td> </tr> <tr> <td>10.240.15.11</td> <td><input type="checkbox"/></td> <td><input type="button" value="Remove"/></td> </tr> </tbody> </table> <p>Set one ore more NTP Server IP Address(es) to customer supplied NTP server(s). It is recommended to have minimum of 3 and up to 4 external NTP servers for reliable functioning of NTP service.</p>  <p>NTP Servers:</p> <table border="1"> <thead> <tr> <th>NTP Server IP Address</th> <th>Prefer</th> </tr> </thead> <tbody> <tr> <td><input type="text"/></td> <td><input type="checkbox"/></td> </tr> </tbody> </table> <p><input type="button" value="Add"/> <input type="button" value="Remove"/></p> <p>Note: In case of NOAMP virtual server: Set the NTP Server IP Address to the host server, given as “<TVOE_XMI_address>”.</p>	NTP Server IP Address	Prefer		10.240.15.7	<input type="checkbox"/>	<input type="button" value="Remove"/>	10.240.15.8	<input type="checkbox"/>	<input type="button" value="Remove"/>	10.240.15.9	<input type="checkbox"/>	<input type="button" value="Remove"/>	10.240.15.11	<input type="checkbox"/>	<input type="button" value="Remove"/>	NTP Server IP Address	Prefer	<input type="text"/>	<input type="checkbox"/>
NTP Server IP Address	Prefer																				
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10.240.15.9	<input type="checkbox"/>	<input type="button" value="Remove"/>																			
10.240.15.11	<input type="checkbox"/>	<input type="button" value="Remove"/>																			
NTP Server IP Address	Prefer																				
<input type="text"/>	<input type="checkbox"/>																				
<p>24.</p> <p><input type="checkbox"/></p>	<p>NOAMP Server A:</p> <p>1) The user should be presented with a banner information message stating “Pre-Validation passed”.</p> <p>2) Click the “Apply” dialogue button.</p>	<p>Main Menu: Configuration -> Servers [Insert]</p>  <p>Info</p> <p>Info • Pre-Validation passed - Data NOT committed ...</p> <p>Hostname: NO-A</p> <p>XMI (10.240.80.128/26): 10.240.80.146 bond0 [x] VLAN (3)</p> <p>IMI (10.240.56.192/26): 10.240.56.197 bond0 [x] VLAN (4)</p> <p><input type="button" value="Ok"/> <input type="button" value="Apply"/> <input type="button" value="Cancel"/></p>																			

Procedure 10: Configuring NOAMP-A Server (1stNOAMPsite only)

Step	Procedure	Result																
25. <input type="checkbox"/>	<p>NOAMP Server A:</p> <p>If the values provided match the network ranges assigned to the NOAMP NE, the user will receive a banner information message showing that the data has been validated and committed to the DB.</p>																	
26. <input type="checkbox"/>	<p>NOAMP Server A:</p> <p>Applying the UDR Server Configuration File</p> <p>Select...</p> <p>Main Menu → Configuration → Servers</p> <p>...as shown on the right.</p>	<table border="1"> <thead> <tr> <th>Hostname</th> <th>Role</th> <th>System ID</th> <th>Server Group</th> </tr> </thead> <tbody> <tr> <td>NO-A</td> <td>Network OAM&P</td> <td>NOAMP</td> <td></td> </tr> </tbody> </table>	Hostname	Role	System ID	Server Group	NO-A	Network OAM&P	NOAMP									
Hostname	Role	System ID	Server Group															
NO-A	Network OAM&P	NOAMP																
27. <input type="checkbox"/>	<p>NOAMP Server A:</p> <p>The “Configuration → Servers” screen should now show the newly added UDR Server in the list.</p>	<table border="1"> <thead> <tr> <th>Hostname</th> <th>Role</th> <th>System ID</th> <th>Server Group</th> <th>Network Element</th> <th>Location</th> <th>Place</th> <th>Details</th> </tr> </thead> <tbody> <tr> <td>NO-A</td> <td>Network OAM&P</td> <td>NOAMP</td> <td></td> <td>NO_UDR_VM</td> <td></td> <td></td> <td>XMI: 10.240.15.41 IMI: 192.168.45.4</td> </tr> </tbody> </table>	Hostname	Role	System ID	Server Group	Network Element	Location	Place	Details	NO-A	Network OAM&P	NOAMP		NO_UDR_VM			XMI: 10.240.15.41 IMI: 192.168.45.4
Hostname	Role	System ID	Server Group	Network Element	Location	Place	Details											
NO-A	Network OAM&P	NOAMP		NO_UDR_VM			XMI: 10.240.15.41 IMI: 192.168.45.4											
28. <input type="checkbox"/>	<p>NOAMP Server A:</p> <p>1) Use the cursor to select the UDR Server entry added in Steps 14 - 25.</p> <p>The row containing the desired Server should now be highlighted in GREEN.</p> <p>2) Select the “Export” dialogue button.</p>	<table border="1"> <thead> <tr> <th>Hostname</th> <th>Role</th> <th>System ID</th> <th>Server Group</th> <th>Network Element</th> <th>Location</th> <th>Place</th> <th>Details</th> </tr> </thead> <tbody> <tr> <td>NO-A</td> <td>Network OAM&P</td> <td>NOAMP</td> <td></td> <td>NO_UDR_VM</td> <td></td> <td></td> <td>XMI: 10.240.15.41 IMI: 192.168.45.4</td> </tr> </tbody> </table> <p>Insert Edit Delete Export Report</p>	Hostname	Role	System ID	Server Group	Network Element	Location	Place	Details	NO-A	Network OAM&P	NOAMP		NO_UDR_VM			XMI: 10.240.15.41 IMI: 192.168.45.4
Hostname	Role	System ID	Server Group	Network Element	Location	Place	Details											
NO-A	Network OAM&P	NOAMP		NO_UDR_VM			XMI: 10.240.15.41 IMI: 192.168.45.4											

Procedure 10: Configuring NOAMP-A Server (1stNOAMPsite only)

Step	Procedure	Result
<p>29.</p> <input type="checkbox"/>	<p>NOAMP Server A:</p> <p>The user will receive a banner information message showing a download link for the UDR Server configuration data.</p>	 <p>The configuration file was created and stored in the /var/TKLC/db/filemgmt directory. The configuration file will have a file name like TKLCConfigData.<hostname>.sh.</p>
<p>30.</p> <input type="checkbox"/>	<p>NOAMP Server A:</p> <p>1) Access the command prompt.</p> <p>2) Log into the NOAMP-A server as the “admusr” user.</p>	<pre>login as: admusr root@10.250.xx.yy's password:<admusr_password> Last login: Mon Jul 30 10:33:19 2012 from 10.250.80.199 [root@pc9040833-no-a ~]#</pre>
<p>31.</p> <input type="checkbox"/>	<p>NOAMP Server A:</p> <p>Output similar to that shown on the right will appear as the server access the command prompt.</p>	<pre>*** TRUNCATED OUTPUT *** VPATH=/opt/TKLCcomcol/runcm5.16:/opt/TKLCcomcol/cm5.16 PRODPATH= RELEASE=5.16 RUNID=00 VPATH=/var/TKLC/rundb:/usr/TKLC/appworks:/usr/TKLC/awpcommon:/usr/TKLC/awptransportmgr:/usr/TKLC/awpss7:/usr/TKLC/exhr PRODPATH=/opt/comcol/prod RUNID=00 [admusr@pc9040833-no-a ~]#</pre>
<p>32.</p> <input type="checkbox"/>	<p>NOAMP Server A:</p> <p>Switch to “root” user.</p>	<pre>[admusr@ pc9040833-no-a ~]\$ su - password: <root_password></pre>


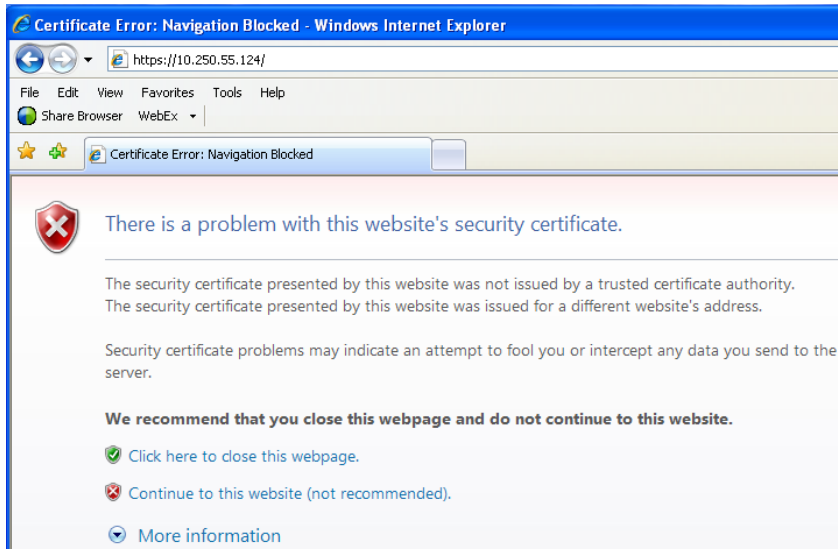
Procedure 10: Configuring NOAMP-A Server (1stNOAMPsite only)

Step	Procedure	Result
<p>33.</p> <input type="checkbox"/>	<p>NOAMP Server A:</p> <p>Copy the server configuration file to the “/var/tmp” directory on the server, making sure to rename the file by omitting the server hostname from the file name.</p> <p>NOTE: <i>The server will poll the /var/tmp directory for the presence of the configuration file and automatically execute it when found.</i></p>	<p>Example:</p> <p>TKLCConfigData<.server_hostname>.sh → will translate to →TKLCConfigData.sh</p> <pre># cp -p /var/TKLC/db/filemgmt/TKLCConfigData.NO-A.sh /var/tmp/TKLCConfigData.sh</pre>
<p>34.</p> <input type="checkbox"/>	<p>NOAMP Server A:</p> <p>After the script completes, a broadcast message will be sent to the terminal.</p> <p>Ignore the output shown and press the <ENTER> key to return to the command prompt.</p> <p>NOTE: <i>The user should be aware that the time to complete this step varies by server and may take from 3-20 minutes to complete.</i></p>	<p>*** NO OUTPUT FOR ≈ 3-20 MINUTES ***</p> <p>Broadcast message from root (Thu Dec 1 09:41:24 2011):</p> <p>Server configuration completed successfully!</p> <p>See /var/TKLC/appw/logs/Process/install.log for details.</p> <p>Please remove the USB flash drive if connected and reboot the server.</p> <p><ENTER></p>
<p>35.</p> <input type="checkbox"/>	<p>NOAMP Server A:</p> <p>Configure the time zone.</p>	<pre># set_ini_tz.pl <time zone></pre> <p>Note: The following command example uses America/New_York time zone. Replace, as appropriate, with the time zone you have selected for this installation. For UTC, use “Etc/UTC”. See Appendix P for a list of valid time zones.</p> <pre># set_ini_tz.pl "America/New_York"</pre>
<p>36.</p> <input type="checkbox"/>	<p>NOAMP Server A:</p> <p>Initiate a reboot of the NOAMP Server.</p>	<pre># init 6</pre>


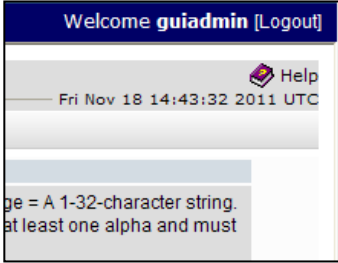
Procedure 10: Configuring NOAMP-A Server (1stNOAMPsite only)

Step	Procedure	Result
<p>37.</p> <input type="checkbox"/>	<p>NOAMP Server A:</p> <p>Wait until server reboot is done. Then, SSH into the NOAMP-A server.</p> <p>Output similar to that shown on the right may be observed</p>	<p>Wait about 9 minutes until the server reboot is done.</p> <p>Using an SSH client such as putty, ssh to the NOAMP-A server.</p> <pre>login as: admusr root@10.250.xx.yy's password:<admusr_password> Last login: Mon Jul 30 10:33:19 2012 from 10.250.80.199</pre> <p>Note: If the server isn't up, wait a few minutes and re-enter the <code>ssh</code> command. You can also try running the <code>ping</code> command to see if the server is up.</p>
<p>38.</p> <input type="checkbox"/>	<p>NOAMP Server A:</p> <p>Output similar to that shown on the right will appear as the server access the command prompt.</p>	<p>*** TRUNCATED OUTPUT ***</p> <pre>VPATH=/opt/TKLCcomcol/runcm5.16:/opt/TKLCcomcol/cm5.16 PRODPATH= RELEASE=5.16 RUNID=00 VPATH=/var/TKLC/rundb:/usr/TKLC/appworks:/usr/TKLC/awpcommon:/usr/TKLC/awptransportmgr:/usr/TKLC/awps7:/usr/TKLC/exhr PRODPATH=/opt/comcol/prod RUNID=00 [admusr@pc9040833-no-a ~]\$</pre>
<p>39.</p> <input type="checkbox"/>	<p>NOAMP Server A:</p> <p>Switch to "root" user.</p>	<pre>[admusr@ pc9040833-no-a ~]\$ su - password: <root_password></pre>
<p>40.</p> <input type="checkbox"/>	<p>NOAMP Server A:</p> <p>Verify that the XMI and IMI IP addresses entered in Step 22 have been applied</p> <p>NOTE: The server's XMI and IMI addresses can be verified by reviewing the server configuration through the UDR GUI.</p> <p>i.e.</p> <p>Main Menu → Configuration → Servers</p> <p>Scroll to line entry containing the server's hostname.</p>	<pre># ifconfig grep in grep -v inet6</pre> <p>Example with bond:</p> <pre>bond0.3 Link encap:Ethernet HWaddr F0:92:1C:18:59:10 inet addr:10.250.80.146 Bcast:10.250.80.191 Mask:255.255.255.192 bond0.4 Link encap:Ethernet HWaddr F0:92:1C:18:59:10 inet addr:10.250.56.197 Bcast:10.250.56.255 Mask:255.255.255.192</pre> <p>Example with xmi/imi</p> <pre>[root@NO-A ~]# ifconfig grep in grep -v inet6 control Link encap:Ethernet HWaddr 02:0C:D1:66:ED:15 inet addr:192.168.1.10 Bcast:192.168.1.255 Mask:255.255.255.0 imi Link encap:Ethernet HWaddr 02:DA:46:3E:98:4F inet addr:192.168.45.4 Bcast:192.168.45.63 Mask:255.255.255.192 lo Link encap:Local Loopback inet addr:127.0.0.1 Mask:255.0.0.0 xmi Link encap:Ethernet HWaddr 02:D0:D0:AA:EF:A1 inet addr:10.240.15.41 Bcast:10.240.15.63 Mask:255.255.255.192</pre>

Procedure 10: Configuring NOAMP-A Server (1stNOAMPsite only)

Step	Procedure	Result
41. <input type="checkbox"/>	<p>NOAMP Server A:</p> <p>Use the “ntpq” command to verify that the server has connectivity to the assigned Primary (and Secondary if one was provided) NTP server(s).</p>	<pre># ntpq -np remote refid st t when poll reach delay offset jitter ===== *10.250.32.10 192.5.41.209 2 u 651 1024 377 0.339 0.583 0.048 +10.250.32.51 192.5.41.209 2 u 656 1024 377 0.416 0.641 0.086</pre>
<div style="display: flex; align-items: center;">  <p>IF CONNECTIVITY TO THE NTP SERVER(S) CANNOT BE ESTABLISHED, STOP AND EXECUTE THE FOLLOWING STEPS:</p> <ul style="list-style-type: none"> Have the customer IT group provide a network path from the OAM server IP to the assigned NTP IP addresses. <p>ONCE NETWORK CONNECTIVITY IS ESTABLISHED TO THE ASSIGNED NTP IP ADDRESSES, THEN RESTART THIS PROCEDURE BEGINNING WITH STEP 36.</p> </div>		
42. <input type="checkbox"/>	<p>NOAMP Server A:</p> <p>Execute a “alarmMgr” to verify the current health of the server</p>	<pre># alarmMgr --alarmStatus</pre> <p>NOTE: This command should return no output on a healthy system.</p>
43. <input type="checkbox"/>	<p>NOAMP Server A:</p> <p>Exit the SSH session for the NOAMP-A server</p>	<pre># exit</pre>
44. <input type="checkbox"/>	<p>NOAMP Server A:</p> <p>Verify that you can log back into the GUI.</p> <p>Launch an approved web browser and connect to the NOAMP Server A IP address.</p> <p>NOTE: If presented with the “security certificate” warning screen shown to the right, choose the following option:</p> <p>“Continue to this website (not recommended)”.</p>	

Procedure 10: Configuring NOAMP-A Server (1stNOAMPsite only)

Step	Procedure	Result
<p>45.</p> <p><input type="checkbox"/></p>	<p>NOAMP Server A:</p> <p>The user should be presented the login screen shown on the right.</p> <p>Login to the GUI using the default user and password.</p>	
<p>46.</p> <p><input type="checkbox"/></p>	<p>NOAMP Server A:</p> <p>Click the “Logout” link on the server GUI..</p>	
<p>THIS PROCEDURE HAS BEEN COMPLETED</p>		

8.2 Create Configuration for Remaining Servers (All Sites)

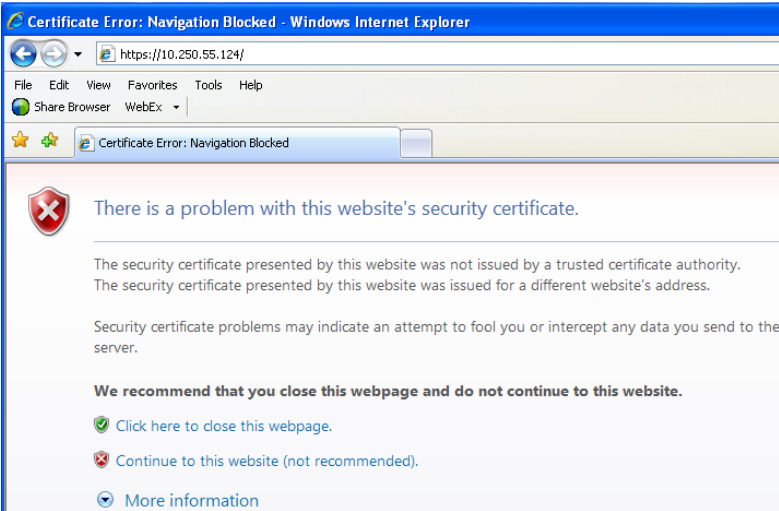
This procedure is used to create and configure all UDR Servers (Primary and DR Servers) except the first NOAMP-A server.

Requirements:


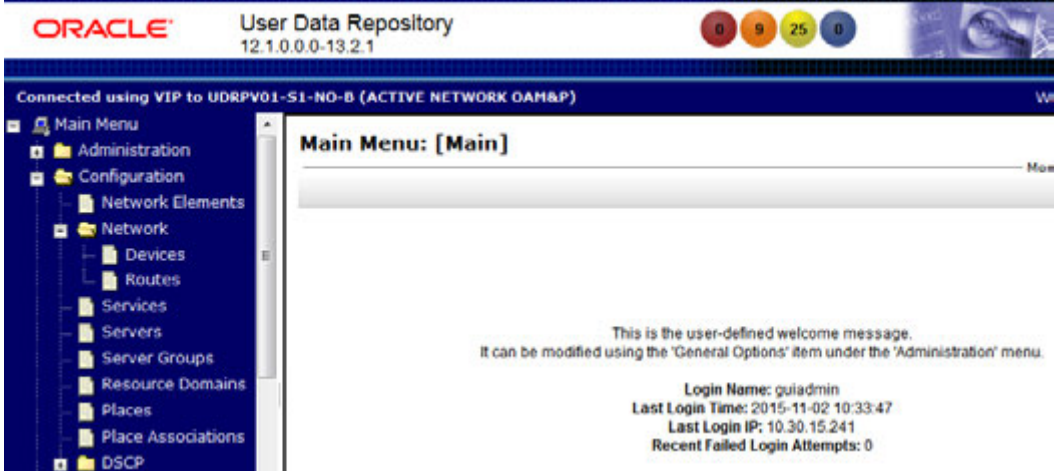
- **Procedure 3: Create, IPM and InstallApplication on all Virtual Machines (SO Network Elements)**
- **or Procedure 5: Create, IPM and Install Application on all Virtual Machines**
- **or Procedure 7: Create, IPM and Install Application on all Virtual Machines**
- **or Procedure 9: Create, IPM and Install Application on all Virtual Machines** has been completed on all servers being configured by this procedure
- **Procedure 10: Configuring NOAMP-A Server (1stNOAMPsite only)** has been completed

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

Procedure 11: Create Configuration for Remaining Servers

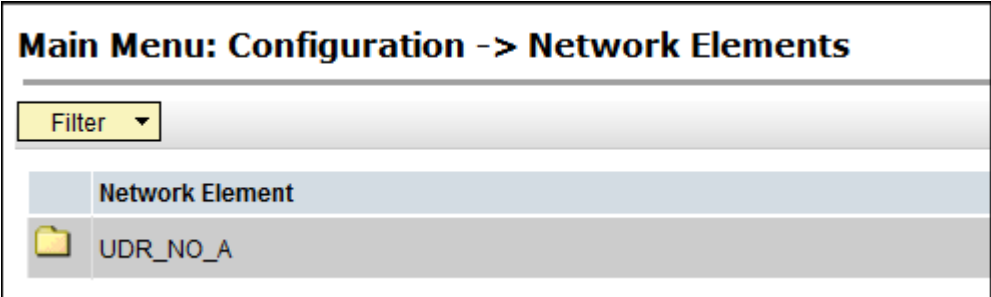
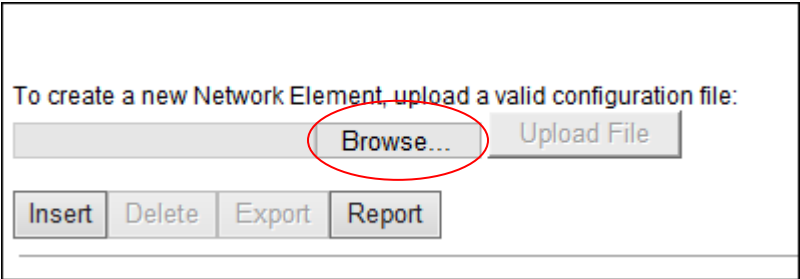
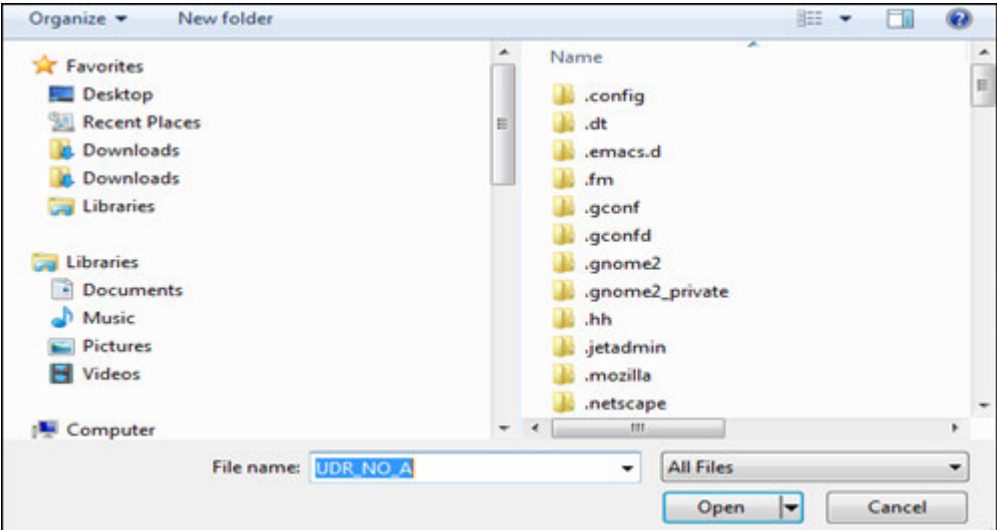
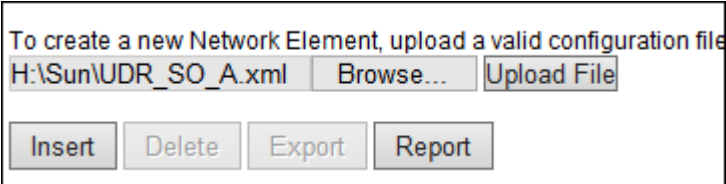
Step	Procedure	Result
<p>1.</p> <input type="checkbox"/>	<p>NOAMP Server A:</p> <p>Launch an approved web browser and connect to the NOAMP Server A IP address</p> <p>NOTE: If presented with the security warning screen shown to the right, choose the following option: “Proceed to xxx.xx.xx.xx (unsafe)”.</p>	

Procedure 11: Create Configuration for Remaining Servers

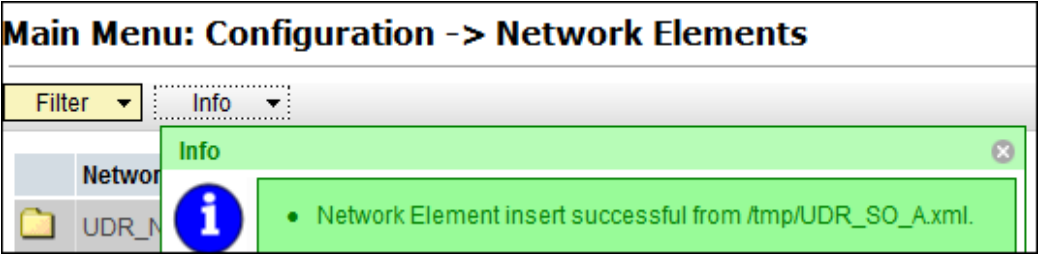
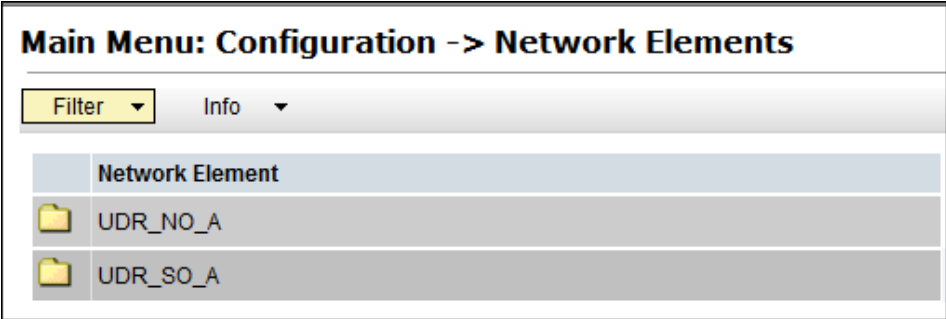
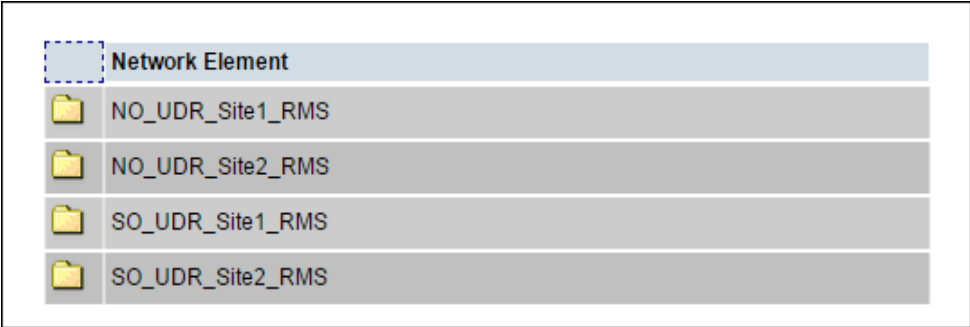
Step	Procedure	Result
<p>2.</p> <p><input type="checkbox"/></p>	<p>NOAMP Server A:</p> <p>The user should be presented the login screen shown on the right.</p> <p>Login to the GUI using the default user and password.</p>	
<p>3.</p> <p><input type="checkbox"/></p>	<p>NOAMP Server A:</p> <p>The user should be presented the UDR Main Menu as shown on the right.</p>	

For steps 4 – 8 add the remaining Network Elements one at a time. This includes the SO network Element for the Primary site and the DR elements (NO and SO) if present. (DR elements can be uploaded during DR install)

Procedure 11: Create Configuration for Remaining Servers

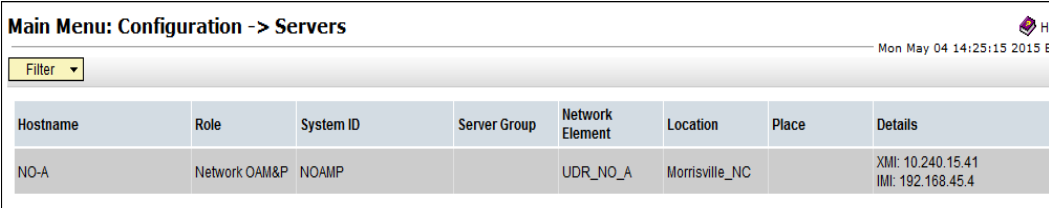
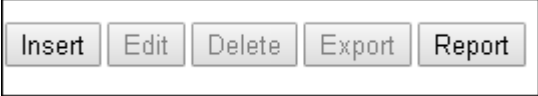
Step	Procedure	Result
<p>4.</p> <input type="checkbox"/>	<p>NOAMP Server A: <i>Configuring Network Element</i></p> <p>Select...</p> <p><u>Main Menu</u> → Configuration → Network Elements</p> <p>...as shown on the right.</p>	
<p>5.</p> <input type="checkbox"/>	<p>NOAMP Server A:</p> <p>From the Configuration / Network Elements screen...</p> <p>Select the “Browse” dialogue button (scroll to bottom left corner of screen).</p>	
<p>6.</p> <input type="checkbox"/>	<p>NOAMP Server A:</p> <p>Note: This step assumes that the xml files were previously prepared, as described in Appendix N.</p> <p>1) Select the location containing the site .xml file.</p> <p>2) Select the .xml file and click the “Open” dialogue button.</p>	
<p>7.</p> <input type="checkbox"/>	<p>NOAMP Server A:</p> <p>Select the “UploadFile” dialogue button (bottom left corner of screen).</p>	

Procedure 11: Create Configuration for Remaining Servers

Step	Procedure	Result
<p>8.</p> <p><input type="checkbox"/></p>	<p>NOAMP Server A:</p> <p>If the values in the .xml file pass validation rules, the user receives a banner information message showing that the data has been successfully committed to the DB.</p> <p>Note: You may have to left mouse click the "Info" banner option in order to see the banner output.</p>	  <p>Example with DR elements:</p> 

Note: The following steps need to run for all servers EXCEPT the first NOAMP-A server. These steps include a check box for NOAMP-A server. That check box is only referring to NOAMP-A servers that are not at the primary provisioning site, such as the NOAMP-A server at the Disaster Recovery (DR) site.

Procedure 11: Create Configuration for Remaining Servers

Step	Procedure	Result
<p>9.</p> <input type="checkbox"/>	<p>NOAMP Server A: Select...</p> <p><u>Main Menu</u> → Configuration → Servers</p> <p>...as shown on the right.</p>	 <p>• “Check off” the associated Check Box as addition is completed for each Server.</p> <p><input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B</p> <p><input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4</p> <p><input type="checkbox"/> MP-5 (Gen-9 normal capacity):</p> <p><input type="checkbox"/> MP-6 (Gen-9 normal capacity):</p>
<p>10.</p> <input type="checkbox"/>	<p>NOAMP Server A: Select the “Insert” dialogue button at the bottom left.</p>	 <p>• “Check off” the associated Check Box as addition is completed for each Server.</p> <p><input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B</p> <p><input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4</p> <p><input type="checkbox"/> MP-5 (Gen-9 normal capacity):</p> <p><input type="checkbox"/> MP-6 (Gen-9 normal capacity):</p>

Procedure 11: Create Configuration for Remaining Servers

Step	Procedure	Result																					
<p>11.</p> <p><input type="checkbox"/></p>	<p>NOAMP Server A:</p> <p>The user is now presented with the “Adding a new server” configuration screen.</p>	<p>Main Menu: Configuration -> Servers [Insert]</p> <p style="text-align: right;">Tue Oct 14 16:07:40 2</p> <hr/> <p>Adding a new server</p> <table border="1"> <thead> <tr> <th>Attribute</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Hostname</td> <td><input type="text"/></td> <td>Unique name for the server. [Default = n/a. Range = A 20-character string. Valid characters are alphanumeric and minus sign. Must start with an alphanumeric and end with an alphanumeric.]</td> </tr> <tr> <td>Role</td> <td>- Select Role -</td> <td>Select the function of the server</td> </tr> <tr> <td>System ID</td> <td><input type="text"/></td> <td>System ID for the NOAMP or SOAM server. [Default = n/a. Range = A 64-character string. Valid value is any text string.]</td> </tr> <tr> <td>Hardware Profile</td> <td>UDR SO</td> <td>Hardware profile of the server</td> </tr> <tr> <td>Network Element Name</td> <td>- Unassigned -</td> <td>Select the network element</td> </tr> <tr> <td>Location</td> <td><input type="text"/></td> <td>Location description [Default = "" Range = A 15-character string. Valid value is any text string.]</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> <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Server. <p> <input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B <input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4 <input type="checkbox"/> MP-5(Gen-9 normal capacity): <input type="checkbox"/> MP-6 (Gen-9 normal capacity): </p>	Attribute	Value	Description	Hostname	<input type="text"/>	Unique name for the server. [Default = n/a. Range = A 20-character string. Valid characters are alphanumeric and minus sign. Must start with an alphanumeric and end with an alphanumeric.]	Role	- Select Role -	Select the function of the server	System ID	<input type="text"/>	System ID for the NOAMP or SOAM server. [Default = n/a. Range = A 64-character string. Valid value is any text string.]	Hardware Profile	UDR SO	Hardware profile of the server	Network Element Name	- Unassigned -	Select the network element	Location	<input type="text"/>	Location description [Default = "" Range = A 15-character string. Valid value is any text string.]
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Hardware Profile	UDR SO	Hardware profile of the server																					
Network Element Name	- Unassigned -	Select the network element																					
Location	<input type="text"/>	Location description [Default = "" Range = A 15-character string. Valid value is any text string.]																					
<p>12.</p> <p><input type="checkbox"/></p>	<p>NOAMP Server A:</p> <p>Input the assigned “hostname” for the 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-B</td> <td>Unique name for the server. [Default = n/a. Range = A 20-character string. Valid characters are alphanumeric and minus sign. Must start with an alphanumeric and end with an alphanumeric.]</td> </tr> </tbody> </table> <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Server. <p> <input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B <input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4 <input type="checkbox"/> MP-5(Gen-9 normal capacity): <input type="checkbox"/> MP-6 (Gen-9 normal capacity): </p>	Attribute	Value	Description	Hostname	NO-B	Unique name for the server. [Default = n/a. Range = A 20-character string. Valid characters are alphanumeric and minus sign. Must start with an alphanumeric and end with an alphanumeric.]															
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Procedure 11: Create Configuration for Remaining Servers

Step	Procedure	Result												
<p>13.</p> <input type="checkbox"/>	<p>NOAMP Server A:</p> <p>Select the appropriate server "Role" from the pull-down menu.</p>	<table border="1"> <tr> <td>Role</td> <td>- Select Role - *</td> <td>Select the function of the server</td> </tr> <tr> <td>Hardware Profile</td> <td>- Select Role - NETWORK OAM&P</td> <td>Hardware profile of the server</td> </tr> <tr> <td>Network Element Name</td> <td>SYSTEM OAM MP QUERY SERVER</td> <td>Select the network element</td> </tr> <tr> <td>Location</td> <td></td> <td>Location description [Default = "", Range = A 14]</td> </tr> </table> <ul style="list-style-type: none"> • "Check off" the associated Check Box as addition is completed for each Server. <p> <input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B <input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4 <input type="checkbox"/> MP-5(Gen-9 normal capacity): <input type="checkbox"/> MP-6 (Gen-9 normal capacity): </p>	Role	- Select Role - *	Select the function of the server	Hardware Profile	- Select Role - NETWORK OAM&P	Hardware profile of the server	Network Element Name	SYSTEM OAM MP QUERY SERVER	Select the network element	Location		Location description [Default = "", Range = A 14]
Role	- Select Role - *	Select the function of the server												
Hardware Profile	- Select Role - NETWORK OAM&P	Hardware profile of the server												
Network Element Name	SYSTEM OAM MP QUERY SERVER	Select the network element												
Location		Location description [Default = "", Range = A 14]												
<p>14.</p> <input type="checkbox"/>	<p>NOAMP Server A:</p> <p>Input the "System ID" for the server.</p> <p>NOTE: <i>System ID is not required for MP.</i></p>	<table border="1"> <tr> <td>System ID</td> <td>NOAMP</td> <td>System ID for the NOAMP or SOAM server. [Default = n/a, Range = A 64-character string. Valid value is any text string.]</td> </tr> </table> <ul style="list-style-type: none"> • "Check off" the associated Check Box as addition is completed for each Server. <p> <input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B <input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4 <input type="checkbox"/> MP-5(Gen-9 normal capacity): <input type="checkbox"/> MP-6 (Gen-9 normal capacity): </p>	System ID	NOAMP	System ID for the NOAMP or SOAM server. [Default = n/a, Range = A 64-character string. Valid value is any text string.]									
System ID	NOAMP	System ID for the NOAMP or SOAM server. [Default = n/a, Range = A 64-character string. Valid value is any text string.]												

Procedure 11: Create Configuration for Remaining Servers

Step	Procedure	Result			
<p>15.</p> <input type="checkbox"/>	<p>NOAMP Server A:</p> <p>Select the correct Hardware Profile from the pull-down menu.</p>	<p>Select Hardware Profile:</p> <ul style="list-style-type: none"> • BL460 HP c-Class Blade NOAMP installations • UDR_NO_LowCapacity for NO virtual server installations • UDRSO for SO virtual server installations • UDR MP for MP virtual server installations <div style="border: 1px solid black; padding: 2px; margin: 10px 0;"> <p> The linked image cannot be displayed. The file may have been moved, renamed, or deleted. Verify that the link points to the correct file and location.</p> </div> <ul style="list-style-type: none"> • "Check off" the associated Check Box as addition is completed for each Server. <p> <input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B </p> <p> <input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4 </p> <p> <input type="checkbox"/> MP-5(Gen-9 normal capacity): </p> <p> <input type="checkbox"/> MP-6 (Gen-9 normal capacity): </p>			
<p>16.</p> <input type="checkbox"/>	<p>NOAMP Server A:</p> <p>Select the Network Element Name from the pull-down menu.</p> <p>NOTE: After the Network Element Name is selected, the Interfaces fields will be displayed.</p> <p>NOTE: NO and DR pairs will have their own Network element as per Appendix N. SO pairs will also have their own Network Element which they share with their associated MP.</p>	<div style="border: 1px solid gray; padding: 5px; margin-bottom: 10px;"> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border: 1px solid gray; padding: 2px;">Network Element Name</td> <td style="border: 1px solid gray; padding: 2px;"> <input style="width: 80%;" type="text" value="NO_UDR_VM"/> </td> <td style="border: 1px solid gray; padding: 2px;">Select the network element</td> </tr> </table> </div> <ul style="list-style-type: none"> • "Check off" the associated Check Box as addition is completed for each Server. <p> <input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B </p> <p> <input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4 </p> <p> <input type="checkbox"/> MP-5(Gen-9 normal capacity): </p> <p> <input type="checkbox"/> MP-6 (Gen-9 normal capacity): </p>	Network Element Name	<input style="width: 80%;" type="text" value="NO_UDR_VM"/>	Select the network element
Network Element Name	<input style="width: 80%;" type="text" value="NO_UDR_VM"/>	Select the network element			

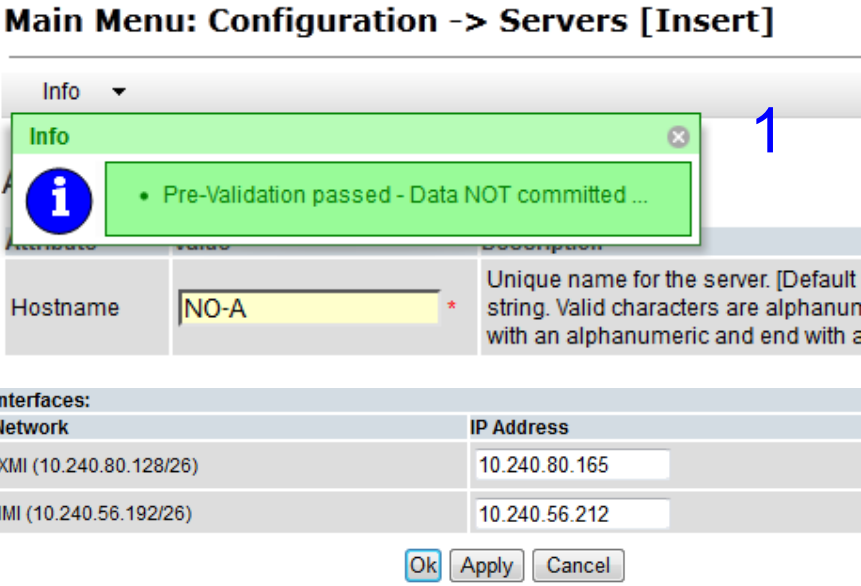
Procedure 11: Create Configuration for Remaining Servers

Step	Procedure	Result																		
<p>17.</p> <p><input type="checkbox"/></p>	<p>NOAMP Server A:</p> <p>Enter the site location.</p> <p>NOTE: <i>Location is an optional field.</i></p>	<div style="border: 1px solid black; padding: 2px;"> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%; padding: 2px;">Location</td> <td style="width: 30%; padding: 2px;"><input type="text" value="Morrisville_NC"/></td> <td style="padding: 2px;">Location description [Default = "", Range = A 15-character string. Valid value is any text string.]</td> </tr> </table> </div> <ul style="list-style-type: none"> "Check off" the associated Check Box as addition is completed for each Server. <p> <input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B </p> <p> <input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4 </p> <p> <input type="checkbox"/> MP-5(Gen-9 normal capacity): </p> <p> <input type="checkbox"/> MP-6 (Gen-9 normal capacity): </p>	Location	<input type="text" value="Morrisville_NC"/>	Location description [Default = "", Range = A 15-character string. Valid value is any text string.]															
Location	<input type="text" value="Morrisville_NC"/>	Location description [Default = "", Range = A 15-character string. Valid value is any text string.]																		
<p>18.</p> <p><input type="checkbox"/></p>	<p>NOAMP Server A:</p> <p>1) Enter the XMI and IMI IP addresses for the UDR Server.</p> <p>2) Set the XMI and IMI Interface according to deployment type.</p>	<p>Normal Capacity C-Class Configuration:</p> <ul style="list-style-type: none"> SO: Set XMI to "xmi" and set IMI to "imi". VLAN boxes are <i>not</i> checked. MP: Set XMI to "xmi" and set IMI to "imi". VLAN boxes are <i>not</i> checked. NOAMP: Set both XMI and IMI to bond0. Check all VLAN boxes. <div style="border: 1px solid gray; padding: 5px;"> <p>Interfaces:</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Network</th> <th style="text-align: left;">IP Address</th> <th style="text-align: left;">Interface</th> </tr> </thead> <tbody> <tr> <td>XMI (10.240.37.128/26)</td> <td><input type="text"/></td> <td>xmi <input type="checkbox"/> VLAN (3)</td> </tr> <tr> <td>IMI (10.240.37.192/27)</td> <td><input type="text"/></td> <td>imi <input type="checkbox"/> VLAN (4)</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> <p>Low Capacity Systems:</p> <ul style="list-style-type: none"> SO: Set XMI to "xmi" and set IMI to "imi". VLAN boxes are <i>not</i> checked. MP: Set XMI to "xmi" and set IMI to "imi". VLAN boxes are <i>not</i> checked. NOAMP: Set XMI to "xmi" and set IMI to "imi". VLAN boxes are <i>not</i> checked. <div style="border: 1px solid gray; padding: 5px;"> <p>Interfaces:</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Network</th> <th style="text-align: left;">IP Address</th> <th style="text-align: left;">Interface</th> </tr> </thead> <tbody> <tr> <td>XMI (10.240.15.0/26)</td> <td><input type="text" value="10.240.15.42"/></td> <td>xmi <input type="checkbox"/> VLAN (3)</td> </tr> <tr> <td>IMI (192.168.45.0/26)</td> <td><input type="text" value="192.168.45.8"/></td> <td>imi <input type="checkbox"/> VLAN (405)</td> </tr> </tbody> </table> <p>MP Servers:</p> </div> <p>"Check off" the associated Check Box as addition is completed for each Server.</p> <p> <input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B </p> <p> <input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4 </p> <p> <input type="checkbox"/> MP-5(Gen-9 normal capacity): </p> <p> <input type="checkbox"/> MP-6 (Gen-9 normal capacity): </p>	Network	IP Address	Interface	XMI (10.240.37.128/26)	<input type="text"/>	xmi <input type="checkbox"/> VLAN (3)	IMI (10.240.37.192/27)	<input type="text"/>	imi <input type="checkbox"/> VLAN (4)	Network	IP Address	Interface	XMI (10.240.15.0/26)	<input type="text" value="10.240.15.42"/>	xmi <input type="checkbox"/> VLAN (3)	IMI (192.168.45.0/26)	<input type="text" value="192.168.45.8"/>	imi <input type="checkbox"/> VLAN (405)
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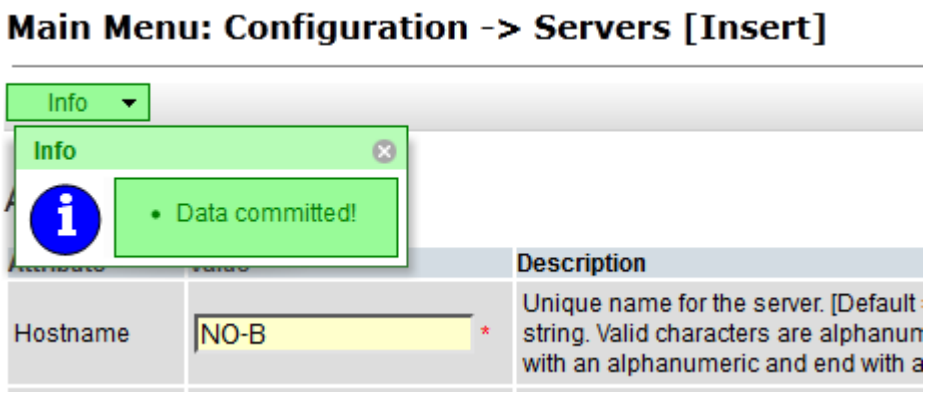
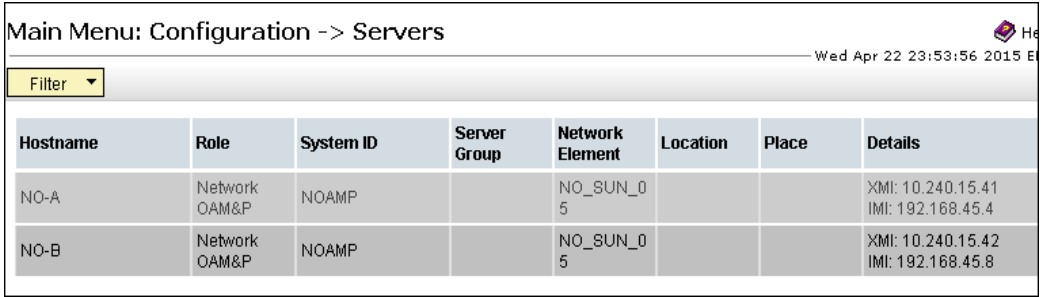
Procedure 11: Create Configuration for Remaining Servers

Step	Procedure	Result																					
<p>19.</p> <input type="checkbox"/>	<p>NOAMP Server A:</p> <p>Click the "Add" button under NTP Servers and add the address(s) of the NTP server(s).</p>	<div> <table border="1"> <thead> <tr> <th>NTP Server IP Address</th> <th>Prefer</th> <th></th> </tr> </thead> <tbody> <tr> <td><input type="text" value="10.240.15.7"/></td> <td><input type="checkbox"/></td> <td><input type="button" value="Add"/></td> </tr> <tr> <td><input type="text" value="10.240.15.8"/></td> <td><input type="checkbox"/></td> <td><input type="button" value="Remove"/></td> </tr> <tr> <td><input type="text" value="10.240.15.9"/></td> <td><input type="checkbox"/></td> <td><input type="button" value="Remove"/></td> </tr> <tr> <td><input type="text" value="10.240.15.11"/></td> <td><input type="checkbox"/></td> <td><input type="button" value="Remove"/></td> </tr> </tbody> </table> </div> <p>NTP Server according to server type:</p> <ul style="list-style-type: none"> • <i>NOAMP</i>: Set one ore more NTP Server IP Address(es) to customer supplied NTP server(s). It is recommended to have minimum of 3 and up to 4 external NTP servers for reliable functioning of NTP service. • <i>SOAM and MP</i>: Set the NTP Server IP Address to the host server, given as "<TVOE_XML_address>" in <i>Appendix L Configure TVOE Network</i>. <div> <p>NTP Servers:</p> <table border="1"> <thead> <tr> <th>NTP Server IP Address</th> <th>Prefer</th> </tr> </thead> <tbody> <tr> <td><input type="text"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td><input type="button" value="Add"/></td> <td><input type="button" value="Remove"/></td> </tr> </tbody> </table> </div> <p>Note: In case of NOAMP virtual server: Set the NTP Server IP Address to the host server, given as "<TVOE_XML_address>" in <i>Appendix L Configure TVOE Network</i>.</p> <p>"Check off" the associated Check Box as addition is completed for each Server.</p> <p> <input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B </p> <p> <input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4 </p> <p> <input type="checkbox"/> MP-5(Gen-9 normal capacity): </p> <p> <input type="checkbox"/> MP-6 (Gen-9 normal capacity): </p>	NTP Server IP Address	Prefer		<input type="text" value="10.240.15.7"/>	<input type="checkbox"/>	<input type="button" value="Add"/>	<input type="text" value="10.240.15.8"/>	<input type="checkbox"/>	<input type="button" value="Remove"/>	<input type="text" value="10.240.15.9"/>	<input type="checkbox"/>	<input type="button" value="Remove"/>	<input type="text" value="10.240.15.11"/>	<input type="checkbox"/>	<input type="button" value="Remove"/>	NTP Server IP Address	Prefer	<input type="text"/>	<input type="checkbox"/>	<input type="button" value="Add"/>	<input type="button" value="Remove"/>
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Procedure 11: Create Configuration for Remaining Servers

Step	Procedure	Result									
<p>20.</p> <p><input type="checkbox"/></p>	<p>NOAMP Server A:</p> <p>1) The user should be presented with a banner information message stating "Pre-Validation passed".</p> <p>2) Click the "Apply" dialogue button.</p>	 <p>Main Menu: Configuration -> Servers [Insert]</p> <p>Info</p> <p>Info</p> <ul style="list-style-type: none"> Pre-Validation passed - Data NOT committed ... <p>Hostname: NO-A *</p> <p>Unique name for the server. [Default string. Valid characters are alphanumeric with an alphanumeric and end with a</p> <p>Interfaces:</p> <table border="1"> <thead> <tr> <th>Network</th> <th>IP Address</th> <th>Interface</th> </tr> </thead> <tbody> <tr> <td>XMI (10.240.80.128/26)</td> <td>10.240.80.165</td> <td>xmi</td> </tr> <tr> <td>IMI (10.240.56.192/26)</td> <td>10.240.56.212</td> <td>imi</td> </tr> </tbody> </table> <p>Ok Apply Cancel</p> <ul style="list-style-type: none"> "Check off" the associated Check Box as addition is completed for each Server. <p> <input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B </p> <p> <input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4 </p> <p> <input type="checkbox"/> MP-5(Gen-9 normal capacity): </p> <p> <input type="checkbox"/> MP-6 (Gen-9 normal capacity): </p>	Network	IP Address	Interface	XMI (10.240.80.128/26)	10.240.80.165	xmi	IMI (10.240.56.192/26)	10.240.56.212	imi
Network	IP Address	Interface									
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Procedure 11: Create Configuration for Remaining Servers

Step	Procedure	Result																								
<p>21.</p> <p><input type="checkbox"/></p>	<p>NOAMP Server A:</p> <p>If the values provided match the network ranges assigned to the UDR NE, the user will receive a banner information message showing that the data has been validated and committed to the DB.</p>	 <p>Main Menu: Configuration -> Servers [Insert]</p> <p>Info</p> <p>Info</p> <p>• Data committed!</p> <p>Hostname: NO-B * Description: Unique name for the server. [Default string. Valid characters are alphanumeric with an alphanumeric and end with a</p> <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Server. <p><input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B</p> <p><input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4</p> <p><input type="checkbox"/> MP-5(Gen-9 normal capacity):</p> <p><input type="checkbox"/> MP-6 (Gen-9 normal capacity):</p>																								
<p>22.</p> <p><input type="checkbox"/></p>	<p>NOAMP Server A:</p> <p><i>Applying the Server Configuration File</i></p> <p>Select...</p> <p><u>Main Menu</u> → Configuration → Servers</p> <p>...as shown on the right.</p>	 <p>Main Menu: Configuration -> Servers</p> <p>Filter</p> <table border="1"> <thead> <tr> <th>Hostname</th> <th>Role</th> <th>System ID</th> <th>Server Group</th> <th>Network Element</th> <th>Location</th> <th>Place</th> <th>Details</th> </tr> </thead> <tbody> <tr> <td>NO-A</td> <td>Network OAM&P</td> <td>NOAMP</td> <td></td> <td>NO_SUN_05</td> <td></td> <td></td> <td>XMI: 10.240.15.41 IMI: 192.168.45.4</td> </tr> <tr> <td>NO-B</td> <td>Network OAM&P</td> <td>NOAMP</td> <td></td> <td>NO_SUN_05</td> <td></td> <td></td> <td>XMI: 10.240.15.42 IMI: 192.168.45.8</td> </tr> </tbody> </table> <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Server. <p><input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B</p> <p><input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4</p> <p><input type="checkbox"/> MP-5(Gen-9 normal capacity):</p> <p><input type="checkbox"/> MP-6 (Gen-9 normal capacity):</p>	Hostname	Role	System ID	Server Group	Network Element	Location	Place	Details	NO-A	Network OAM&P	NOAMP		NO_SUN_05			XMI: 10.240.15.41 IMI: 192.168.45.4	NO-B	Network OAM&P	NOAMP		NO_SUN_05			XMI: 10.240.15.42 IMI: 192.168.45.8
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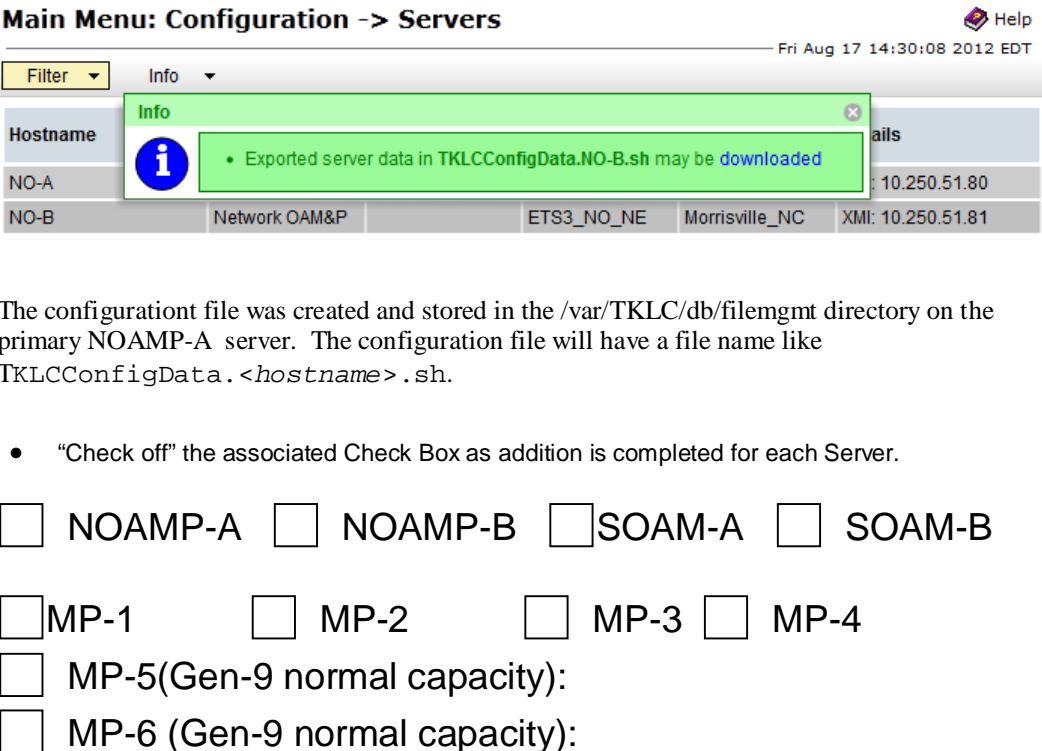
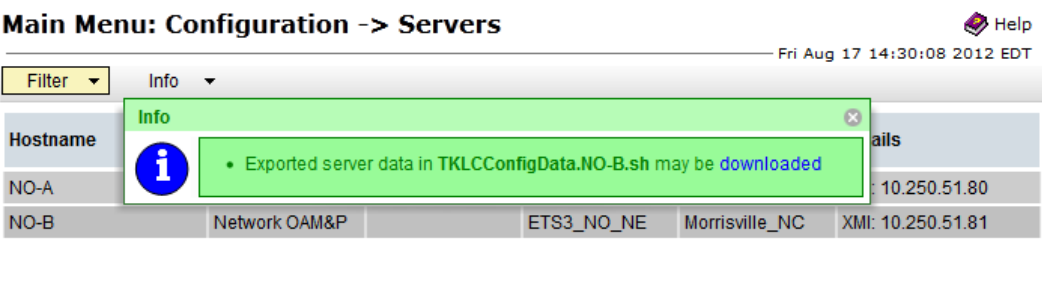
Procedure 11: Create Configuration for Remaining Servers

Step	Procedure	Result																																																
<p>23.</p> <p><input type="checkbox"/></p>	<p>NOAMP Server A:</p> <p>The "Configuration →Servers" screen should now show the newly added UDR Server in the list.</p>	<p>Normal or Low Capacity Configuration:</p> <div> <p>Main Menu: Configuration -> Servers</p> <p>Filter ▾</p> <table border="1"> <thead> <tr> <th>Hostname</th> <th>Role</th> <th>System ID</th> <th>Server Group</th> <th>Network Element</th> <th>Location</th> <th>Place</th> <th>Details</th> </tr> </thead> <tbody> <tr> <td>NO-A</td> <td>Network OAM&P</td> <td>NOAMP</td> <td></td> <td>UDR_NO_A</td> <td>Morrisville_NC</td> <td></td> <td>XMI: 10.240.15.41 IMI: 192.168.45.4</td> </tr> <tr> <td>NO-B</td> <td>Network OAM&P</td> <td>NOAMP</td> <td></td> <td>UDR_NO_A</td> <td>Morrisville_NC</td> <td></td> <td>XMI: 10.240.15.42 IMI: 192.168.45.8</td> </tr> </tbody> </table> </div> <p>Single Server Configuration:</p> <div> <table border="1"> <thead> <tr> <th>Hostname</th> <th>Role</th> <th>System ID</th> <th>Server Group</th> <th>Network Element</th> <th>Location</th> <th>Place</th> <th>Details</th> </tr> </thead> <tbody> <tr> <td>NO-A</td> <td>Network OAM&P</td> <td>NOAMP</td> <td></td> <td>NO_SUN_05</td> <td></td> <td></td> <td>XMI: 10.240.15.41</td> </tr> <tr> <td>SO-A</td> <td>System OAM</td> <td>SOAM</td> <td></td> <td>SO_SUN_05</td> <td></td> <td></td> <td>XMI: 10.240.15.44</td> </tr> </tbody> </table> </div> <ul style="list-style-type: none"> • "Check off" the associated Check Box as addition is completed for each Server. <p> <input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B <input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4 <input type="checkbox"/> MP-5(Gen-9 normal capacity): <input type="checkbox"/> MP-6 (Gen-9 normal capacity): </p>	Hostname	Role	System ID	Server Group	Network Element	Location	Place	Details	NO-A	Network OAM&P	NOAMP		UDR_NO_A	Morrisville_NC		XMI: 10.240.15.41 IMI: 192.168.45.4	NO-B	Network OAM&P	NOAMP		UDR_NO_A	Morrisville_NC		XMI: 10.240.15.42 IMI: 192.168.45.8	Hostname	Role	System ID	Server Group	Network Element	Location	Place	Details	NO-A	Network OAM&P	NOAMP		NO_SUN_05			XMI: 10.240.15.41	SO-A	System OAM	SOAM		SO_SUN_05			XMI: 10.240.15.44
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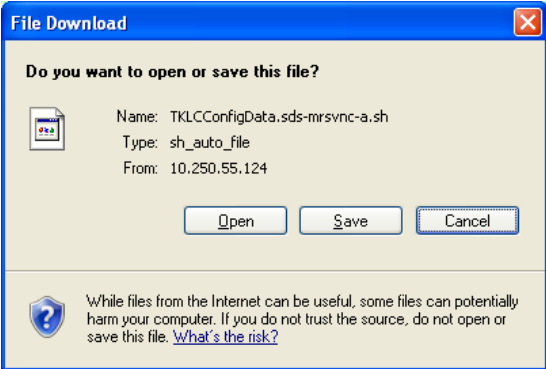
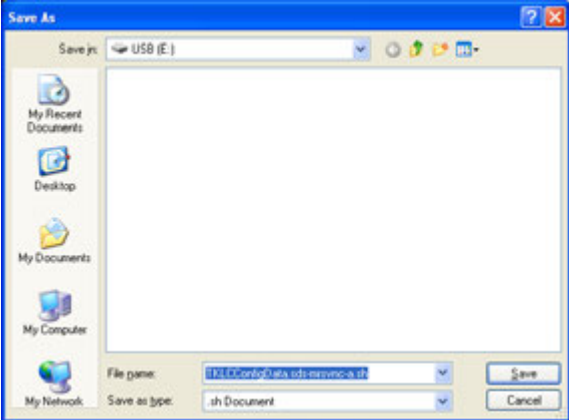
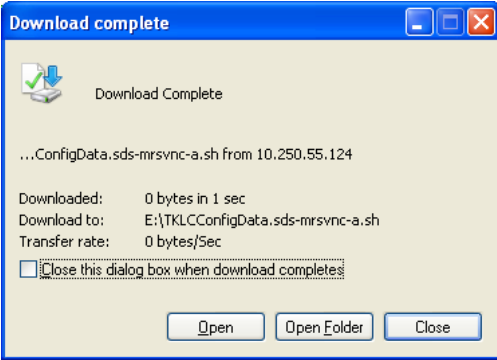
Procedure 11: Create Configuration for Remaining Servers

Step	Procedure	Result																																																
<p>24.</p> <p><input type="checkbox"/></p>	<p>NOAMP Server A:</p> <p>1) Use the cursor to select the UDR Server entry added in Steps 9 - 21.</p> <p>The row containing the desired Server should now be highlighted in GREEN.</p> <p>2) Select the “Export” dialogue button.</p>	<p>Normal or Low Capacity Configuration:</p> <div> <p>Main Menu: Configuration -> Servers Help</p> <p style="text-align: right;">Mon May 04 14:47:37 2015 EDT</p> <p>Filter <input type="text"/></p> <table border="1"> <thead> <tr> <th>Hostname</th> <th>Role</th> <th>System ID</th> <th>Server Group</th> <th>Network Element</th> <th>Location</th> <th>Place</th> <th>Details</th> </tr> </thead> <tbody> <tr> <td>NO-A</td> <td>Network OAM&P</td> <td>NOAMP</td> <td></td> <td>UDR_NO_A</td> <td>Morrisville_NC</td> <td></td> <td>XMI: 10.240.15.41 IMI: 192.168.45.4</td> </tr> <tr style="background-color: #90EE90;"> <td>NO-B</td> <td>Network OAM&P</td> <td>NOAMP</td> <td></td> <td>UDR_NO_A</td> <td>Morrisville_NC</td> <td></td> <td>XMI: 10.240.15.42 IMI: 192.168.45.8</td> </tr> </tbody> </table> </div> <p>Single Server Configuration:</p> <div> <table border="1"> <thead> <tr> <th>Hostname</th> <th>Role</th> <th>System ID</th> <th>Server Group</th> <th>Network Element</th> <th>Location</th> <th>Place</th> <th>Details</th> </tr> </thead> <tbody> <tr> <td>NO-A</td> <td>Network OAM&P</td> <td>NOAMP</td> <td></td> <td>NO_SUN_05</td> <td></td> <td></td> <td>XMI: 10.240.15.41</td> </tr> <tr style="background-color: #90EE90;"> <td>SO-A</td> <td>System OAM</td> <td>SOAM</td> <td></td> <td>SO_SUN_05</td> <td></td> <td></td> <td>XMI: 10.240.15.44</td> </tr> </tbody> </table> <p>Insert Edit Delete Export Report</p> </div> <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Server. <p> <input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B </p> <p> <input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4 </p> <p> <input type="checkbox"/> MP-5(Gen-9 normal capacity): </p> <p> <input type="checkbox"/> MP-6 (Gen-9 normal capacity): </p>	Hostname	Role	System ID	Server Group	Network Element	Location	Place	Details	NO-A	Network OAM&P	NOAMP		UDR_NO_A	Morrisville_NC		XMI: 10.240.15.41 IMI: 192.168.45.4	NO-B	Network OAM&P	NOAMP		UDR_NO_A	Morrisville_NC		XMI: 10.240.15.42 IMI: 192.168.45.8	Hostname	Role	System ID	Server Group	Network Element	Location	Place	Details	NO-A	Network OAM&P	NOAMP		NO_SUN_05			XMI: 10.240.15.41	SO-A	System OAM	SOAM		SO_SUN_05			XMI: 10.240.15.44
Hostname	Role	System ID	Server Group	Network Element	Location	Place	Details																																											
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SO-A	System OAM	SOAM		SO_SUN_05			XMI: 10.240.15.44																																											

Procedure 11: Create Configuration for Remaining Servers

Step	Procedure	Result
<p>25.</p> <p><input type="checkbox"/></p>	<p>NOAMP Server A:</p> <p>The user will receive a banner information message showing a download link for the UDR Server configuration data.</p>	 <p>The configuration file was created and stored in the /var/TKLC/db/filemgmt directory on the primary NOAMP-A server. The configuration file will have a file name like TKLCConfigData.<hostname>.sh.</p> <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Server. <p><input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B</p> <p><input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4</p> <p><input type="checkbox"/> MP-5(Gen-9 normal capacity):</p> <p><input type="checkbox"/> MP-6 (Gen-9 normal capacity):</p>
<p>26.</p> <p><input type="checkbox"/></p>	<p>NOAMP Server A:</p> <p>Click on the “downloaded” link inside the Info box.</p>	 <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Server. <p><input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B</p> <p><input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4</p> <p><input type="checkbox"/> MP-5(Gen-9 normal capacity):</p> <p><input type="checkbox"/> MP-6 (Gen-9 normal capacity):</p>

Procedure 11: Create Configuration for Remaining Servers

Step	Procedure	Result
<p>27.</p> <p><input type="checkbox"/></p>	<p>NOAMP Server A:</p> <p>1) Click the “Save” dialogue button.</p> <p>2) Save the configuration file to a USB flash drive.</p> <p>3) Click the “Close” dialogue button</p>	<div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 20px;">  <p style="font-size: 2em; color: blue; margin-left: 100px;">1</p> </div> <div style="margin-bottom: 20px;">  <p style="font-size: 2em; color: blue; margin-left: 100px;">2</p> </div> <div>  <p style="font-size: 2em; color: blue; margin-left: 100px;">3</p> </div> </div> <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Server. <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4 </div> <div style="margin-top: 10px;"> <input type="checkbox"/> MP-5(Gen-9 normal capacity): </div> <div style="margin-top: 10px;"> <input type="checkbox"/> MP-6 (Gen-9 normal capacity): </div>

Note: The steps above may be completed for one or all servers listed in the “Check Off” section before continuing...

Procedure 11: Create Configuration for Remaining Servers

Step	Procedure	Result
<p>28. <input type="checkbox"/></p>	<p>NOAMP Server A: Apply server configuration scripts.</p>	<p>Use the configuration scripts created and exported in the steps above to apply configuration to each server:</p> <ul style="list-style-type: none"> For HP rack mount NOAMP/DR servers and Oracle RMS (X5) NOAM/DR servers: Follow Appendix K.1 Applying Server Configuration with ILO For all other servers: Follow Appendix K.2 Applying Server Configuration with PM&C <p><input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B</p> <p><input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4</p> <p><input type="checkbox"/> MP-5 (Gen-9 normal capacity):</p> <p><input type="checkbox"/> MP-6 (Gen-9 normal capacity):</p>
<p>THIS PROCEDURE HAS BEEN COMPLETED</p>		

8.3 Configure XSI Networks (All SOAM Sites)

This procedure configures the XSI networks used on MP to support signaling traffic.

Requirements:

- Procedure 11: Create Configuration for Remaining Servers has been completed.

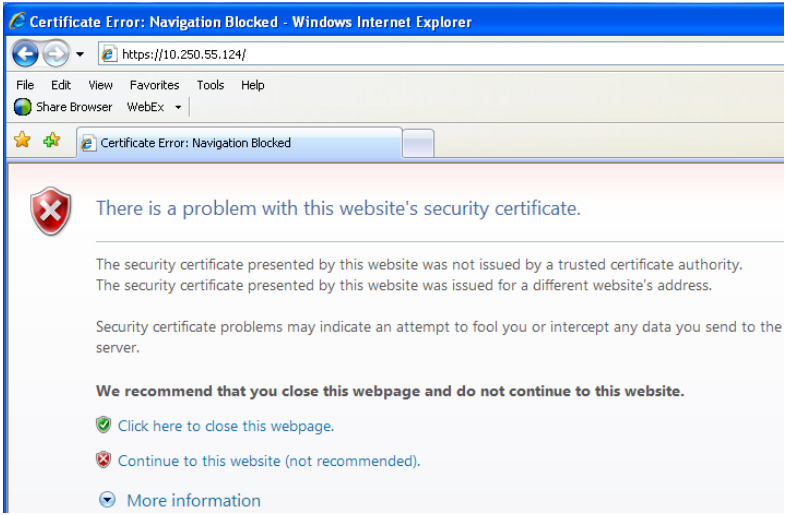

Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.

Note: If a setup has two sites and ComAgent over XSI supported for the same setup, then if adding XSI network for the other site, will need to keep the name the same for both the XSI networks.


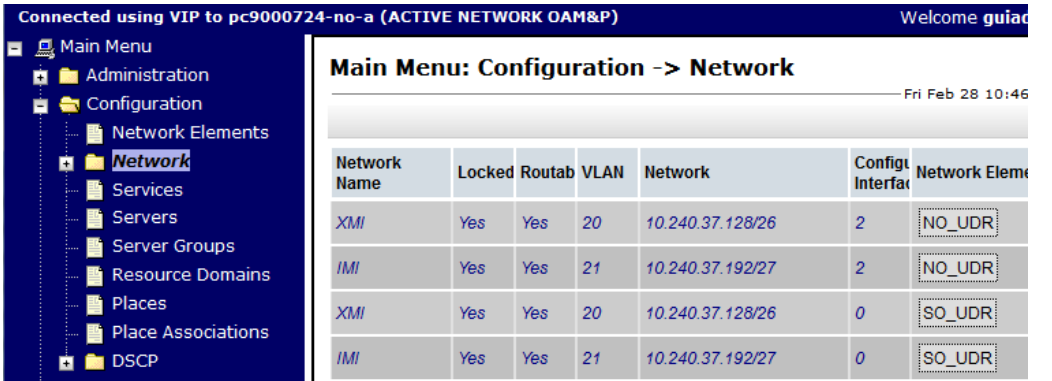
Procedure 12: Configure XSI Networks

Step	Procedure	Result
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Procedure 12: Configure XSI Networks

Step	Procedure	Result
<p>1.</p> <div style="border: 1px solid black; width: 20px; height: 20px; margin-bottom: 5px;"></div>	<p>NOAMP Server A</p> <p>Launch an approved web browser and connect to the XMI IP address assigned to NOAMP Server A using Error! Hyperlink reference not valid. https://</p> <p>NOTE: If presented with the “security certificate” warning screen shown to the right, choose the following option: “Continue to this website (not recommended)”.</p>	
<p>2.</p> <div style="border: 1px solid black; width: 20px; height: 20px; margin-bottom: 5px;"></div>	<p>NOAMP Server A</p> <p>The user should be presented the login screen shown on the right.</p> <p>Login to the GUI using the default user and password.</p>	

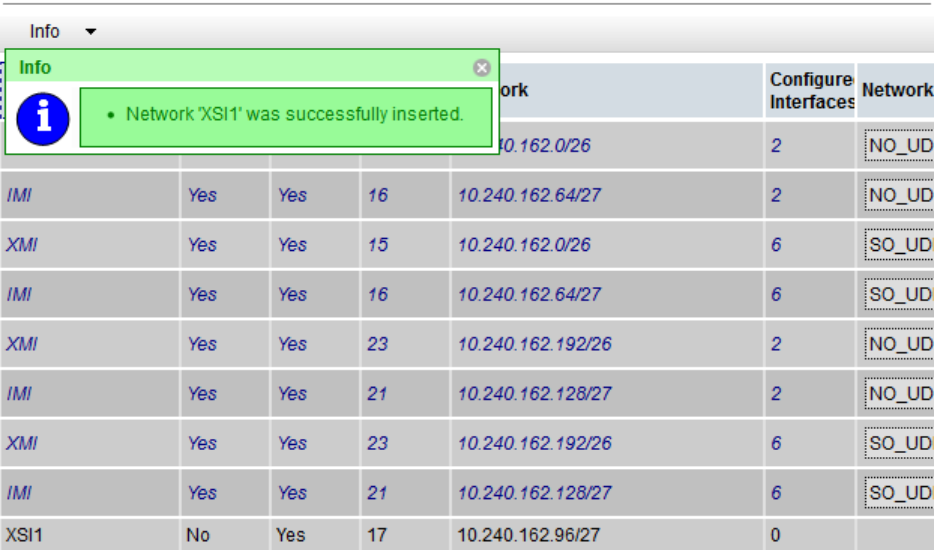
Procedure 12: Configure XSI Networks

Step	Procedure	Result																																			
<p>3.</p> <p><input type="checkbox"/></p>	<p>NOAMP Server A</p> <p>The user should be presented the Main Menu as shown on the right.</p>																																				
<p>4.</p> <p><input type="checkbox"/></p>	<p>NOAMP Server A</p> <p>Select...</p> <p>Main Menu → Configuration → Network</p> <p>...as shown on the right.</p>	 <table border="1"> <thead> <tr> <th>Network Name</th> <th>Locked</th> <th>Routab</th> <th>VLAN</th> <th>Network</th> <th>Config Interfac</th> <th>Network Eleme</th> </tr> </thead> <tbody> <tr> <td>XMI</td> <td>Yes</td> <td>Yes</td> <td>20</td> <td>10.240.37.128/26</td> <td>2</td> <td>NO_UDR</td> </tr> <tr> <td>IMI</td> <td>Yes</td> <td>Yes</td> <td>21</td> <td>10.240.37.192/27</td> <td>2</td> <td>NO_UDR</td> </tr> <tr> <td>XMI</td> <td>Yes</td> <td>Yes</td> <td>20</td> <td>10.240.37.128/26</td> <td>0</td> <td>SO_UDR</td> </tr> <tr> <td>IMI</td> <td>Yes</td> <td>Yes</td> <td>21</td> <td>10.240.37.192/27</td> <td>0</td> <td>SO_UDR</td> </tr> </tbody> </table>	Network Name	Locked	Routab	VLAN	Network	Config Interfac	Network Eleme	XMI	Yes	Yes	20	10.240.37.128/26	2	NO_UDR	IMI	Yes	Yes	21	10.240.37.192/27	2	NO_UDR	XMI	Yes	Yes	20	10.240.37.128/26	0	SO_UDR	IMI	Yes	Yes	21	10.240.37.192/27	0	SO_UDR
Network Name	Locked	Routab	VLAN	Network	Config Interfac	Network Eleme																															
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Procedure 12: Configure XSI Networks

Step	Procedure	Result																											
<p>5.</p> <p><input type="checkbox"/></p>	<p>NOAMP Server A</p> <p>Add the XSI1 network</p>	<p>Click the Insert button. </p> <p>Output similar to that shown below may be observed.</p> <p>Insert Network</p> <table border="1"> <thead> <tr> <th>Field</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Network Name</td> <td>XSI1 *</td> <td>The name of this network. [Default = N/A. Range = Alphanumeric string up to 31 chars, starting with a letter.]</td> </tr> <tr> <td>Network Element</td> <td>- Unassigned - *</td> <td>The network element this network is a part of. If not specified, the network will be available to servers in all network elements.</td> </tr> <tr> <td>VLAN ID</td> <td>17 *</td> <td>The VLAN ID to use for this network. [Default = N/A. Range = 1-4094.]</td> </tr> <tr> <td>Network Address</td> <td>10.240.162.96 *</td> <td>The network address of this network. [Default = N/A. Range = Valid Network Address of the network in dotted decimal (IPv4) or colon hex (IPv6) format.]</td> </tr> <tr> <td>Netmask</td> <td>255.255.255.224 *</td> <td>Subnetting to apply to servers within this network. [Default = N/A. Range = Valid Netmask for the network in prefix length (IPv4 or IPv6) or dotted decimal (IPv4) format.]</td> </tr> <tr> <td>Router IP</td> <td>10.240.162.97</td> <td>The IP address of a router on this network. If this is a default network, this will be used as the gateway address of the default route on servers with interfaces on this network. If customer router monitoring is enabled, this address will be the one 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 default gateway.</td> </tr> <tr> <td>Routeable</td> <td><input checked="" type="radio"/> Yes <input type="radio"/> No</td> <td>Whether or not this network is routeable outside its network element. If it is not assigned to a network element, it is assumed to be possibly present in all network elements.</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>Enter all of the above fields for the XSI1 network according to the customer's network parameters. The default values for Network Element (Unassigned), Default Network (No) and Routeable (Yes) should be retained.</p> <p>ComAgent Service is configured to run on XSI1 in Section 8.118.10 Configure ComAgent Service, this network shall be used for MP ↔ NOAMP ComAgent Traffic.</p> <p>This network may or may not be used for MP Signaling Traffic.</p> <p>Note: Network names can be overloaded to support multiple subnets. When defining network for ComAgent Service, use same network name for Primary and DR Site.</p>	Field	Value	Description	Network Name	XSI1 *	The name of this network. [Default = N/A. Range = Alphanumeric string up to 31 chars, starting with a letter.]	Network Element	- Unassigned - *	The network element this network is a part of. If not specified, the network will be available to servers in all network elements.	VLAN ID	17 *	The VLAN ID to use for this network. [Default = N/A. Range = 1-4094.]	Network Address	10.240.162.96 *	The network address of this network. [Default = N/A. Range = Valid Network Address of the network in dotted decimal (IPv4) or colon hex (IPv6) format.]	Netmask	255.255.255.224 *	Subnetting to apply to servers within this network. [Default = N/A. Range = Valid Netmask for the network in prefix length (IPv4 or IPv6) or dotted decimal (IPv4) format.]	Router IP	10.240.162.97	The IP address of a router on this network. If this is a default network, this will be used as the gateway address of the default route on servers with interfaces on this network. If customer router monitoring is enabled, this address will be the one monitored.	Default Network	<input type="radio"/> Yes <input checked="" type="radio"/> No	A selection indicating whether this is the network with a default gateway.	Routeable	<input checked="" type="radio"/> Yes <input type="radio"/> No	Whether or not this network is routeable outside its network element. If it is not assigned to a network element, it is assumed to be possibly present in all network elements.
Field	Value	Description																											
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Routeable	<input checked="" type="radio"/> Yes <input type="radio"/> No	Whether or not this network is routeable outside its network element. If it is not assigned to a network element, it is assumed to be possibly present in all network elements.																											
<p>Repeat Step 5 of this procedure to Insert additional signaling networks (XSI2, etc) as required.</p>																													

Procedure 12: Configure XSI Networks

Step	Procedure	Result																																																																	
<p>6.</p> <p><input type="checkbox"/></p>	<p>NOAMP Server A</p> <p>New XSI network is displayed along with a success message.</p>	<p>Main Menu: Configuration -> Network</p>  <p>The screenshot shows a configuration window titled 'Main Menu: Configuration -> Network'. A green info box displays the message: 'Network 'XSI1' was successfully inserted.' Below this is a table with columns for network type, status, and IP address. The table includes entries for IMI, XMI, and XSI1 networks.</p> <table border="1"> <thead> <tr> <th>Network</th> <th>Configure Interfaces</th> <th>Network</th> </tr> </thead> <tbody> <tr> <td>ork</td> <td>2</td> <td>NO_UD</td> </tr> <tr> <td>10.162.0/26</td> <td>2</td> <td>NO_UD</td> </tr> <tr> <td>IMI</td> <td>Yes</td> <td>Yes</td> </tr> <tr> <td>16</td> <td>10.240.162.64/27</td> <td>2</td> <td>NO_UD</td> </tr> <tr> <td>XMI</td> <td>Yes</td> <td>Yes</td> </tr> <tr> <td>15</td> <td>10.240.162.0/26</td> <td>6</td> <td>SO_UD</td> </tr> <tr> <td>IMI</td> <td>Yes</td> <td>Yes</td> </tr> <tr> <td>16</td> <td>10.240.162.64/27</td> <td>6</td> <td>SO_UD</td> </tr> <tr> <td>XMI</td> <td>Yes</td> <td>Yes</td> </tr> <tr> <td>23</td> <td>10.240.162.192/26</td> <td>2</td> <td>NO_UD</td> </tr> <tr> <td>IMI</td> <td>Yes</td> <td>Yes</td> </tr> <tr> <td>21</td> <td>10.240.162.128/27</td> <td>2</td> <td>NO_UD</td> </tr> <tr> <td>XMI</td> <td>Yes</td> <td>Yes</td> </tr> <tr> <td>23</td> <td>10.240.162.192/26</td> <td>6</td> <td>SO_UD</td> </tr> <tr> <td>IMI</td> <td>Yes</td> <td>Yes</td> </tr> <tr> <td>21</td> <td>10.240.162.128/27</td> <td>6</td> <td>SO_UD</td> </tr> <tr> <td>XSI1</td> <td>No</td> <td>Yes</td> </tr> <tr> <td>17</td> <td>10.240.162.96/27</td> <td>0</td> <td></td> </tr> </tbody> </table>	Network	Configure Interfaces	Network	ork	2	NO_UD	10.162.0/26	2	NO_UD	IMI	Yes	Yes	16	10.240.162.64/27	2	NO_UD	XMI	Yes	Yes	15	10.240.162.0/26	6	SO_UD	IMI	Yes	Yes	16	10.240.162.64/27	6	SO_UD	XMI	Yes	Yes	23	10.240.162.192/26	2	NO_UD	IMI	Yes	Yes	21	10.240.162.128/27	2	NO_UD	XMI	Yes	Yes	23	10.240.162.192/26	6	SO_UD	IMI	Yes	Yes	21	10.240.162.128/27	6	SO_UD	XSI1	No	Yes	17	10.240.162.96/27	0	
Network	Configure Interfaces	Network																																																																	
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XSI1	No	Yes																																																																	
17	10.240.162.96/27	0																																																																	
<p>THIS PROCEDURE HAS BEEN COMPLETED</p>																																																																			

8.4 OAM Pairing for the Primary NOAMP Servers (1st NOAMP site only)

Oracle Communications User Data Repository Installation and Configuration Guide

The user should be aware that during the OAM Pairing 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.

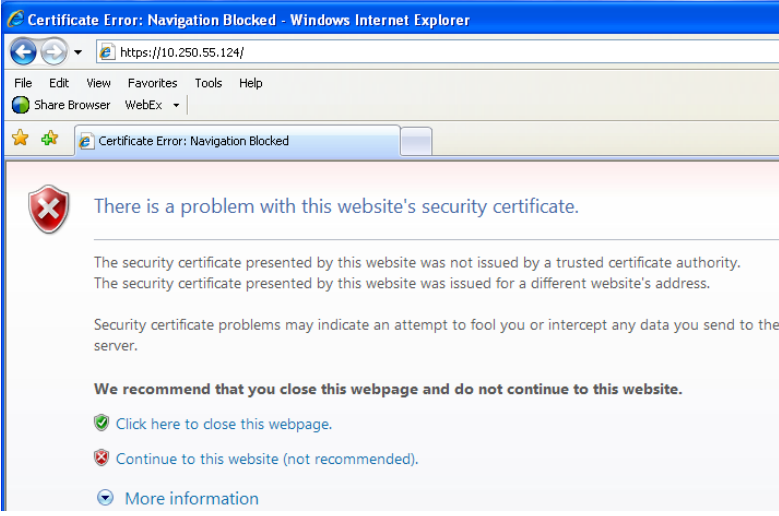

This procedure creates active/standby pair for the NOAMP servers at the Primary Provisioning Site..

Requirements:


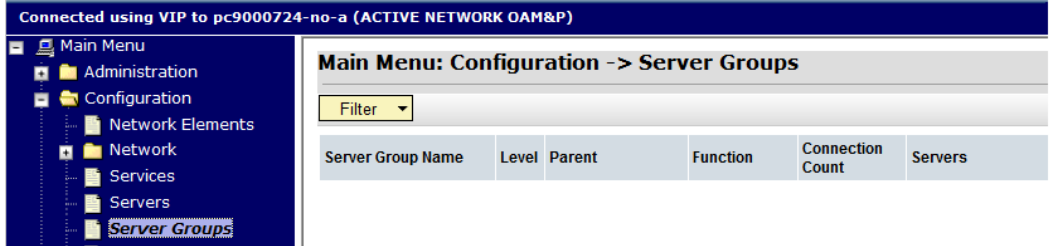
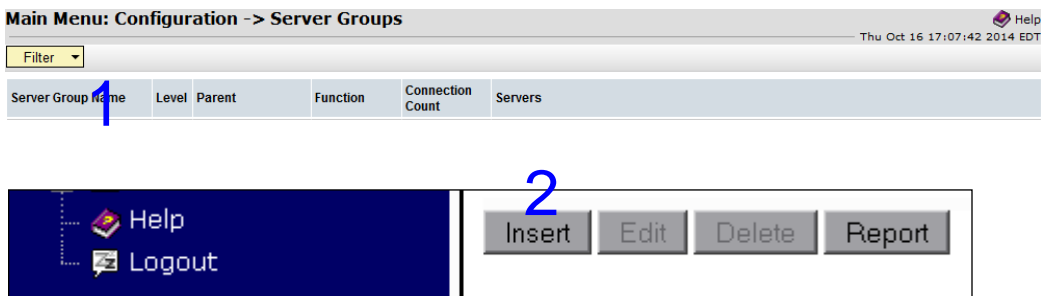
- **Procedure 11: Create Configuration for Remaining Servers** has been completed.

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

Procedure 13: OAM Pairing for the Primary NOAMP Servers

Step	Procedure	Result
<p>1.</p> <input type="checkbox"/>	<p>NOAMP Server A:</p> <p>Launch an approved web browser and connect to the XMI IP address assigned to NOAMP Server A using https://</p> <p>NOTE: If presented with the “security certificate” warning screen shown to the right, choose the following option: “Continue to this website (not recommended)”.</p>	
<p>2.</p> <input type="checkbox"/>	<p>NOAMP Server A:</p> <p>The user should be presented the login screen shown on the right.</p> <p>Login to the GUI using the default user and password.</p>	

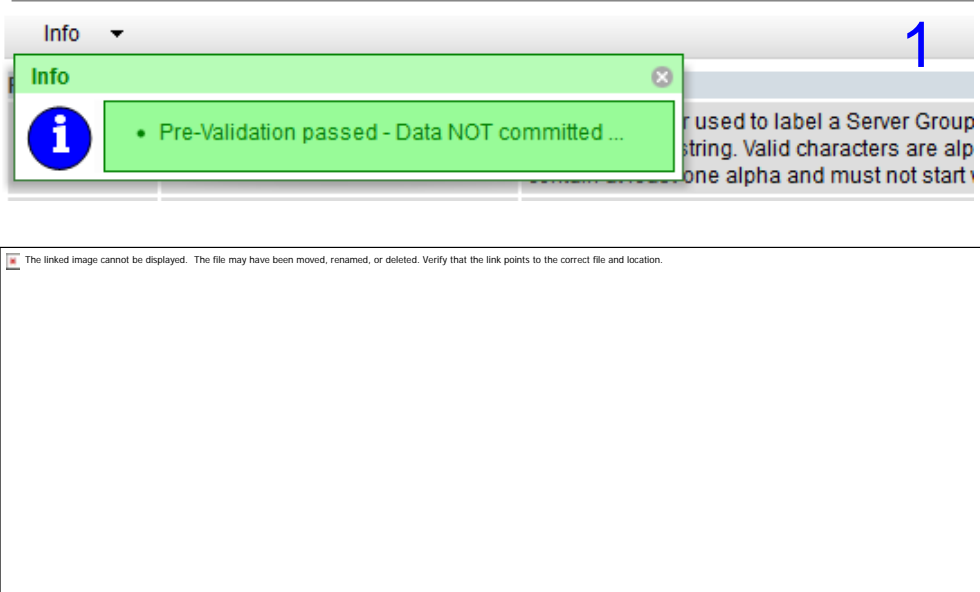
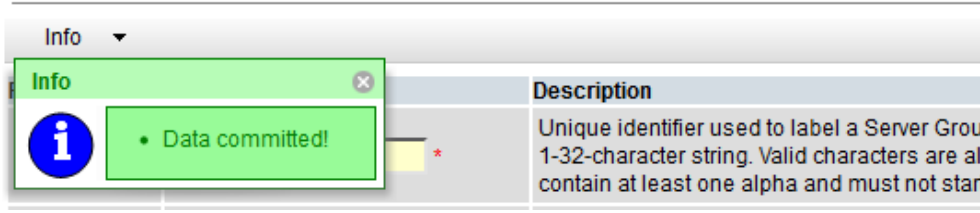
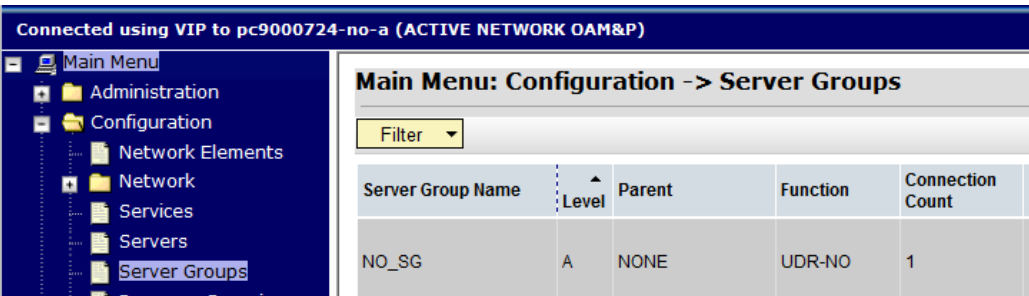
Procedure 13: OAM Pairing for the Primary NOAMP Servers

Step	Procedure	Result
<p>3.</p> <p><input type="checkbox"/></p>	<p>NOAMP Server A:</p> <p>The user should be presented the Main Menu as shown on the right.</p>	
<p>4.</p> <p><input type="checkbox"/></p>	<p>NOAMP Server A:</p> <p><i>Configuring Server Group</i></p> <p>Select...</p> <p>Main Menu → Configuration → Server Groups</p> <p>...as shown on the right.</p>	
<p>5.</p> <p><input type="checkbox"/></p>	<p>NOAMP Server A:</p> <p>1) The user will be presented with the “Server Groups” configuration screen as shown on the right.</p> <p>2) Select the “Insert” dialogue button from the bottom left corner of the screen.</p> <p>NOTE: The user may need to use the vertical scroll-bar in order to make the “Insert” dialogue button visible.</p>	

Procedure 13: OAM Pairing for the Primary NOAMP Servers

Step	Procedure	Result																		
6. <input type="checkbox"/>	NOAMP Server A: The user will be presented with the “ Server Groups [Insert] ” screen as shown on the right.	<table border="1"> <thead> <tr> <th>Field</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Server Group Name</td> <td><input type="text"/></td> <td>Unique identifier used to label a Server Group. [Default = n/a. Range = A 1-32-character string. Valid characters are alphanumeric and underscore. Must contain at least one alpha and must not start with a digit.]</td> </tr> <tr> <td>Level</td> <td>- Select Level - *</td> <td>Select one of the Levels supported by the system. [Level A groups contain NOAMP and Query servers. Level B groups are optional and contain SOAM servers. Level C groups contain MP servers.]</td> </tr> <tr> <td>Parent</td> <td>- Select Parent - *</td> <td>Select an existing Server Group or NONE</td> </tr> <tr> <td>Function</td> <td>- Select Function - *</td> <td>Select one of the Functions supported by the system</td> </tr> <tr> <td>WAN Replication Connection Count</td> <td><input type="text"/></td> <td>Specify the number of TCP connections that will be used by replication over any WAN connection associated with this Server Group. [Default = 1. Range = An integer between 1 and 8.]</td> </tr> </tbody> </table> <p style="text-align: right;">Ok Apply Cancel</p>	Field	Value	Description	Server Group Name	<input type="text"/>	Unique identifier used to label a Server Group. [Default = n/a. Range = A 1-32-character string. Valid characters are alphanumeric and underscore. Must contain at least one alpha and must not start with a digit.]	Level	- Select Level - *	Select one of the Levels supported by the system. [Level A groups contain NOAMP and Query servers. Level B groups are optional and contain SOAM servers. Level C groups contain MP servers.]	Parent	- Select Parent - *	Select an existing Server Group or NONE	Function	- Select Function - *	Select one of the Functions supported by the system	WAN Replication Connection Count	<input type="text"/>	Specify the number of TCP connections that will be used by replication over any WAN connection associated with this Server Group. [Default = 1. Range = An integer between 1 and 8.]
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7. <input type="checkbox"/>	NOAMP Server A: Input the Server Group Name .	<table border="1"> <thead> <tr> <th>Field</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Server Group Name</td> <td>NO_grp *</td> <td>Unique identifier used to label a Server Group. string. Valid characters are alphanumeric and underscore and must not start with a digit.]</td> </tr> </tbody> </table>	Field	Value	Description	Server Group Name	NO_grp *	Unique identifier used to label a Server Group. string. Valid characters are alphanumeric and underscore and must not start with a digit.]												
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Server Group Name	NO_grp *	Unique identifier used to label a Server Group. string. Valid characters are alphanumeric and underscore and must not start with a digit.]																		
8. <input type="checkbox"/>	NOAMP Server A: Select “ A ” on the “ Level ” pull-down menu.	<table border="1"> <tbody> <tr> <td>Level</td> <td>- Select Level - * - Select Level - A</td> <td>Select one of the Levels supported by the system. Query servers. Level B groups are optional and contain MP servers.]</td> </tr> <tr> <td>Parent</td> <td>- Select Parent - *</td> <td>Select an existing Server Group or NONE</td> </tr> </tbody> </table>	Level	- Select Level - * - Select Level - A	Select one of the Levels supported by the system. Query servers. Level B groups are optional and contain MP servers.]	Parent	- Select Parent - *	Select an existing Server Group or NONE												
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Parent	- Select Parent - *	Select an existing Server Group or NONE																		
9. <input type="checkbox"/>	NOAMP Server A: Select “ None ” on the “ Parent ” pull-down menu.	<table border="1"> <tbody> <tr> <td>Parent</td> <td>- Select Parent - * None</td> <td>Select an existing Server Group or NONE</td> </tr> <tr> <td>Function</td> <td>- Select Function - *</td> <td>Select one of the Functions supported by the system</td> </tr> </tbody> </table>	Parent	- Select Parent - * None	Select an existing Server Group or NONE	Function	- Select Function - *	Select one of the Functions supported by the system												
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Function	- Select Function - *	Select one of the Functions supported by the system																		
10. <input type="checkbox"/>	NOAMP Server A: Select “ UDR-NO ” on the “ Function ” pull-down menu.	<table border="1"> <tbody> <tr> <td>Function</td> <td>UDR-NO *</td> <td></td> </tr> </tbody> </table>	Function	UDR-NO *																
Function	UDR-NO *																			
11. <input type="checkbox"/>	NOAMP Server A: Input value “ 8 ” into “ WAN Replication Connection Count ”.	<table border="1"> <tbody> <tr> <td>WAN Replication Connection Count</td> <td>8</td> <td>Specify the number of TCP connections that will be used by replication over any WAN connection associated with this Server Group. [Default = 1. Range = An integer between 1 and 8.]</td> </tr> </tbody> </table>	WAN Replication Connection Count	8	Specify the number of TCP connections that will be used by replication over any WAN connection associated with this Server Group. [Default = 1. Range = An integer between 1 and 8.]															
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Procedure 13: OAM Pairing for the Primary NOAMP Servers

Step	Procedure	Result										
<p>12.</p> <p><input type="checkbox"/></p>	<p>NOAMP Server A:</p> <p>1) The user should be presented with a banner information message stating “Pre-Validation passed”.</p> <p>2) Select the “Apply” dialogue button.</p>	<p>Main Menu: Configuration -> Server Groups [Insert]</p>  <p>The screenshot shows a green information dialog box with the text "Pre-Validation passed - Data NOT committed ...". The background is the Oracle OAM&P configuration page for "Server Groups". A blue number "1" is in the top right, and a blue number "2" is in the bottom right of the screenshot area.</p>										
<p>13.</p> <p><input type="checkbox"/></p>	<p>NOAMP Server A:</p> <p>The user should be presented with a banner information message stating “Data committed”.</p>	<p>Main Menu: Configuration -> Server Groups [Insert]</p>  <p>The screenshot shows a green information dialog box with the text "Data committed!". The background is the Oracle OAM&P configuration page for "Server Groups".</p>										
<p>14.</p> <p><input type="checkbox"/></p>	<p>NOAMP Server A:</p> <p>Select...</p> <p>Main Menu → Configuration → Server Groups</p> <p>...as shown on the right.</p>	 <p>The screenshot shows the Oracle OAM&P navigation tree on the left with "Main Menu", "Configuration", and "Server Groups" selected. On the right, the "Server Groups" table is displayed with the following data:</p> <table border="1"> <thead> <tr> <th>Server Group Name</th> <th>Level</th> <th>Parent</th> <th>Function</th> <th>Connection Count</th> </tr> </thead> <tbody> <tr> <td>NO_SG</td> <td>A</td> <td>NONE</td> <td>UDR-NO</td> <td>1</td> </tr> </tbody> </table>	Server Group Name	Level	Parent	Function	Connection Count	NO_SG	A	NONE	UDR-NO	1
Server Group Name	Level	Parent	Function	Connection Count								
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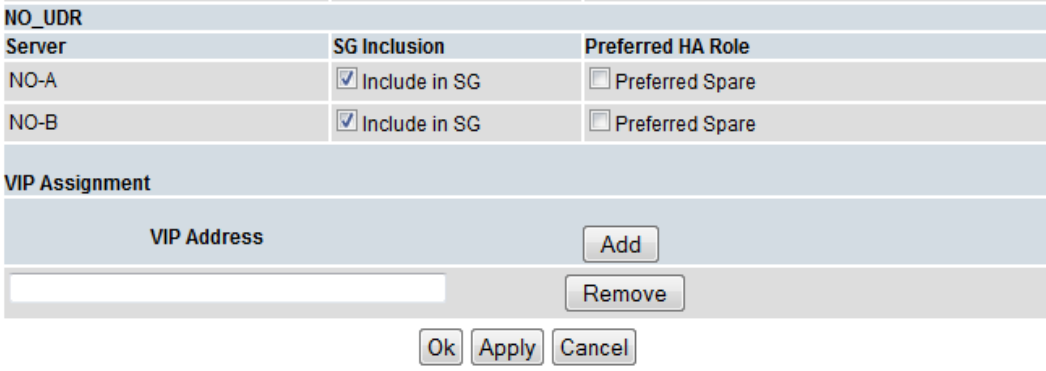
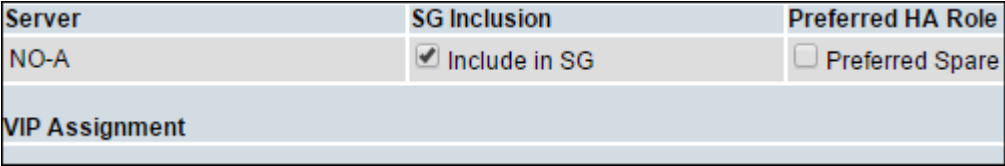
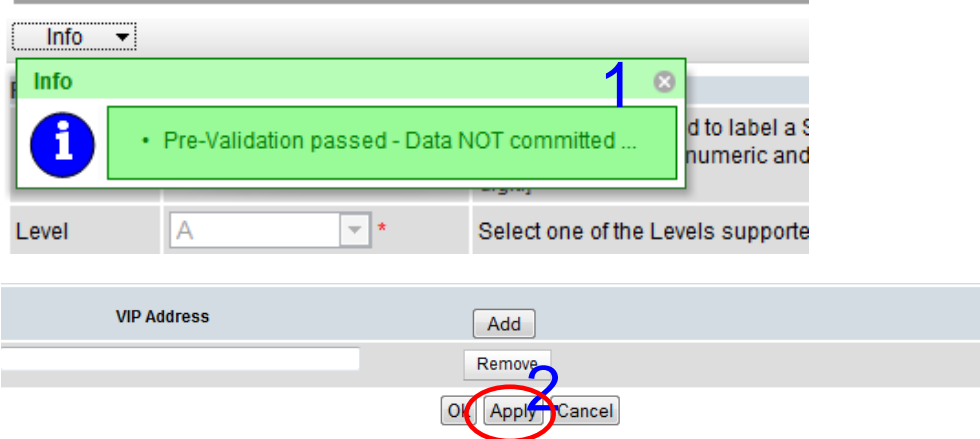
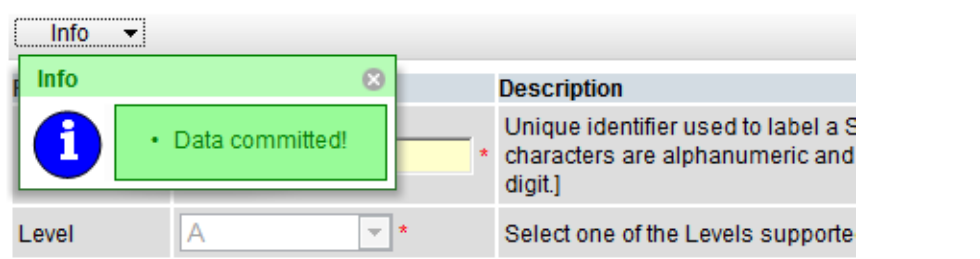
Procedure 13: OAM Pairing for the Primary NOAMP Servers

Step	Procedure	Result																
<p>15.</p> <p><input type="checkbox"/></p>	<p>NOAMP Server A:</p> <p>The Server Group entry added in Steps6- 13 should now appear on the “Server Groups” configuration screen as shown on the right.</p>	<p>Main Menu: Configuration -> Server Groups</p> <p>Filter ▾</p> <table border="1"> <thead> <tr> <th>Server Group Name</th> <th>Level</th> <th>Parent</th> <th>Function</th> <th>Connection Count</th> </tr> </thead> <tbody> <tr> <td>NO_SG</td> <td>A</td> <td>NONE</td> <td>UDR-NO</td> <td>1</td> </tr> </tbody> </table>	Server Group Name	Level	Parent	Function	Connection Count	NO_SG	A	NONE	UDR-NO	1						
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NO_SG	A	NONE	UDR-NO	1														
<p>16.</p> <p><input type="checkbox"/></p>	<p>NOAMP Server A:</p> <p>1) Select the Server Group entry added in Steps6 - 13. The line entry should now be highlighted in GREEN.</p> <p>2) Select the “Edit” dialogue button from the bottom left corner of the screen.</p> <p>NOTE: <i>The user may need to use the vertical scroll-bar in order to make the “Edit” dialogue button visible.</i></p>	<p>Main Menu: Configuration -> Server Groups</p> <p>Filter ▾</p> <table border="1"> <thead> <tr> <th>Server Group Name</th> <th>Level</th> <th>Parent</th> <th>Function</th> <th>Connection Count</th> <th>Serv</th> </tr> </thead> <tbody> <tr> <td>No_grp</td> <td>1</td> <td>A</td> <td>NONE</td> <td>UDR-NO</td> <td>8</td> </tr> </tbody> </table> <p>2</p> <table border="1"> <tr> <td>Insert</td> <td>Edit</td> <td>Delete</td> <td>Report</td> </tr> </table>	Server Group Name	Level	Parent	Function	Connection Count	Serv	No_grp	1	A	NONE	UDR-NO	8	Insert	Edit	Delete	Report
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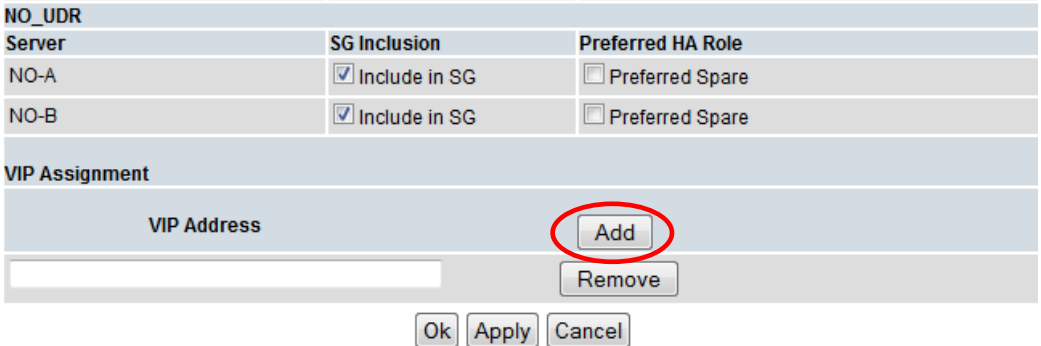
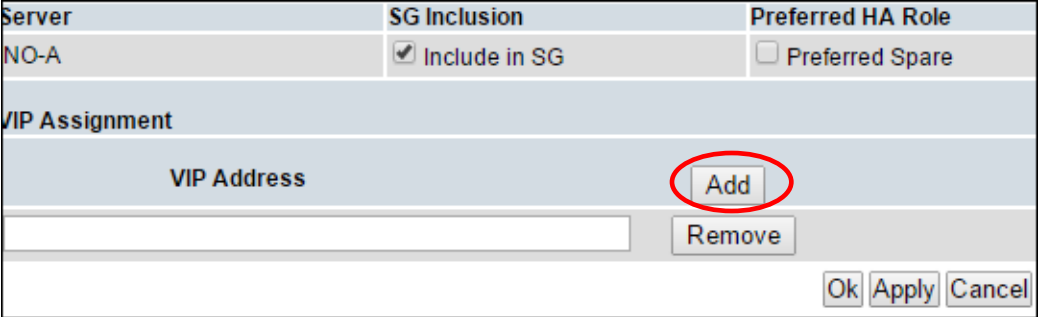
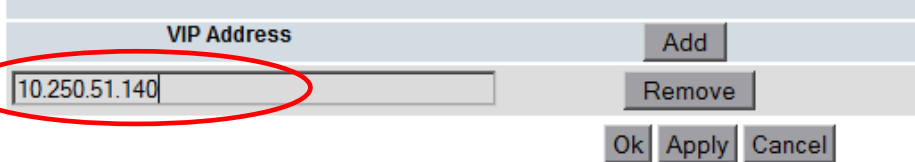
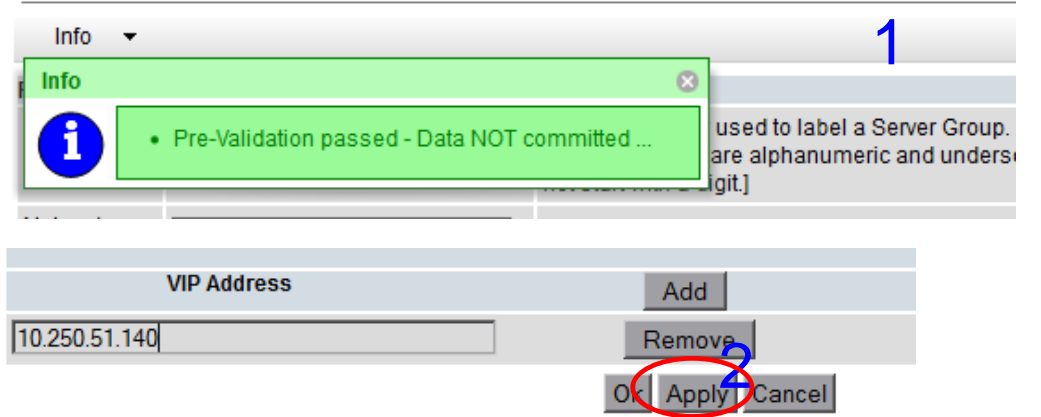
Procedure 13: OAM Pairing for the Primary NOAMP Servers

Step	Procedure	Result																																																			
<p>17.</p> <p><input type="checkbox"/></p>	<p>NOAMP Server A:</p> <p>The user will be presented with the “Server Groups [Edit]” screen as shown on the right.</p>	<p>Normal or Low Capacity Configuration:</p> <p>Main Menu: Configuration -> Server Groups [Edit]</p> <p style="text-align: right;">Fri Aug 08 15:45:10 2014</p> <p>Info ▾</p> <table border="1"> <thead> <tr> <th>Field</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Server Group Name</td> <td>S1_NO_SG *</td> <td>Unique identifier used to label a Server Group. [Default = n/a. Range = A 1-32-character string. Valid characters are alphanumeric and underscore. 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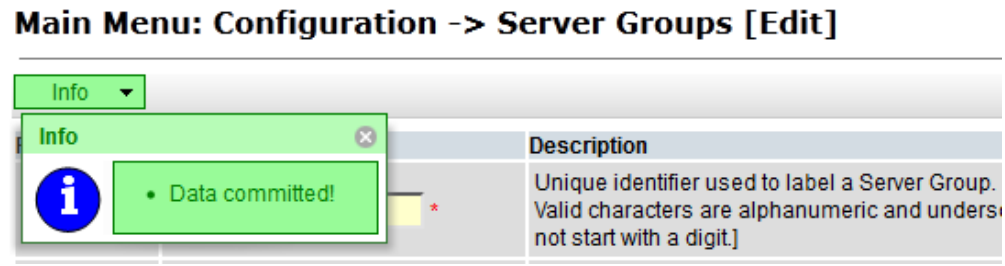
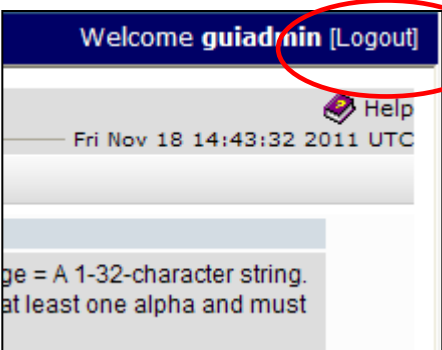
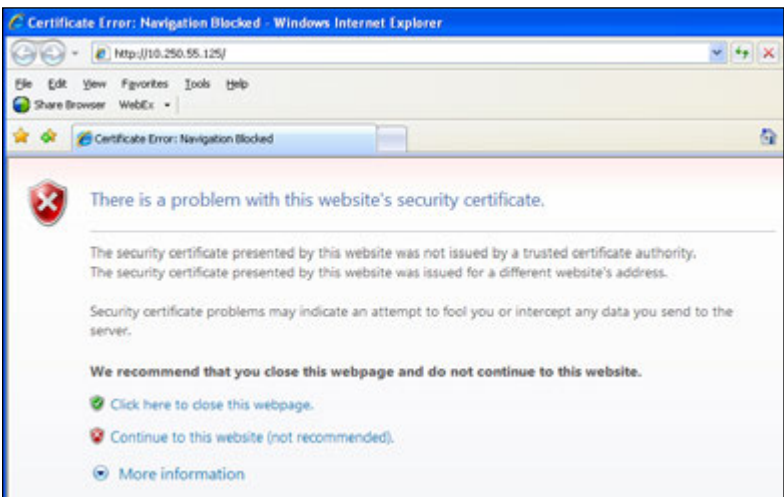
Procedure 13: OAM Pairing for the Primary NOAMP Servers

Step	Procedure	Result
<p>18.</p> <p><input type="checkbox"/></p>	<p>NOAMP Server A:</p> <p>Check the boxes to include the “A” server and the “B” server into the NOAMP Server Group.</p> <p>Note: For Single Server Installation, only NO-A will be displayed; therefore only one box will be selected.</p>	<p>Normal or Low Capacity Configuration:</p>  <p>Single Server Configuration:</p> 
<p>19.</p> <p><input type="checkbox"/></p>	<p>NOAMP Server A:</p> <p>1) The user should be presented with a banner information message stating “Pre-Validation passed”.</p> <p>2) Select the “Apply” dialogue button.</p>	<p>Main Menu: Configuration -> Server Groups [Edit]</p> 
<p>20.</p> <p><input type="checkbox"/></p>	<p>NOAMP Server A:</p> <p>The user should be presented with a banner information message stating “Data committed”.</p>	<p>Main Menu: Configuration -> Server Groups [Edit]</p> 


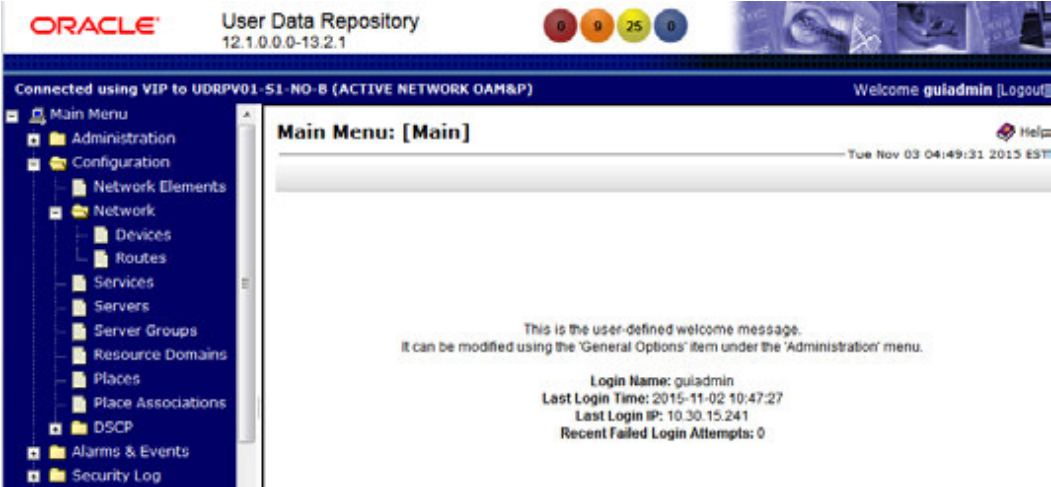


Procedure 13: OAM Pairing for the Primary NOAMP Servers

Step	Procedure	Result
<p>21.</p> <p><input type="checkbox"/></p>	<p>NOAMP Server A:</p> <p>Click the “Add” dialogue button for the VIP Address.</p> <p>Note: VIP Address optional for Single Server Configuration.</p>	<p>Normal or Low Capacity Configuration:</p>  <p>Single Server Configuration:</p> 
<p>22.</p> <p><input type="checkbox"/></p>	<p>NOAMP Server A:</p> <p>Input the VIP Address</p>	
<p>23.</p> <p><input type="checkbox"/></p>	<p>NOAMP Server A:</p> <p>1) The user should be presented with a banner information message stating “Pre-Validation passed”.</p> <p>2) Select the “Apply” dialogue button.</p>	<p>Main Menu: Configuration -> Server Groups [Edit]</p> 

Procedure 13: OAM Pairing for the Primary NOAMP Servers

Step	Procedure	Result
<p>24.</p> <input type="checkbox"/>	<p>NOAMP Server A:</p> <p>The user should be presented with a banner information message stating “Data committed”.</p>	 <p>Main Menu: Configuration -> Server Groups [Edit]</p> <p>Info</p> <p>Info</p> <p>• Data committed!</p> <p>Description</p> <p>Unique identifier used to label a Server Group. Valid characters are alphanumeric and underscores, not start with a digit.]</p>
<p>25.</p> <input type="checkbox"/>	<p>NOAMP Server A:</p> <p>Click the “Logout” link on the OAM A server GUI.</p>	 <p>Welcome guidadmin [Logout]</p> <p>Help</p> <p>Fri Nov 18 14:43:32 2011 UTC</p> <p>ge = A 1-32-character string. at least one alpha and must</p>
<p>26.</p> <input type="checkbox"/>	<p>IMPORTANT:</p> <p>Wait at least 5 minutes before proceeding on to the next Step.</p>	<ul style="list-style-type: none"> Now that the server(s) have been paired within a Server Group they must establish a master/slave relationship for High Availability (HA). It may take several minutes for this process to be completed. Note: Single Server Configuration will not need to establish the master/slave relationship for High Availability (HA). <p>Allow a minimum of 5 minutes before continuing to the next Step.</p>
<p>27.</p> <input type="checkbox"/>	<p>NOAMP VIP:</p> <p>Launch an approved web browser and connect to the XMI Virtual IP Address(VIP) assigned in STEP 22 to the UDR Server Group using “https://”.</p>	 <p>Certificate Error: Navigation Blocked - Windows Internet Explorer</p> <p>http://10.250.55.125/</p> <p>File Edit View Favorites Tools Help</p> <p>Share Browser WebEx</p> <p>Certificate Error: Navigation Blocked</p> <p>There is a problem with this website's security certificate.</p> <p>The security certificate presented by this website was not issued by a trusted certificate authority. The security certificate presented by this website was issued for a different website's address.</p> <p>Security certificate problems may indicate an attempt to fool you or intercept any data you send to the server.</p> <p>We recommend that you close this webpage and do not continue to this website.</p> <p>Click here to close this webpage.</p> <p>Continue to this website (not recommended).</p> <p>More information</p>

Procedure 13: OAM Pairing for the Primary NOAMP Servers

Step	Procedure	Result
<p>28.</p> <p><input type="checkbox"/></p>	<p>NOAMP VIP:</p> <p>The user should be presented the login screen shown on the right.</p> <p>Login to the GUI using the default user and password.</p>	
<p>29.</p> <p><input type="checkbox"/></p>	<p>NOAMP VIP:</p> <p>The user should be presented the Main Menu as shown on the right.</p>	
<p>30.</p> <p><input type="checkbox"/></p>	<p>NOAMP VIP:</p> <p><i>Restarting the NOAMP Server Application</i></p> <p>Select...</p> <p>Main Menu → Status & Manage → Server</p> <p>...as shown on the right.</p>	<p>Normal or Low Capacity Configuration:</p>  <p>Single Server Configuration:</p> 

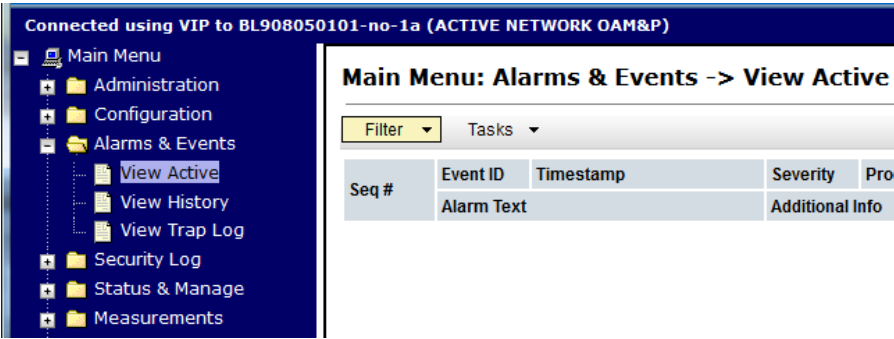
Procedure 13: OAM Pairing for the Primary NOAMP Servers

Step	Procedure	Result																																			
<p>31.</p> <p><input type="checkbox"/></p>	<p>NOAMP VIP:</p> <p>1) The “A” and “B” servers should now appear in the right panel. Note: For single server, only the “A” server will appear.</p> <p>2) Verify that the “DB” status shows “Norm” and the “Proc” status shows “Man” for one/both servers before proceeding to the next Step.</p>	<p>Normal or Low Capacity Configuration:</p> <table border="1"> <thead> <tr> <th>Network Element</th> <th>Server Hostname</th> <th>Appl State</th> <th>Alm</th> <th>DB</th> <th>Reporting Status</th> <th>Proc</th> </tr> </thead> <tbody> <tr> <td>NO_UDR</td> <td>pc9000722-no-b</td> <td>Disabled</td> <td>Err</td> <td>Norm</td> <td>Norm</td> <td>Man</td> </tr> <tr> <td>NO_UDR</td> <td>pc9000724-no-a</td> <td>Disabled</td> <td>Err</td> <td>Norm</td> <td>Norm</td> <td>Man</td> </tr> </tbody> </table> <p>Single Server Configuration:</p> <table border="1"> <thead> <tr> <th>Network Element</th> <th>Server Hostname</th> <th>Appl State</th> <th>Alm</th> <th>DB</th> <th>Reporting Status</th> <th>Proc</th> </tr> </thead> <tbody> <tr> <td>NO_UDR</td> <td>pc9000722-no a</td> <td>Disabled</td> <td>Err</td> <td>Norm</td> <td>Norm</td> <td>Man</td> </tr> </tbody> </table>	Network Element	Server Hostname	Appl State	Alm	DB	Reporting Status	Proc	NO_UDR	pc9000722-no-b	Disabled	Err	Norm	Norm	Man	NO_UDR	pc9000724-no-a	Disabled	Err	Norm	Norm	Man	Network Element	Server Hostname	Appl State	Alm	DB	Reporting Status	Proc	NO_UDR	pc9000722-no a	Disabled	Err	Norm	Norm	Man
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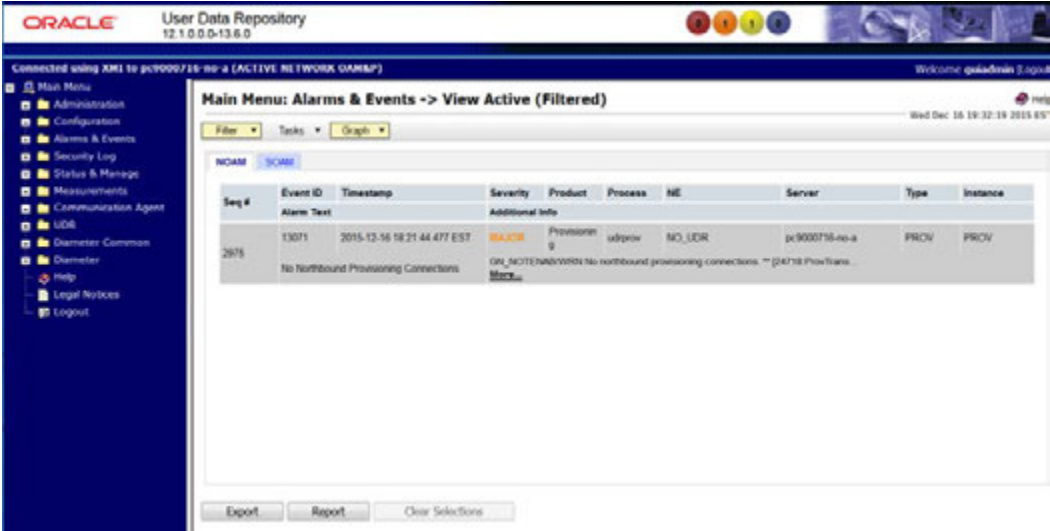
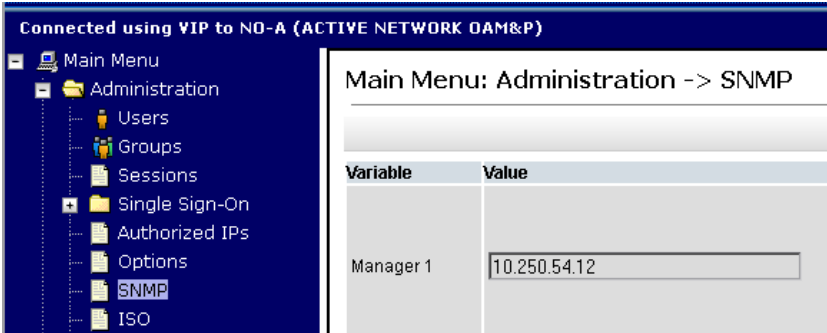
Procedure 13: OAM Pairing for the Primary NOAMP Servers

Step	Procedure	Result																																																						
<p>32.</p> <p><input type="checkbox"/></p>	<p>NOAMP VIP:</p> <p>1) Using the mouse, select NOAMP Server A. The line entry should now be highlighted in GREEN.</p> <p>2) Select the “Restart” dialogue button from the bottom left corner of the screen.</p> <p>3) Click the “OK” button on the confirmation dialogue box.</p> <p>4) The user should be presented with a confirmation message (in the banner area) for NOAMP Server A stating: “Successfully restarted application”.</p> <p><i>NOTE: The user may need to use the vertical scroll-bar in order to make the “Restart” dialogue button visible.</i></p>	<p>Normal or Low Capacity Configuration:</p> <p>Main Menu: Status & Manage -> Server 1</p> <p>Filter</p> <table border="1"> <thead> <tr> <th>Network Element</th> <th>Server Hostname</th> <th>Appl State</th> <th>Alm</th> <th>Repl</th> <th>Coll</th> <th>DB</th> <th>HA</th> <th>Proc</th> </tr> </thead> <tbody> <tr> <td>ETS3_NO_NE</td> <td>NO-A</td> <td>Disabled</td> <td>Err</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Err</td> <td>Man</td> </tr> <tr> <td>ETS3_NO_NE</td> <td>NO-B</td> <td>Disabled</td> <td>Warn</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Err</td> <td>Man</td> </tr> </tbody> </table> <p>Single Server Configuration:</p> <p>Main Menu: Status & Manage -> Server 1</p> <p>Filter</p> <table border="1"> <thead> <tr> <th>Network Element</th> <th>Server Hostname</th> <th>Appl State</th> <th>Alm</th> <th>Repl</th> <th>Coll</th> <th>DB</th> <th>HA</th> <th>Proc</th> </tr> </thead> <tbody> <tr> <td>ETS3_NO_NE</td> <td>NO-A</td> <td>Disabled</td> <td>Err</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Err</td> <td>Man</td> </tr> </tbody> </table> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Help Logout</p> <p style="text-align: center; font-size: 2em;">2</p> <p>Stop Restart Reboot</p> </div> <div style="border: 1px solid gray; padding: 5px; margin-top: 10px;"> <p>Are you sure you wish to restart application software on the following server(s)? NO-A</p> <p style="text-align: center; font-size: 2em;">3</p> <p>OK Cancel</p> </div> <p>Main Menu: Status & Manage -> Server [Restart]</p> <p>Filter Status</p> <table border="1"> <thead> <tr> <th>Appl State</th> <th>Alm</th> <th>Repl</th> </tr> </thead> <tbody> <tr> <td>Disabled</td> <td>Err</td> <td>Norm</td> </tr> <tr> <td>Disabled</td> <td>Warn</td> <td>Norm</td> </tr> </tbody> </table> <div style="border: 1px solid blue; padding: 5px; margin-top: 10px;"> <p>Status 4</p> <p><input checked="" type="checkbox"/> • NO-A: Successfully restarted application.</p> </div>	Network Element	Server Hostname	Appl State	Alm	Repl	Coll	DB	HA	Proc	ETS3_NO_NE	NO-A	Disabled	Err	Norm	Norm	Norm	Err	Man	ETS3_NO_NE	NO-B	Disabled	Warn	Norm	Norm	Norm	Err	Man	Network Element	Server Hostname	Appl State	Alm	Repl	Coll	DB	HA	Proc	ETS3_NO_NE	NO-A	Disabled	Err	Norm	Norm	Norm	Err	Man	Appl State	Alm	Repl	Disabled	Err	Norm	Disabled	Warn	Norm
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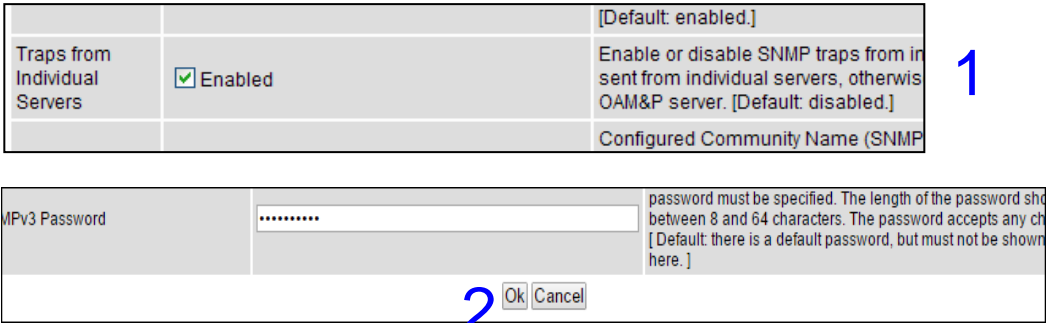

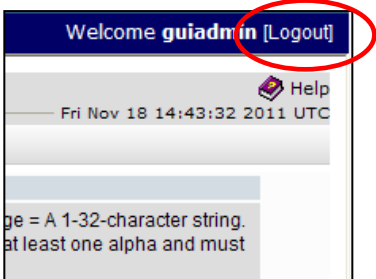
Procedure 13: OAM Pairing for the Primary NOAMP Servers

Step	Procedure	Result																																													
<p>33.</p> <p><input type="checkbox"/></p>	<p>NOAMP VIP:</p> <p>Verify that the “Appl State” now shows “Enabled” and that the “Repl, Coll, DB, HA & Proc” status columns all show “Norm” for NOAMP Server A before proceeding to the next Step.</p> <p>NOTE:If user chooses to refresh the Server status screen in advance of the default setting (15-30 sec.). This may be done by simply reselecting the “Status & Manage → Server” option from the Main menu on the left.</p>	<p>Normal or Low Capacity Configuration:</p> <table border="1"> <thead> <tr> <th>Network Element</th> <th>Server Hostname</th> <th>Appl State</th> <th>Alm</th> <th>Repl</th> <th>Coll</th> <th>DB</th> <th>HA</th> <th>Proc</th> </tr> </thead> <tbody> <tr> <td>ETS3_NO_NE</td> <td>NO-A</td> <td>Enabled</td> <td>Err</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> <tr> <td>ETS3_NO_NE</td> <td>NO-B</td> <td>Disabled</td> <td>Warn</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Err</td> <td>man</td> </tr> </tbody> </table> <p>Single Server Configuration:</p> <table border="1"> <thead> <tr> <th>Network Element</th> <th>Server Hostname</th> <th>Appl State</th> <th>Alm</th> <th>Repl</th> <th>Coll</th> <th>DB</th> <th>HA</th> <th>Proc</th> </tr> </thead> <tbody> <tr> <td>ETS3_NO_NE</td> <td>NO-A</td> <td>Enabled</td> <td>Err</td> <td>norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> </tbody> </table>	Network Element	Server Hostname	Appl State	Alm	Repl	Coll	DB	HA	Proc	ETS3_NO_NE	NO-A	Enabled	Err	Norm	Norm	Norm	Norm	Norm	ETS3_NO_NE	NO-B	Disabled	Warn	Norm	Norm	Norm	Err	man	Network Element	Server Hostname	Appl State	Alm	Repl	Coll	DB	HA	Proc	ETS3_NO_NE	NO-A	Enabled	Err	norm	Norm	Norm	Norm	Norm
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<p>34.</p> <p><input type="checkbox"/></p>	<p>NOAMP VIP:</p> <p>Restart NOAMP Server B.</p>	<p>Note: Don’t perform this step for single server installations. Repeat steps 32 and 33 above to restart NOAMP Server B.</p>																																													
<p>35.</p> <p><input type="checkbox"/></p>	<p>NOAMP VIP:</p> <p>Verifying the NOAMP Server Alarm status</p> <p>Select...</p> <p>Main Menu → Alarms & Events → View Active</p> <p>...as shown on the right.</p>	 <p>Connected using VIP to BL908050101-no-1a (ACTIVE NETWORK OAM&P)</p> <p>Main Menu: Alarms & Events -> View Active</p> <p>Filter Tasks</p> <table border="1"> <thead> <tr> <th>Seq #</th> <th>Event ID</th> <th>Timestamp</th> <th>Severity</th> <th>Pro</th> </tr> </thead> <tbody> <tr> <td></td> <td colspan="2">Alarm Text</td> <td></td> <td>Additional Info</td> </tr> </tbody> </table>	Seq #	Event ID	Timestamp	Severity	Pro		Alarm Text			Additional Info																																			
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Procedure 13: OAM Pairing for the Primary NOAMP Servers

Step	Procedure	Result
<p>36.</p> <p><input type="checkbox"/></p>	<p>NOAMP VIP:</p> <p>Verify that the noted Event IDs are the only alarms present on the system at this time.</p>	 <p>Verify that only the following Event IDs are the only alarms present:</p> <ul style="list-style-type: none"> - 13071 (<i>No Northbound Provisioning Connections</i>) - 19820 (<i>“Communicaton Agent Routed Service Unavailable”</i>) <p>Note: <i>It may take a few minutes for residual process alarms to clear.</i></p>
<p>37.</p> <p><input type="checkbox"/></p>	<p>NOAMP VIP:</p> <p>Configuring SNMP for Traps from Individual Servers</p> <p>Select...</p> <p>Main Menu → Administration → Remote Servers → SNMP Trapping ...as shown on the right.</p>	

Procedure 13: OAM Pairing for the Primary NOAMP Servers

Step	Procedure	Result
<p>38.</p> <input type="checkbox"/>	<p>NOAMP VIP:</p> <p>1) Using the cursor, place a “check” in the check box for “Traps from Individual Servers”.</p> <p>2) Click the “OK” button located at the bottom in the center of the screen.</p> <p>3) Verify that a banner message stating “Data committed” is received.</p>	 
<p>39.</p> <input type="checkbox"/>	<p>NOAMP VIP:</p> <p>Click the “Logout” link on the server GUI.</p>	
<p>THIS PROCEDURE HAS BEEN COMPLETED</p>		

8.5 OAM pairing for SOAM and DR sites (All SOAM and DR Sites)

The user should be aware that during the OAM Pairing 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.

The steps in this procedure are for all SOAM servers and the DR NOAMP servers.

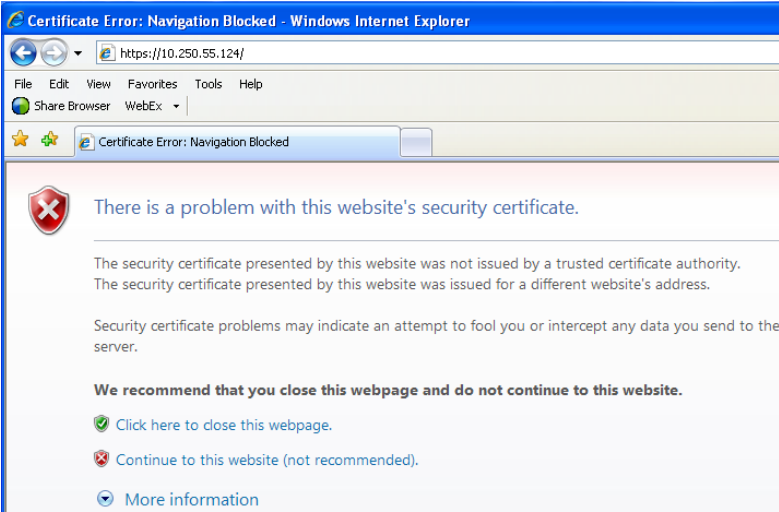

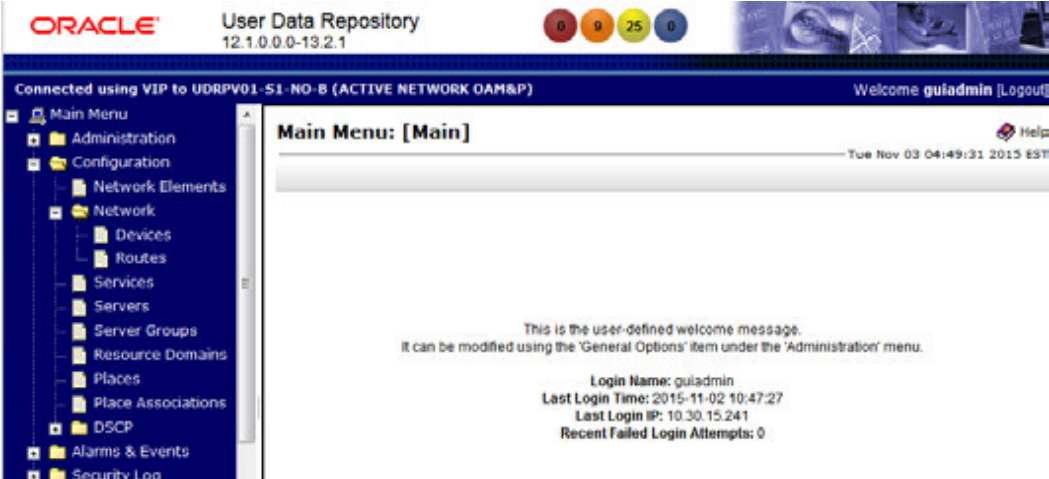
This procedure creates active/standby pair for the SOAM servers at any site or the DR NOAMP servers.

Requirements:

- **Procedure 11: Create Configuration for Remaining Servers** has been completed.
- **Procedure 13: OAM Pairing for the Primary NOAMP Servers** has been completed.

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


Procedure 14: Pairing the OAM Servers for SOAM or DR NOAMPsites

Step	Procedure	Result
<p>1.</p> <p><input type="checkbox"/></p>	<p>Active NOAMPVIP:</p> <p>Launch an approved web browser and connect to the XMI Virtual IP Address(VIP) of the Active NOAMPsite using https://</p> <p>NOTE: If presented with the “security certificate” warning screen shown to the right, choose the following option: “Continue to this website (not recommended)”.</p>	
<p>2.</p> <p><input type="checkbox"/></p>	<p>Active NOAMPVIP:</p> <p>The user should be presented the login screen shown on the right.</p> <p>Login to the GUI using the default user and password.</p>	
<p>3.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP:</p> <p>The user should be presented the Main Menu as shown on the right.</p>	


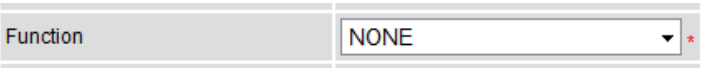

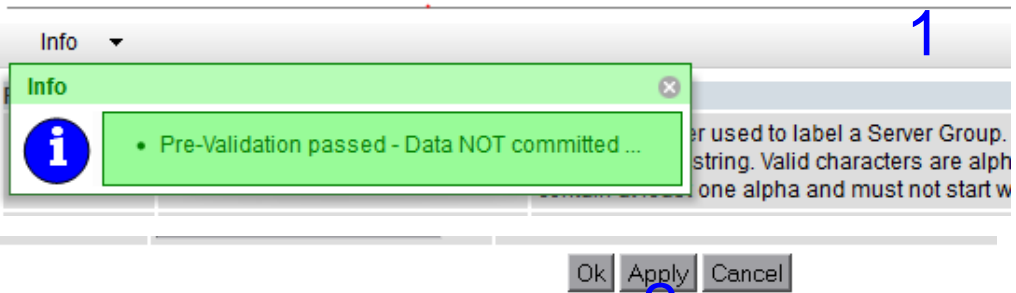
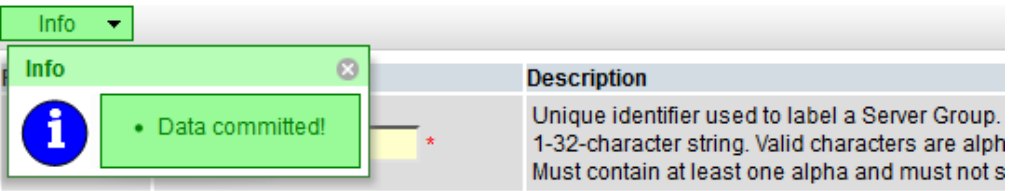
Procedure 14: Pairing the OAM Servers for SOAM or DR NOAMPsites

Step	Procedure	Result																																																																	
<p>4.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP:</p> <p><i>For Primary NOAMPstandby server only:</i></p> <p>Mark the server 'forced standby'</p> <p>Main Menu → Status & Manage → HA</p> <p>Click "Edit" button on bottom left</p> <p>Find the row for the Primary NOAMP Standby server and change "Max Allowed HA Role" to "Standby".</p>	<p>*Note: Don't perform this step for single server installations.</p> <div> <p>Main Menu: Status & Manage -> HA</p> <p>Filter</p> <table border="1"> <thead> <tr> <th>Hostname</th> <th>OAM HA Role</th> <th>Application HA Role</th> <th>Max Allowed HA Role</th> <th>Mate Hostname List</th> <th>Network Element</th> <th>Server Role</th> <th>Active VIPs</th> </tr> </thead> <tbody> <tr> <td>NO-A</td> <td>Active</td> <td>OOS</td> <td>Active</td> <td>NO-B</td> <td>UDR_NO_A</td> <td>Network OAM&P</td> <td>10.240.15.40</td> </tr> <tr> <td>NO-B</td> <td>Standby</td> <td>OOS</td> <td>Active</td> <td>NO-A</td> <td>UDR_NO_A</td> <td>Network OAM&P</td> <td></td> </tr> <tr> <td>SO-A</td> <td>Unavailable</td> <td>Unavailable</td> <td></td> <td></td> <td>UDR_SO_A</td> <td>System OAM</td> <td></td> </tr> <tr> <td>SO-B</td> <td>Unavailable</td> <td>Unavailable</td> <td></td> <td></td> <td>UDR_SO_A</td> <td>System OAM</td> <td></td> </tr> <tr> <td>MP1</td> <td>Unavailable</td> <td>Unavailable</td> <td></td> <td></td> <td>UDR_SO_A</td> <td>MP</td> <td></td> </tr> <tr> <td>MP2</td> <td>Unavailable</td> <td>Unavailable</td> <td></td> <td></td> <td>UDR_SO_A</td> <td>MP</td> <td></td> </tr> </tbody> </table> </div> <div> <p>Main Menu: Status & Manage -> HA [Edit]</p> <p>Info</p> <table border="1"> <thead> <tr> <th>Hostname</th> <th>Max Allowed HA Role</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>NO-A</td> <td>Active</td> <td>The maximum desired HA Role for NO-A</td> </tr> <tr> <td>NO-B</td> <td>Standby</td> <td>The maximum desired HA Role for NO-B</td> </tr> </tbody> </table> <p>Ok Cancel</p> </div>	Hostname	OAM HA Role	Application HA Role	Max Allowed HA Role	Mate Hostname List	Network Element	Server Role	Active VIPs	NO-A	Active	OOS	Active	NO-B	UDR_NO_A	Network OAM&P	10.240.15.40	NO-B	Standby	OOS	Active	NO-A	UDR_NO_A	Network OAM&P		SO-A	Unavailable	Unavailable			UDR_SO_A	System OAM		SO-B	Unavailable	Unavailable			UDR_SO_A	System OAM		MP1	Unavailable	Unavailable			UDR_SO_A	MP		MP2	Unavailable	Unavailable			UDR_SO_A	MP		Hostname	Max Allowed HA Role	Description	NO-A	Active	The maximum desired HA Role for NO-A	NO-B	Standby	The maximum desired HA Role for NO-B
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<p>5.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP:</p> <p>Select...</p> <p>Main Menu → Configuration → Server Groups</p> <p>...as shown on the right.</p>	<div> <p>Connected using VIP to pc9000724-no-a (ACTIVE NETWORK OAM&P)</p> <p>Main Menu: Configuration -> Server Groups</p> <p>Filter</p> <table border="1"> <thead> <tr> <th>Server Group Name</th> <th>Level</th> <th>Parent</th> <th>Function</th> <th>Connection Count</th> <th>Servers</th> <th>HA Role Pref</th> <th>VIPs</th> </tr> </thead> <tbody> <tr> <td>NO_SG</td> <td>A</td> <td>NONE</td> <td>UDR-NO</td> <td>1</td> <td>NE NO_UDR pc9000722-no-b NO_UDR pc9000724-no-a</td> <td></td> <td>10.240.37.130 10.240.37.130</td> </tr> </tbody> </table> </div>	Server Group Name	Level	Parent	Function	Connection Count	Servers	HA Role Pref	VIPs	NO_SG	A	NONE	UDR-NO	1	NE NO_UDR pc9000722-no-b NO_UDR pc9000724-no-a		10.240.37.130 10.240.37.130																																																	
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Procedure 14: Pairing the OAM Servers for SOAM or DR NOAMPsites

Step	Procedure	Result																		
6. <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>1) The user will be presented with the “Server Groups” configuration screen as shown on the right.</p> <p>2) Select the “Insert” dialogue button from the bottom left corner of the screen.</p> <p>NOTE:The user may need to use the vertical scroll-bar in order to make the “Insert” dialogue button visible.</p>	<table border="1"> <thead> <tr> <th>Server Group Name</th> <th>Level</th> <th>Parent</th> <th>Function</th> <th>Connection Count</th> </tr> </thead> <tbody> <tr> <td>NO_SG</td> <td>A</td> <td>NONE</td> <td>UDR-NO</td> <td>1</td> </tr> </tbody> </table> 	Server Group Name	Level	Parent	Function	Connection Count	NO_SG	A	NONE	UDR-NO	1								
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7. <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>Configuring the SOAM or DR NOAMP Server Group</p> <p>The user will be presented with the “Server Groups [Insert]” screen as shown on the right.</p>	<table border="1"> <thead> <tr> <th>Field</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Server Group Name</td> <td><input type="text"/></td> <td>Unique identifier used to label a Server Group. [Default = n/a. Range = A 1-32-character string. Valid characters are alphanumeric and underscore. Must contain at least one alpha and must not start with a digit.]</td> </tr> <tr> <td>Level</td> <td>- Select Level -</td> <td>Select one of the Levels supported by the system. [Level A groups contain NOAMP and Query servers. Level B groups are optional and contain SOAM servers. Level C groups contain MP servers.]</td> </tr> <tr> <td>Parent</td> <td>- Select Parent -</td> <td>Select an existing Server Group or NONE</td> </tr> <tr> <td>Function</td> <td>- Select Function -</td> <td>Select one of the Functions supported by the system</td> </tr> <tr> <td>WAN Replication Connection Count</td> <td><input type="text"/></td> <td>Specify the number of TCP connections that will be used by replication over any WAN connection associated with this Server Group. [Default = 1. Range = An integer between 1 and 8.]</td> </tr> </tbody> </table> <p style="text-align: right;">Ok Apply Cancel</p>	Field	Value	Description	Server Group Name	<input type="text"/>	Unique identifier used to label a Server Group. [Default = n/a. Range = A 1-32-character string. Valid characters are alphanumeric and underscore. Must contain at least one alpha and must not start with a digit.]	Level	- Select Level -	Select one of the Levels supported by the system. [Level A groups contain NOAMP and Query servers. Level B groups are optional and contain SOAM servers. Level C groups contain MP servers.]	Parent	- Select Parent -	Select an existing Server Group or NONE	Function	- Select Function -	Select one of the Functions supported by the system	WAN Replication Connection Count	<input type="text"/>	Specify the number of TCP connections that will be used by replication over any WAN connection associated with this Server Group. [Default = 1. Range = An integer between 1 and 8.]
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8. <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>Input the Server Group Name.</p>	<table border="1"> <thead> <tr> <th>Field</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Server Group Name</td> <td>SO_grp</td> <td>Unique identifier used to label a Server Group. 1-32-character string. Valid characters are alphanumeric and underscore. Must contain at least one alpha and must not start with a digit.</td> </tr> </tbody> </table>	Field	Value	Description	Server Group Name	SO_grp	Unique identifier used to label a Server Group. 1-32-character string. Valid characters are alphanumeric and underscore. Must contain at least one alpha and must not start with a digit.												
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9. <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>Assign the correct group Level.</p>	<table border="1"> <tbody> <tr> <td>Level</td> <td>- Select Level -</td> <td>Select one of the Levels supported by the system. [Level A groups contain NOAMP and Query servers. Level B groups are optional and contain SOAM servers. Level C groups contain MP servers.]</td> </tr> <tr> <td>Parent</td> <td>B</td> <td>Select an existing Server Group or NONE</td> </tr> </tbody> </table> <p>Note: Use these setting for group level:</p> <ul style="list-style-type: none"> For DR NOAMP server group: select “A” on the “Level” pull-down menu.. For SOAM server group: select “B” on the “Level” pull-down menu. 	Level	- Select Level -	Select one of the Levels supported by the system. [Level A groups contain NOAMP and Query servers. Level B groups are optional and contain SOAM servers. Level C groups contain MP servers.]	Parent	B	Select an existing Server Group or NONE												
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Parent	B	Select an existing Server Group or NONE																		

Procedure 14: Pairing the OAM Servers for SOAM or DR NOAMPsites

Step	Procedure	Result
<p>10.</p> <input type="checkbox"/>	<p>Active NOAMP VIP: Assign the correct Parent.</p>	 <p>Select an existing Server Group or NONE</p> <p>Note: Use these setting for parent:</p> <ul style="list-style-type: none"> For DR NOAMP server group: select “NONE” on the “Parent” pull-down menu. For SOAM server group: select the 1st NOAMP Site’s server group, as entered in Procedure 9, Step 7 on the “Parent” pull-down menu.
<p>11.</p> <input type="checkbox"/>	<p>Active NOAMP VIP: Assign the correct Function.</p>	 <p>Note: Use these setting for function:</p> <ul style="list-style-type: none"> For DR NOAMP server group: select “UDR-NO” on the “Function” pull-down menu. For SOAM server group: select “NONE” on the “Function” pull-down menu.
<p>12.</p> <input type="checkbox"/>	<p>Active NOAMP VIP: <i>For DR NOAMP only:</i></p> <p>Input value “8” into “WAN Replication Connection Count”.</p>	 <p>Specify the r associated</p>
<p>13.</p> <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>1) The user should be presented with a banner information message stating “Pre-Validation passed”.</p> <p>2) Select the “Apply” dialogue button.</p>	<p>Main Menu: Configuration -> Server Groups [Insert]</p>  <p>1</p> <p>2</p>
<p>14.</p> <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>The user should be presented with a banner information message stating “Data committed”.</p>	<p>Main Menu: Configuration -> Server Groups [Insert]</p>  <p>Description Unique identifier used to label a Server Group. 1-32-character string. Valid characters are alph Must contain at least one alpha and must not s</p>

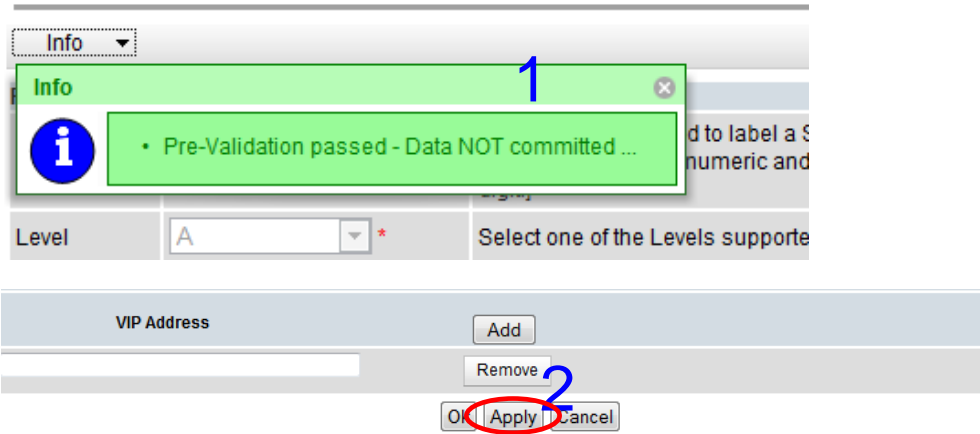
Procedure 14: Pairing the OAM Servers for SOAM or DR NOAMPsites

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15. <input type="checkbox"/>	<p>Active NOAMP VIP: Select...</p> <p>Main Menu → Configuration → Server Groups</p> <p>...as shown on the right.</p>	<table border="1"> <thead> <tr> <th>Server Group Name</th> <th>Level</th> <th>Parent</th> <th>Function</th> <th>Connection Count</th> <th>Servers</th> </tr> </thead> <tbody> <tr> <td>NO_grp</td> <td>A</td> <td>NONE</td> <td>UDR-NO</td> <td>8</td> <td>NE, Serve</td> </tr> <tr> <td>SO_grp</td> <td>B</td> <td>NO_grp</td> <td>NONE</td> <td>1</td> <td>NE, Serve</td> </tr> </tbody> </table>	Server Group Name	Level	Parent	Function	Connection Count	Servers	NO_grp	A	NONE	UDR-NO	8	NE, Serve	SO_grp	B	NO_grp	NONE	1	NE, Serve						
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17. <input type="checkbox"/>	<p>NOAMP Server A:</p> <p>1) Select the Server Group entry applied in Step 7. The line entry should now be highlighted in GREEN.</p> <p>2) Select the “Edit” dialogue button from the bottom left corner of the screen.</p> <p>NOTE: The user may need to use the vertical scroll-bar in order to make the “Edit” dialogue button visible.</p>	<table border="1"> <thead> <tr> <th>Server Group Name</th> <th>Level</th> <th>Parent</th> <th>Function</th> <th>Connection Count</th> <th>Servers</th> </tr> </thead> <tbody> <tr> <td>MP_SG</td> <td>C</td> <td>SO_SG</td> <td>UDR-MP (multi-active cluster)</td> <td>8</td> <td>NE, SO_UDR, pc900</td> </tr> <tr> <td>NO_SG</td> <td>A</td> <td>NONE</td> <td>UDR-NO</td> <td>8</td> <td>NE, NO_UDR, pc900</td> </tr> <tr style="background-color: #90EE90;"> <td>SO_SG</td> <td>B</td> <td>NO_SG</td> <td>NONE</td> <td>8</td> <td>NE, SO_UDR, pc900</td> </tr> </tbody> </table> <p style="text-align: center; font-size: 2em; color: blue;">2</p> <p>Insert Edit Delete Report</p>	Server Group Name	Level	Parent	Function	Connection Count	Servers	MP_SG	C	SO_SG	UDR-MP (multi-active cluster)	8	NE, SO_UDR, pc900	NO_SG	A	NONE	UDR-NO	8	NE, NO_UDR, pc900	SO_SG	B	NO_SG	NONE	8	NE, SO_UDR, pc900
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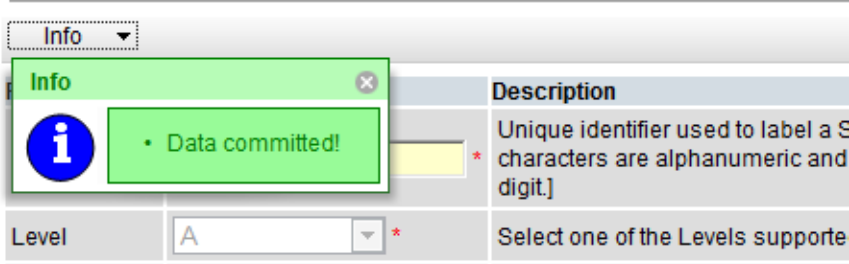
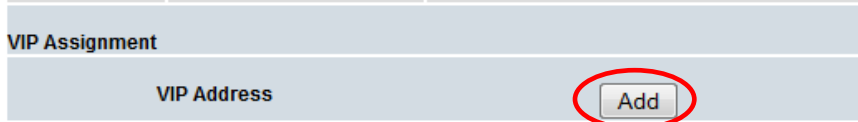
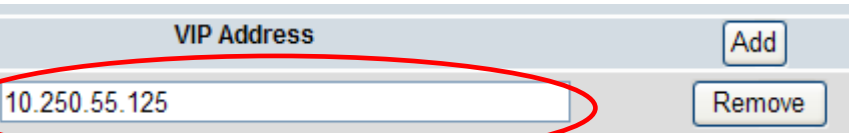
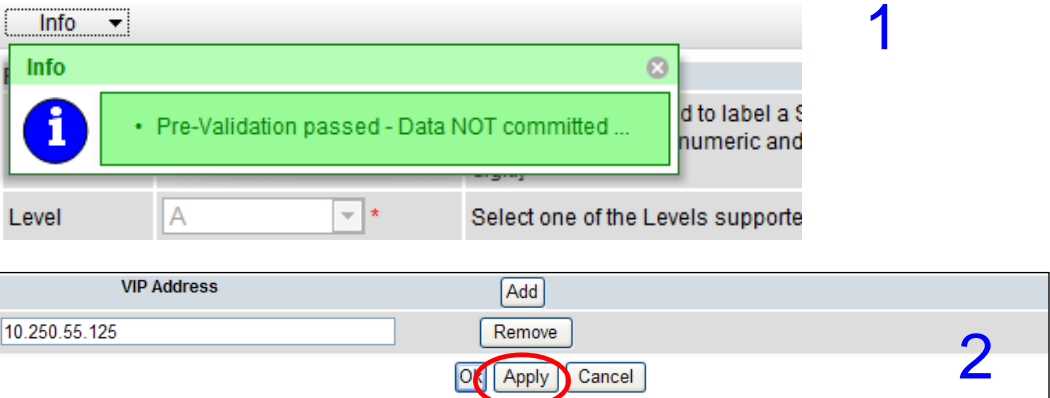
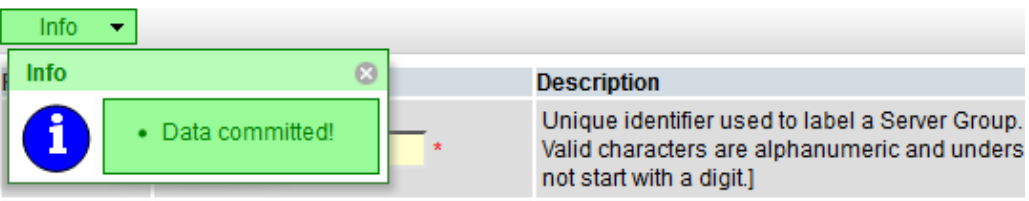
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<p>18.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP:</p> <p>Adding a Server to the OAM Server Group (SOAM or DR NOAMP)</p> <p>The user will be presented with the “Server Groups [Edit]” screen as shown on the right.</p>	<p>Normal or Low Capacity Configuration:</p> <table border="1"> <thead> <tr> <th>Field</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Server Group Name</td> <td>SO_SG</td> <td>Unique identifier used to label a Server Group. [Default = n/a. Range = A 1-32-character string. Valid characters are alphanumeric and underscore. 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Step	Procedure	Result																		
<p>19.</p> <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>Select the “A” server and the “B” server from the list of “Servers” by clicking the check box next to their names.</p> <p>Note: For Single Server Installation, only SO-A will be displayed; therefore only one box will be selected.</p>	<p>Normal or Low Capacity Configuration:</p> <table border="1"> <thead> <tr> <th colspan="3">SO_UDR</th> </tr> <tr> <th>Server</th> <th>SG Inclusion</th> <th>Preferred HA Role</th> </tr> </thead> <tbody> <tr> <td>SO-A</td> <td><input checked="" type="checkbox"/> Include in SG</td> <td><input type="checkbox"/> Preferred Spare</td> </tr> <tr> <td>SO-B</td> <td><input checked="" type="checkbox"/> Include in SG</td> <td><input type="checkbox"/> Preferred Spare</td> </tr> </tbody> </table> <p>VIP Assignment</p> <p>Single Server Configuration:</p> <table border="1"> <thead> <tr> <th>Server</th> <th>SG Inclusion</th> <th>Preferred HA Role</th> </tr> </thead> <tbody> <tr> <td>SO-A</td> <td><input checked="" type="checkbox"/> Include in SG</td> <td><input type="checkbox"/> Preferred Spare</td> </tr> </tbody> </table> <p>VIP Assignment</p>	SO_UDR			Server	SG Inclusion	Preferred HA Role	SO-A	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare	SO-B	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare	Server	SG Inclusion	Preferred HA Role	SO-A	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare
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<p>20.</p> <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>For DR NOAMP servers only:</p> <p>Check the Preferred Spare boxes next to their names</p>	<table border="1"> <thead> <tr> <th></th> <th>SG Inclusion</th> <th>Preferred HA Role</th> </tr> </thead> <tbody> <tr> <td></td> <td><input checked="" type="checkbox"/> Include in SG</td> <td><input checked="" type="checkbox"/> Preferred Spare</td> </tr> <tr> <td></td> <td><input checked="" type="checkbox"/> Include in SG</td> <td><input checked="" type="checkbox"/> Preferred Spare</td> </tr> </tbody> </table> <p>NOTE: DR NOAMP will not be accessible via their VIP unless they become the Active NOAMP. Individual servers in the DR NOAMP server group are always accessible by their XMI addresses.</p>		SG Inclusion	Preferred HA Role		<input checked="" type="checkbox"/> Include in SG	<input checked="" type="checkbox"/> Preferred Spare		<input checked="" type="checkbox"/> Include in SG	<input checked="" type="checkbox"/> Preferred Spare									
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<p>21.</p> <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>1) The user should be presented with a banner information message stating “Pre-Validation passed”.</p> <p>2) Select the “Apply” dialogue button.</p>	<p>Main Menu: Configuration -> Server Groups [Edit]</p> 																		

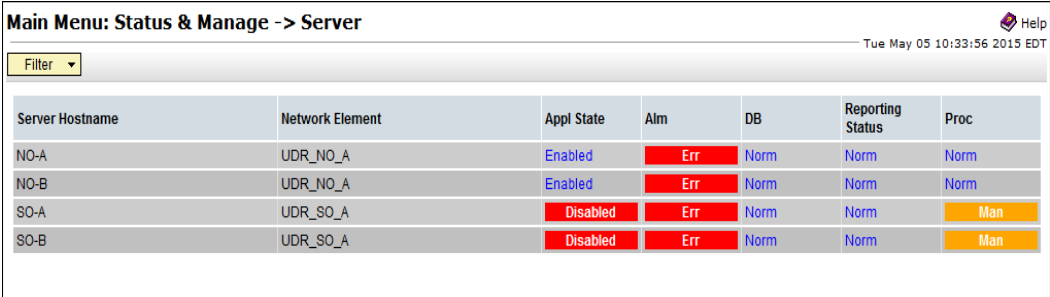
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<p>22.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP:</p> <p>The user should be presented with a banner information message stating “Data committed”.</p>	<p>Main Menu: Configuration -> Server Groups [Edit]</p> 
<p>23.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP:</p> <p>Click the “Add” dialogue button for the VIP Address.</p>	
<p>24.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP:</p> <p>Input the VIP Address</p>	
<p>25.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP:</p> <p>1) The user should be presented with a banner information message stating “Pre-Validation passed”.</p> <p>2) Select the “Apply” dialogue button.</p>	<p>Main Menu: Configuration -> Server Groups [Edit]</p> 
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Procedure 14: Pairing the OAM Servers for SOAM or DR NOAMPsites

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27. <input type="checkbox"/>	<p>IMPORTANT:</p> <p>Wait at least 5 minutes before proceeding on to the next Step.</p>	<ul style="list-style-type: none"> Now that the server(s) have been paired within a Server Group they must establish a master/slave relationship for High Availability (HA). It may take several minutes for this process to be completed. Note: Single Server Configurations do not establish master/slave relationship for High Availability (HA). Allow a minimum of 5 minutes before continuing to the next Step. 																																																																																																
28. <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>Select...</p> <p>Main Menu → Status & Manage → HA</p> <p>...as shown on the right.</p>	<p>Main Menu: Status & Manage -> HA Tue May 05 10:24:36</p> <p>Filter ▾</p> <table border="1"> <thead> <tr> <th>Hostname</th> <th>OAM HA Role</th> <th>Application HA Role</th> <th>Max Allowed HA Role</th> <th>Mate Hostname List</th> <th>Network Element</th> <th>Server Role</th> <th>Active VIPs</th> </tr> </thead> <tbody> <tr> <td>NO-A</td> <td>Active</td> <td>OOS</td> <td>Active</td> <td>NO-B</td> <td>UDR_NO_A</td> <td>Network OAM&P</td> <td>10.240.15.40</td> </tr> <tr> <td>NO-B</td> <td>Standby</td> <td>OOS</td> <td>Active</td> <td>NO-A</td> <td>UDR_NO_A</td> <td>Network OAM&P</td> <td></td> </tr> <tr> <td>SO-A</td> <td>Active</td> <td>OOS</td> <td>Active</td> <td>SO-B</td> <td>UDR_SO_A</td> <td>System OAM</td> <td>10.240.15.43</td> </tr> <tr> <td>SO-B</td> <td>Standby</td> <td>OOS</td> <td>Standby</td> <td>SO-A</td> <td>UDR_SO_A</td> <td>System OAM</td> <td></td> </tr> <tr> <td>MP1</td> <td>Unavailable</td> <td>Unavailable</td> <td></td> <td></td> <td>UDR_SO_A</td> <td>MP</td> <td></td> </tr> <tr> <td>MP2</td> <td>Unavailable</td> <td>Unavailable</td> <td></td> <td></td> <td>UDR_SO_A</td> <td>MP</td> <td></td> </tr> </tbody> </table>	Hostname	OAM HA Role	Application HA Role	Max Allowed HA Role	Mate Hostname List	Network Element	Server Role	Active VIPs	NO-A	Active	OOS	Active	NO-B	UDR_NO_A	Network OAM&P	10.240.15.40	NO-B	Standby	OOS	Active	NO-A	UDR_NO_A	Network OAM&P		SO-A	Active	OOS	Active	SO-B	UDR_SO_A	System OAM	10.240.15.43	SO-B	Standby	OOS	Standby	SO-A	UDR_SO_A	System OAM		MP1	Unavailable	Unavailable			UDR_SO_A	MP		MP2	Unavailable	Unavailable			UDR_SO_A	MP																																									
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29. <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>Note:</p> <p>DRNO servers will have OAM MAX HA Role of Spare and two Active VIPs (shown in red)</p> <p>SOAM server(s) will have OAM MAX HA Role of Active or Standby and an Active VIP.</p>	<p>Normal or Low Capacity Configuration:</p> <table border="1"> <thead> <tr> <th>Hostname</th> <th>OAM Max HA Role</th> <th>Application Max HA Role</th> <th>Max Allowed HA Role</th> <th>Mate Hostname List</th> <th>Network Element</th> <th>Server Role</th> <th>Active VIPs</th> </tr> </thead> <tbody> <tr> <td>BL119122305-SO-1A</td> <td>Active</td> <td>OOS</td> <td>Active</td> <td>BL119122306-SO-1B</td> <td>SO_UDR_Site1_VM</td> <td>System OAM</td> <td>10.240.168.1</td> </tr> <tr> <td>BL119122306-SO-1B</td> <td>Standby</td> <td>OOS</td> <td>Active</td> <td>BL119122305-SO-1A</td> <td>SO_UDR_Site1_VM</td> <td>System OAM</td> <td></td> </tr> <tr> <td>BL119121305-SO-2A</td> <td>Active</td> <td>OOS</td> <td>Active</td> <td>BL119121306-SO-2B</td> <td>SO_UDR_Site2_VM</td> <td>System OAM</td> <td>10.240.168.1</td> </tr> <tr> <td>BL119121306-SO-2B</td> <td>Standby</td> <td>OOS</td> <td>Active</td> <td>BL119121305-SO-2A</td> <td>SO_UDR_Site2_VM</td> <td>System OAM</td> <td></td> </tr> <tr> <td>BL119122301-NO-1A</td> <td>Standby</td> <td>OOS</td> <td>Active</td> <td>BL119122303-NO-1B</td> <td>NO_UDR_Site1_VM</td> <td>Network OAM&P</td> <td></td> </tr> <tr> <td>BL119122303-NO-1B</td> <td>Active</td> <td>OOS</td> <td>Active</td> <td>BL119122301-NO-1A</td> <td>NO_UDR_Site1_VM</td> <td>Network OAM&P</td> <td>10.240.168.1</td> </tr> <tr> <td>BL119121301-NO-2A</td> <td>Spare</td> <td>OOS</td> <td>Active</td> <td>BL119121303-NO-2B</td> <td>NO_UDR_Site2_VM</td> <td>Network OAM&P</td> <td></td> </tr> <tr> <td>BL119121303-NO-2B</td> <td>Spare</td> <td>OOS</td> <td>Active</td> <td>BL119121301-NO-2A</td> <td>NO_UDR_Site2_VM</td> <td>Network OAM&P</td> <td></td> </tr> </tbody> </table> <p>Single Server Configuration:</p> <table border="1"> <thead> <tr> <th>Hostname</th> <th>OAM HA Role</th> <th>Application HA Role</th> <th>Max Allowed HA Role</th> <th>Mate Hostname List</th> <th>Network Element</th> <th>Server Role</th> <th>Active VIPs</th> </tr> </thead> <tbody> <tr> <td>NO-A</td> <td>Active</td> <td>OOS</td> <td>Active</td> <td></td> <td>NO_SUN_05</td> <td>Network OAM&P</td> <td>10.240.15.40</td> </tr> <tr> <td>SO-A</td> <td>Active</td> <td>OOS</td> <td>Active</td> <td></td> <td>SO_SUN_05</td> <td>System OAM</td> <td>10.240.15.41</td> </tr> </tbody> </table>	Hostname	OAM Max HA Role	Application Max HA Role	Max Allowed HA Role	Mate Hostname List	Network Element	Server Role	Active VIPs	BL119122305-SO-1A	Active	OOS	Active	BL119122306-SO-1B	SO_UDR_Site1_VM	System OAM	10.240.168.1	BL119122306-SO-1B	Standby	OOS	Active	BL119122305-SO-1A	SO_UDR_Site1_VM	System OAM		BL119121305-SO-2A	Active	OOS	Active	BL119121306-SO-2B	SO_UDR_Site2_VM	System OAM	10.240.168.1	BL119121306-SO-2B	Standby	OOS	Active	BL119121305-SO-2A	SO_UDR_Site2_VM	System OAM		BL119122301-NO-1A	Standby	OOS	Active	BL119122303-NO-1B	NO_UDR_Site1_VM	Network OAM&P		BL119122303-NO-1B	Active	OOS	Active	BL119122301-NO-1A	NO_UDR_Site1_VM	Network OAM&P	10.240.168.1	BL119121301-NO-2A	Spare	OOS	Active	BL119121303-NO-2B	NO_UDR_Site2_VM	Network OAM&P		BL119121303-NO-2B	Spare	OOS	Active	BL119121301-NO-2A	NO_UDR_Site2_VM	Network OAM&P		Hostname	OAM HA Role	Application HA Role	Max Allowed HA Role	Mate Hostname List	Network Element	Server Role	Active VIPs	NO-A	Active	OOS	Active		NO_SUN_05	Network OAM&P	10.240.15.40	SO-A	Active	OOS	Active		SO_SUN_05	System OAM	10.240.15.41
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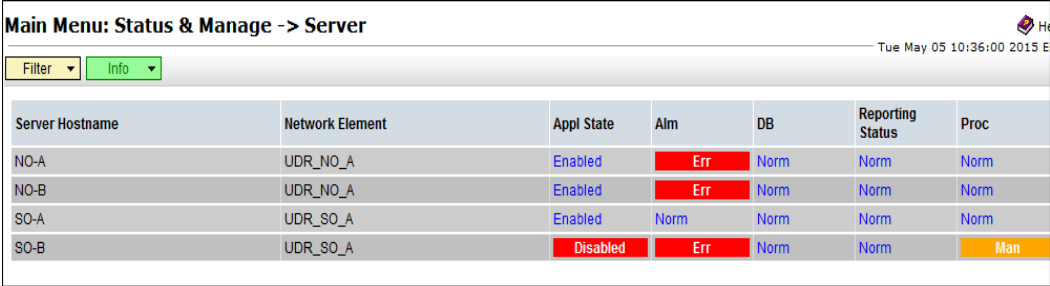
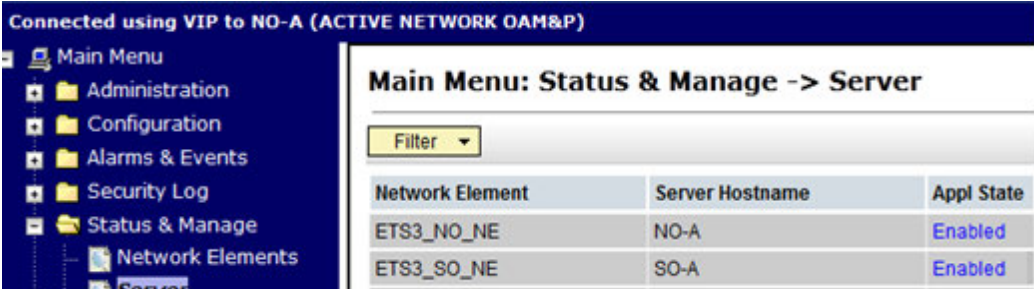
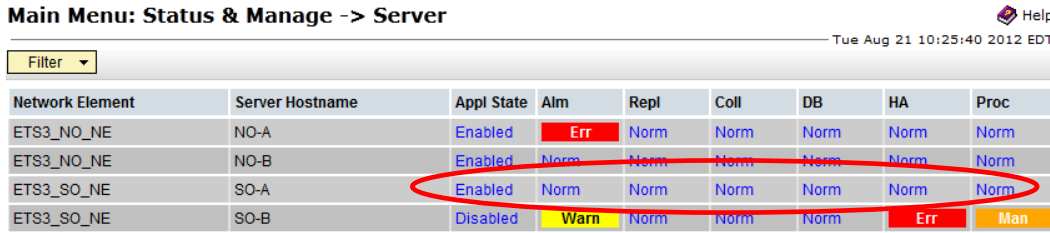

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30. <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>Restarting the OAM Server Application</p> <p>Select...</p> <p>Main Menu → Status & Manage → Server</p> <p>...as shown on the right.</p>	 <p>Main Menu: Status & Manage -> Server</p> <p>Filter</p> <table border="1"> <thead> <tr> <th>Server Hostname</th> <th>Network Element</th> <th>Appl State</th> <th>Alm</th> <th>DB</th> <th>Reporting Status</th> <th>Proc</th> </tr> </thead> <tbody> <tr> <td>NO-A</td> <td>UDR_NO_A</td> <td>Enabled</td> <td>Err</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> <tr> <td>NO-B</td> <td>UDR_NO_A</td> <td>Enabled</td> <td>Err</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> <tr> <td>SO-A</td> <td>UDR_SO_A</td> <td>Disabled</td> <td>Err</td> <td>Norm</td> <td>Norm</td> <td>Man</td> </tr> <tr> <td>SO-B</td> <td>UDR_SO_A</td> <td>Disabled</td> <td>Err</td> <td>Norm</td> <td>Norm</td> <td>Man</td> </tr> </tbody> </table>	Server Hostname	Network Element	Appl State	Alm	DB	Reporting Status	Proc	NO-A	UDR_NO_A	Enabled	Err	Norm	Norm	Norm	NO-B	UDR_NO_A	Enabled	Err	Norm	Norm	Norm	SO-A	UDR_SO_A	Disabled	Err	Norm	Norm	Man	SO-B	UDR_SO_A	Disabled	Err	Norm	Norm	Man							
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31. <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>1) The "A" and "B" servers should now appear in the right panel. (Only "A" for single server installs)</p> <p>2) Verify that the "DB" status shows "Norm" and the "Proc" status shows "Man" for both servers before proceeding to the next Step. (Only "A" server for single server configuration)</p>	<p>Normal or Low Capacity Configuration:</p> <table border="1"> <thead> <tr> <th>Network Element</th> <th>Server Hostname</th> <th>Appl State</th> <th>Alm</th> <th>DB</th> <th>Reporting Status</th> <th>Proc</th> </tr> </thead> <tbody> <tr> <td>SO_UDR</td> <td>pc9000722-so-b</td> <td>Disabled</td> <td>Err</td> <td>Norm</td> <td>Norm</td> <td>Man</td> </tr> <tr> <td>SO_UDR</td> <td>pc9000720-so-a</td> <td>Disabled</td> <td>Err</td> <td>Norm</td> <td>Norm</td> <td>Man</td> </tr> </tbody> </table> <p>Single Server Configuration:</p> <table border="1"> <thead> <tr> <th>Network Element</th> <th>Server Hostname</th> <th>Appl State</th> <th>Alm</th> <th>DB</th> <th>Reporting Status</th> <th>Proc</th> </tr> </thead> <tbody> <tr> <td>NO_UDR</td> <td>pc9000724-no-a</td> <td>Enabled</td> <td>Err</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> <tr> <td>SO_UDR</td> <td>pc9000720-so-a</td> <td>Disabled</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Man</td> </tr> </tbody> </table>	Network Element	Server Hostname	Appl State	Alm	DB	Reporting Status	Proc	SO_UDR	pc9000722-so-b	Disabled	Err	Norm	Norm	Man	SO_UDR	pc9000720-so-a	Disabled	Err	Norm	Norm	Man	Network Element	Server Hostname	Appl State	Alm	DB	Reporting Status	Proc	NO_UDR	pc9000724-no-a	Enabled	Err	Norm	Norm	Norm	SO_UDR	pc9000720-so-a	Disabled	Norm	Norm	Norm	Man
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<p>32.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP:</p> <p>1) Using the mouse, select Server A. The line entry should now be highlighted in GREEN.</p> <p>2) Select the “Restart” dialogue button from the bottom left corner of the screen.</p> <p>3) Click the “OK” button on the confirmation dialogue box.</p> <p>4) The user should be presented with a confirmation message (in the banner area) for Server A stating: “Successfully restarted application”.</p> <p>NOTE:The user may need to use the vertical scroll-bar in order to make the “Restart” dialogue button visible.</p>	<p>Normal or Low Capacity Configuration:</p> <p>Main Menu: Status & Manage -> Server</p> <p>1</p> <table border="1"> <thead> <tr> <th>Network Element</th> <th>Server Hostname</th> <th>Appl State</th> <th>Alm</th> <th>Repl</th> <th>Coll</th> <th>DB</th> <th>HA</th> <th>Proc</th> </tr> </thead> <tbody> <tr> <td>ETS3_NO_NE</td> <td>NO-A</td> <td>Enabled</td> <td>Err</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> <tr> <td>ETS3_NO_NE</td> <td>NO-B</td> <td>Enabled</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> <tr style="background-color: #e0ffe0;"> <td>ETS3_SO_NE</td> <td>SO-A</td> <td>Disabled</td> <td>Warn</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Err</td> <td>Man</td> </tr> <tr> <td>ETS3_SO_NE</td> <td>SO-B</td> <td>Disabled</td> <td>Warn</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Err</td> <td>Man</td> </tr> </tbody> </table> <p>Single Server Configuration:</p> <p>Main Menu: Status & Manage -> Server</p> <p>2</p> <table border="1"> <thead> <tr> <th>Network Element</th> <th>Server Hostname</th> <th>Appl State</th> <th>Alm</th> <th>Repl</th> <th>Coll</th> <th>DB</th> <th>HA</th> <th>Proc</th> </tr> </thead> <tbody> <tr> <td>ETS3_NO_NE</td> <td>NO-A</td> <td>Enabled</td> <td>Err</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> <tr style="background-color: #e0ffe0;"> <td>ETS3_SO_NE</td> <td>SO-A</td> <td>Disabled</td> <td>Warn</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Err</td> <td>Man</td> </tr> </tbody> </table> <p>3</p> <p>Are you sure you wish to restart application software on the following server(s)?</p> <p>SO-A</p> <p>4</p> <p>Main Menu: Status & Manage -> Server [Restart]</p> <table border="1"> <thead> <tr> <th>Filter</th> <th>Status</th> <th>Appl State</th> <th>Alm</th> <th>Repl</th> </tr> </thead> <tbody> <tr> <td></td> <td> <div style="border: 1px solid blue; padding: 5px;"> <p>Status</p> <ul style="list-style-type: none"> SO-A: Successfully restarted application. </div> </td> <td>Enabled</td> <td>Err</td> <td>Norm</td> </tr> <tr> <td></td> <td></td> <td>Enabled</td> <td>Norm</td> <td>Norm</td> </tr> </tbody> </table>	Network Element	Server Hostname	Appl State	Alm	Repl	Coll	DB	HA	Proc	ETS3_NO_NE	NO-A	Enabled	Err	Norm	Norm	Norm	Norm	Norm	ETS3_NO_NE	NO-B	Enabled	Norm	Norm	Norm	Norm	Norm	Norm	ETS3_SO_NE	SO-A	Disabled	Warn	Norm	Norm	Norm	Err	Man	ETS3_SO_NE	SO-B	Disabled	Warn	Norm	Norm	Norm	Err	Man	Network Element	Server Hostname	Appl State	Alm	Repl	Coll	DB	HA	Proc	ETS3_NO_NE	NO-A	Enabled	Err	Norm	Norm	Norm	Norm	Norm	ETS3_SO_NE	SO-A	Disabled	Warn	Norm	Norm	Norm	Err	Man	Filter	Status	Appl State	Alm	Repl		<div style="border: 1px solid blue; padding: 5px;"> <p>Status</p> <ul style="list-style-type: none"> SO-A: Successfully restarted application. </div>	Enabled	Err	Norm			Enabled	Norm	Norm
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<p>34.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP:</p> <p>Verify that the “Appl State” now shows “Enabled” and that the “Alm, Repl, Coll, DB, HA & Proc” status columns all show “Norm” for OAM Server A before proceeding to the next Step.</p> <p>NOTE: If user chooses to refresh the Server status screen in advance of the default setting (15-30 sec.). This may be done by simply reselecting the “Status & Manage → Server” option from the Main menu on the left.</p>	<p>Normal or Low Capacity Configuration:</p>  <p>Single Server Configuration:</p> 

Perform steps 35 – 38 for multiple server Configurations only (not single server).

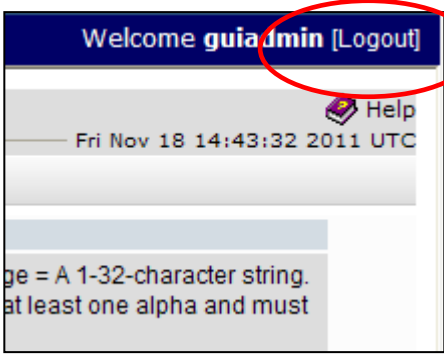
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<p>35.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP:</p> <p>1) Using the mouse, select Server B. The line entry should now be highlighted in GREEN.</p> <p>2) Select the “Restart” dialogue button from the bottom left corner of the screen.</p> <p>3) Click the “OK” button on the confirmation dialogue box.</p> <p>4) The user should be presented with a confirmation message (in the banner area) for Server B stating: “Successfully restarted application”.</p> <p>NOTE: The user may need to use the vertical scroll-bar in order to make the “Restart” dialogue button visible.</p>	<p>Main Menu: Status & Manage -> Server Help</p> <p style="text-align: right;">Tue Aug 21 10:25:40 2012 EDT</p> <p>Filter ▾</p> <table border="1"> <thead> <tr> <th>Network Element</th> <th>Server Hostname</th> <th>Appl State</th> <th>Alm</th> <th>Repl</th> <th>Coll</th> <th>DB</th> <th>HA</th> <th>Proc</th> </tr> </thead> <tbody> <tr> <td>ETS3_NO_NE</td> <td>NO-A</td> <td>Enabled</td> <td>Err</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> <tr> <td>ETS3_NO_NE</td> <td>NO-B</td> <td>Enabled</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> <tr> <td>ETS3_SO_NE</td> <td>SO-A</td> <td>Enabled</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> <tr style="background-color: #e0ffe0;"> <td>ETS3_SO_NE</td> <td>SO-B</td> <td>Disabled</td> <td>Warn</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Err</td> <td>Man</td> </tr> </tbody> </table> <div style="border: 1px solid black; padding: 5px;"> <p>Help Logout</p> <p style="text-align: right; font-size: 2em; color: blue;">2</p> <p>Stop Restart Reboot</p> </div> <p style="text-align: center;">Are you sure you wish to restart application software on the following server(s)?</p> <p style="text-align: center; font-size: 2em; color: blue;">3</p> <p style="text-align: center;">SO-B</p> <div style="border: 1px solid gray; padding: 5px; width: fit-content; margin: 0 auto;"> <p>OK Cancel</p> </div> <p>Main Menu: Status & Manage -> Server [Restart] Help</p> <p style="text-align: right;">Tue Aug 21 10:30:31 2012 EDT</p> <p>Filter ▾ Status ▾</p> <div style="border: 1px solid blue; padding: 5px; margin-bottom: 5px;"> <p>Status</p> <ul style="list-style-type: none"> SO-B: Successfully restarted application. </div> <table border="1"> <thead> <tr> <th>Server Hostname</th> <th>Network Element</th> <th>Appl State</th> <th>Alm</th> <th>Repl</th> <th>Coll</th> <th>DB</th> <th>HA</th> <th>Proc</th> </tr> </thead> <tbody> <tr> <td>ETS3_SO_NE</td> <td>SO-A</td> <td>Enabled</td> <td>Err</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> <tr> <td>ETS3_SO_NE</td> <td>SO-B</td> <td>Enabled</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> </tbody> </table> <p style="text-align: right; font-size: 2em; color: blue;">4</p>	Network Element	Server Hostname	Appl State	Alm	Repl	Coll	DB	HA	Proc	ETS3_NO_NE	NO-A	Enabled	Err	Norm	Norm	Norm	Norm	Norm	ETS3_NO_NE	NO-B	Enabled	Norm	Norm	Norm	Norm	Norm	Norm	ETS3_SO_NE	SO-A	Enabled	Norm	Norm	Norm	Norm	Norm	Norm	ETS3_SO_NE	SO-B	Disabled	Warn	Norm	Norm	Norm	Err	Man	Server Hostname	Network Element	Appl State	Alm	Repl	Coll	DB	HA	Proc	ETS3_SO_NE	SO-A	Enabled	Err	Norm	Norm	Norm	Norm	Norm	ETS3_SO_NE	SO-B	Enabled	Norm	Norm	Norm	Norm	Norm	Norm
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<p>36.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP:</p> <p>Select...</p> <p>Main Menu → Status & Manage → Server</p> <p>...as shown on the right.</p>	<p>Main Menu: Status & Manage -> Server Help</p> <p style="text-align: right;">Tue May 05 10:37:18 2015 EDT</p> <p>Filter ▾</p> <table border="1"> <thead> <tr> <th>Server Hostname</th> <th>Network Element</th> <th>Appl State</th> <th>Alm</th> <th>DB</th> <th>Reporting Status</th> <th>Proc</th> </tr> </thead> <tbody> <tr> <td>NO-A</td> <td>UDR_NO_A</td> <td>Enabled</td> <td>Err</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> <tr> <td>NO-B</td> <td>UDR_NO_A</td> <td>Enabled</td> <td>Err</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> <tr> <td>SO-A</td> <td>UDR_SO_A</td> <td>Enabled</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> <tr> <td>SO-B</td> <td>UDR_SO_A</td> <td>Enabled</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> </tbody> </table>	Server Hostname	Network Element	Appl State	Alm	DB	Reporting Status	Proc	NO-A	UDR_NO_A	Enabled	Err	Norm	Norm	Norm	NO-B	UDR_NO_A	Enabled	Err	Norm	Norm	Norm	SO-A	UDR_SO_A	Enabled	Norm	Norm	Norm	Norm	SO-B	UDR_SO_A	Enabled	Norm	Norm	Norm	Norm																																					
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Procedure 14: Pairing the OAM Servers for SOAM or DR NOAMPsites

Step	Procedure	Result																																													
<p>37.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP:</p> <p>Verify that the “Appl State” now shows “Enabled” and that the “Alm, Repl, Coll, DB, HA & Proc” status columns all show “Norm” for OAM Server A and OAM Server B before proceeding to the next Step.</p> <p>NOTE: If user chooses to refresh the Server status screen in advance of the default setting (15-30 sec.). This may be done by simply reselecting the “Status & Manage → Server” option from the Main menu on the left.</p>	<p>Main Menu: Status & Manage -> Server</p> <p style="text-align: right;">Help Tue Aug 21 10:31:29 2012 EDT</p> <p>Filter ▾</p> <table border="1"> <thead> <tr> <th>Network Element</th> <th>Server Hostname</th> <th>Appl State</th> <th>Alm</th> <th>Repl</th> <th>Coll</th> <th>DB</th> <th>HA</th> <th>Proc</th> </tr> </thead> <tbody> <tr> <td>ETS3_NO_NE</td> <td>NO-A</td> <td>Enabled</td> <td>Err</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> <tr> <td>ETS3_NO_NE</td> <td>NO-B</td> <td>Enabled</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> <tr> <td>ETS3_SO_NE</td> <td>SO-A</td> <td>Enabled</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> <tr> <td>ETS3_SO_NE</td> <td>SO-B</td> <td>Enabled</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> </tbody> </table>	Network Element	Server Hostname	Appl State	Alm	Repl	Coll	DB	HA	Proc	ETS3_NO_NE	NO-A	Enabled	Err	Norm	Norm	Norm	Norm	Norm	ETS3_NO_NE	NO-B	Enabled	Norm	Norm	Norm	Norm	Norm	Norm	ETS3_SO_NE	SO-A	Enabled	Norm	Norm	Norm	Norm	Norm	Norm	ETS3_SO_NE	SO-B	Enabled	Norm	Norm	Norm	Norm	Norm	Norm
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<p>Repeat the steps above for each DR NOAMP and SOAM site being installed.</p>																																															
<p>38.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP:</p> <p>For Primary NOAMP Standby server only: Move the server back to ‘Active’</p> <p>Main Menu → Status & Manage → HA[Edit]</p> <p>Find the row for the Primary NOAMP Standby server and change “Max Allowed HA Role” back to “Active”.</p>	<p>Main Menu: Status & Manage -> HA [Edit]</p> <table border="1"> <thead> <tr> <th>Hostname</th> <th>Max Allowed HA Role</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>NO-A</td> <td>Active ▾</td> <td>The maximum desired HA Role for NO-A</td> </tr> <tr> <td>NO-B</td> <td>Active ▾</td> <td>The maximum desired HA Role for NO-B</td> </tr> <tr> <td>SO-A</td> <td>Active ▾</td> <td>The maximum desired HA Role for SO-A</td> </tr> <tr> <td>SO-B</td> <td>Active ▾</td> <td>The maximum desired HA Role for SO-B</td> </tr> </tbody> </table> <p style="text-align: right;">Ok Cancel</p>	Hostname	Max Allowed HA Role	Description	NO-A	Active ▾	The maximum desired HA Role for NO-A	NO-B	Active ▾	The maximum desired HA Role for NO-B	SO-A	Active ▾	The maximum desired HA Role for SO-A	SO-B	Active ▾	The maximum desired HA Role for SO-B																														
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Procedure 14: Pairing the OAM Servers for SOAM or DR NOAMPsites

Step	Procedure	Result
39.	<p>Active NOAMP VIP:</p> <p>Click the “Logout” link on the server GUI.</p>	
THIS PROCEDURE HAS BEEN COMPLETED		

8.6 Configuring MP Server Groups (All SOAM sites)

The user should be aware that during the Message Processor(MP) 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.

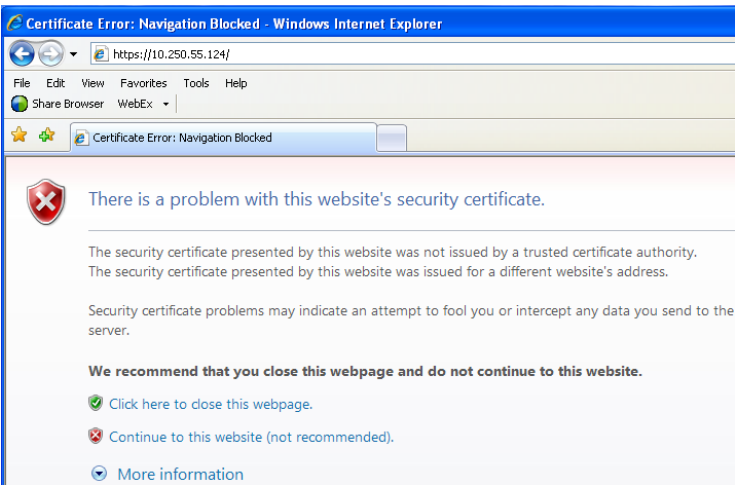
This procedure creates server groups for each MP..

Requirements:

- **Procedure 11: Create Configuration for Remaining Servers** has been completed.
- **Procedure 13: OAM Pairing for the Primary NOAMP Servers** has been completed.
- **Procedure 14:** has been completed.

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

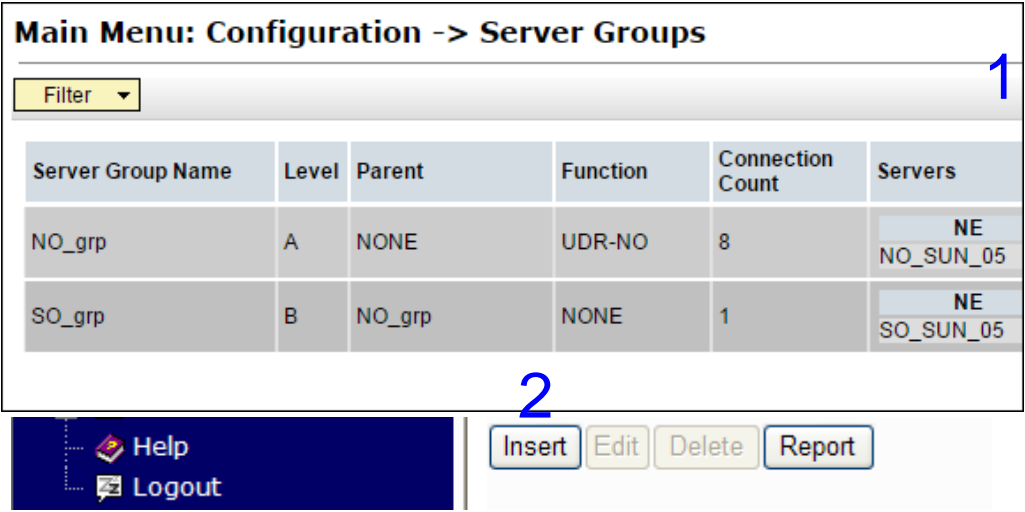
Procedure 15: Configuring MP Server Groups

Step	Procedure	Result
1. <input type="checkbox"/>	<p>Active NOAMPVIP:</p> <p>Launch an approved web browser and connect to the XMI Virtual IP Address(VIP) of the Active NOAMPsite using https://</p> <p>NOTE: If presented with the “security certificate” warning screen shown to the right, choose the following option: “Continue to this website (not recommended)”.</p>	

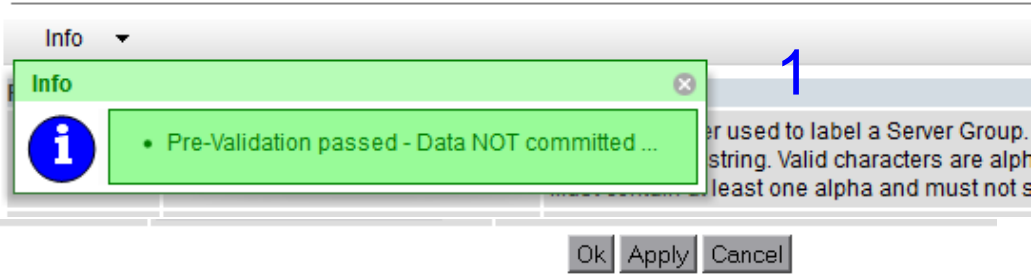

Procedure 15: Configuring MP Server Groups

Step	Procedure	Result																		
<p>2.</p> <p><input type="checkbox"/></p>	<p>Active NOAMPVIP: The user should be presented the login screen shown on the right.</p> <p>Login to the GUI using the default user and password.</p>																			
<p>3.</p> <p><input type="checkbox"/></p>	<p>Active NOAMPVIP: The user should be presented the Main Menu as shown on the right.</p>																			
<p>4.</p> <p><input type="checkbox"/></p>	<p>Active NOAMPVIP: Select...</p> <p>Main Menu → Configuration → Server Groups</p> <p>...as shown on the right.</p>	<table border="1"> <thead> <tr> <th>Server Group Name</th> <th>Level</th> <th>Parent</th> <th>Function</th> <th>Connection Count</th> <th>Servers</th> </tr> </thead> <tbody> <tr> <td>NO_grp</td> <td>A</td> <td>NONE</td> <td>UDR-NO</td> <td>8</td> <td>NE NO_SUN_05</td> </tr> <tr> <td>SO_grp</td> <td>B</td> <td>NO_grp</td> <td>NONE</td> <td>1</td> <td>NE SO_SUN_05</td> </tr> </tbody> </table>	Server Group Name	Level	Parent	Function	Connection Count	Servers	NO_grp	A	NONE	UDR-NO	8	NE NO_SUN_05	SO_grp	B	NO_grp	NONE	1	NE SO_SUN_05
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Procedure 15: Configuring MP Server Groups

Step	Procedure	Result																		
<p>5.</p> <p><input type="checkbox"/></p>	<p>Active NOAMPVIP:</p> <p>1) The user will be presented with the “Server Groups” configuration screen as shown on the right.</p> <p>2) Select the “Insert” dialogue button from the bottom left corner of the screen.</p> <p>NOTE: <i>The user may need to use the vertical scroll-bar in order to make the “Insert” dialogue button visible.</i></p>																			
<p>6.</p> <p><input type="checkbox"/></p>	<p>Active NOAMPVIP:</p> <p>The user will be presented with the “Server Groups [Insert]” screen as shown on the right</p>	<table border="1"> <thead> <tr> <th>Field</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Server Group Name</td> <td><input type="text"/></td> <td>Unique identifier used to label a Server Group. [Default = n/a. Range = A 1-32-character string. Valid characters are alphanumeric and underscore. Must contain at least one alpha and must not start with a digit.]</td> </tr> <tr> <td>Level</td> <td>- Select Level - *</td> <td>Select one of the Levels supported by the system. [Level A groups contain NOAMP and Query servers. Level B groups are optional and contain SOAM servers. Level C groups contain MP servers.]</td> </tr> <tr> <td>Parent</td> <td>- Select Parent - *</td> <td>Select an existing Server Group or NONE</td> </tr> <tr> <td>Function</td> <td>- Select Function - *</td> <td>Select one of the Functions supported by the system</td> </tr> <tr> <td>WAN Replication Connection Count</td> <td><input type="text"/></td> <td>Specify the number of TCP connections that will be used by replication over any WAN connection associated with this Server Group. [Default = 1. Range = An integer between 1 and 8.]</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>	Field	Value	Description	Server Group Name	<input type="text"/>	Unique identifier used to label a Server Group. [Default = n/a. Range = A 1-32-character string. Valid characters are alphanumeric and underscore. Must contain at least one alpha and must not start with a digit.]	Level	- Select Level - *	Select one of the Levels supported by the system. [Level A groups contain NOAMP and Query servers. Level B groups are optional and contain SOAM servers. Level C groups contain MP servers.]	Parent	- Select Parent - *	Select an existing Server Group or NONE	Function	- Select Function - *	Select one of the Functions supported by the system	WAN Replication Connection Count	<input type="text"/>	Specify the number of TCP connections that will be used by replication over any WAN connection associated with this Server Group. [Default = 1. Range = An integer between 1 and 8.]
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<p>7.</p> <p><input type="checkbox"/></p>	<p>Active NOAMPVIP:</p> <p>Input the Server Group Name.</p>	<table border="1"> <thead> <tr> <th>Field</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Server Group Name</td> <td>MP1_grp <input type="text"/></td> <td>Unique identifier used to label a Server Group. 1-32-character string. Valid characters are alpha Must contain at least one alpha and must not s</td> </tr> </tbody> </table>	Field	Value	Description	Server Group Name	MP1_grp <input type="text"/>	Unique identifier used to label a Server Group. 1-32-character string. Valid characters are alpha Must contain at least one alpha and must not s												
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<p>8.</p> <p><input type="checkbox"/></p>	<p>Active NOAMPVIP:</p> <p>Select “C” on the “Level” pull-down menu..</p>	<table border="1"> <tbody> <tr> <td>Level</td> <td>C <input type="text"/></td> <td>Select one of the Levels supported by the system. [Level A groups contain NOAMP and Query servers. Level B groups are optional and contain SOAM servers. Level C groups contain MP servers.]</td> </tr> </tbody> </table>	Level	C <input type="text"/>	Select one of the Levels supported by the system. [Level A groups contain NOAMP and Query servers. Level B groups are optional and contain SOAM servers. Level C groups contain MP servers.]															
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<p>9.</p> <p><input type="checkbox"/></p>	<p>Active NOAMPVIP:</p> <p>Select the desired SOAM server group on the “Parent” pull-down menu.</p>	<table border="1"> <tbody> <tr> <td>Parent</td> <td>SO_grp <input type="text"/></td> <td>Select an existing Server Group or NONE</td> </tr> </tbody> </table>	Parent	SO_grp <input type="text"/>	Select an existing Server Group or NONE															
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<p>10.</p> <p><input type="checkbox"/></p>	<p>Active NOAMPVIP:</p> <p>Select “UDR-MP (multi-active cluster)” on the “Function” pull-down menu.</p>	<table border="1"> <tbody> <tr> <td>Function</td> <td>UDR-MP (multi-active cluster) <input type="text"/></td> <td></td> </tr> </tbody> </table>	Function	UDR-MP (multi-active cluster) <input type="text"/>																
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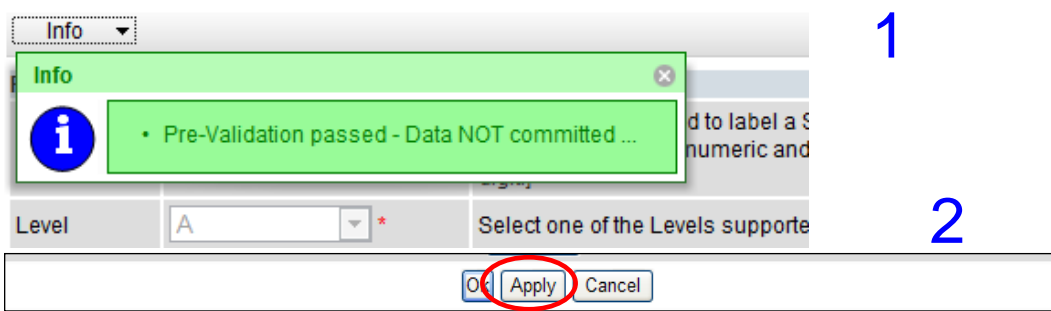
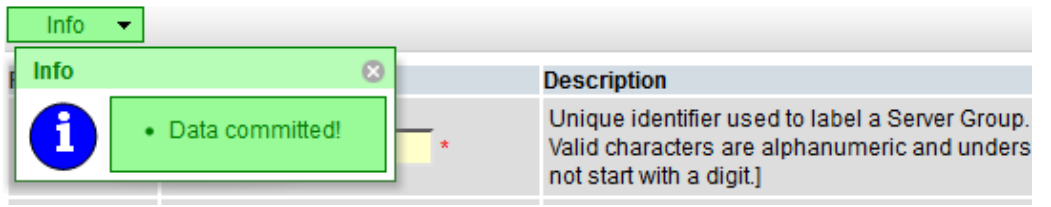
Procedure 15: Configuring MP Server Groups

Step	Procedure	Result																								
<p>11.</p> <p><input type="checkbox"/></p>	<p>Active NOAMPVIP:</p> <p>1) The user should be presented with a banner information message stating “Pre-Validation passed”.</p> <p>2) Select the “Apply” dialogue button.</p>	<p>Main Menu: Configuration -> Server Groups [Insert]</p> 																								
<p>12.</p> <p><input type="checkbox"/></p>	<p>Active NOAMPVIP:</p> <p>The user should be presented with a banner information message stating “Data committed”.</p>	<p>Main Menu: Configuration -> Server Groups [Insert]</p> 																								
<p>13.</p> <p><input type="checkbox"/></p>	<p>Active NOAMPVIP:</p> <p>1) Using the mouse, select the MP Server Group associated with the MP being installed.</p> <p>2) Select the “Edit” dialogue button from the bottom left corner of the screen.</p>	<p>Main Menu: Configuration -> Server Groups</p> <p>Tue May 05 10:41:12 2015</p> <p>Filter</p> <table border="1"> <thead> <tr> <th>Server Group Name</th> <th>Level</th> <th>Parent</th> <th>Function</th> <th>Connection Count</th> <th>Servers</th> </tr> </thead> <tbody> <tr> <td>MP1_grp</td> <td>C</td> <td>SO_grp</td> <td>UDR-MP (multi-active cluster)</td> <td>1</td> <td>NE Server HA Role Pref VIPs</td> </tr> <tr> <td>No_grp</td> <td>A</td> <td>NONE</td> <td>UDR-NO</td> <td>8</td> <td>UDR_NO_A NO-A 10.240.15.40 UDR_NO_A NO-B 10.240.15.40</td> </tr> <tr> <td>SO_grp</td> <td>B</td> <td>No_grp</td> <td>NONE</td> <td>8</td> <td>UDR_SO_A SO-A 10.240.15.43 UDR_SO_A SO-B 10.240.15.43</td> </tr> </tbody> </table> <p>Help Logout</p> <p>Insert Edit Delete Report</p> <p>A blue '1' is placed to the right of the table, and a blue '2' is placed to the right of the 'Edit' button.</p>	Server Group Name	Level	Parent	Function	Connection Count	Servers	MP1_grp	C	SO_grp	UDR-MP (multi-active cluster)	1	NE Server HA Role Pref VIPs	No_grp	A	NONE	UDR-NO	8	UDR_NO_A NO-A 10.240.15.40 UDR_NO_A NO-B 10.240.15.40	SO_grp	B	No_grp	NONE	8	UDR_SO_A SO-A 10.240.15.43 UDR_SO_A SO-B 10.240.15.43
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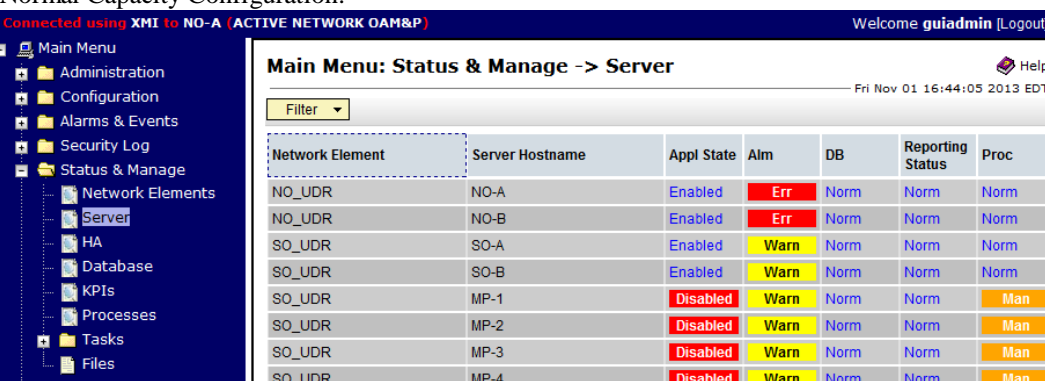
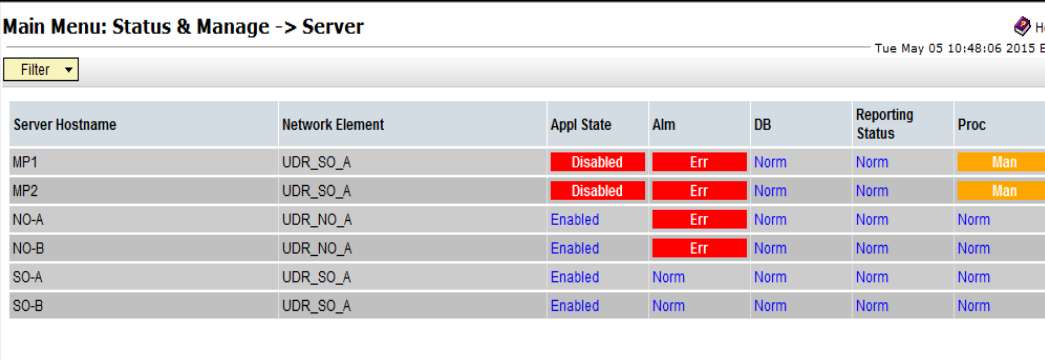

Procedure 15: Configuring MP Server Groups

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<p>15.</p> <p><input type="checkbox"/></p>	<p>Active NOAMPVIP: Put a check mark in the box labeled “Include in SG” for each MP to be included in this Server Group.</p> <p>Note: Low Capacity Configurations have 2 MPs and Single Server Configurations have 1 MP.</p>	<p>Normal Capacity Configuration:</p> <table border="1"> <thead> <tr> <th colspan="3">SO_UDR_Site1_VM</th> </tr> <tr> <th>Server</th> <th>SG Inclusion</th> <th>Preferred HA Role</th> </tr> </thead> <tbody> <tr> <td>UDRPV01-S1-MP-1</td> <td><input checked="" type="checkbox"/> Include in SG</td> <td><input type="checkbox"/> Preferred Spare</td> </tr> <tr> <td>UDRPV01-S1-MP-2</td> <td><input checked="" type="checkbox"/> Include in SG</td> <td><input type="checkbox"/> Preferred Spare</td> </tr> <tr> <td>UDRPV01-S1-MP-3</td> <td><input checked="" type="checkbox"/> Include in SG</td> <td><input type="checkbox"/> Preferred Spare</td> </tr> <tr> <td>UDRPV01-S1-MP-4</td> <td><input checked="" type="checkbox"/> Include in SG</td> <td><input type="checkbox"/> Preferred Spare</td> </tr> <tr> <td>UDRPV01-S1-MP-5</td> <td><input checked="" type="checkbox"/> Include in SG</td> <td><input type="checkbox"/> Preferred Spare</td> </tr> <tr> <td>UDRPV01-S1-MP-6</td> <td><input checked="" type="checkbox"/> Include in SG</td> <td><input type="checkbox"/> Preferred Spare</td> </tr> </tbody> </table> <p>Low Capacity Configuration:</p> <table border="1"> <thead> <tr> <th colspan="3">SO_UDR</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>Single Server Configuration:</p> <table border="1"> <thead> <tr> <th colspan="3">SO_UDR</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> </tbody> </table>	SO_UDR_Site1_VM			Server	SG Inclusion	Preferred HA Role	UDRPV01-S1-MP-1	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare	UDRPV01-S1-MP-2	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare	UDRPV01-S1-MP-3	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare	UDRPV01-S1-MP-4	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare	UDRPV01-S1-MP-5	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare	UDRPV01-S1-MP-6	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare	SO_UDR			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	SO_UDR			Server	SG Inclusion	Preferred HA Role	MP-1	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare
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<p>16.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP: 1) The user should be presented with a banner information message stating “Pre-Validation passed”. 2) Select the “Apply” dialogue button.</p>	<p>Main Menu: Configuration -> Server Groups [Edit]</p> 																																													
<p>17.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP: The user should be presented with a banner information message stating “Data committed”.</p>	<p>Main Menu: Configuration -> Server Groups [Edit]</p> 																																													
<p>18.</p> <p><input type="checkbox"/></p>	<p>IMPORTANT: Wait at least 5 minutes before proceeding on to the next Step.</p>	<ul style="list-style-type: none"> Now that the Message Processor(s) have been placed within their respective Server Groups, each must establish DB replication with the Active SOAM server at the NE. It may take several minutes for this process to be completed. UDR processs alarms may be present until Section 8.8 Configure SPR Application on MP(All SOAM Sites)is completed. Allow a minimum of5 minutes before continuing to the next Step. 																																													

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<p>20.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP: Verify that the “DB & Reporting Status” status columns show “Norm” for the MPs at this point. The “Proc” column should show “Man”.</p>	<p>Normal Capacity Configuration :</p> <table border="1"> <thead> <tr> <th>Network Element</th> <th>Server Hostname</th> <th>Appl State</th> <th>Alm</th> <th>DB</th> <th>Reporting Status</th> <th>Proc</th> </tr> </thead> <tbody> <tr> <td>SO_UDR</td> <td>MP-1</td> <td>Disabled</td> <td>Warn</td> <td>Norm</td> <td>Norm</td> <td>Man</td> </tr> <tr> <td>SO_UDR</td> <td>MP-2</td> <td>Disabled</td> <td>Warn</td> <td>Norm</td> <td>Norm</td> <td>Man</td> </tr> <tr> <td>SO_UDR</td> <td>MP-3</td> <td>Disabled</td> <td>Warn</td> <td>Norm</td> <td>Norm</td> <td>Man</td> </tr> <tr> <td>SO_UDR</td> <td>MP-4</td> <td>Disabled</td> <td>Warn</td> <td>Norm</td> <td>Norm</td> <td>Man</td> </tr> </tbody> </table> <p>Low Capacity Configuration :</p> <table border="1"> <thead> <tr> <th>Server Hostname</th> <th>Network Element</th> <th>Appl State</th> <th>Alm</th> <th>DB</th> <th>Reporting Status</th> <th>Proc</th> </tr> </thead> <tbody> <tr> <td>MP-1</td> <td>UDR_SO_A</td> <td>Disabled</td> <td>Warn</td> <td>Norm</td> <td>Norm</td> <td>Man</td> </tr> <tr> <td>MP-2</td> <td>UDR_SO_A</td> <td>Disabled</td> <td>Warn</td> <td>Norm</td> <td>Norm</td> <td>Man</td> </tr> </tbody> </table> <p>Single Server Configuration :</p> <table border="1"> <thead> <tr> <th>Network Element</th> <th>Server Hostname</th> <th>Appl State</th> <th>Alm</th> <th>DB</th> <th>Reporting Status</th> <th>Proc</th> </tr> </thead> <tbody> <tr> <td>SO_SUN_05</td> <td>MP-1</td> <td>Disabled</td> <td>Warn</td> <td>Norm</td> <td>Norm</td> <td>Man</td> </tr> </tbody> </table>	Network Element	Server Hostname	Appl State	Alm	DB	Reporting Status	Proc	SO_UDR	MP-1	Disabled	Warn	Norm	Norm	Man	SO_UDR	MP-2	Disabled	Warn	Norm	Norm	Man	SO_UDR	MP-3	Disabled	Warn	Norm	Norm	Man	SO_UDR	MP-4	Disabled	Warn	Norm	Norm	Man	Server Hostname	Network Element	Appl State	Alm	DB	Reporting Status	Proc	MP-1	UDR_SO_A	Disabled	Warn	Norm	Norm	Man	MP-2	UDR_SO_A	Disabled	Warn	Norm	Norm	Man	Network Element	Server Hostname	Appl State	Alm	DB	Reporting Status	Proc	SO_SUN_05	MP-1	Disabled	Warn	Norm	Norm	Man
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Procedure 15: Configuring MP Server Groups

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<p>21.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP:</p> <p>1) Select each "MP" with "Man" status using the mouse and holding the Ctrl key. The line entries should be highlighted in GREEN.</p> <p>2) Select the "Restart" dialogue button from the bottom left corner of the screen.</p> <p>3) Click the "OK" button on the confirmation dialogue box.</p> <p>4) The user should be presented with a confirmation message (in the banner area) stating: "Successfully restarted application".</p> <p>NOTE: The user may need to use the vertical scroll-bar in order to make the "Restart" dialogue button visible.</p>	<p>Normal Capacity Configuration: Main Menu: Status & Manage -> Server Help Fri Nov 01 17:05:48 2013 EDT</p> <p><input type="text" value="Filter"/></p> <table border="1"> <thead> <tr> <th>Network Element</th> <th>Server Hostname</th> <th>Appl State</th> <th>Alm</th> <th>DB</th> <th>Reporting Status</th> <th>Proc</th> </tr> </thead> <tbody> <tr><td>NO_UDR</td><td>NO-A</td><td>Enabled</td><td>Err</td><td>Norm</td><td>Norm</td><td>Norm</td></tr> <tr><td>NO_UDR</td><td>NO-B</td><td>Enabled</td><td>Err</td><td>Norm</td><td>Norm</td><td>Norm</td></tr> <tr><td>SO_UDR</td><td>SO-A</td><td>Enabled</td><td>Norm</td><td>Norm</td><td>Norm</td><td>Norm</td></tr> <tr><td>SO_UDR</td><td>SO-B</td><td>Enabled</td><td>Norm</td><td>Norm</td><td>Norm</td><td>Norm</td></tr> <tr style="background-color: #e0ffe0;"><td>SO_UDR</td><td>MP-1</td><td>Disabled</td><td>Err</td><td>Norm</td><td>Norm</td><td>Man</td></tr> <tr style="background-color: #e0ffe0;"><td>SO_UDR</td><td>MP-2</td><td>Disabled</td><td>Err</td><td>Norm</td><td>Norm</td><td>Man</td></tr> <tr style="background-color: #e0ffe0;"><td>SO_UDR</td><td>MP-3</td><td>Disabled</td><td>Err</td><td>Norm</td><td>Norm</td><td>Man</td></tr> <tr style="background-color: #e0ffe0;"><td>SO_UDR</td><td>MP-4</td><td>Disabled</td><td>Err</td><td>Norm</td><td>Norm</td><td>Man</td></tr> </tbody> </table> <p>Low Capacity Configuration:</p> <table border="1"> <tbody> <tr style="background-color: #e0ffe0;"><td>SO_UDR</td><td>MP-1</td><td>Disabled</td><td>Err</td><td>Norm</td><td>Norm</td><td>Man</td></tr> <tr style="background-color: #e0ffe0;"><td>SO_UDR</td><td>MP-2</td><td>Disabled</td><td>Err</td><td>Norm</td><td>Norm</td><td>Man</td></tr> </tbody> </table> <p>Single Server Configuration:</p> <div style="border: 1px solid black; padding: 5px;"> Help Logout <div style="float: right;"> 2 <input type="button" value="Stop"/> <input type="button" value="Restart"/> <input type="button" value="Reboot"/> </div> </div> <div style="border: 1px solid gray; padding: 5px; margin-top: 10px;"> <p>Are you sure you wish to restart application software on the following server(s)? MP-1,MP-2,MP-3,MP-4</p> <div style="text-align: center;"> 3 <input type="button" value="OK"/> <input type="button" value="Cancel"/> </div> </div> <p>Main Menu: Status & Manage -> Server [Restart] 4</p> <p><input type="text" value="Filter"/> <input type="text" value="Status"/></p> <table border="1"> <thead> <tr> <th>Status</th> <th>Appl State</th> <th>Alm</th> </tr> </thead> <tbody> <tr> <td><input checked="" type="checkbox"/></td> <td>Enabled</td> <td>Err</td> </tr> <tr> <td></td> <td>Enabled</td> <td>Norm</td> </tr> </tbody> </table>	Network Element	Server Hostname	Appl State	Alm	DB	Reporting Status	Proc	NO_UDR	NO-A	Enabled	Err	Norm	Norm	Norm	NO_UDR	NO-B	Enabled	Err	Norm	Norm	Norm	SO_UDR	SO-A	Enabled	Norm	Norm	Norm	Norm	SO_UDR	SO-B	Enabled	Norm	Norm	Norm	Norm	SO_UDR	MP-1	Disabled	Err	Norm	Norm	Man	SO_UDR	MP-2	Disabled	Err	Norm	Norm	Man	SO_UDR	MP-3	Disabled	Err	Norm	Norm	Man	SO_UDR	MP-4	Disabled	Err	Norm	Norm	Man	SO_UDR	MP-1	Disabled	Err	Norm	Norm	Man	SO_UDR	MP-2	Disabled	Err	Norm	Norm	Man	Status	Appl State	Alm	<input checked="" type="checkbox"/>	Enabled	Err		Enabled	Norm
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THIS PROCEDURE HAS BEEN COMPLETED

8.7 Configure MP Signaling Interfaces (All SOAM Sites)

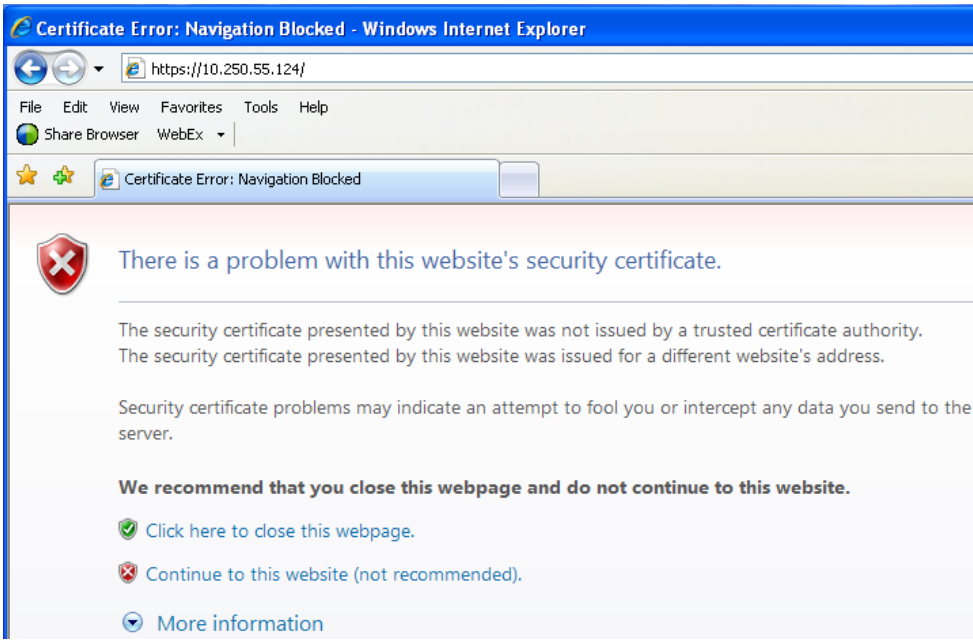

This procedure configures XSI IP Interface and adds the XSI signaling route for all MP Servers.

Requirements:

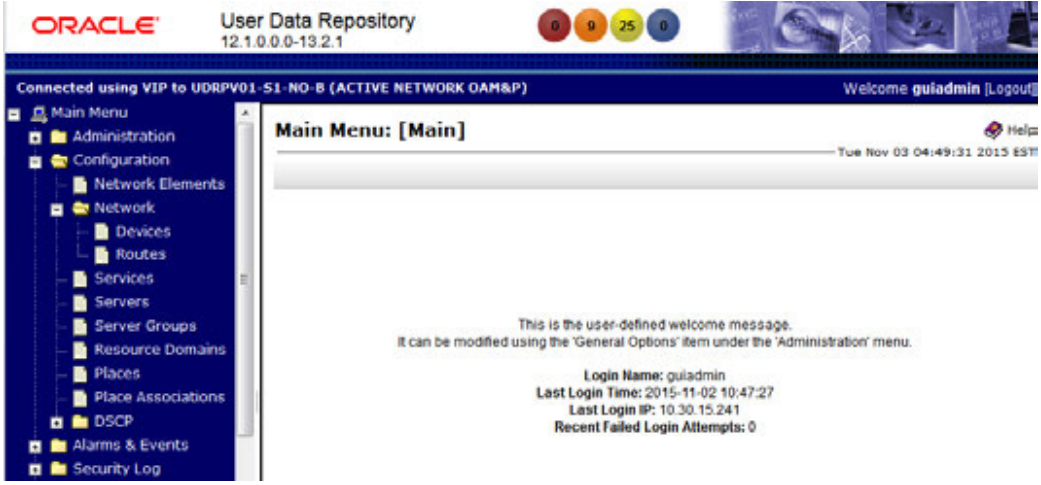
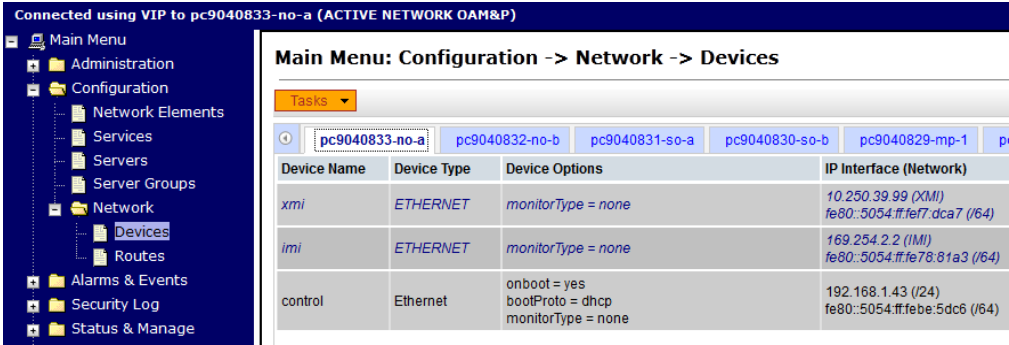
Procedure 15: Configuring MP Server Groupshas been completed.

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

Procedure 16: Configure MP Signaling Interfaces

Step	Procedure	Result
<p>1.</p> <input type="checkbox"/>	<p>Active NOAMPVIP</p> <p>Launch an approved web browser and connect to the XMI Virtual IP Address(VIP) of the Active NOAMPsite usingError! Hyperlink reference not valid.https://</p> <p>NOTE: If presented with the “security certificate” warning screen shown to the right, choose the following option: “Continue to this website (not recommended)”.</p>	
<p>2.</p> <input type="checkbox"/>	<p>Active NOAMPVIP</p> <p>The user should be presented the login screen shown on the right.</p> <p>Login to the GUI using the default user and password.</p>	


Procedure 16: Configure MP Signaling Interfaces

Step	Procedure	Result
<p>3.</p> <p><input type="checkbox"/></p>	<p>Active NOAMPVIP</p> <p>The user should be presented the Main Menu as shown on the right.</p>	 <p>The screenshot shows the Oracle User Data Repository interface. At the top, it says 'ORACLE User Data Repository 12.1.0.0-13.2.1'. Below that, it indicates 'Connected using VIP to UDRPV01-S1-ND-B (ACTIVE NETWORK OAM&P)'. The main content area is titled 'Main Menu: [Main]' and displays a user-defined welcome message. On the left, there is a navigation tree with categories like Administration, Configuration, Network Elements, Network, Devices, Routes, Services, Servers, Server Groups, Resource Domains, Places, Place Associations, DSCP, Alarms & Events, and Security Log.</p>
<p>Note: Repeat the steps below (Steps 4 - 9) for each MP.</p>		
<p>4.</p> <p><input type="checkbox"/></p>	<p>Bring up xsi1 on the servers before executing steps below.</p>	<p>NOTE: For any Low Capacity or any Gen9 Servers only:</p> <p>Execute "ifup xsi1" on all the MP Servers:</p> <pre># ifup xsi1</pre>
<p>5.</p> <p><input type="checkbox"/></p>	<p>Active NOAMPVIP</p> <p>Select...</p> <p>Main Menu → Configuration → Network → Devices</p> <p>...as shown on the right.</p>	 <p>The screenshot shows the 'Main Menu: Configuration -> Network -> Devices' page. It features a table of network devices with columns for Device Name, Device Type, Device Options, and IP Interface (Network). The table lists devices like xmi, lmi, and control. Below the table, there are instructions to check off associated checkboxes for each server.</p> <p>• "Check off" the associated Check Box as addition is completed for each Server.</p> <p><input type="checkbox"/> MP-1 (XSI-1) <input type="checkbox"/> MP-2 (XSI-1) <input type="checkbox"/> MP-3(XSI-1) <input type="checkbox"/> MP-4(XSI-1)</p> <p><input type="checkbox"/> MP-1 (XSI-2) <input type="checkbox"/> MP-2 (XSI-2) <input type="checkbox"/> MP-3(XSI-2) <input type="checkbox"/> MP-4(XSI-2)</p> <p>Gen-9 Normal Capacity Configuration:</p> <p><input type="checkbox"/> MP-5(XSI-1) <input type="checkbox"/> MP-6(XSI-1)</p> <p><input type="checkbox"/> MP-5(XSI-2) <input type="checkbox"/> MP-6(XSI-2)</p>

Procedure 16: Configure MP Signaling Interfaces

Step	Procedure	Result																														
<p>6.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP</p> <p>Select the xsi device for the desired MP</p>	<p>Click on the desired MP tab.</p> <p>Select the xsi1 device.</p> <p>Output similar to that shown below may be observed.</p> <p>Main Menu: Configuration -> Network -> Devices</p> <p style="text-align: right;">Help Tue Aug 21 14:39:44 2012 EDT</p> <p>Tasks</p> <table border="1"> <thead> <tr> <th>Device Name</th> <th>Device Type</th> <th>Device Options</th> <th>IP Interface (Network)</th> <th>Configuration Status</th> </tr> </thead> <tbody> <tr> <td>xmi</td> <td>ETHERNET</td> <td>monitorType = none</td> <td>10.250.39.105 (XMI) fe80::5054:ff:fe69:dade (/64)</td> <td>Discovered</td> </tr> <tr> <td>imi</td> <td>ETHERNET</td> <td>monitorType = none</td> <td>169.254.2.6 (IMI) fe80::5054:ff:fe67:dcb6 (/64)</td> <td>Discovered</td> </tr> <tr> <td>control</td> <td>Ethernet</td> <td>onboot = yes bootProto = dhcp monitorType = none</td> <td>192.168.1.47 (/24) fe80::5054:ff:fe2d:92e1 (/64)</td> <td>Discovered</td> </tr> <tr style="background-color: #e0ffe0;"> <td>xsi1</td> <td>Ethernet</td> <td>onboot = yes bootProto = none monitorType = none</td> <td>10.250.39.82 (XSI11) fe80::5054:ff:feaf:7285 (/64)</td> <td>Configured</td> </tr> <tr> <td>xsi2</td> <td>Ethernet</td> <td>onboot = yes bootProto = none monitorType = none</td> <td>10.250.39.90 (XSI12) fe80::5054:ff:feaf:1937 (/64)</td> <td>Configured</td> </tr> </tbody> </table> <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Server. <p> <input type="checkbox"/> MP-1 (XSI-1) <input type="checkbox"/> MP-2 (XSI-1) <input type="checkbox"/> MP-3(XSI-1) <input type="checkbox"/> MP-4(XSI-1) </p> <p> <input type="checkbox"/> MP-1 (XSI-2) <input type="checkbox"/> MP-2 (XSI-2) <input type="checkbox"/> MP-3(XSI-2) <input type="checkbox"/> MP-4(XSI-2) </p> <p>Gen-9 Normal Capacity Configuration:</p> <p> <input type="checkbox"/> MP-5(XSI-1) <input type="checkbox"/> MP-6(XSI-1) </p> <p> <input type="checkbox"/> MP-5(XSI-2) <input type="checkbox"/> MP-6(XSI-2) </p>	Device Name	Device Type	Device Options	IP Interface (Network)	Configuration Status	xmi	ETHERNET	monitorType = none	10.250.39.105 (XMI) fe80::5054:ff:fe69:dade (/64)	Discovered	imi	ETHERNET	monitorType = none	169.254.2.6 (IMI) fe80::5054:ff:fe67:dcb6 (/64)	Discovered	control	Ethernet	onboot = yes bootProto = dhcp monitorType = none	192.168.1.47 (/24) fe80::5054:ff:fe2d:92e1 (/64)	Discovered	xsi1	Ethernet	onboot = yes bootProto = none monitorType = none	10.250.39.82 (XSI11) fe80::5054:ff:feaf:7285 (/64)	Configured	xsi2	Ethernet	onboot = yes bootProto = none monitorType = none	10.250.39.90 (XSI12) fe80::5054:ff:feaf:1937 (/64)	Configured
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xsi1	Ethernet	onboot = yes bootProto = none monitorType = none	10.250.39.82 (XSI11) fe80::5054:ff:feaf:7285 (/64)	Configured																												
xsi2	Ethernet	onboot = yes bootProto = none monitorType = none	10.250.39.90 (XSI12) fe80::5054:ff:feaf:1937 (/64)	Configured																												

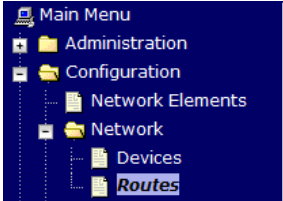
Procedure 16: Configure MP Signaling Interfaces

Step	Procedure	Result
<p>7.</p> <input type="checkbox"/>	<p>Active NOAMP VIP</p> <p>Edit the xsi device for the desired MP</p>	<div style="text-align: center;">  </div> <ol style="list-style-type: none"> 1. Click on the Take Ownership button. 2. Re-select the xsi1 device. 3. Click on the Edit button. <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Server. <p> <input type="checkbox"/> MP-1 (XSI-1) <input type="checkbox"/> MP-2 (XSI-1) <input type="checkbox"/> MP-3(XSI-1) <input type="checkbox"/> MP-4(XSI-1) <input type="checkbox"/> MP-1 (XSI-2) <input type="checkbox"/> MP-2 (XSI-2) <input type="checkbox"/> MP-3(XSI-2) <input type="checkbox"/> MP-4(XSI-2) </p> <p>Gen-9 Normal Capacity Configuration:</p> <p> <input type="checkbox"/> MP-5(XSI-1) <input type="checkbox"/> MP-6(XSI-1) <input type="checkbox"/> MP-5(XSI-2) <input type="checkbox"/> MP-6(XSI-2) </p>

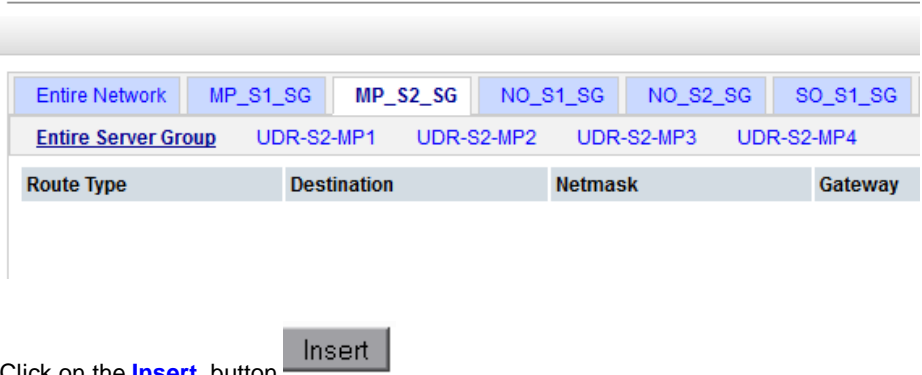
Procedure 16: Configure MP Signaling Interfaces

Step	Procedure	Result																		
<p>8.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP</p> <p>Enable "Start On Boot"</p>	<p>Click on the General Options tab.</p> <p>Check the Start on Boot check box (to make it enabled).</p> <p>Output similar to that shown below may be observed.</p> <p>Main Menu: Configuration -> Network -> Devices [Edit]</p> <p style="text-align: right;">Help Tue Aug 21 14:40:26 2012 EDT</p> <p>Edit Ethernet device xsi1 on pc9040829-mp-1</p> <table border="1"> <thead> <tr> <th>Field</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Device Type</td> <td> <input checked="" type="radio"/> Ethernet <input type="radio"/> Bonding <input type="radio"/> Vlan <input type="radio"/> Alias </td> <td>Select the device type. It cannot be changed after device is created. [Default = N/A. Range = Bonding, Vlan, Alias.]</td> </tr> <tr> <td>Device Monitoring</td> <td>-- Monitoring Type--</td> <td>Choose a monitoring style to use with a bonded device. Disabled for non-bonded devices. [Default = MII. Options = MII, ARP]</td> </tr> <tr> <td>Start On Boot</td> <td><input checked="" type="checkbox"/> Enable</td> <td>Start the device, and also start on boot. [Default = enabled]</td> </tr> <tr> <td>Boot Protocol</td> <td>None</td> <td>Select the boot protocol. [Default = None, Range = [None, DHCP]]</td> </tr> <tr> <td>Base Device(s)</td> <td> <input type="checkbox"/> xmi <input type="checkbox"/> imi <input type="checkbox"/> control <input type="checkbox"/> xsi1 <input type="checkbox"/> xsi2 </td> <td>The base device(s) for Bonding, Alias and Vlan device types. Alias and Vlan devices require 1 selection; Bonding devices require 2 selections. It cannot be changed after device is created. [Default = N/A. Range = available base devices per device type.]</td> </tr> </tbody> </table> <p>Ok Apply Cancel</p> <ul style="list-style-type: none"> • "Check off" the associated Check Box as addition is completed for each Server. <p> <input type="checkbox"/> MP-1 (XSI-1) <input type="checkbox"/> MP-2 (XSI-1) <input type="checkbox"/> MP-3(XSI-1) <input type="checkbox"/> MP-4(XSI-1) <input type="checkbox"/> MP-1 (XSI-2) <input type="checkbox"/> MP-2 (XSI-2) <input type="checkbox"/> MP-3(XSI-2) <input type="checkbox"/> MP-4(XSI-2) </p> <p>Gen-9 Normal Capacity Configuration:</p> <p> <input type="checkbox"/> MP-5(XSI-1) <input type="checkbox"/> MP-6(XSI-1) <input type="checkbox"/> MP-5(XSI-2) <input type="checkbox"/> MP-6(XSI-2) </p>	Field	Value	Description	Device Type	<input checked="" type="radio"/> Ethernet <input type="radio"/> Bonding <input type="radio"/> Vlan <input type="radio"/> Alias	Select the device type. It cannot be changed after device is created. [Default = N/A. Range = Bonding, Vlan, Alias.]	Device Monitoring	-- Monitoring Type--	Choose a monitoring style to use with a bonded device. Disabled for non-bonded devices. [Default = MII. Options = MII, ARP]	Start On Boot	<input checked="" type="checkbox"/> Enable	Start the device, and also start on boot. [Default = enabled]	Boot Protocol	None	Select the boot protocol. [Default = None, Range = [None, DHCP]]	Base Device(s)	<input type="checkbox"/> xmi <input type="checkbox"/> imi <input type="checkbox"/> control <input type="checkbox"/> xsi1 <input type="checkbox"/> xsi2	The base device(s) for Bonding, Alias and Vlan device types. Alias and Vlan devices require 1 selection; Bonding devices require 2 selections. It cannot be changed after device is created. [Default = N/A. Range = available base devices per device type.]
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Device Type	<input checked="" type="radio"/> Ethernet <input type="radio"/> Bonding <input type="radio"/> Vlan <input type="radio"/> Alias	Select the device type. It cannot be changed after device is created. [Default = N/A. Range = Bonding, Vlan, Alias.]																		
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Start On Boot	<input checked="" type="checkbox"/> Enable	Start the device, and also start on boot. [Default = enabled]																		
Boot Protocol	None	Select the boot protocol. [Default = None, Range = [None, DHCP]]																		
Base Device(s)	<input type="checkbox"/> xmi <input type="checkbox"/> imi <input type="checkbox"/> control <input type="checkbox"/> xsi1 <input type="checkbox"/> xsi2	The base device(s) for Bonding, Alias and Vlan device types. Alias and Vlan devices require 1 selection; Bonding devices require 2 selections. It cannot be changed after device is created. [Default = N/A. Range = available base devices per device type.]																		

Procedure 16: Configure MP Signaling Interfaces

Step	Procedure	Result
<p>9.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP</p> <p>Add an xsi IP Address.</p>	<p>Click on the IP Interfaces tab.</p> <p>Click the Add Row button.</p> <p>Output similar to that shown below may be observed.</p> <p>Main Menu: Configuration -> Network -> Devices [Edit]</p> <hr/> <p>Edit Ethernet device xsi1 on pc9040829-mp-1</p> <p>General Options MII Monitoring Options ARP Monitoring Options IP Interfaces</p> <p>IP Address List Add Row</p> <p>10.250.39.82 XSI11 Remove</p> <p>Set the Network Name to xsi1.</p> <p>Enter the xsi1 IP Address.</p> <p>Click on the Ok button.</p> <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Server. <p><input type="checkbox"/> MP-1 (XSI-1) <input type="checkbox"/> MP-2 (XSI-1) <input type="checkbox"/> MP-3 (XSI-1) <input type="checkbox"/> MP-4 (XSI-1)</p> <p><input type="checkbox"/> MP-1 (XSI-2) <input type="checkbox"/> MP-2 (XSI-2) <input type="checkbox"/> MP-3 (XSI-2) <input type="checkbox"/> MP-4 (XSI-2)</p> <p>Gen-9 Normal Capacity Configuration:</p> <p><input type="checkbox"/> MP-5 (XSI-1) <input type="checkbox"/> MP-6 (XSI-1)</p> <p><input type="checkbox"/> MP-5 (XSI-2) <input type="checkbox"/> MP-6 (XSI-2)</p>
<p>Repeat Steps 4 - 9 for each MP and its Signaling network(s).</p> <p>NOTE: If a second XSI network is present (XSI-2), steps 4 - 9 must be run for each MP's XSI-2 network.</p>		
<p>10.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP</p> <p>Select...</p> <p>Main Menu → Configuration → Network → Routes</p> <p>...as shown on the right.</p>	 <p>Main Menu: Configuration -> Network -> Routes</p> <p>Warning ▾</p> <p>Entire Network MP_GRP NO_GRP SO_GRP</p> <p>BL908070109-NO-A BL908070110-NO-B BL908070111-SO-A BL9</p>

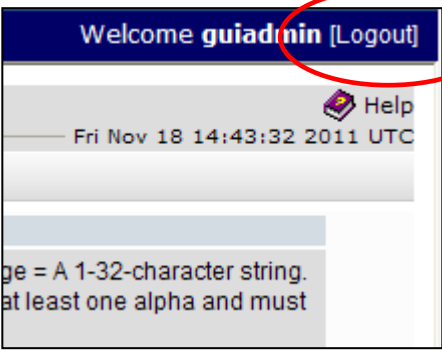
Procedure 16: Configure MP Signaling Interfaces

Step	Procedure	Result
<p>11.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP</p> <p>Insert a new route for the MP.</p>	<p>Click on the desired Server Group tab on the top line.</p> <p>Then click on the Entire Server Group tab on the line below Server Group line.</p> <p>Output similar to that shown below may be observed.</p> <p>Main Menu: Configuration -> Network -> Routes</p> <hr/>  <p>Click on the Insert button</p> <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Network. <p><input type="checkbox"/> XSI-1 <input type="checkbox"/> XSI-2</p>

Procedure 16: Configure MP Signaling Interfaces

Step	Procedure	Result																		
<p>12.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP</p> <p>Add xsi signaling route to MP</p>	<p>Output similar to that shown below may be observed.</p> <p>Main Menu: Configuration -> Network -> Routes [Insert]</p> <p style="text-align: right;">Thu Mar 20 19:09:27 2014</p> <p>Info ▾</p> <p>Insert Route on MP_S2_SG</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. [Default = N/A. Options = Net, Default, Host. You can configure at most one IPv4 default route and one IPv6 default route on a given target machine.]</td> </tr> <tr> <td>Device</td> <td>xsi1 ▾ *</td> <td>Select the network device name through which traffic is being routed. The selection of AUTO will result in the device being selected automatically, if possible. [Default = N/A. Range = Provisioned devices on the selected server.]</td> </tr> <tr> <td>Destination</td> <td>10.240.37.224</td> <td>The destination network address. [Default = N/A. Range = Valid Network Address of the network in dotted decimal (IPv4) or colon hex (IPv6) format.]</td> </tr> <tr> <td>Netmask</td> <td>255.255.255.240</td> <td>A valid netmask for the network route destination IP address. [Default = N/A. Range = Valid Netmask for the network in prefix length (IPv4 or IPv6) or dotted decimal (IPv4) format.]</td> </tr> <tr> <td>Gateway IP</td> <td>10.240.162.161 *</td> <td>The IP address of the gateway for this route. [Default = N/A. Range = Valid IP address of the gateway in dotted decimal (IPv4) or colon hex (IPv6) format.]</td> </tr> </tbody> </table> <p style="text-align: center;">Ok Apply Cancel</p> <p>Set Route Type to desired value Set Device to xsi1 Enter Destination: This is the address of the Diameter Sh clients that will connect to UDR on the signaling network, Enter Netmask for the Diameter Sh client network. Enter Gateway IP: This is the gateway for UDR signaling network as configured in Procedure 3, Step 10. Click Apply button</p> <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Network. <p><input type="checkbox"/> XSI-1 <input type="checkbox"/> XSI-2</p>	Field	Value	Description	Route Type	<input checked="" type="radio"/> Net <input 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 and one IPv6 default route on a given target machine.]	Device	xsi1 ▾ *	Select the network device name through which traffic is being routed. The selection of AUTO will result in the device being selected automatically, if possible. [Default = N/A. Range = Provisioned devices on the selected server.]	Destination	10.240.37.224	The destination network address. [Default = N/A. Range = Valid Network Address of the network in dotted decimal (IPv4) or colon hex (IPv6) format.]	Netmask	255.255.255.240	A valid netmask for the network route destination IP address. [Default = N/A. Range = Valid Netmask for the network in prefix length (IPv4 or IPv6) or dotted decimal (IPv4) format.]	Gateway IP	10.240.162.161 *	The IP address of the gateway for this route. [Default = N/A. Range = Valid IP address of the gateway in dotted decimal (IPv4) or colon hex (IPv6) format.]
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Route Type	<input checked="" type="radio"/> Net <input 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 and one IPv6 default route on a given target machine.]																		
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Gateway IP	10.240.162.161 *	The IP address of the gateway for this route. [Default = N/A. Range = Valid IP address of the gateway in dotted decimal (IPv4) or colon hex (IPv6) format.]																		
<p>Repeat Step 11-12 for each Network.</p>																				
<p>13.</p> <p><input type="checkbox"/></p>	<p>Repeat Step 11-12 for MP ↔ ComAgent communication intended to be configured on XSI1 as described in 8.11 Configure Services on Signaling Network. This step is only needed for geo-redundant systems.</p> <p>Note: Destination would be DR Site XSI1 Address if configuring Primary Site and vice-versa. Note: Netmask would be DR Site XSI1 Address if configuring Primary Site and vice-versa. Note: Gateway IP would be Primary Site XSI1 Gateway if configuring Primary Site and vice-versa.</p>																			

Procedure 16: Configure MP Signaling Interfaces

Step	Procedure	Result
<p>14.</p> <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>Click the “Logout” link on the server GUI.</p>	
<p>THIS PROCEDURE HAS BEEN COMPLETED</p>		

8.8 Configure SPR Application on MP(All SOAM Sites)

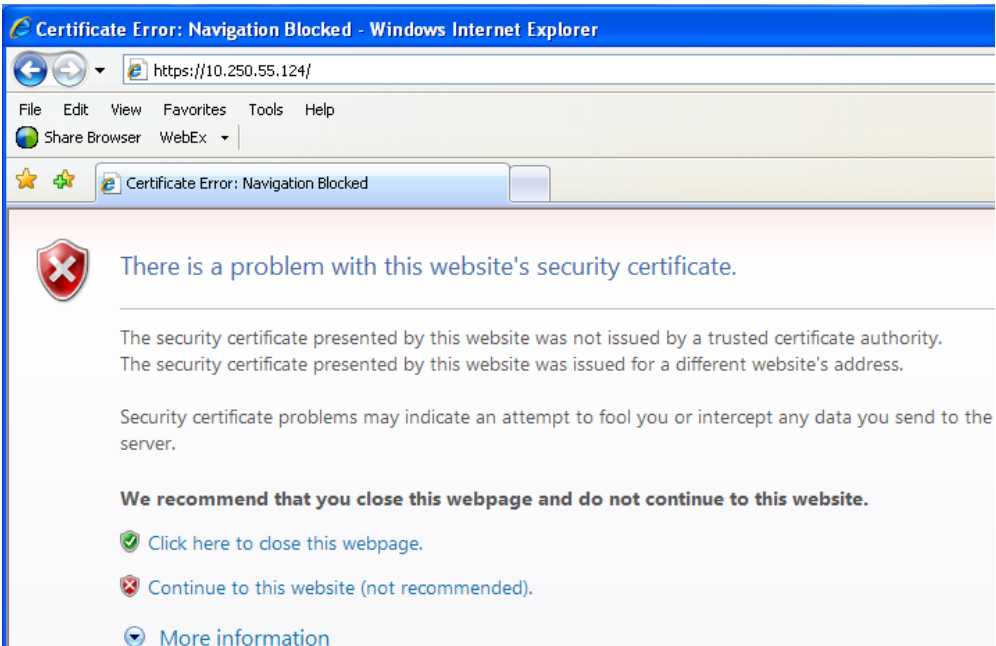
This procedure configures the SPR application for MP Servers on each SOAM site.

Requirements:

Procedure 16: Configure MP Signaling Interfaces (All SOAM Sites) has been completed.

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

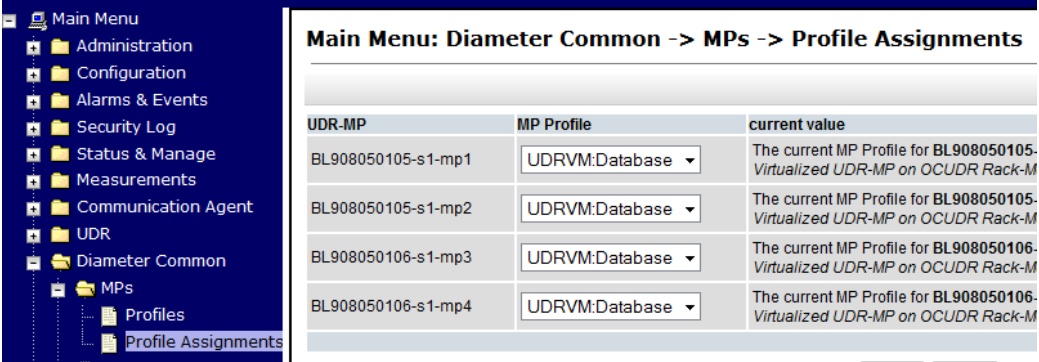
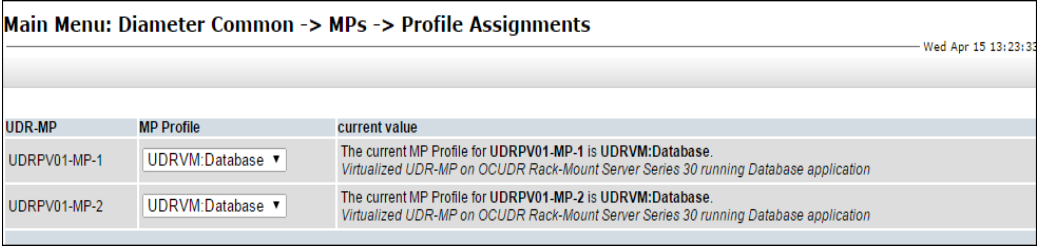

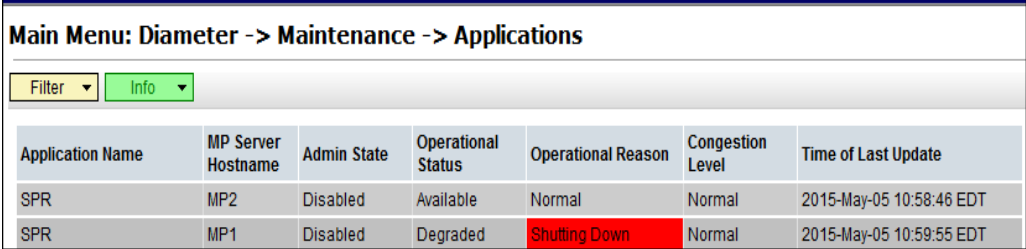
Procedure 17: Configure SPR Application on MP

Step	Procedure	Result
<p>1.</p> <input type="checkbox"/>	<p>Active SOAM VIP</p> <p>Launch an approved web browser and connect to the XMI Virtual IP Address(VIP) of the Active SOAM site using https://</p> <p>NOTE: If presented with the “security certificate” warning screen shown to the right, choose the following option: “Continue to this website (not recommended)”.</p>	

Procedure 17: Configure SPR Application on MP

Step	Procedure	Result
<p>2.</p> <p><input type="checkbox"/></p>	<p>Active SOAM VIP</p> <p>The user should be presented the login screen shown on the right.</p> <p>Login to the GUI using the default user and password.</p>	
<p>3.</p> <p><input type="checkbox"/></p>	<p>Active SOAM VIP</p> <p>The user should be presented the Main Menu as shown on the right.</p>	

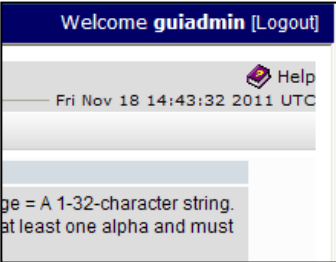
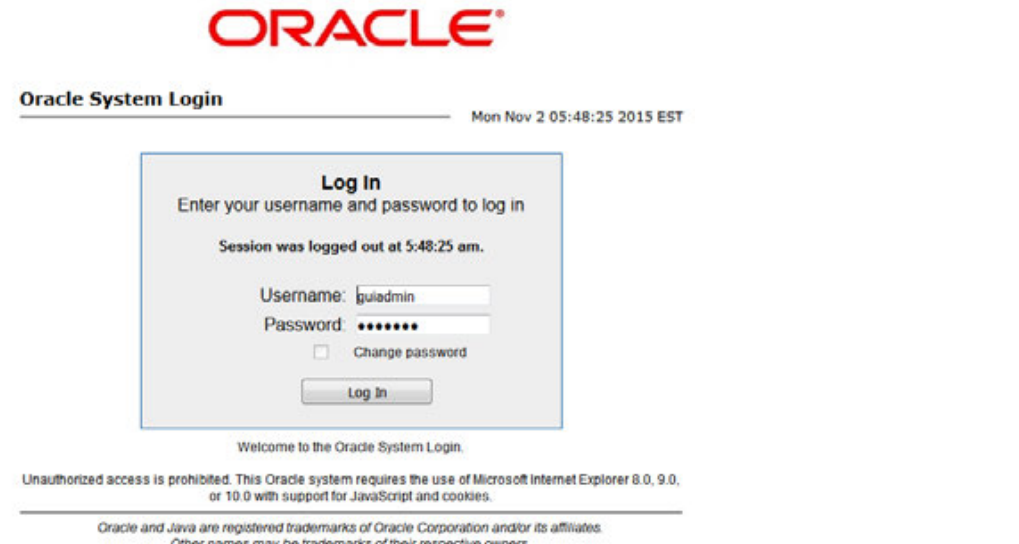
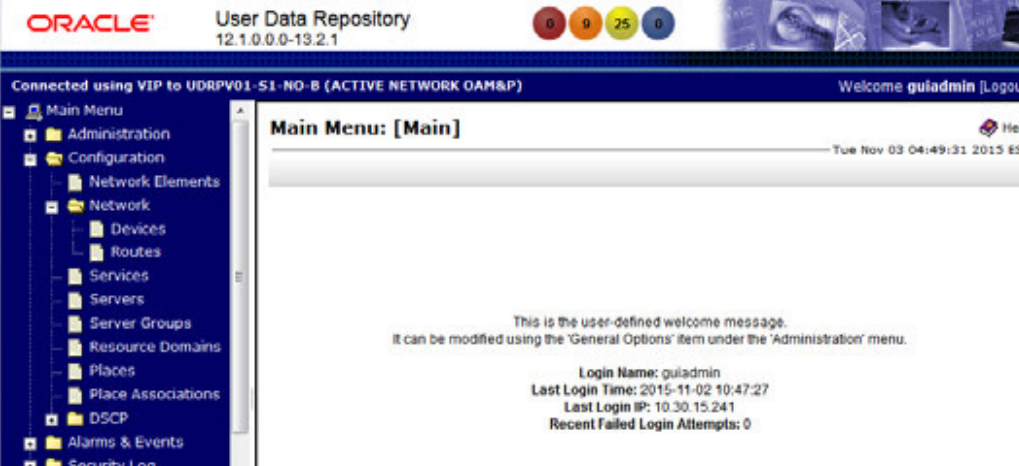
Procedure 17: Configure SPR Application on MP

Step	Procedure	Result
<p>4.</p> <p><input type="checkbox"/></p>	<p>Active SOAM VIP Select...</p> <p>Main Menu → <i>Diameter Common</i> → <i>MPs</i> → <i>Profile Assignments</i></p> <p>Select <i>UDRVM:Database</i> profile as <i>UDRVM:Database</i> and click on Assign (for each MP)</p>	<p>Normal Capacity Configuration:</p>  <p>Low Capacity Configuration:</p>  <p>Single Server Configuration:</p> 
<p>5.</p> <p><input type="checkbox"/></p>	<p>Active SOAM VIP Select...</p> <p>Main Menu → <i>Diameter</i> → <i>Maintenance</i> → <i>Applications</i></p> <p>...as shown on the right.</p>	

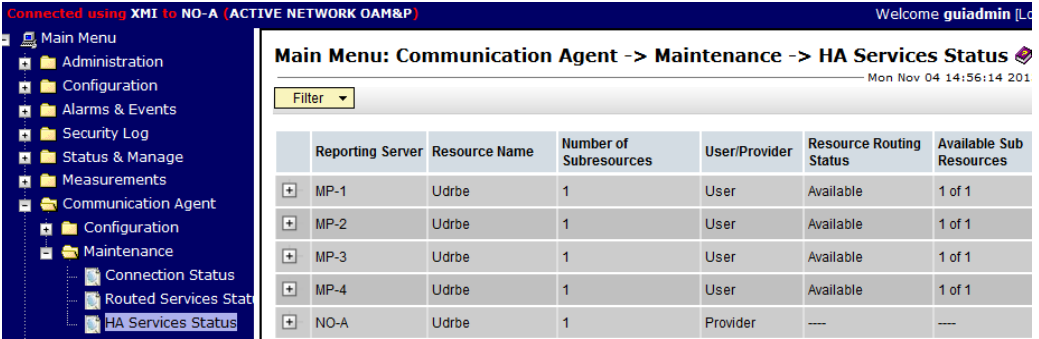
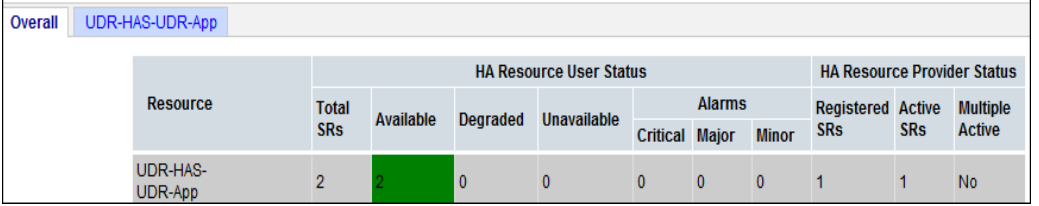

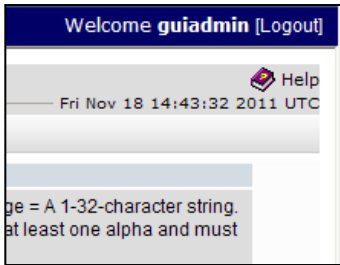
Procedure 17: Configure SPR Application on MP

Step	Procedure	Result																																																																						
<p>6.</p> <p><input type="checkbox"/></p>	<p>Active SOAM VIP</p> <p>1) Select the “SPR” Application on each “MP” using the mouse and holding the Ctrl key. The line entries should be highlighted in GREEN.</p> <p>2) Click on Enable Button</p>	<p>NormalCapacity Configuration:</p> <p>Main Menu: Diameter -> Maintenance -> Applications</p> <p>Filter</p> <table border="1"> <thead> <tr> <th>DSR Application Name</th> <th>MP Server Hostname</th> <th>Admin State</th> <th>Operational Status</th> <th>Operational Reason</th> <th>Congestion Level</th> <th>Time of</th> </tr> </thead> <tbody> <tr> <td>SPR</td> <td>MP-1</td> <td>Disabled</td> <td>Unk</td> <td>Unk</td> <td>Unk</td> <td>Unk</td> </tr> <tr> <td>SPR</td> <td>MP-3</td> <td>Disabled</td> <td>Unk</td> <td>Unk</td> <td>Unk</td> <td>Unk</td> </tr> <tr> <td>SPR</td> <td>MP-2</td> <td>Disabled</td> <td>Unk</td> <td>Unk</td> <td>Unk</td> <td>Unk</td> </tr> <tr> <td>SPR</td> <td>MP-4</td> <td>Disabled</td> <td>Unk</td> <td>Unk</td> <td>Unk</td> <td>Unk</td> </tr> </tbody> </table> <p>Low Capacity Configuration:</p> <p>Main Menu: Diameter -> Maintenance -> Applications</p> <p>Filter</p> <table border="1"> <thead> <tr> <th>DSR Application Name</th> <th>MP Server Hostname</th> <th>Admin State</th> <th>Operational Status</th> <th>Operational Reason</th> <th>Congestion Level</th> <th>Time of</th> </tr> </thead> <tbody> <tr> <td>SPR</td> <td>MP-1</td> <td>Disabled</td> <td>Unk</td> <td>Unk</td> <td>Unk</td> <td>Unk</td> </tr> <tr> <td>SPR</td> <td>MP-2</td> <td>Disabled</td> <td>Unk</td> <td>Unk</td> <td>Unk</td> <td>Unk</td> </tr> </tbody> </table> <p>Single Server Configuration:</p> <p>Main Menu: Diameter -> Maintenance -> Applications</p> <p>Filter</p> <table border="1"> <thead> <tr> <th>DSR Application Name</th> <th>MP Server Hostname</th> <th>Admin State</th> <th>Operational Status</th> <th>Operational Reason</th> <th>Congestion Level</th> <th>Time of</th> </tr> </thead> <tbody> <tr> <td>SPR</td> <td>MP-1</td> <td>Disabled</td> <td>Unk</td> <td>Unk</td> <td>Unk</td> <td>Unk</td> </tr> </tbody> </table> <p>Enable Disable 2</p>	DSR Application Name	MP Server Hostname	Admin State	Operational Status	Operational Reason	Congestion Level	Time of	SPR	MP-1	Disabled	Unk	Unk	Unk	Unk	SPR	MP-3	Disabled	Unk	Unk	Unk	Unk	SPR	MP-2	Disabled	Unk	Unk	Unk	Unk	SPR	MP-4	Disabled	Unk	Unk	Unk	Unk	DSR Application Name	MP Server Hostname	Admin State	Operational Status	Operational Reason	Congestion Level	Time of	SPR	MP-1	Disabled	Unk	Unk	Unk	Unk	SPR	MP-2	Disabled	Unk	Unk	Unk	Unk	DSR Application Name	MP Server Hostname	Admin State	Operational Status	Operational Reason	Congestion Level	Time of	SPR	MP-1	Disabled	Unk	Unk	Unk	Unk
DSR Application Name	MP Server Hostname	Admin State	Operational Status	Operational Reason	Congestion Level	Time of																																																																		
SPR	MP-1	Disabled	Unk	Unk	Unk	Unk																																																																		
SPR	MP-3	Disabled	Unk	Unk	Unk	Unk																																																																		
SPR	MP-2	Disabled	Unk	Unk	Unk	Unk																																																																		
SPR	MP-4	Disabled	Unk	Unk	Unk	Unk																																																																		
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SPR	MP-1	Disabled	Unk	Unk	Unk	Unk																																																																		
SPR	MP-2	Disabled	Unk	Unk	Unk	Unk																																																																		
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SPR	MP-1	Disabled	Unk	Unk	Unk	Unk																																																																		
<p>7.</p> <p><input type="checkbox"/></p>	<p>Active SOAM VIP</p> <p>The user should be presented with a banner information message stating “Enabled application”.</p>	<p>Info</p> <p>• Enabled applications on 4 MPs</p> <p>Main Menu: Diameter -> Maintenance -> Applications</p> <p>Filter Info</p> <table border="1"> <thead> <tr> <th>Application Name</th> <th>MP Server Hostname</th> <th>Admin State</th> <th>Operational Status</th> <th>Operational Reason</th> <th>Congestion Level</th> <th>Time of Last Update</th> </tr> </thead> <tbody> <tr> <td>SPR</td> <td>MP2</td> <td>Enabled</td> <td>Available</td> <td>Normal</td> <td>Normal</td> <td>2015-May-05 11:00:41 EDT</td> </tr> <tr> <td>SPR</td> <td>MP1</td> <td>Enabled</td> <td>Available</td> <td>Normal</td> <td>Normal</td> <td>2015-May-05 11:00:42 EDT</td> </tr> </tbody> </table>	Application Name	MP Server Hostname	Admin State	Operational Status	Operational Reason	Congestion Level	Time of Last Update	SPR	MP2	Enabled	Available	Normal	Normal	2015-May-05 11:00:41 EDT	SPR	MP1	Enabled	Available	Normal	Normal	2015-May-05 11:00:42 EDT																																																	
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SPR	MP2	Enabled	Available	Normal	Normal	2015-May-05 11:00:41 EDT																																																																		
SPR	MP1	Enabled	Available	Normal	Normal	2015-May-05 11:00:42 EDT																																																																		

Procedure 17: Configure SPR Application on MP

Step	Procedure	Result
<p>8.</p> <p><input type="checkbox"/></p>	<p>Active SOAM VIP</p> <p>Click the “Logout” link on the server GUI.</p>	
<p>9.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP</p> <p>The user should be presented the login screen shown on the right.</p> <p>Login to the GUI using the default user and password.</p>	
<p>10.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP</p> <p>The user should be presented the UDR Main Menu as shown on the right.</p>	

Procedure 17: Configure SPR Application on MP

Step	Procedure	Result																																																																						
<p>11.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP</p> <p>Verify service appears on NOAMP GUI page</p> <p>Select...</p> <p>Main Menu → Communication Agent → Maintenance → HA Services Status</p> <p>...as shown on the right.</p>	<p>Normal Capacity Configuration:</p>  <table border="1"> <thead> <tr> <th>Reporting Server</th> <th>Resource Name</th> <th>Number of Subresources</th> <th>User/Provider</th> <th>Resource Routing Status</th> <th>Available Sub Resources</th> </tr> </thead> <tbody> <tr> <td>MP-1</td> <td>Udrbe</td> <td>1</td> <td>User</td> <td>Available</td> <td>1 of 1</td> </tr> <tr> <td>MP-2</td> <td>Udrbe</td> <td>1</td> <td>User</td> <td>Available</td> <td>1 of 1</td> </tr> <tr> <td>MP-3</td> <td>Udrbe</td> <td>1</td> <td>User</td> <td>Available</td> <td>1 of 1</td> </tr> <tr> <td>MP-4</td> <td>Udrbe</td> <td>1</td> <td>User</td> <td>Available</td> <td>1 of 1</td> </tr> <tr> <td>NO-A</td> <td>Udrbe</td> <td>1</td> <td>Provider</td> <td>---</td> <td>---</td> </tr> </tbody> </table> <p>Low Capacity Configuration:</p>  <table border="1"> <thead> <tr> <th rowspan="2">Resource</th> <th rowspan="2">Total SRs</th> <th colspan="3">HA Resource User Status</th> <th colspan="3">HA Resource Provider Status</th> </tr> <tr> <th>Available</th> <th>Degraded</th> <th>Unavailable</th> <th>Registered SRs</th> <th>Active SRs</th> <th>Multiple Active</th> </tr> </thead> <tbody> <tr> <td>UDR-HAS-UDR-App</td> <td>2</td> <td>2</td> <td>0</td> <td>0</td> <td>1</td> <td>1</td> <td>No</td> </tr> </tbody> </table> <p>Single Server Configuration:</p>  <table border="1"> <thead> <tr> <th>Reporting Server</th> <th>Resource Name</th> <th>Number of Subresources</th> <th>User/Provider</th> <th>Resource Routing Status</th> <th>Available Sub Resources</th> </tr> </thead> <tbody> <tr> <td>UDRPV01-MP-1</td> <td>UDR-HAS-UDR-App</td> <td>1</td> <td>User</td> <td>Available</td> <td>1 of 1</td> </tr> </tbody> </table>	Reporting Server	Resource Name	Number of Subresources	User/Provider	Resource Routing Status	Available Sub Resources	MP-1	Udrbe	1	User	Available	1 of 1	MP-2	Udrbe	1	User	Available	1 of 1	MP-3	Udrbe	1	User	Available	1 of 1	MP-4	Udrbe	1	User	Available	1 of 1	NO-A	Udrbe	1	Provider	---	---	Resource	Total SRs	HA Resource User Status			HA Resource Provider Status			Available	Degraded	Unavailable	Registered SRs	Active SRs	Multiple Active	UDR-HAS-UDR-App	2	2	0	0	1	1	No	Reporting Server	Resource Name	Number of Subresources	User/Provider	Resource Routing Status	Available Sub Resources	UDRPV01-MP-1	UDR-HAS-UDR-App	1	User	Available	1 of 1
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<p>12.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP</p> <p>Click the “Logout” link on the server GUI.</p>	 <p>ge = A 1-32-character string. at least one alpha and must</p>																																																																						
<p>THIS PROCEDURE HAS BEEN COMPLETED</p>																																																																								

8.9 Configure NOAMP Signaling Interfaces (All NOAM Sites)

This procedure configures XSI IP Interface and adds the XSI signaling route for all NOAMP Servers. **ComAgent Service is required** to be configured on XSI Network. Normal Capacity C-Class Configurations use this procedure.

Requirements:

Procedure 13: OAM Pairing for the Primary NOAMP Servers has been completed.

Procedure 14: Pairing the OAM Servers for SOAM or DR NOAMPsites

has been completed.

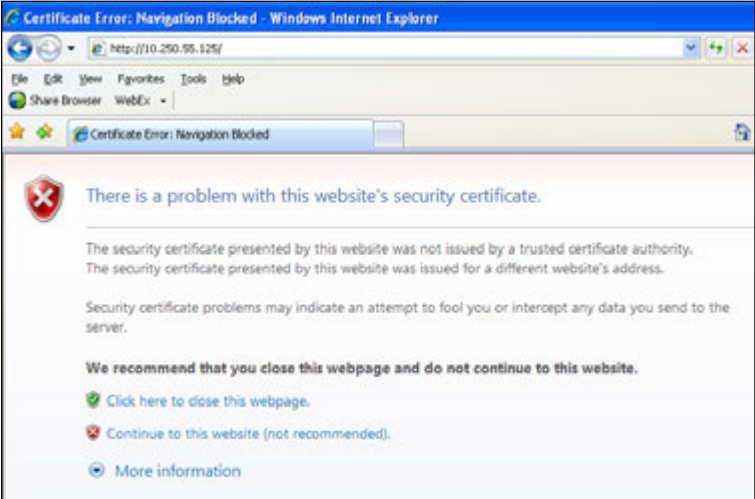
Procedure 15: Configuring MP Server Groupshas been completed.

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


Procedure 18: Configure NOAMP Signaling Interfaces

Step	Procedure	Result
1. <input type="checkbox"/>	Create bond interface for signaling network on NOAMP for Topology 4 and Topology 4A ONLY	<u>For Toplogy 4 and Topology 4A ONLY:</u> Deployments with two pairs of enclosure switches (Topology 4 and Topology 4A in reference [6]) will host XSI on bond1 : Execute Step 2 - 7 on all NOAMP servers
2. <input type="checkbox"/>	NOAMP Server : 1) Access the command prompt. 2) Log into the NOAMP server as the "admusr" user..	login as: admusr admusr@10.250.xx.yy's password:<admusr_password> Last login: Mon Jul 30 10:33:19 2012 from 10.25.80.199 [admusr@pc9040833-no-a ~]#
3. <input type="checkbox"/>	NOAMP Server: Output similar to that shown on the right will appear as the server access the command prompt.	*** TRUNCATED OUTPUT *** VPATH=/opt/TKLCComcol/runcm5.16:/opt/TKLCComcol/cm5.16 PRODPATH= RELEASE=5.16 RUNID=00 VPATH=/var/TKLC/rundb:/usr/TKLC/appworks:/usr/TKLC/awpcommon:/usr/TKLC/awpttransportmgr:/usr/TKLC/awpss7:/usr/TKLC/exhr PRODPATH=/opt/comcol/prod RUNID=00 [admusr@pc9040833-no-a ~]#
4. <input type="checkbox"/>	NOAMP Server : Switch to "root" user.	[admusr@ pc9040833-no-a ~]\$ su - password: <root_password>
5. <input type="checkbox"/>	NOAMP Server: Add bond for signaling [Topology 4 only]	<u>Topology 4 and Topology 4A ONLY:</u> Deployments with two pairs of enclosure switches (Topology 4 and Topology 4A in reference [6]) will host XSI on bond1 : #netAdm add --device=bond1 --onboot=yes --bootproto=none Interface bond1 added

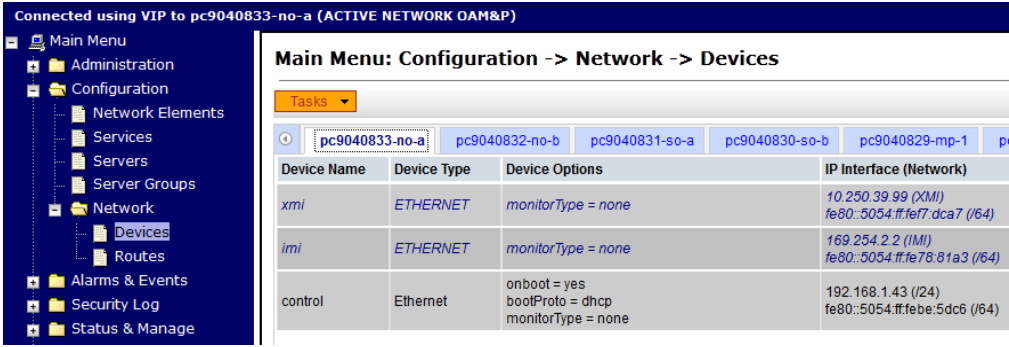
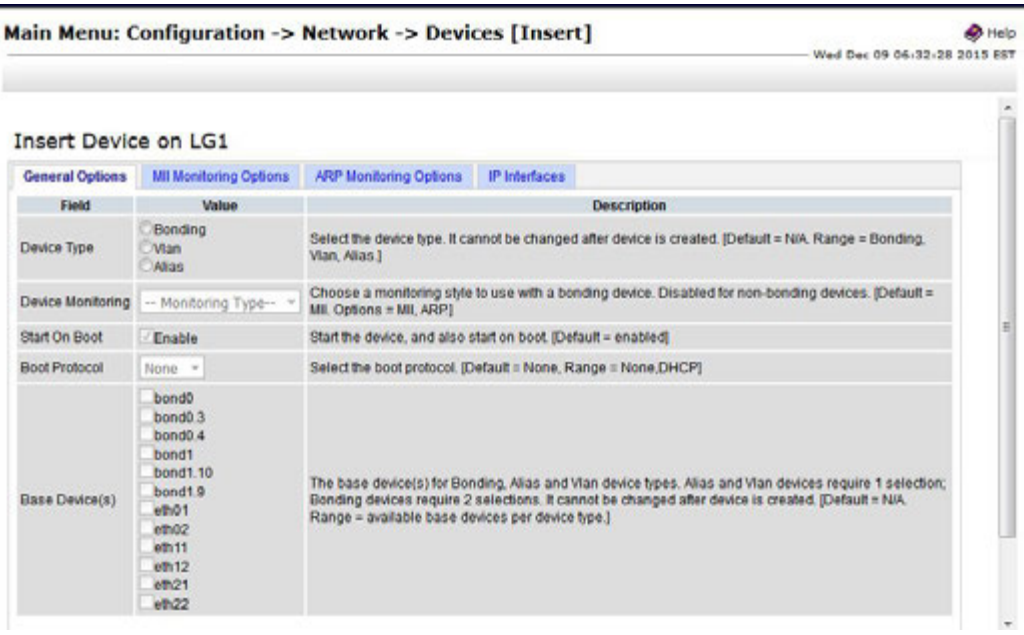
Procedure 18: Configure NOAMP Signaling Interfaces

Step	Procedure	Result
<p>6.</p> <input type="checkbox"/>	<p>NOAMP Server:</p> <p><i>Bond interfaces eth11 and eth12 for signaling</i></p> <p><i>[Topology 4 only]</i></p>	<p><u>Topology 4 and Topology 4A ONLY:</u></p> <p>Deployments with two pairs of enclosure switches (Topology 4 and Topology 4A in reference [6]) will host XSI on bond1:</p> <pre>#netAdm set --device=bond1 --bondInterfaces=eth11,eth12</pre> <p>Interface bond1 updated</p>
<p>7.</p> <input type="checkbox"/>	<p>NOAMP Server:</p> <p><i>Bring up bond1 on the server</i></p> <p>Note: <i>Output similar to that shown on the right may be observed</i></p>	<p>Restart the network interfaces:</p> <pre>#ifup bond1</pre> <p>RTNETLINK answers: File exists</p>
<p>8.</p> <input type="checkbox"/>	<p>Active NOAMP VIP</p> <p>Launch an approved web browser and connect to the XMI Virtual IP Address(VIP) of the Active NOAMP site using "https://"</p>	

Procedure 18: Configure NOAMP Signaling Interfaces

Step	Procedure	Result
<p>9.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP</p> <p>The user should be presented the login screen shown on the right.</p> <p>Login to the GUI using the default user and password.</p>	
<p>10.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP</p> <p>The user should be presented the Main Menu as shown on the right.</p>	

Procedure 18: Configure NOAMP Signaling Interfaces

Step	Procedure	Result
<p>11.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP</p> <p>Select...</p> <p>Main Menu → Configuration → Network → Devices</p> <p>...as shown on the right.</p>	<p>For NormalCapacity C-Class Configuration:</p>  <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Server. <p><input type="checkbox"/> NOAMP-A (XSI-1) <input type="checkbox"/> NOAMP-B(XSI-1)</p>
<p>12.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP</p> <p>Click on Insert.</p>	<p>Click on the desired NOAMP tab. Output similar to that shown below may be observed.</p>  <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Server. <p><input type="checkbox"/> NOAMP-A (XSI-1) <input type="checkbox"/> NOAMP-B(XSI-1)</p>

Procedure 18: Configure NOAMP Signaling Interfaces

Step	Procedure	Result																											
<p>13.</p> <div style="border: 1px solid black; width: 20px; height: 20px; margin-left: 5px;"></div>	<p>Active NOAMP VIP</p> <ol style="list-style-type: none"> 1. Select Device Type as Vlan and 2. Select Base Device for Signaling Bond Interface 	<p>Click on the General Options tab.</p> <p>Select Device Type as Vlan and</p> <p>Select Base Device as Signaling Bond Interface i.e. bond0 on Topology 1/1A and Topology 3/3A or bond1 on Topology 4/4A</p> <p>Output similar to that shown below may be observed.</p> <div style="border: 1px solid gray; padding: 5px;"> <p>Main Menu: Configuration -> Network -> Devices [Insert] Help</p> <p style="text-align: right;">Wed Dec 09 06:32:28 2015 EST</p> <hr/> <p>Insert Device on LG1</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 25%;">General Options</th> <th style="width: 25%;">MII Monitoring Options</th> <th style="width: 25%;">ARP Monitoring Options</th> <th style="width: 25%;">IP Interfaces</th> </tr> </thead> <tbody> <tr> <td colspan="4"> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;">Field</th> <th style="width: 30%;">Value</th> <th style="width: 40%;">Description</th> </tr> </thead> <tbody> <tr> <td>Device Type</td> <td> <input type="radio"/> Bonding <input checked="" type="radio"/> Vlan 1 <input type="radio"/> Alias </td> <td>Select the device type. 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Procedure 18: Configure NOAMP Signaling Interfaces

Step	Procedure	Result			
<p>14.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP</p> <p>Add an xsi IP Address.</p>	<p>Click on the IP Interfaces tab.</p> <p>Click the Add Row button.</p> <p>Output similar to that shown below may be observed.</p> <p>Insert Device on BL119122301-no-1a</p> <div style="border: 1px solid #ccc; padding: 5px;"> <p>General Options MII Monitoring Options ARP Monitoring Options IP Interfaces</p> <p>IP Address List: <input type="button" value="Add Row"/></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 40%; padding: 2px;"><input type="text" value="10.240.168.91"/></td> <td style="width: 30%; padding: 2px;">XSI1 (10.240.168.96/27) ▼</td> <td style="width: 30%; padding: 2px; text-align: right;"><input type="button" value="Remove"/></td> </tr> </table> </div> <p><input type="button" value="Ok"/> <input type="button" value="Apply"/> <input type="button" value="Cancel"/></p> <p>Set the Network Name to xsi1.</p> <p>Enter the xsi1 IP Address.</p> <p>Click on the Ok button.</p> <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Server. <p><input type="checkbox"/> NOAMP-A (XSI-1) <input type="checkbox"/> NOAMP-B (XSI-1)</p>	<input type="text" value="10.240.168.91"/>	XSI1 (10.240.168.96/27) ▼	<input type="button" value="Remove"/>
<input type="text" value="10.240.168.91"/>	XSI1 (10.240.168.96/27) ▼	<input type="button" value="Remove"/>			

Repeat **Steps 11-14** for each NOAMP and its Signaling network to be used for ComAgent.

Note: **Steps 15-20** are only required for geo-redundant systems.

Procedure 18: Configure NOAMP Signaling Interfaces

Step	Procedure	Result
<p>15.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP</p> <p>Select...</p> <p>Main Menu → Configuration → Network → Routes</p> <p>...as shown on the right.</p>	
<p>16.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP</p> <p>Insert a new route for the NOAMP for Primary Site.</p>	<p>Click on the desired Primary SiteServer Group tab on the top line. Then click on the Entire Server Group tab on the line below Server Group line. Output similar to that shown below may be observed.</p> <p>Main Menu: Configuration -> Network -> Routes</p>  <p>Click on the Insert button </p> <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Network. <p><input type="checkbox"/> XSI-1</p>

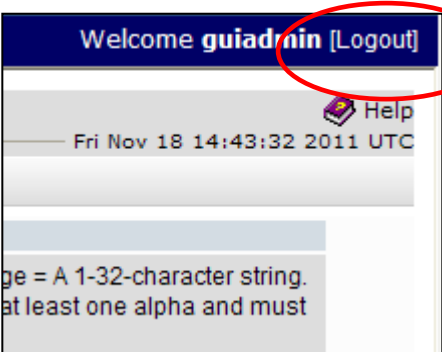
Procedure 18: Configure NOAMP Signaling Interfaces

Step	Procedure	Result																		
<p>17.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP</p> <p>Add xsi signaling route to NOAMP for Primary Site</p>	<p>Output similar to that shown below may be observed.</p> <p>Main Menu: Configuration -> Network -> Routes [Insert]</p> <hr/> <p>Insert Route on S1_NO_SG</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. [Default = N/A. Options = Net, Default, Host. default route on a given target machine.]</td> </tr> <tr> <td>Device</td> <td>bond0.5 *</td> <td>Select the network device name through which traffic is being routed automatically, if possible. [Default = N/A. Range = Provisioned devices]</td> </tr> <tr> <td>Destination</td> <td>10.240.168.64</td> <td>The destination network address. [Default = N/A. Range = Valid (IPv6) format]</td> </tr> <tr> <td>Netmask</td> <td>255.255.255.224</td> <td>A valid netmask for the network route destination IP address. [Default = N/A. Range = Valid (IPv4 or IPv6) or dotted decimal (IPv4) format]</td> </tr> <tr> <td>Gateway IP</td> <td>10.240.168.97 *</td> <td>The IP address of the gateway for this route. [Default = N/A. Range = Valid (IPv4 or IPv6) or hex (IPv6) 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>Set Route Type to desired value Set Device to Signaling Interface Enter Destination: This is the address of the DR Site Signaling network address of MPs that will connect to Primary Site NOAMP on the signaling network, Enter Netmask for the DR Site Signaling network. Enter Gateway IP : This is the gateway for UDR Primary Site signaling network as configured in Procedure 3, Step 10. Click Apply button</p> <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Network. <p><input type="checkbox"/> XSI-1</p>	Field	Value	Description	Route Type	<input checked="" type="radio"/> Net <input type="radio"/> Default <input type="radio"/> Host *	Select a route type. [Default = N/A. Options = Net, Default, Host. default route on a given target machine.]	Device	bond0.5 *	Select the network device name through which traffic is being routed automatically, if possible. [Default = N/A. Range = Provisioned devices]	Destination	10.240.168.64	The destination network address. [Default = N/A. Range = Valid (IPv6) format]	Netmask	255.255.255.224	A valid netmask for the network route destination IP address. [Default = N/A. Range = Valid (IPv4 or IPv6) or dotted decimal (IPv4) format]	Gateway IP	10.240.168.97 *	The IP address of the gateway for this route. [Default = N/A. Range = Valid (IPv4 or IPv6) or hex (IPv6) format]
Field	Value	Description																		
Route Type	<input checked="" type="radio"/> Net <input type="radio"/> Default <input type="radio"/> Host *	Select a route type. [Default = N/A. Options = Net, Default, Host. default route on a given target machine.]																		
Device	bond0.5 *	Select the network device name through which traffic is being routed automatically, if possible. [Default = N/A. Range = Provisioned devices]																		
Destination	10.240.168.64	The destination network address. [Default = N/A. Range = Valid (IPv6) format]																		
Netmask	255.255.255.224	A valid netmask for the network route destination IP address. [Default = N/A. Range = Valid (IPv4 or IPv6) or dotted decimal (IPv4) format]																		
Gateway IP	10.240.168.97 *	The IP address of the gateway for this route. [Default = N/A. Range = Valid (IPv4 or IPv6) or hex (IPv6) format]																		

Procedure 18: Configure NOAMP Signaling Interfaces

Step	Procedure	Result								
<p>18.</p> <input type="checkbox"/>	<p>Active NOAMP VIP</p> <p>Insert a new route for the NOAMP for DR Site.</p>	<p>Click on the desired DR SiteServer Group tab on the top line. Then click on the Entire Server Group tab on the line below Server Group line. Output similar to that shown below may be observed.</p> <p>Main Menu: Configuration -> Network -> Routes</p> <hr/> <div style="border: 1px solid #ccc; padding: 5px; margin-bottom: 10px;"> <p style="text-align: center;"> Entire Network S1_MP_SG S1_NO_SG S1_SO_SG S2_MP_SG S2_NO_SG S2_SO_SG </p> <p style="text-align: center;"> Entire Server Group BL121081301-NO-2A BL121081303-NO-2B </p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 33%;">Route Type</th> <th style="width: 33%;">Destination</th> <th style="width: 17%;">Netmask</th> <th style="width: 17%;">Gateway</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table> </div> <p>Click on the Insert button <input type="button" value="Insert"/></p> <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Network. <p><input type="checkbox"/> XSI-1</p>	Route Type	Destination	Netmask	Gateway				
Route Type	Destination	Netmask	Gateway							

Procedure 18: Configure NOAMP Signaling Interfaces

Step	Procedure	Result																		
<p>19.</p> <input type="checkbox"/>	<p>Active NOAMP VIP</p> <p>Add xsi signaling route to NOAMP for DR Site</p>	<p>Output similar to that shown below may be observed.</p> <p>Main Menu: Configuration -> Network -> Routes [Insert]</p> <hr/> <p>Insert Route on S2_NO_SG</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. [Default = N/A. Options = Net, Default, Host. default route on a given target machine.]</td> </tr> <tr> <td>Device</td> <td>bond0.5 *</td> <td>Select the network device name through which traffic is being routed automatically, if possible. [Default = N/A. Range = Provisioned devices]</td> </tr> <tr> <td>Destination</td> <td>10.240.168.96</td> <td>The destination network address. [Default = N/A. Range = Valid (IPv6) format.]</td> </tr> <tr> <td>Netmask</td> <td>255.255.255.224</td> <td>A valid netmask for the network route destination IP address. [Default = N/A. Range = Valid (IPv4 or IPv6) or dotted decimal (IPv4) format.]</td> </tr> <tr> <td>Gateway IP</td> <td>10.240.168.65 *</td> <td>The IP address of the gateway for this route. [Default = N/A. Range = Valid (IPv4 or IPv6) or hex (IPv6) 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>Set Route Type to desired value Set Device to Signaling Interface Enter Destination: This is the address of the Primary Site Signaling network address of MPs that will connect to DR Site NOAMP on the signaling network, Enter Netmask for the Primary Site Signaling network. Enter Gateway IP : This is the gateway for UDRDR Site signaling network as configured in Procedure 3, Step 10. Click Apply button</p> <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Network. <p><input type="checkbox"/> XSI-1</p>	Field	Value	Description	Route Type	<input checked="" type="radio"/> Net <input type="radio"/> Default <input type="radio"/> Host *	Select a route type. [Default = N/A. Options = Net, Default, Host. default route on a given target machine.]	Device	bond0.5 *	Select the network device name through which traffic is being routed automatically, if possible. [Default = N/A. Range = Provisioned devices]	Destination	10.240.168.96	The destination network address. [Default = N/A. Range = Valid (IPv6) format.]	Netmask	255.255.255.224	A valid netmask for the network route destination IP address. [Default = N/A. Range = Valid (IPv4 or IPv6) or dotted decimal (IPv4) format.]	Gateway IP	10.240.168.65 *	The IP address of the gateway for this route. [Default = N/A. Range = Valid (IPv4 or IPv6) or hex (IPv6) format.]
Field	Value	Description																		
Route Type	<input checked="" type="radio"/> Net <input type="radio"/> Default <input type="radio"/> Host *	Select a route type. [Default = N/A. Options = Net, Default, Host. default route on a given target machine.]																		
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Gateway IP	10.240.168.65 *	The IP address of the gateway for this route. [Default = N/A. Range = Valid (IPv4 or IPv6) or hex (IPv6) format.]																		
<p>20.</p> <input type="checkbox"/>	<p>Active NOAMP VIP:</p> <p>Click the “Logout” link on the server GUI.</p>	 <p>The screenshot shows a web interface with a blue header bar containing the text 'Welcome guidanin [Logout]'. The '[Logout]' link is circled in red. Below the header, there is a 'Help' icon and a timestamp 'Fri Nov 18 14:43:32 2011 UTC'. At the bottom, there is a text field with a placeholder that reads 'ge = A 1-32-character string. at least one alpha and must'.</p>																		
<p>THIS PROCEDURE HAS BEEN COMPLETED</p>																				

8.10 Configure NOAMP Signaling Interfaces (virtual NOAMP servers on Low Capacity Systems)

This procedure configures XSI IP Interface and adds the XSI signaling route for all NOAMP Virtual Servers on RMS.

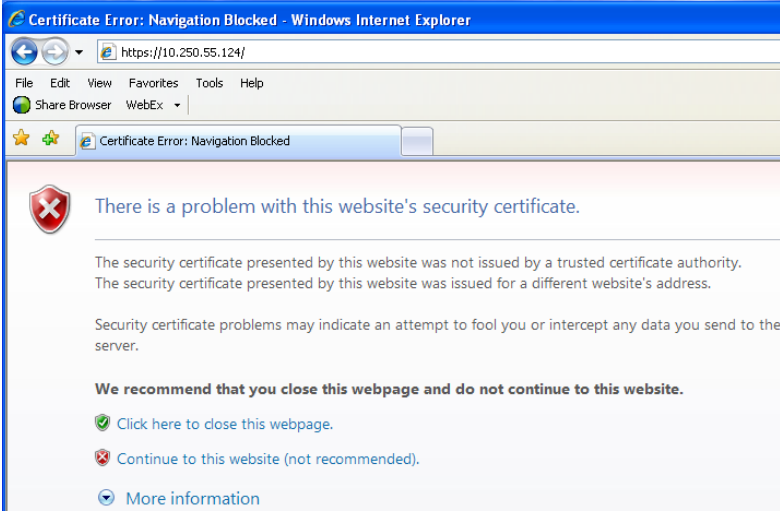

Requirements:

- **Procedure 13: OAM Pairing for the Primary NOAMP Servers** has been completed.
-


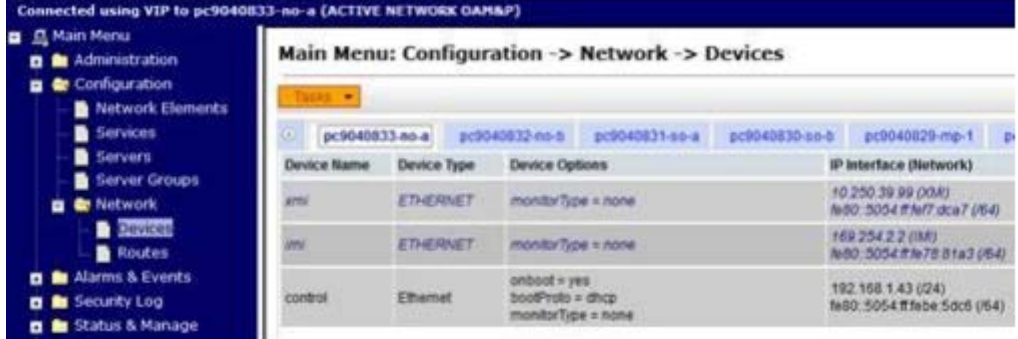
- **Procedure 14:** Pairing the OAM Servers for SOAM or DR NOAMPsites
- has been completed.
- **Procedure 15:** Configuring MP Server Groupshas been completed.

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

Procedure 19: Configure NOAMP Signaling Interfaces(virtual NOAMP servers on Low Capacity Systems)

Step	Procedure	Result
<p>1.</p> <div style="border: 1px solid black; width: 30px; height: 30px; margin-left: 10px;"></div>	<p>Active NOAMP VIP</p> <p>Launch an approved web browser and connect to the XMI Virtual IP Address(VIP) of the Active NOAMP site usingError! Hyperlink reference not valid. https://</p> <p>NOTE:if presented with the “security certificate” warning screen shown to the right, choose the following option: “Continue to this website (not recommended)””.</p>	
<p>2.</p> <div style="border: 1px solid black; width: 30px; height: 30px; margin-left: 10px;"></div>	<p>Active NOAMP VIP</p> <p>The user should be presented the login screen shown on the right.</p> <p>Login to the GUI using the default user and password.</p>	


Procedure 19: Configure NOAMP Signaling Interfaces(virtual NOAMP servers on Low Capacity Systems)

Step	Procedure	Result
<p>3.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP</p> <p>The user should be presented the Main Menu as shown on the right.</p>	 <p>The screenshot shows the Oracle User Data Repository interface. The title bar reads 'User Data Repository 12.1.0.0.0-13.2.1'. The user is logged in as 'guidadmin'. The main menu is displayed on the left, with 'Configuration' expanded to show 'Network Elements', 'Network', 'Devices', 'Routes', 'Services', 'Servers', 'Server Groups', 'Resource Domains', 'Places', and 'Place Associations'. The main content area shows a welcome message for 'guidadmin' with login details: 'Last Login Time: 2015-11-02 10:47:27', 'Last Login IP: 10.30.15.241', and 'Recent Failed Login Attempts: 0'.</p>
<p>4.</p> <p><input type="checkbox"/></p>	<p>Bring up xsi1 on the servers before executing steps below.</p>	<p>NOTE: For Low Capacity Servers only:</p> <p>Execute "ifup xsi1" on all NO Servers:</p> <pre># ifup xsi1</pre>
<p>Note: Repeat the steps below (Steps 5 - 9) for each NOAMP.</p>		
<p>5.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP</p> <p>Select...</p> <p>Main Menu → Configuration → Network → Devices</p> <p>...as shown on the right.</p>	 <p>The screenshot shows the 'Configuration -> Network -> Devices' page. It displays a table of network devices. The table has columns for 'Device Name', 'Device Type', 'Device Options', and 'IP Interface (Network)'. The devices listed are 'xsi1', 'xsi2', and 'control'. The 'control' device is highlighted.</p> <ul style="list-style-type: none"> • "Check off" the associated Check Box as addition is completed for each Server. <p><input type="checkbox"/> NOAMP-A (XSI-1) <input type="checkbox"/> NOAMP-B (XSI-1)</p>


Procedure 19: Configure NOAMP Signaling Interfaces(virtual NOAMP servers on Low Capacity Systems)

Step	Procedure	Result																				
<p>6.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP</p> <p>Select the xsi device for the desired NOAMP</p>	<p>Click on the desired NOAMP tab. Select the xsi1 device. Output similar to that shown below may be observed.</p> <div style="border: 1px solid black; padding: 5px;"> <p>Main Menu: Configuration -> Network -> Devices</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 25%;">Device Name</th> <th style="width: 25%;">Device Type</th> <th style="width: 30%;">Device Options</th> <th style="width: 20%;">IP Interface (Network)</th> </tr> </thead> <tbody> <tr> <td>xsi1</td> <td>Ethernet</td> <td>onboot = yes bootProto = none</td> <td>10.196.62.200 (XSI1) fe80::b0:80ff:fe4d:fe9d (/64)</td> </tr> <tr> <td>xmi</td> <td>Ethernet</td> <td>bootProto = none onboot = yes</td> <td>10.240.80.145 (XMI) 10.240.80.144 (/26) fe80::95:21ff:feba:9433 (/64)</td> </tr> <tr> <td>control</td> <td>"Ethernet"</td> <td>bootProto = "dhcp" hwAddr = "02:2A:91:F8:8F:18" onboot = "yes" persistent_dhclient = yes</td> <td>192.168.1.199 (/24) fe80::2a:91ff:fe78:8f18 (/64)</td> </tr> <tr> <td>imi</td> <td>Ethernet</td> <td>bootProto = none onboot = yes</td> <td>169.254.0.2 (IMI) fe80::38:33ff:feb3:9466 (/64)</td> </tr> </tbody> </table> </div> <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Server. <p><input type="checkbox"/> NOAMP-A (XSI-1) <input type="checkbox"/> NOAMP-B (XSI-1)</p>	Device Name	Device Type	Device Options	IP Interface (Network)	xsi1	Ethernet	onboot = yes bootProto = none	10.196.62.200 (XSI1) fe80::b0:80ff:fe4d:fe9d (/64)	xmi	Ethernet	bootProto = none onboot = yes	10.240.80.145 (XMI) 10.240.80.144 (/26) fe80::95:21ff:feba:9433 (/64)	control	"Ethernet"	bootProto = "dhcp" hwAddr = "02:2A:91:F8:8F:18" onboot = "yes" persistent_dhclient = yes	192.168.1.199 (/24) fe80::2a:91ff:fe78:8f18 (/64)	imi	Ethernet	bootProto = none onboot = yes	169.254.0.2 (IMI) fe80::38:33ff:feb3:9466 (/64)
Device Name	Device Type	Device Options	IP Interface (Network)																			
xsi1	Ethernet	onboot = yes bootProto = none	10.196.62.200 (XSI1) fe80::b0:80ff:fe4d:fe9d (/64)																			
xmi	Ethernet	bootProto = none onboot = yes	10.240.80.145 (XMI) 10.240.80.144 (/26) fe80::95:21ff:feba:9433 (/64)																			
control	"Ethernet"	bootProto = "dhcp" hwAddr = "02:2A:91:F8:8F:18" onboot = "yes" persistent_dhclient = yes	192.168.1.199 (/24) fe80::2a:91ff:fe78:8f18 (/64)																			
imi	Ethernet	bootProto = none onboot = yes	169.254.0.2 (IMI) fe80::38:33ff:feb3:9466 (/64)																			
<p>7.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP</p> <p>Edit the xsi device for the desired NOAMP</p>	<div style="border: 1px solid gray; padding: 5px; text-align: center;"> <p style="font-size: 2em; color: blue; margin: 0;">2</p> <p style="font-size: 2em; color: blue; margin: 0;">1</p> <p style="margin: 0;"> <input type="button" value="Insert"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/> <input type="button" value="Report"/> <input type="button" value="ReportAll"/> <input type="button" value="Take Ownership"/> </p> </div> <ol style="list-style-type: none"> 1. Click on the Take Ownership button. 2. Re-select the xsi1 device. 3. Click on the Edit button. <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Server. <p><input type="checkbox"/> NOAMP-A (XSI-1) <input type="checkbox"/> NOAMP-B (XSI-1)</p>																				


Procedure 19: Configure NOAMP Signaling Interfaces(virtual NOAMP servers on Low Capacity Systems)

Step	Procedure	Result																		
<p>8.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP</p> <p>Enable “Start On Boot”</p>	<p>Click on the General Options tab.</p> <p>Check the Start on Boot check box (to make it enabled).</p> <p>Output similar to that shown below may be observed.</p>  <p>Main Menu: Configuration -> Network -> Devices [Edit]</p> <p>Tue Aug 21 14:40:26 2012 EDT</p> <p>Edit Ethernet device xsi1 on pc9040829-mp-1</p> <p>General Options MI Monitoring Options ARP Monitoring Options IP Interfaces</p> <table border="1"> <thead> <tr> <th>Field</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Device Type</td> <td><input type="radio"/> Ethernet <input checked="" type="radio"/> Bonding <input type="radio"/> Vlan <input type="radio"/> Alias</td> <td>Select the device type. It cannot be changed after device is created. [Default = N/A, Range = Bonding, Vlan, Alias.]</td> </tr> <tr> <td>Device Monitoring</td> <td>Monitoring Type</td> <td>Choose a monitoring style to use with a bonded device. Disabled for non-bonded devices. [Default = MI, Options = MI, ARP]</td> </tr> <tr> <td>Start On Boot</td> <td><input checked="" type="checkbox"/> Enable</td> <td>Start the device, and also start on boot. [Default = enabled]</td> </tr> <tr> <td>Boot Protocol</td> <td>None</td> <td>Select the boot protocol. [Default = None, Range = [None, DHCP]]</td> </tr> <tr> <td>Base Device(s)</td> <td><input type="checkbox"/> xms <input type="checkbox"/> xms <input type="checkbox"/> control <input type="checkbox"/> xsi1 <input type="checkbox"/> xsi2</td> <td>The base device(s) for Bonding, Alias and Vlan device types. Alias and Vlan devices require 1 selection. Bonding devices require 2 selections. It cannot be changed after device is created. [Default = N/A, Range = available base devices per device type.]</td> </tr> </tbody> </table> <p>Ok Apply Cancel</p> <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Server. <p><input type="checkbox"/> NOAMP-A (XSI-1) <input type="checkbox"/> NOAMP-B (XSI-1)</p>	Field	Value	Description	Device Type	<input type="radio"/> Ethernet <input checked="" type="radio"/> Bonding <input type="radio"/> Vlan <input type="radio"/> Alias	Select the device type. It cannot be changed after device is created. [Default = N/A, Range = Bonding, Vlan, Alias.]	Device Monitoring	Monitoring Type	Choose a monitoring style to use with a bonded device. Disabled for non-bonded devices. [Default = MI, Options = MI, ARP]	Start On Boot	<input checked="" type="checkbox"/> Enable	Start the device, and also start on boot. [Default = enabled]	Boot Protocol	None	Select the boot protocol. [Default = None, Range = [None, DHCP]]	Base Device(s)	<input type="checkbox"/> xms <input type="checkbox"/> xms <input type="checkbox"/> control <input type="checkbox"/> xsi1 <input type="checkbox"/> xsi2	The base device(s) for Bonding, Alias and Vlan device types. Alias and Vlan devices require 1 selection. Bonding devices require 2 selections. It cannot be changed after device is created. [Default = N/A, Range = available base devices per device type.]
Field	Value	Description																		
Device Type	<input type="radio"/> Ethernet <input checked="" type="radio"/> Bonding <input type="radio"/> Vlan <input type="radio"/> Alias	Select the device type. It cannot be changed after device is created. [Default = N/A, Range = Bonding, Vlan, Alias.]																		
Device Monitoring	Monitoring Type	Choose a monitoring style to use with a bonded device. Disabled for non-bonded devices. [Default = MI, Options = MI, ARP]																		
Start On Boot	<input checked="" type="checkbox"/> Enable	Start the device, and also start on boot. [Default = enabled]																		
Boot Protocol	None	Select the boot protocol. [Default = None, Range = [None, DHCP]]																		
Base Device(s)	<input type="checkbox"/> xms <input type="checkbox"/> xms <input type="checkbox"/> control <input type="checkbox"/> xsi1 <input type="checkbox"/> xsi2	The base device(s) for Bonding, Alias and Vlan device types. Alias and Vlan devices require 1 selection. Bonding devices require 2 selections. It cannot be changed after device is created. [Default = N/A, Range = available base devices per device type.]																		

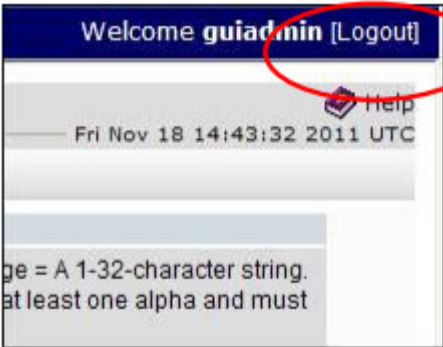
Procedure 19: Configure NOAMP Signaling Interfaces(virtual NOAMP servers on Low Capacity Systems)

Step	Procedure	Result
<p>9.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP</p> <p>Add an xsi IP Address.</p>	<p>Click on the IP Interfaces tab.</p> <p>Click the Add Row button.</p> <p>Output similar to that shown below may be observed.</p> <p>Main Menu: Configuration -> Network -> Devices [Edit]</p> <hr/> <p>Edit Ethernet device xsi1 on pc9040829-mp-1</p> <p>General Options MII Monitoring Options ARP Monitoring Options IP Interfaces</p> <p>IP Address List Add Row</p> <p><input type="text" value="10.250.39.82"/> <input type="text" value="XSI11"/> Remove</p> <p>Set the Network Name to xsi1.</p> <p>Enter the xsi1 IP Address.</p> <p>Click on the Ok button.</p> <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Server. <p><input type="checkbox"/> NOAMP-A (XSI-1) <input type="checkbox"/> NOAMP-B (XSI-1)</p>
<p>Repeat Steps 5 - 9 for each NOAMP and its Signaling network(s).</p> <p>NOTE: If a second XSI network is present (XSI-2), Steps 5 - 9 must be run for each NOAMP’s XSI-2 network.</p> <p>NOTE: Steps 10-12 are only needed for geo-redundant systems.</p>		
<p>10.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP</p> <p>Select...</p> <p>Main Menu → Configuration → Network → Routes</p> <p>...as shown on the right.</p>	

Procedure 19: Configure NOAMP Signaling Interfaces(virtual NOAMP servers on Low Capacity Systems)

Step	Procedure	Result
<p>11.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP</p> <p>Insert a new route for the MP.</p>	<p>Click on the desired Server Group tab on the top line. Then click on the Entire Server Group tab on the line below Server Group line. Output similar to that shown below may be observed.</p> <p>Main Menu: Configuration -> Network -> Routes</p>  <p>Click on the Insert button <input type="button" value="Insert"/></p> <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Network. <p><input type="checkbox"/> XSI-1</p>

Procedure 19: Configure NOAMP Signaling Interfaces(virtual NOAMP servers on Low Capacity Systems)

Step	Procedure	Result																		
<p>12.</p> <div style="border: 1px solid black; width: 30px; height: 30px; margin-left: 10px;"></div>	<p>Active NOAMP VIP</p> <p>Add xsi signaling route to MP</p>	<p>Output similar to that shown below may be observed.</p> <p>Main Menu: Configuration -> Network -> Routes [Insert]</p> <p style="text-align: right;">Fri Feb 06 14:0</p> <hr/> <p>Insert Route on NO_SG</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 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 and one IPv6 default route on a given target machine.]</td> </tr> <tr> <td>Device</td> <td>- Select Device - ▼ *</td> <td>Select the network device name through which traffic is being routed. The selection of AUTO will result in the device being selected automatically, if possible. [Default = N/A. Range = Provisioned devices on the selected server.]</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 (IPv4) or colon hex (IPv6) format.]</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 network in prefix length (IPv4 or IPv6) or dotted decimal (IPv4) format.]</td> </tr> <tr> <td>Gateway IP</td> <td><input type="text"/></td> <td>The IP address of the gateway for this route. [Default = N/A. Range = Valid IP address of the gateway in dotted decimal (IPv4) or colon hex (IPv6) 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>Set Route Type to desired value</p> <p>Set Device to xsi1</p> <p>Enter Destination: This is the address of the Diameter Sh clients that will connect to UDR on the signaling network,</p> <p>Enter Netmask for the Diameter Sh client network.</p> <p>Enter Gateway IP: This is the gateway for UDR signaling network as configured in Procedure 3, Step 10.</p> <p>Click Apply button</p> <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Network. <p><input type="checkbox"/> XSI-1</p>	Field	Value	Description	Route Type	<input type="radio"/> Net <input 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 and one IPv6 default route on a given target machine.]	Device	- Select Device - ▼ *	Select the network device name through which traffic is being routed. The selection of AUTO will result in the device being selected automatically, if possible. [Default = N/A. Range = Provisioned devices on the selected server.]	Destination	<input type="text"/>	The destination network address. [Default = N/A. Range = Valid Network Address of the network in dotted decimal (IPv4) or colon hex (IPv6) format.]	Netmask	<input type="text"/>	A valid netmask for the network route destination IP address. [Default = N/A. Range = Valid Netmask for the network in prefix length (IPv4 or IPv6) or dotted decimal (IPv4) format.]	Gateway IP	<input type="text"/>	The IP address of the gateway for this route. [Default = N/A. Range = Valid IP address of the gateway in dotted decimal (IPv4) or colon hex (IPv6) format.]
Field	Value	Description																		
Route Type	<input type="radio"/> Net <input 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 and one IPv6 default route on a given target machine.]																		
Device	- Select Device - ▼ *	Select the network device name through which traffic is being routed. The selection of AUTO will result in the device being selected automatically, if possible. [Default = N/A. Range = Provisioned devices on the selected server.]																		
Destination	<input type="text"/>	The destination network address. [Default = N/A. Range = Valid Network Address of the network in dotted decimal (IPv4) or colon hex (IPv6) format.]																		
Netmask	<input type="text"/>	A valid netmask for the network route destination IP address. [Default = N/A. Range = Valid Netmask for the network in prefix length (IPv4 or IPv6) or dotted decimal (IPv4) format.]																		
Gateway IP	<input type="text"/>	The IP address of the gateway for this route. [Default = N/A. Range = Valid IP address of the gateway in dotted decimal (IPv4) or colon hex (IPv6) format.]																		
<p>Repeat Step 11-12 for each Network.</p>																				
<p>13.</p>	<p>Active NOAMP VIP:</p> <p>Click the “Logout” link on the server GUI.</p>																			
<p>THIS PROCEDURE HAS BEEN COMPLETED</p>																				

8.11 Configure Services on Signaling Network

This procedure configures ComAgent communication between NOAMP and MP to use Signaling Network. **ComAgent Service is required to be configured on XSI Network.** This procedure also configures dual path HA heartbeat to use the XSI network.

Requirements:

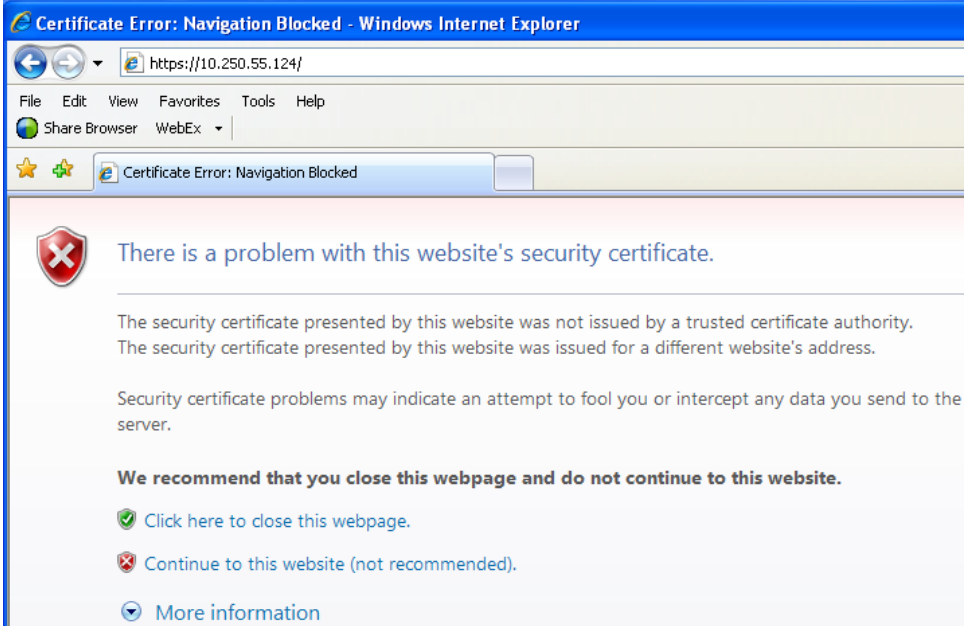

- **Procedure 16: Configure MP Signaling Interfaces (All SOAM Sites)** has been completed.

Oracle Communications User Data Repository Installation and Configuration Guide

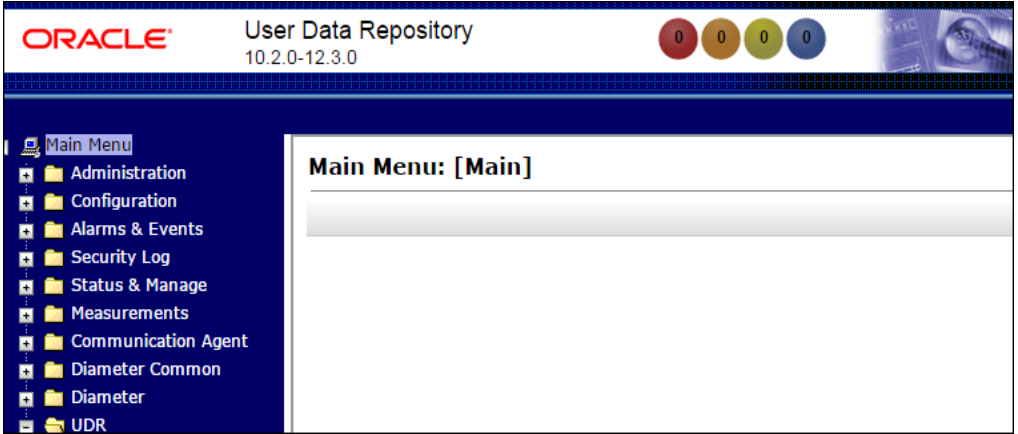

- **Configure NOAMP Signaling Interfaces (All NOAM Sites)** has been completed.
- **Procedure 19: Configure NOAMP Signaling Interfaces (virtual NOAMP servers on Low Capacity Systems)** has been completed.

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

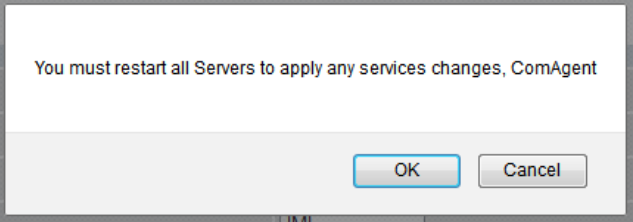
Procedure 20: Configure Services on Signaling Network

Step	Procedure	Result
<p>1.</p> <input type="checkbox"/>	<p>Active NOAMP VIP</p> <p>Launch an approved web browser and connect to the XMI Virtual IP Address(VIP) of the Active NOAMP site using https://</p> <p>NOTE: If presented with the “security certificate” warning screen shown to the right, choose the following option: “Continue to this website (not recommended)”.</p>	
<p>2.</p> <input type="checkbox"/>	<p>Active NOAMP VIP</p> <p>The user should be presented the login screen shown on the right.</p> <p>Login to the GUI using the default user and password.</p>	

Procedure 20: Configure Services on Signaling Network

Step	Procedure	Result																								
<p>3.</p> <div style="border: 1px solid black; width: 20px; height: 20px; margin-bottom: 5px;"></div>	<p>Active NOAMP VIP</p> <p>The user should be presented the Main Menu as shown on the right.</p>																									
<p>4.</p> <div style="border: 1px solid black; width: 20px; height: 20px; margin-bottom: 5px;"></div>	<p>Active NOAMP VIP</p> <p>Select...</p> <p>Main Menu → Configuration → Services</p> <p>...as shown on the right.</p>	 <table border="1"> <thead> <tr> <th>Name</th> <th>Intra-NE Network</th> <th>Inter-NE Network</th> </tr> </thead> <tbody> <tr> <td>GAM</td> <td>RS</td> <td>XMS</td> </tr> <tr> <td>Replication</td> <td>RS</td> <td>XMS</td> </tr> <tr> <td>Signaling</td> <td>Unspecified</td> <td>Unspecified</td> </tr> <tr> <td>HA_Secondary</td> <td>RS</td> <td>XMS</td> </tr> <tr> <td>HA_MP_Secondary</td> <td>RS</td> <td>XMS</td> </tr> <tr> <td>Replication_MP</td> <td>RS</td> <td>XMS</td> </tr> <tr> <td>ConAgent</td> <td>RS</td> <td>XMS</td> </tr> </tbody> </table>	Name	Intra-NE Network	Inter-NE Network	GAM	RS	XMS	Replication	RS	XMS	Signaling	Unspecified	Unspecified	HA_Secondary	RS	XMS	HA_MP_Secondary	RS	XMS	Replication_MP	RS	XMS	ConAgent	RS	XMS
Name	Intra-NE Network	Inter-NE Network																								
GAM	RS	XMS																								
Replication	RS	XMS																								
Signaling	Unspecified	Unspecified																								
HA_Secondary	RS	XMS																								
HA_MP_Secondary	RS	XMS																								
Replication_MP	RS	XMS																								
ConAgent	RS	XMS																								

Procedure 20: Configure Services on Signaling Network

Step	Procedure	Result																								
<p>5.</p> <p><input type="checkbox"/></p>	<p>NOAMP Server A:</p> <p>1)Set two services values as shown on the right.</p> <p>Inter-NE HA_Secondary → XSI1</p> <p>Inter-NE ComAgent → XSI1</p> <p>2)Select the “Apply” dialogue button.</p> <p>3)Select the “OK” dialogue button in the popup window.</p>	<table border="1"> <thead> <tr> <th>Name</th> <th>Intra-NE Network</th> <th>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>IMI</td> <td>XSI1</td> </tr> <tr> <td>HA_MP_Secondary</td> <td>IMI</td> <td>XMI</td> </tr> <tr> <td>Replication_MP</td> <td>IMI</td> <td>XMI</td> </tr> <tr> <td>ComAgent</td> <td>IMI</td> <td>XSI1</td> </tr> </tbody> </table>  <p>NOAMP and MP Servers need to be restarted.</p> <p>Note:</p> <p>For Topology 1 and Topology 3, either of the following configurations can be used for ComAgent service :</p> <p>Intra-NE Network : Inter-NE Network IMI : XSI1 XSI1 : XSI1</p> <p>For Topology 4, the following configuration should be used for ComAgent service :</p> <p>Intra-NE Network : Inter-NE Network XSI1 : XSI1</p> <p>For Topology 7, either of the following configurations can be used for ComAgent service:</p> <p>Intra-NE Network : Inter-NE Network IMI : XSI1 XSI1 : XSI1</p>	Name	Intra-NE Network	Inter-NE Network	OAM	IMI	XMI	Replication	IMI	XMI	Signaling	Unspecified	Unspecified	HA_Secondary	IMI	XSI1	HA_MP_Secondary	IMI	XMI	Replication_MP	IMI	XMI	ComAgent	IMI	XSI1
Name	Intra-NE Network	Inter-NE Network																								
OAM	IMI	XMI																								
Replication	IMI	XMI																								
Signaling	Unspecified	Unspecified																								
HA_Secondary	IMI	XSI1																								
HA_MP_Secondary	IMI	XMI																								
Replication_MP	IMI	XMI																								
ComAgent	IMI	XSI1																								
<p>6.</p> <p><input type="checkbox"/></p>	<p>Active NOAMP VIP</p> <p>The user will be presented with the “Services” configuration screen as shown on the right</p>	<table border="1"> <thead> <tr> <th>Name</th> <th>Intra-NE Network</th> <th>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>IMI</td> <td>XSI1</td> </tr> <tr> <td>HA_MP_Secondary</td> <td>IMI</td> <td>XMI</td> </tr> <tr> <td>Replication_MP</td> <td>IMI</td> <td>XMI</td> </tr> <tr> <td>ComAgent</td> <td>IMI</td> <td>XSI1</td> </tr> </tbody> </table>	Name	Intra-NE Network	Inter-NE Network	OAM	IMI	XMI	Replication	IMI	XMI	Signaling	Unspecified	Unspecified	HA_Secondary	IMI	XSI1	HA_MP_Secondary	IMI	XMI	Replication_MP	IMI	XMI	ComAgent	IMI	XSI1
Name	Intra-NE Network	Inter-NE Network																								
OAM	IMI	XMI																								
Replication	IMI	XMI																								
Signaling	Unspecified	Unspecified																								
HA_Secondary	IMI	XSI1																								
HA_MP_Secondary	IMI	XMI																								
Replication_MP	IMI	XMI																								
ComAgent	IMI	XSI1																								
<p>7.</p> <p><input type="checkbox"/></p>	<p>Restart all NOAMP and MP Servers</p>	<p># init 6</p> <p>Note: This should be executed on all NOAMPs and MPs.</p>																								

Procedure 20: Configure Services on Signaling Network

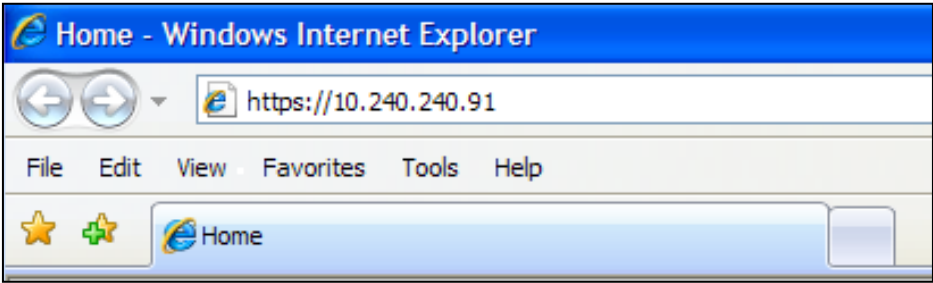
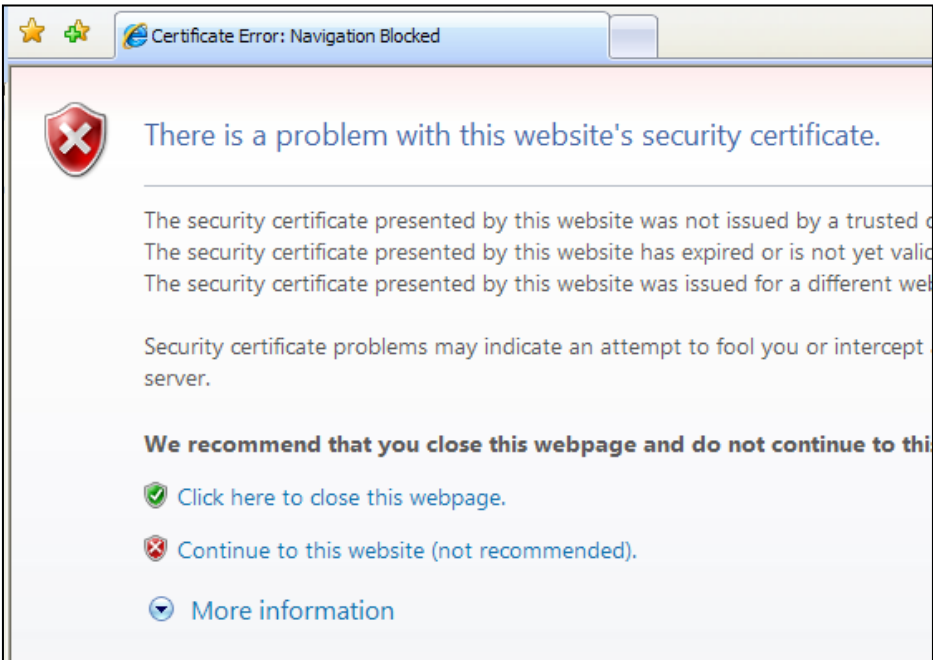
Step	Procedure	Result
THIS PROCEDURE HAS BEEN COMPLETED		

9. APPENDIX

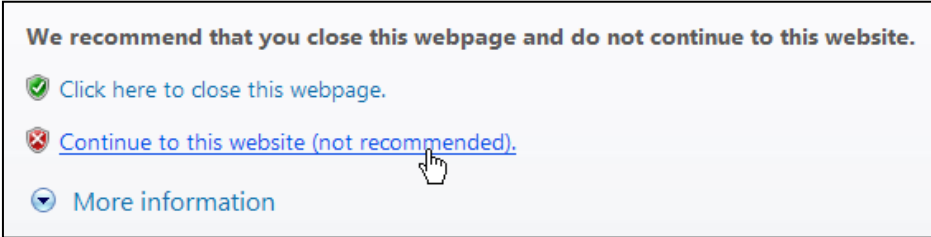

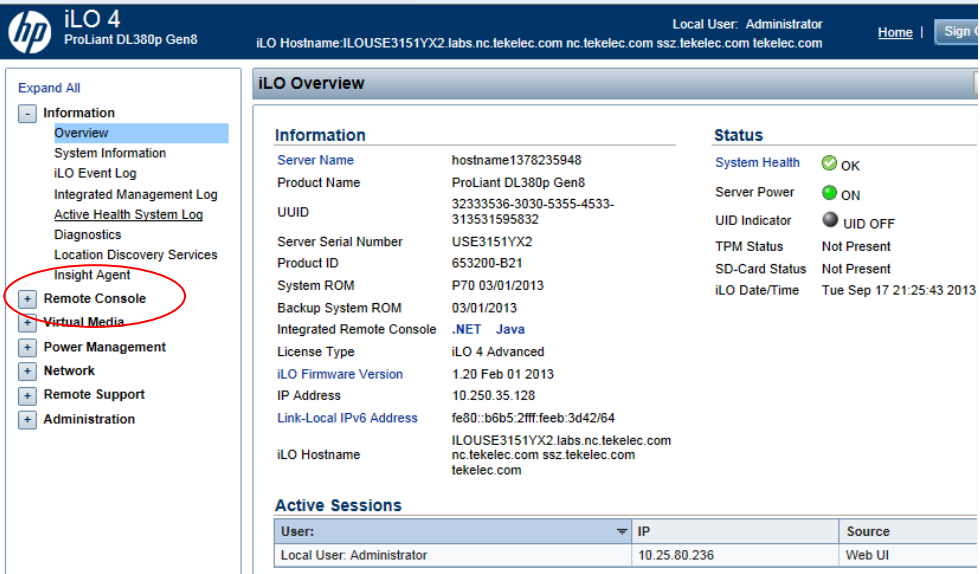
Appendix A. Accessing the iLO VGA Redirection Window

A.1 Accessing the iLo VGA Redirection Window for HP

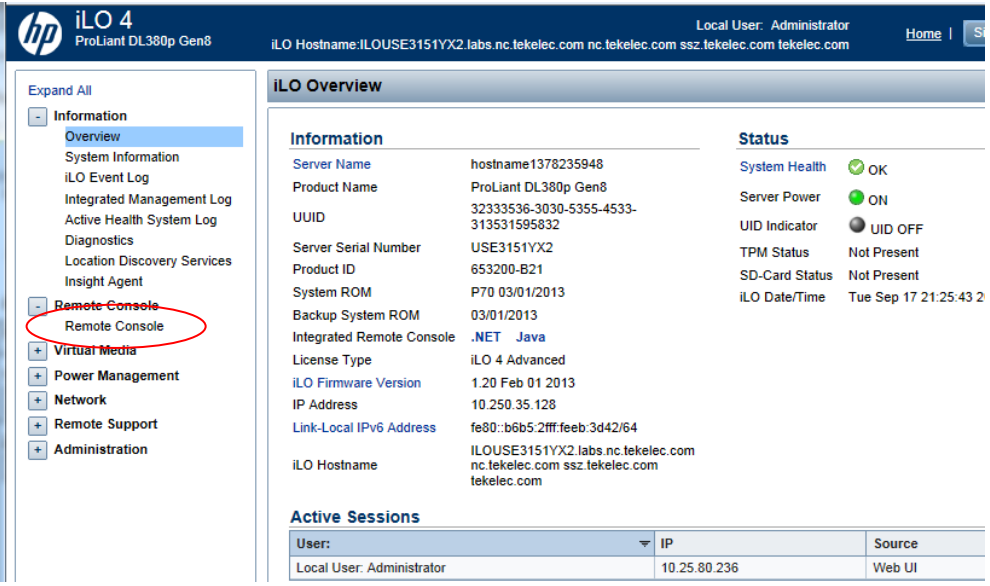
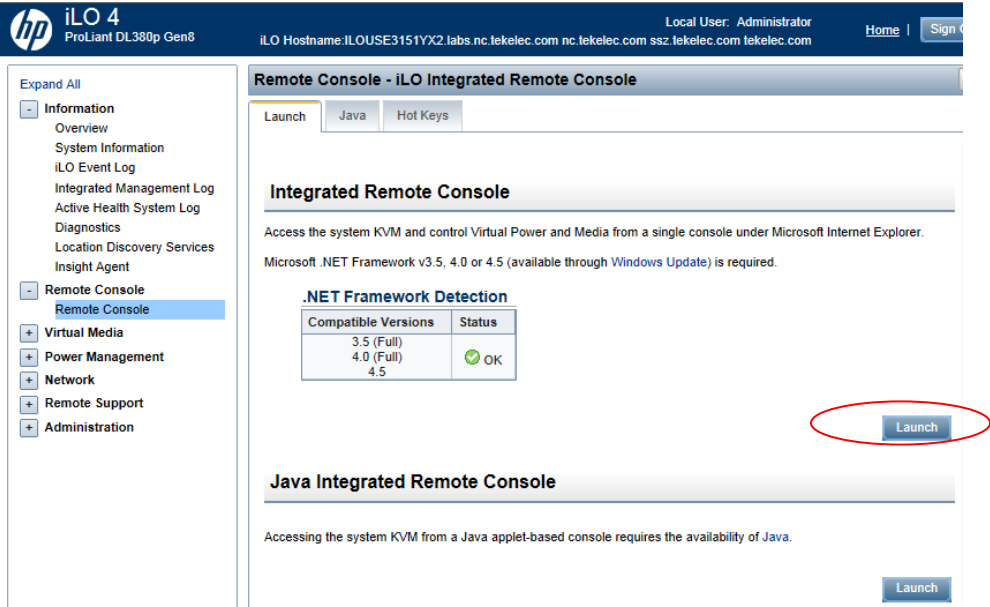
Appendix A.1: Accessing the iLO VGA Redirection Window for HP

Step	Procedure	Result
1. <input type="checkbox"/>	<p>Launch an approved web browser and connect to the iLO interface</p> <p>NOTE: Always use <i>https://</i> for iLO GUI access..</p>	 <p>The screenshot shows the Internet Explorer browser window titled 'Home - Windows Internet Explorer'. The address bar contains 'https://10.240.240.91'. The menu bar includes File, Edit, View, Favorites, Tools, and Help. The status bar shows 'Home'.</p>
2. <input type="checkbox"/>	<p>The web browser will display a warning message regarding the Security Certificate.</p>	 <p>The screenshot shows a warning dialog box titled 'Certificate Error: Navigation Blocked'. It features a red shield icon with a white 'X'. The main text reads: 'There is a problem with this website's security certificate.' Below this, it lists three reasons: 'The security certificate presented by this website was not issued by a trusted d', 'The security certificate presented by this website has expired or is not yet valid', and 'The security certificate presented by this website was issued for a different web'. A warning states: 'Security certificate problems may indicate an attempt to fool you or intercept server.' At the bottom, it says: 'We recommend that you close this webpage and do not continue to thi'. There are three options: 'Click here to close this webpage.' (with a green checkmark), 'Continue to this website (not recommended).' (with a red 'X'), and 'More information' (with a blue downward arrow).</p>

Appendix A.1: Accessing the iLO VGA Redirection Window for HP

<p>3.</p> <input type="checkbox"/>	<p>Select the option to "Continue to the website (not recommended)"</p>							
<p>4.</p> <input type="checkbox"/>	<p>Login to the iLO console as "Administrator"</p>							
<p>5.</p> <input type="checkbox"/>	<p>The admin GUI is displayed.</p> <p>Expand the "Remote Console" tab in the left panel of the GUI.</p>	 <table border="1"> <thead> <tr> <th>User:</th> <th>IP</th> <th>Source</th> </tr> </thead> <tbody> <tr> <td>Local User: Administrator</td> <td>10.25.80.236</td> <td>Web UI</td> </tr> </tbody> </table>	User:	IP	Source	Local User: Administrator	10.25.80.236	Web UI
User:	IP	Source						
Local User: Administrator	10.25.80.236	Web UI						

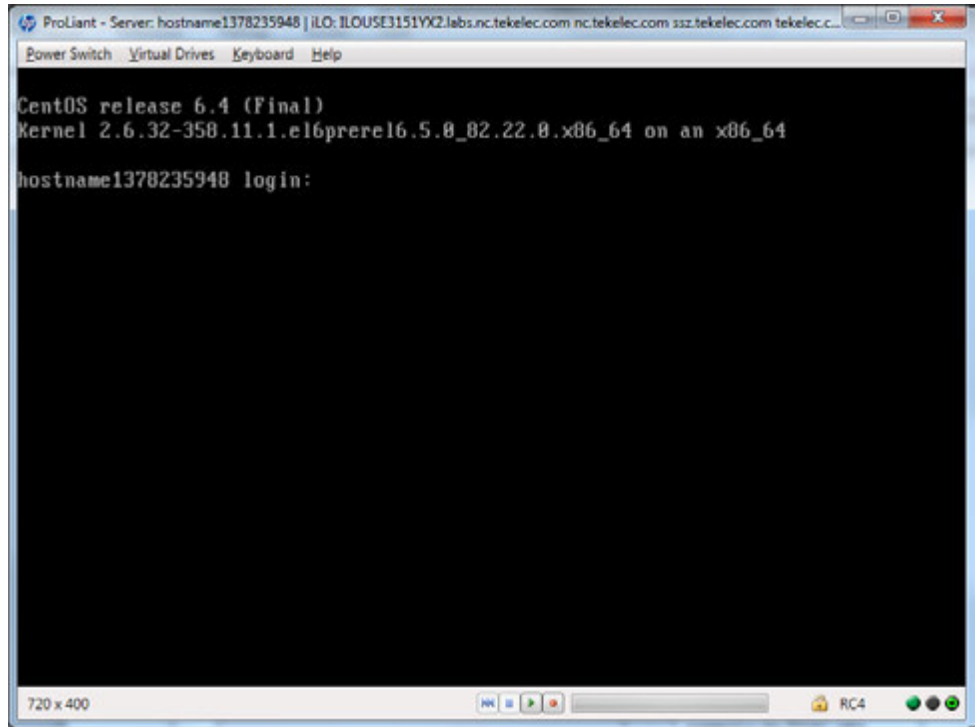
Appendix A.1: Accessing the iLO VGA Redirection Window for HP

<p>6.</p> <p><input type="checkbox"/></p>	<p>The Remote Console tab is expanded</p> <p>Click on the “Remote Console” option</p>	 <p>The screenshot shows the HP iLO 4 ProLiant DL380p Gen8 interface. The left navigation pane is expanded to show the 'Remote Console' option, which is circled in red. The main content area displays the 'iLO Overview' page with various system information and status indicators.</p>								
<p>7.</p> <p><input type="checkbox"/></p>	<p>The Remote Console GUI is displayed</p> <p>Click on the “Launch” button under “Integrated Remote Console”</p>	 <p>The screenshot shows the 'Remote Console - iLO Integrated Remote Console' page. The 'Launch' button under the 'Integrated Remote Console' section is circled in red. The page includes a '.NET Framework Detection' table and a 'Java Integrated Remote Console' section.</p> <table border="1"> <thead> <tr> <th>Compatible Versions</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td>3.5 (Full)</td> <td></td> </tr> <tr> <td>4.0 (Full)</td> <td>OK</td> </tr> <tr> <td>4.5</td> <td></td> </tr> </tbody> </table>	Compatible Versions	Status	3.5 (Full)		4.0 (Full)	OK	4.5	
Compatible Versions	Status									
3.5 (Full)										
4.0 (Full)	OK									
4.5										

Appendix A.1: Accessing the iLO VGA Redirection Window for HP

8. The iLO Console window is displayed.

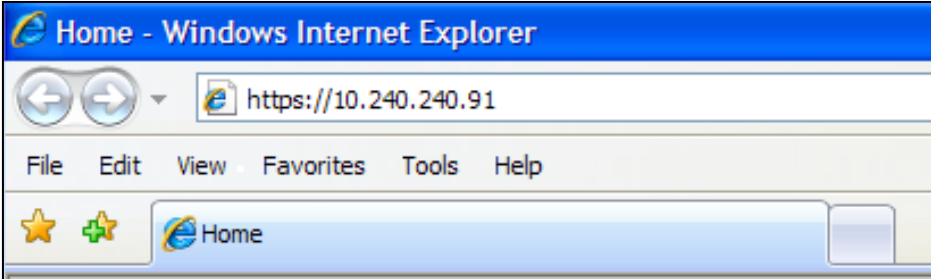
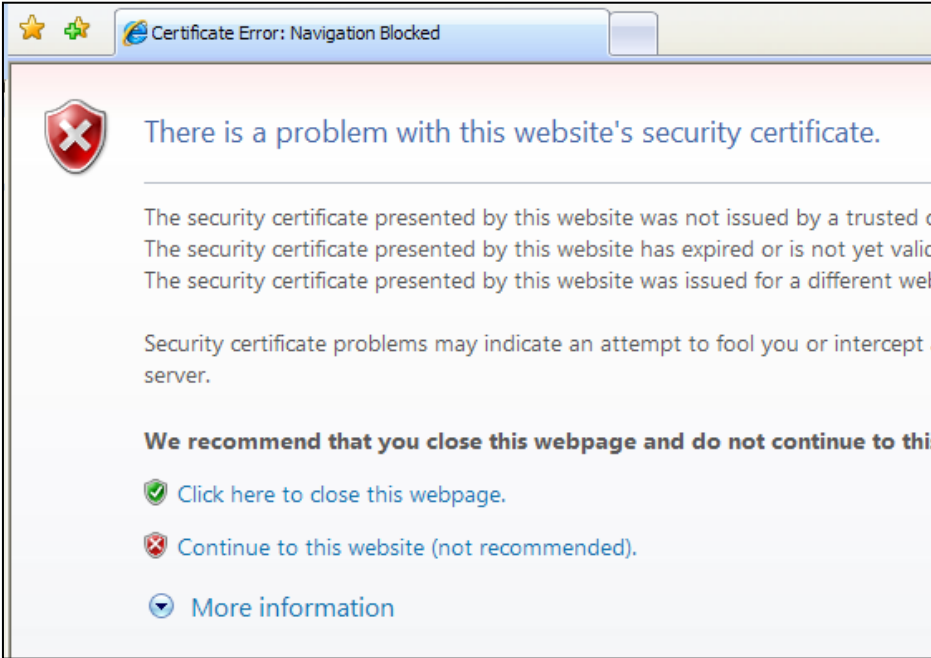
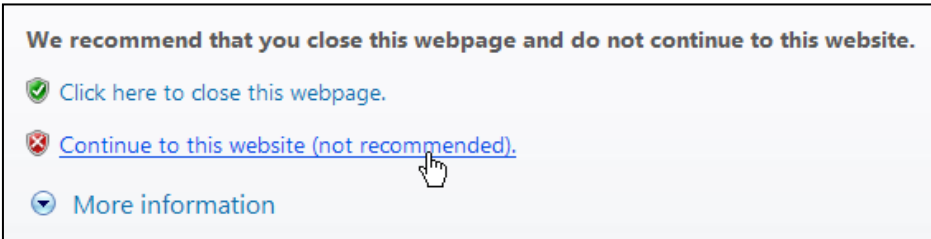
NOTE: *The console window resembles an MS-DOS window but DOES NOT have a scroll-back buffer.*



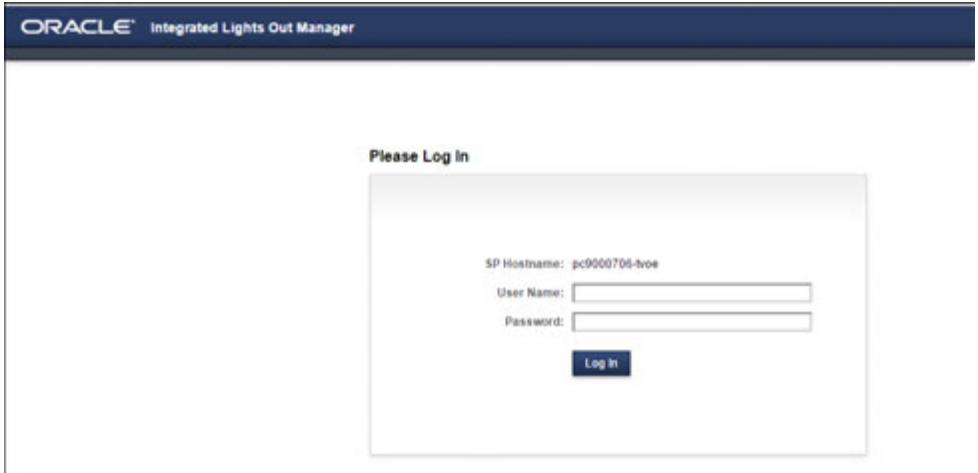
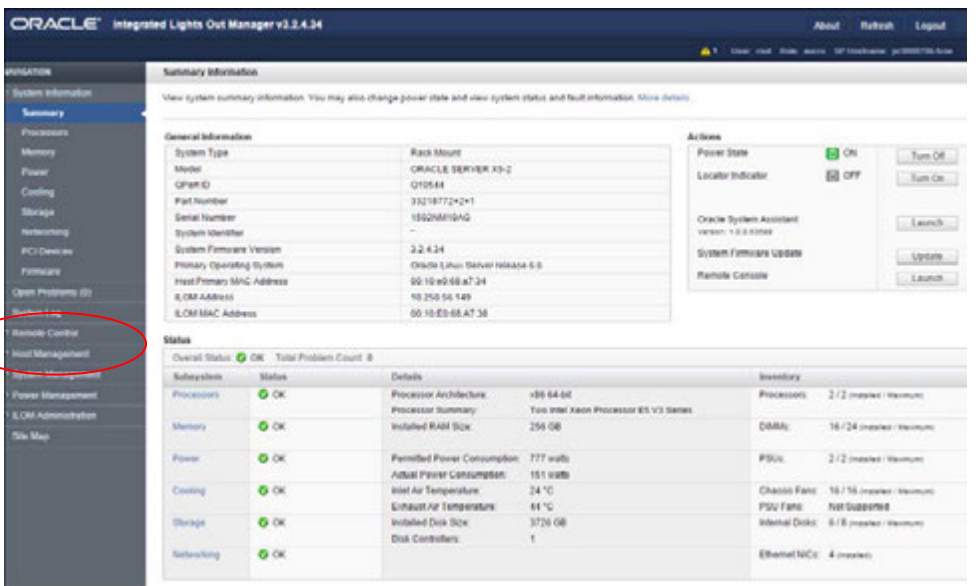
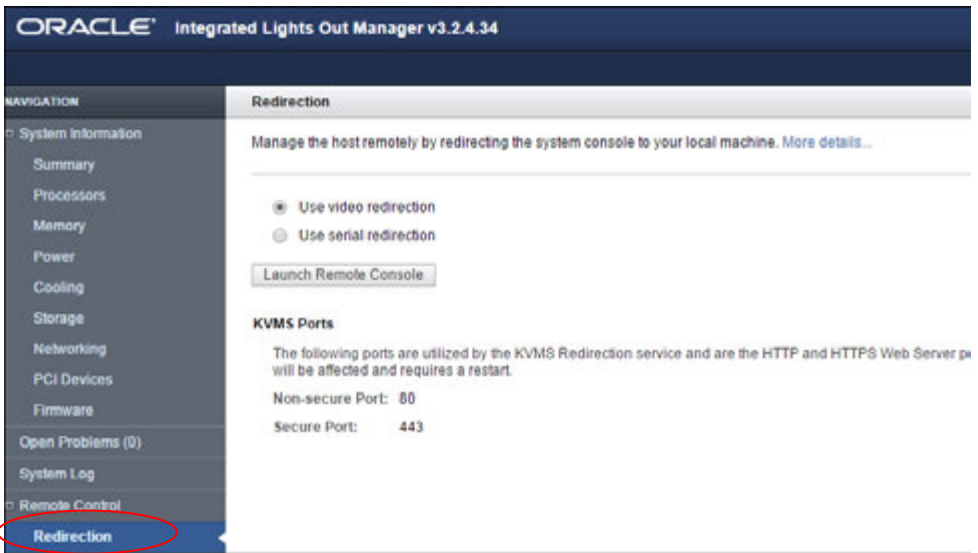
THIS PROCEDURE HAS BEEN COMPLETED

A.2 Accessing the iLo VGA Redirection Window for OracleRMS Servers

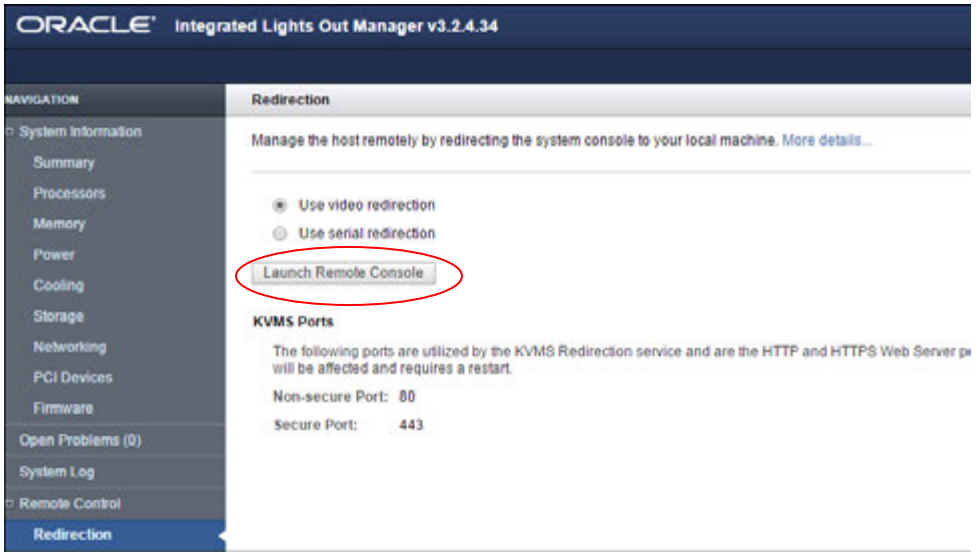
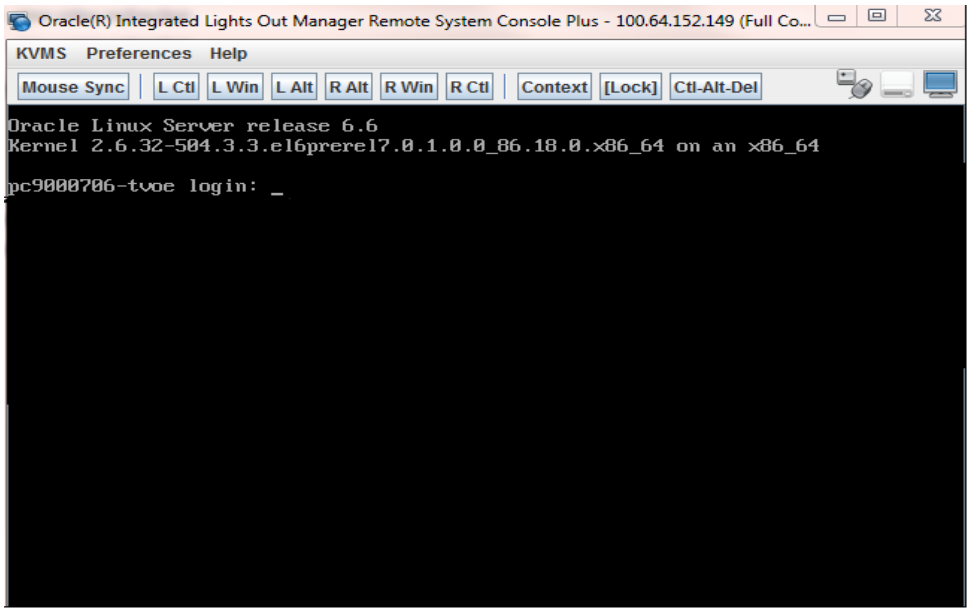
Appendix A.2: Accessing the iLO VGA Redirection Window for Oracle RMS Servers

Step	Procedure	Result
<p>1.</p> <input type="checkbox"/>	<p>Launch an approved web browser and connect to the iLO interface</p> <p>NOTE: Always use <i>https://</i> for iLO GUI access..</p>	
<p>2.</p> <input type="checkbox"/>	<p>The web browser will display a warning message regarding the Security Certificate.</p>	
<p>3.</p> <input type="checkbox"/>	<p>Select the option to "Continue to the website (not recommended)"</p>	

Appendix A.2: Accessing the iLO VGA Redirection Window for Oracle RMS Servers

<p>4.</p> <p><input type="checkbox"/></p>	<p>Login to the iLO console as "Administrator"</p>	
<p>5.</p> <p><input type="checkbox"/></p>	<p>The admin GUI is displayed.</p> <p>Expand the "Remote Control" tab in the left panel of the GUI.</p>	
<p>6.</p> <p><input type="checkbox"/></p>	<p>The Remote Control tab is expanded</p> <p>Click on the "Redirection" option</p> <p>Verify "Use Video redirection" radio button is selected.</p>	

Appendix A.2: Accessing the iLO VGA Redirection Window for Oracle RMS Servers

<p>7.</p> <p><input type="checkbox"/></p>	<p>The Remote Control GUI is displayed</p> <p>Click on the “Launch Remote Console” button</p> <p>** Note: Some security pop up windows may appear – accept them to continue with opening the console.</p>	 <p>The screenshot shows the Oracle Integrated Lights Out Manager interface. The 'Redirection' section is active, showing options for 'Use video redirection' (selected) and 'Use serial redirection'. A button labeled 'Launch Remote Console' is highlighted with a red circle. Below this, 'KVMs Ports' are listed as Non-secure Port: 80 and Secure Port: 443.</p>
<p>8.</p> <p><input type="checkbox"/></p>	<p>The iLO Console window is displayed.</p> <p>NOTE: <i>The console window resembles an MS-DOS window but DOES NOT have a scroll-back buffer.</i></p>	 <p>The screenshot shows a terminal window titled 'Oracle(R) Integrated Lights Out Manager Remote System Console Plus - 100.64.152.149 (Full Co...'. The terminal displays 'Oracle Linux Server release 6.6' and 'Kernel 2.6.32-504.3.3.el6prere17.0.1.0.0_86.18.0.x86_64 on an x86_64'. A login prompt 'pc9000706-tv0e login: _' is visible.</p>
<p>THIS PROCEDURE HAS BEEN COMPLETED</p>		

A.3 Accessing the iLo Console for Oracle RMS Servers

Appendix A.3: Accessing the iLOConsole for Oracle RMS Servers

Step	Procedure	Result
<p>1.</p> <input type="checkbox"/>	<p>Login to the Server ILO console</p> <p>NOTE: Output similar to that shown on the right will appear.</p>	<pre> Login to server using iLO IP address: login as: root Password:xxxxxxxx Oracle(R) Integrated Lights Out Manager Version 3.2.4.10 r94551 Copyright (c) 2014, Oracle and/or its affiliates. All rights reserved. Hostname: pc9000705-tvoe -> </pre>
<p>2.</p> <input type="checkbox"/>	<p>CD to console directory</p>	<pre> ->cd HOST/console /HOST/console </pre>
<p>3.</p> <input type="checkbox"/>	<p>Start the /HOST/console</p> <p>NOTE: Output similar to that shown on the right will appear.</p>	<pre> ->start Are you sure you want to start /HOST/console (y/n)? y Serial console started. To stop, type ESC (Hit enter key Oracle Linux Server release 6.6 Kernel 2.6.32-504.1.3.el6prere17.0.1.0.0_86.16.0.x86_64 on an x86_64 hostnameb2b8de74dc20 login: admusr Password:xxxxxxxx Last login: Thu May 7 13:30:24 on tty1 [admusr@hostnameb2b8de74dc20 ~]\$ </pre>

Appendix B. Accessing the UDR GUI

The user can now launch an approved web browser on this laptop and connect to https://<XMI_IP_Address_for_NO_A> to access the UDR GUI using a temporary IP address.

B.1 Creating Temporary External XMI IP Address

This procedure creates a temporary external XMI IP address that will be used for accessing the UDR GUI prior to configuring the first UDR server. This procedure assumes that the user has access to the ILO and can access an external (XMI) network at the customer site.

Appendix B.1: Creating Temporary External XMI IP Address

Step	In this procedure you will configure a temporary external XMI IP Address for NOAMP Server A for the 1 st NOAMP site. The user will use this IP Address in a web browser to access the GUI to configure the first UDR server.	
1. <input type="checkbox"/>	Log onto the Server ILO as indicated in Appendix A.1 NOTE: <i>Output similar to that shown on the right will appear.</i>	<pre>CentOS release 5.6 (Final) Kernel 2.6.18-238.19.1.el5prere15.0.0_72.22.0 on an x86_64 hostname1260476221 login: root Password: <root_password></pre>
2. <input type="checkbox"/>	Server ILO: Add XMI VLAN to the first UDR server (NOAMP-A)	<pre>#netAdm add --device=bond0.<xmi_vlan>--onboot=yes --netmask=<XMI_NETMASK> --address=<XMI_IP_Address_for_NOAMP_A> Interface bond0.# added</pre>
3. <input type="checkbox"/>	Server ILO: Add route to the default gateway for the first UDR site	<pre># netAdm add --device=bond0.<xmi_vlan>--route=default --gateway=<XMI_IP_Address_for_default_gateway> Route to bond0.# added</pre>
4. <input type="checkbox"/>	Server ILO: Restart the network on the server	<pre>Restart the network by running the following: #service network restart</pre>
5. <input type="checkbox"/>	Server ILO: Ping the default gateway to ensure connectivity.	<pre>[root@hostname1260476221 ~]#ping <XMI_IP_Address_for_default_gateway> [root@hostname1260476221 ~]#</pre>
6. <input type="checkbox"/>	Server ILO Log off the ILO	<pre>[root@hostname1260476221 ~]#exit CentOS release 5.6 (Final) Kernel 2.6.18-238.19.1.el5prere15.0.0_72.22.0 on an x86_64 [root@hostname1260476221 ~] login:</pre>
THIS PROCEDURE HAS BEEN COMPLETED		

B.2 Creating Temporary External XMI IP Address without Interface Bonding

Note: This section presents a recommendation to accommodate lab environments that, due to equipment constraint, do not have the support of switches capable of providing bonded interfaces. **This configuration is not meant or implied to be an officially supported topology for UDR deployments.**

Note: Interconnects should conform to Section 8 of reference [6].

Appendix B.2: Creating Temporary External XMI IP Address without Interface Bonding

Step	In this procedure you will configure a temporary external XMI IP Address for NOAMP Server A for the 1 st NOAMP site. The user will use this IP Address in a web browser to access the GUI to configure the first UDR server.	
<p>1.</p> <input type="checkbox"/>	<p>Log onto the Server A ILO as indicated in Appendix A.1.</p> <p>NOTE: Output similar to that shown on the right will appear.</p>	<pre>CentOS release 5.6 (Final) Kernel 2.6.18-238.19.1.el5prere15.0.0_72.22.0 on an x86_64 hostname1260476221 login: root Password: <root_password></pre>
<p>2.</p> <input type="checkbox"/>	<p>Server ILO:</p> <p>Add XMI IP address to the first UDR server (NOAMP-A) and have it use interface eth01</p>	<pre>[root@hostname1260476221 ~]#netAdm set --device=eth01 --onboot=yes --netmask=<XMI_NETMASK> --address=<XMI_IP_Address_for_NOAMP_A> Interface eth01 updated [root@hostname1260476221 ~]#</pre>
<p>3.</p> <input type="checkbox"/>	<p>Server ILO:</p> <p>Add route to the default gateway for the first UDR site</p>	<pre>[root@hostname1260476221 ~]#netAdm add --device=eth01 --route=default --gateway=<XMI_IP_Address_for_default_gateway> Route to eth01 added [root@hostname1260476221 ~]#</pre>
<p>4.</p> <input type="checkbox"/>	<p>Server ILO:</p> <p>Restart the network on the server</p>	<p>Restart the network by running the following:</p> <pre>#service network restart</pre>
<p>5.</p> <input type="checkbox"/>	<p>Server ILO:</p> <p>Ping the default gateway to ensure connectivity.</p>	<pre>[root@hostname1260476221 ~]#ping <XMI_IP_Address_for_default_gateway> [root@hostname1260476221 ~]#</pre>
<p>6.</p> <input type="checkbox"/>	<p>Server ILO</p> <p>Log off the ILO</p>	<pre>[root@hostname1260476221 ~]#exit CentOS release 5.6 (Final) Kernel 2.6.18-238.19.1.el5prere15.0.0_72.22.0 on an x86_64 [root@hostname1260476221 ~] login:</pre>


Appendix B.2: Creating Temporary External XMI IP Address without Interface Bonding

THIS PROCEDURE HAS BEEN COMPLETED

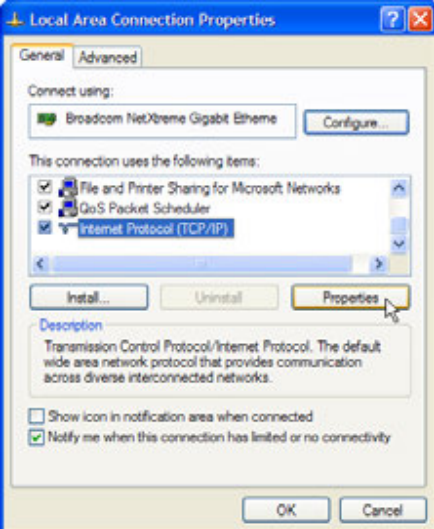
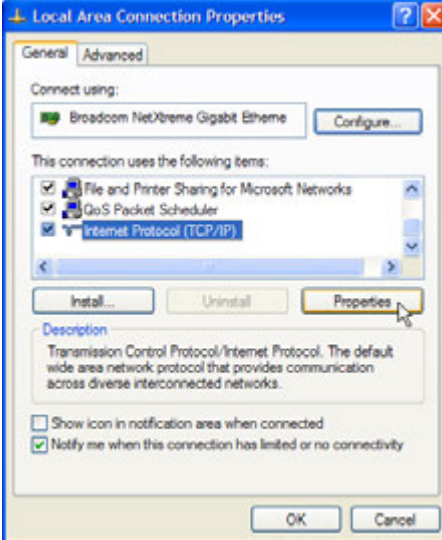

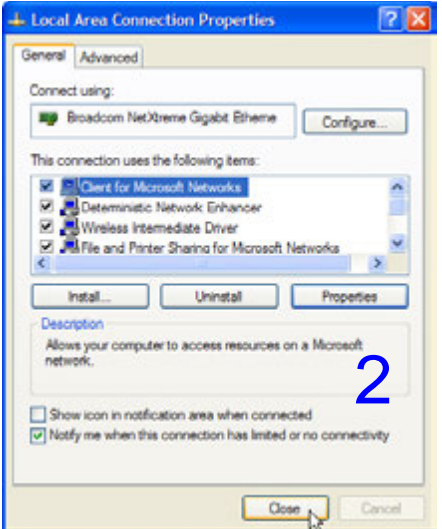
B.3 Establishing a Local Connection for Accessing the UDR GUI (RMS only)

This procedure contains steps to connect a laptop to the SDM-A server via a directly cabled Ethernet connection and setting the IP address of the laptop. This procedure enables the user to use the laptop for accessing the UDR GUI prior to configuring the first UDR server.

Appendix B.3: Establishing a Local Connection for Accessing UDR GUI (RMS only)

Step	In this procedure you will configure a temporary external XMI IP Address for NOAMP Server A for the 1 st NOAMP site. The user will use this IP Address in a web browser to access the GUI to configure the first UDR server.	
1. <input type="checkbox"/>	Access the SDM-A server's console.	Connect to the UDR-A server's console using one of the access methods described in Section 2.1.2 .
2. <input type="checkbox"/>	1) Access the command prompt. 2) Log into the SDM-A server as the "root" user.	CentOS release 5.6 (Final) Kernel 2.6.18-238.19.1.el5prere15.0.0_72.22.0 on an x86_64 hostname1260476221 login: root Password: <root_password>
3. <input type="checkbox"/>	Configure static IP 192.168.100.11 on the eth14 port of the SDM-A server.	<pre>[root@hostname1260476221 ~]# netAdm set --device=eth14 --address=192.168.100.11 --netmask=255.255.255.0 --onboot=yes [root@hostname1260476221 ~]#</pre>
4. <input type="checkbox"/>	1) Plug in one end of the Ethernet cable (straight-thru) into the back of SDM-A server ETH14 (top left port). 2) Plug the other end of the Ethernet cable into the laptop's Ethernet jack.	

Appendix B.3: Establishing a Local Connection for Accessing UDR GUI (RMS only)

<p>5.</p> <p><input type="checkbox"/></p>	<p>Access the laptop network interface card's TCP/IP "Properties" screen.</p> <p>NOTE:For this step follow the instruction specific to the laptop's OS (XP, Vista or Win 7).</p>	<p>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" <p>Select "Internet Protocol (TCP/IP)" and select "Properties"</p> 	<p>Windows Vista / Win 7</p> <ul style="list-style-type: none"> Go to Control Panel. Double-click on Network and Sharing Center Select Manage Network Connections (left menu) Right-click the wired Ethernet Interface icon and select "Properties" <p>Select "Internet Protocol Version 4 (TCP/IPv4)"</p> 
<p>6.</p> <p><input type="checkbox"/></p>	<p>1) Set the IP address and netmask of the laptop's network interface card to an IP address within the same network subnet as the statically assigned IP address used in Step 3 of this procedure (192.168.100.100 is suggested) and click "OK".</p> <p>2) Click "Close" from the network interface card's main "Properties" screen.</p>	<p>Internet Protocol (TCP/IP) Properties</p> <p>1</p> 	<p>Local Area Connection Properties</p> <p>2</p> 
<p>THIS PROCEDURE HAS BEEN COMPLETED</p>			

Oracle Communications User Data Repository Installation and Configuration Guide


- The user can now launch an approved web browser on this laptop and connect to <https://192.168.100.11> to access the UDR GUI using a temporary IP address.

Appendix C. Mounting Media on HP Servers


C.1 Mounting Physical Media on HP Servers (RMS only)

This procedure contains steps to mount electronic and physical media on HP rack mount servers.

Appendix C.1: Mounting Physical Media on HP Rack Mount Servers

Step	In this procedure you will mount media on HP rack mount servers, for ISO access or other file transfer.	
<p>1.</p> <input type="checkbox"/>	<p>Access the server's console.</p>	<p>Connect to the server's console using one of the access methods described in Section 2.1.2.</p>
<p>2.</p> <input type="checkbox"/>	<p>1) Access the command prompt. 2) Log into the SDM-A server as the "root" user.</p>	<pre>CentOS release 5.6 (Final) Kernel 2.6.18-238.19.1.el5prere15.0.0_72.22.0 on an x86_64 hostname1260476221 login: root Password: <root_password></pre>
<p>3.</p> <input type="checkbox"/>	<p>HP Server: Insert the USB flash drive containing the server configuration file into the USB port on the front panel of HP Server.</p>	 <p style="text-align: center;">Figure 6 -HP DL380 Front Panel: USB Port</p>
<p>4.</p> <input type="checkbox"/>	<p>HP Server: Output similar to that shown on the right will appear as the USB flash drive is inserted into the HP Server front USB port. Press the <ENTER> key to return to the command prompt.</p>	<pre>[root@hostname1260476099 ~]# sd 3:0:0:0: [sdb] Assuming drive cache: write through sd 3:0:0:0: [sdb] Assuming drive cache: write through <ENTER> [root@hostname1260476099 ~]#</pre>
<p>5.</p> <input type="checkbox"/>	<p>HP Server: Verify that the USB flash drive's partition has been mounted by the OS: Search df for the device named in the previous step's output .</p>	<pre>[root@hostname1260476099 ~]# df grep sdb /dev/sdb1 2003076 82003068 1% /media/sdb1 [root@hostname1260476099 ~]#</pre>

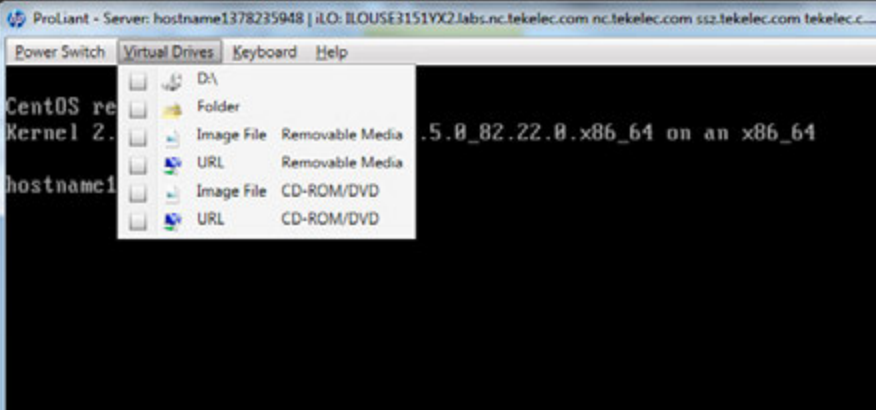
Appendix C.1: Mounting Physical Media on HP Rack Mount Servers

<p>6.</p> <input type="checkbox"/>	<p>HP Server:</p> <p>UDB media may be accessed via the path shown</p>	<pre>[root@hostname1260476099 ~]# cd /media/sdb1</pre> <pre>[root@hostname1260476099 ~]#</pre>
<p>7.</p> <input type="checkbox"/>	<p>HP Server:</p> <p>When you are finished using the mounted drive, remove the USB flash drive from the USB port on the front panel of the server.</p>	 <p style="text-align: center;">Figure 7 -HP DL380 Front Panel: USB Port</p>
<p>THIS PROCEDURE HAS BEEN COMPLETED</p>		

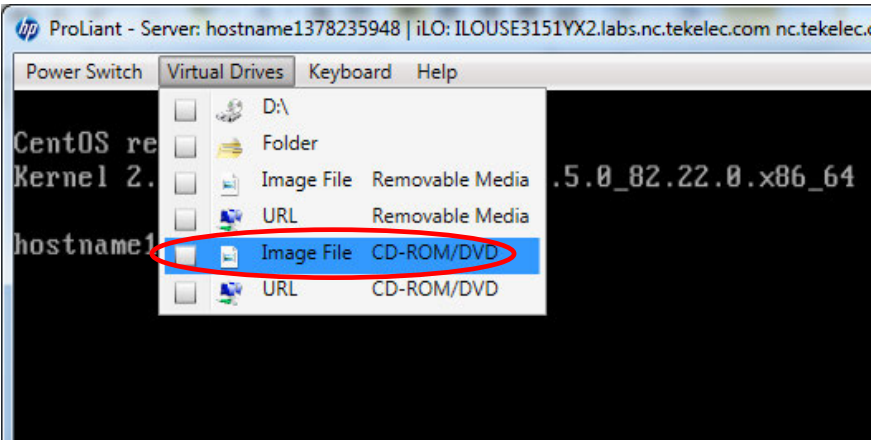
C.2 Mounting Virtual Media on HP Servers

This procedure contains steps to mount virtual media on HP rack mount servers via ILO.

Appendix C.2: Mounting Virtual Media on HP Rack Mount Servers

<p>Step</p>	<p>In this procedure you will mount media on HP rack mount servers via ILO, for ISO access or other file transfer.</p>	
<p>1.</p> <input type="checkbox"/>	<p>Access the server's ILO VGA.</p>	<p>Connect to the server's ILO VGA using the access method described in Appendix A.1.</p>
<p>2.</p> <input type="checkbox"/>	<p>ILO Remote Console:</p> <p>Select "Virtual Drives" from the top menu bar.</p>	

Appendix C.2: Mounting Virtual Media on HP Rack Mount Servers

<p>3.</p> <input type="checkbox"/>	<p>HP Server:</p> <p>Select from the menu options presented:</p> <p>Image File to access files on your laptop client machine.</p> <p>URL to access files on the network.</p> <p>Folder to open a directory on your client machine.</p> <p>CD-ROM/DVD to mount ISO type files.</p> <p>Removable Media for other file types.</p>	 <p>Select the image(ISO) file...</p>
<p>4.</p> <input type="checkbox"/>	<p>HP Server:</p> <p>Folder mounting will cause device information to display to console.</p> <p>or</p> <p>CD-ROM/DVDmedia may be accessed via the device shown by getCDROM</p>	<pre>[root@pc9000724-no-a ~]# sd 4:0:0:0: [sdel] Assuming drive sd 4:0:0:0: [sdel] Assuming drive cache: write through sd 4:0:0:0: [sdel] Assuming drive cache: write through</pre> <pre>[root@hostname1260476099 ~]# getCDROM Virtual_DVD-ROM sr0 /dev/sr0</pre>

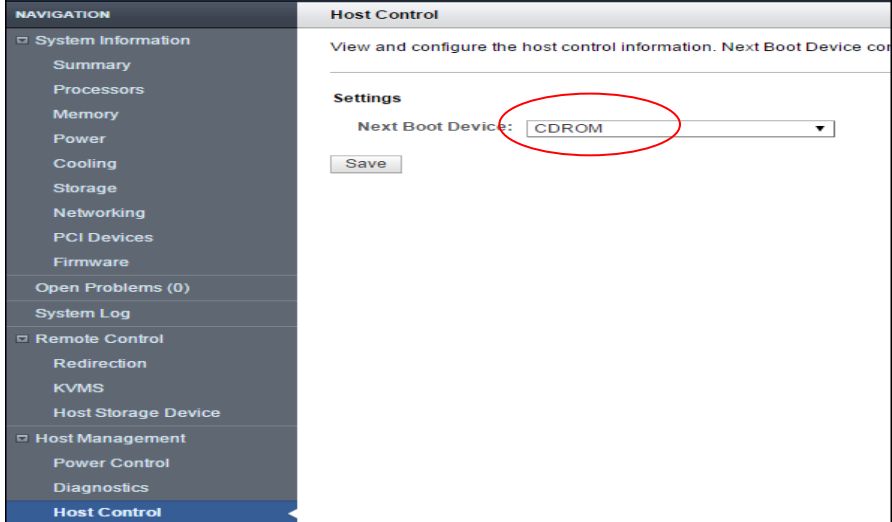
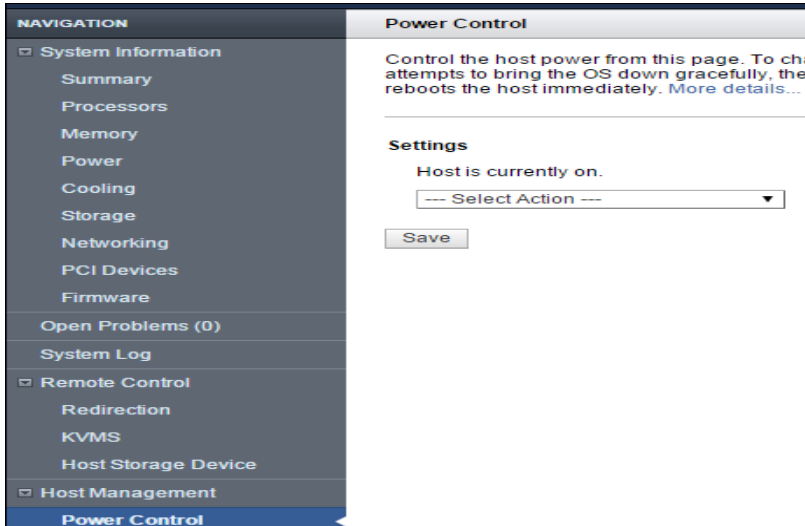
Appendix C.2: Mounting Virtual Media on HP Rack Mount Servers

5. <input type="checkbox"/>	HP Server: Mount device to access its data	<pre>[root@pc9000724-no-a ~]# sd 4:0:0:0: [sde] Assuming drive sd 4:0:0:0: [sde] Assuming drive cache: write through sd 4:0:0:0: [sde] Assuming drive cache: write through # mount /dev/<device_name>/mnt/<mount_name> mount: block device /dev/sde is write-protected, mounting read-only</pre>
THIS PROCEDURE HAS BEEN COMPLETED		

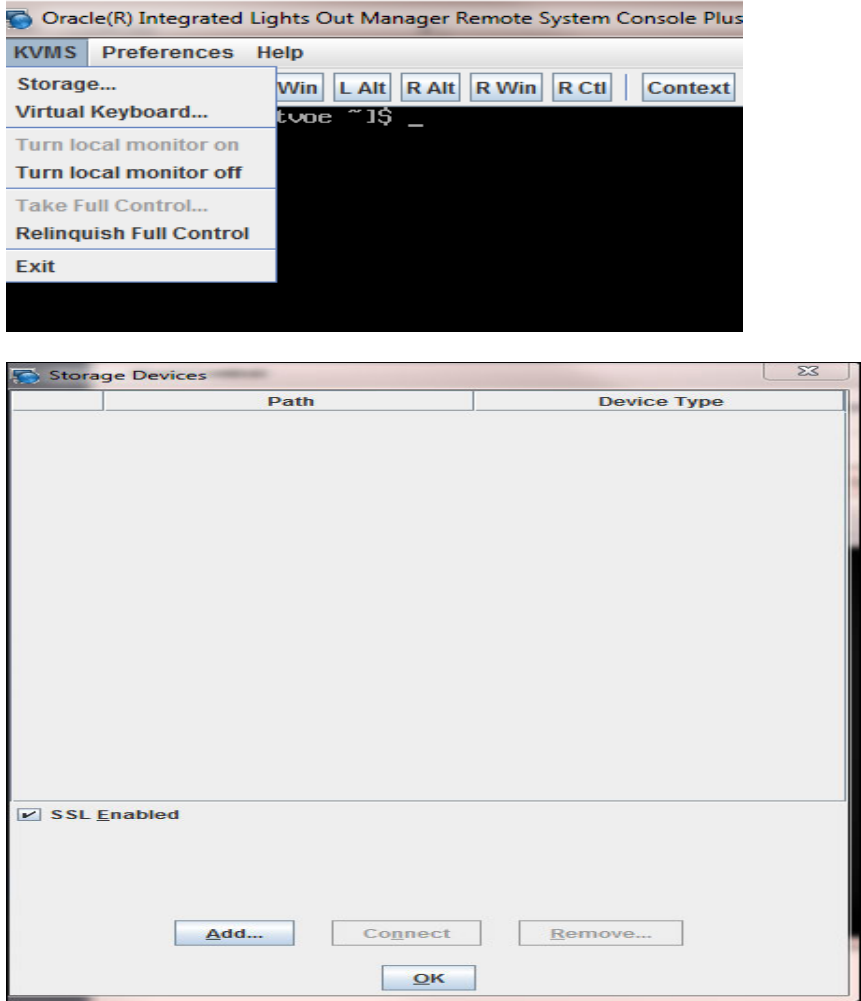
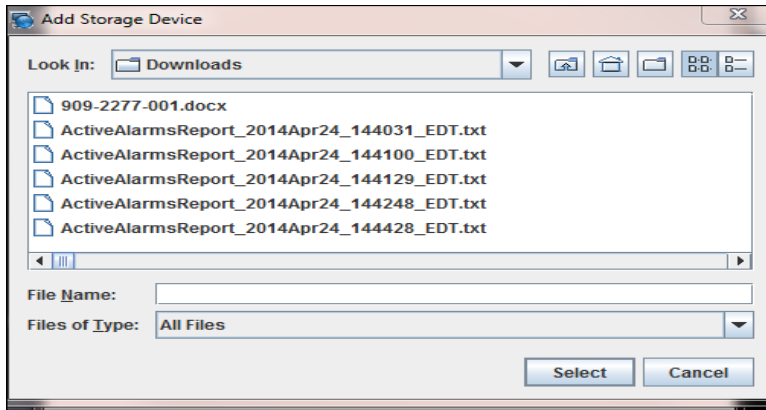
C.3 Mounting Virtual Media on Oracle RMS Servers

This procedure contains steps to mount virtual media on Oracle RMS servers via ILO.

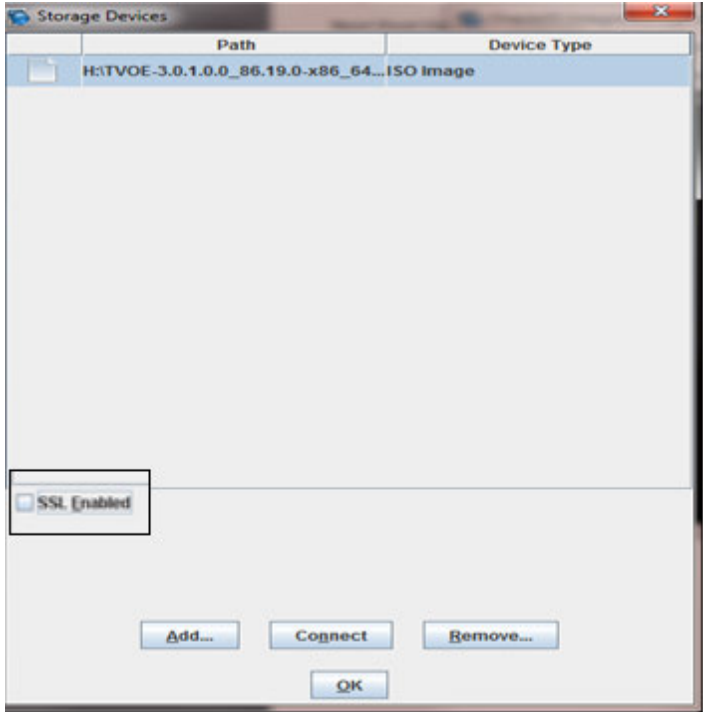
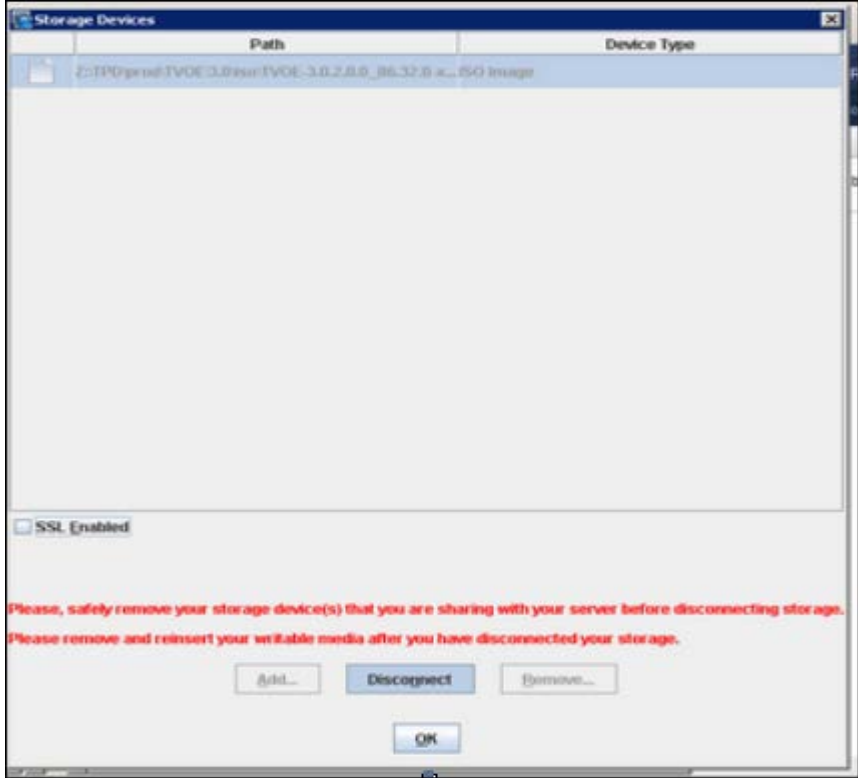
Appendix C.3: Mounting Virtual Media on Oracle RMSServers

Step	In this procedure you will mount media on Oracle RMS servers via ILO, for ISO access or other file transfer.	
1. <input type="checkbox"/>	Access the server's ILO VGA.	Connect to the server's ILO VGA using the access method described in Appendix A. 2: Accessing the iLo VGA Redirection Window for OracleRMS Servers.
2.	<p>ILO Admin GUI:</p> <p>Change the Next Boot Device</p> <p>Select "Host Management/Host Control"</p> <p>Select "CDROM" from "Next Boot Device" drop down box.</p> <p>Click "Save"</p>	
3.	<p>ILO Admin GUI:</p> <p>Go to "Host Management/Power Control"</p> <p>Verify "Host is currently on"</p> <p>Note: If it's turned off, turn it back on.</p>	

Appendix C.3: Mounting Virtual Media on Oracle RMSServers

<p>4.</p> <p><input type="checkbox"/></p>	<p>ILO Remote Console:</p> <p>Select "KMVS/Storage" from the top menu bar.</p> <p>Select "Add" button on next screen near bottom of the screen.</p>	 <p>The screenshot shows the Oracle(R) Integrated Lights Out Manager Remote System Console Plus interface. The 'Storage...' menu is open, showing options like 'Virtual Keyboard...', 'Turn local monitor on/off', 'Take Full Control...', 'Relinquish Full Control', and 'Exit'. Below this, the 'Storage Devices' dialog box is displayed, featuring a table with columns for 'Path' and 'Device Type', an 'SSL Enabled' checkbox, and 'Add...', 'Connect', 'Remove...', and 'OK' buttons.</p>
<p>5.</p> <p><input type="checkbox"/></p>	<p>ILO Remote Console:</p> <p>Select desired Image File from files on your laptop/desktop client machine.</p>	 <p>The screenshot shows the 'Add Storage Device' dialog box. The 'Look In:' field is set to 'Downloads'. A list of files is displayed, including '909-2277-001.docx' and several 'ActiveAlarmsReport_2014Apr24_...' files. The 'Files of Type:' is set to 'All Files'. 'Select' and 'Cancel' buttons are at the bottom.</p>

Appendix C.3: Mounting Virtual Media on Oracle RMSServers

<p>6.</p> <p>ILO Remote Console:</p> <ol style="list-style-type: none"> 1. Select/highlight the ISO file 2. Uncheck SSL Enabled checkbox before connecting to the TVOE iso. 3. Click Connect 4. Click OK 		 
<p>THIS PROCEDURE HAS BEEN COMPLETED</p>		

Appendix D. Hardware Setup

D.1 BIOS Settings for HP Blade and Rack Mount Servers

This procedure will configure HP BIOS settings for Blade and RMS.

Needed material:

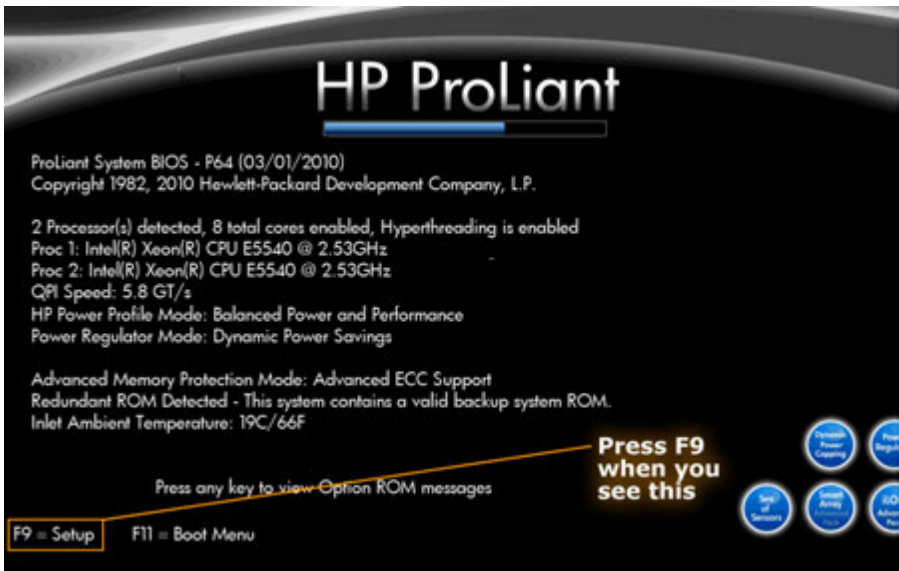
- None

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

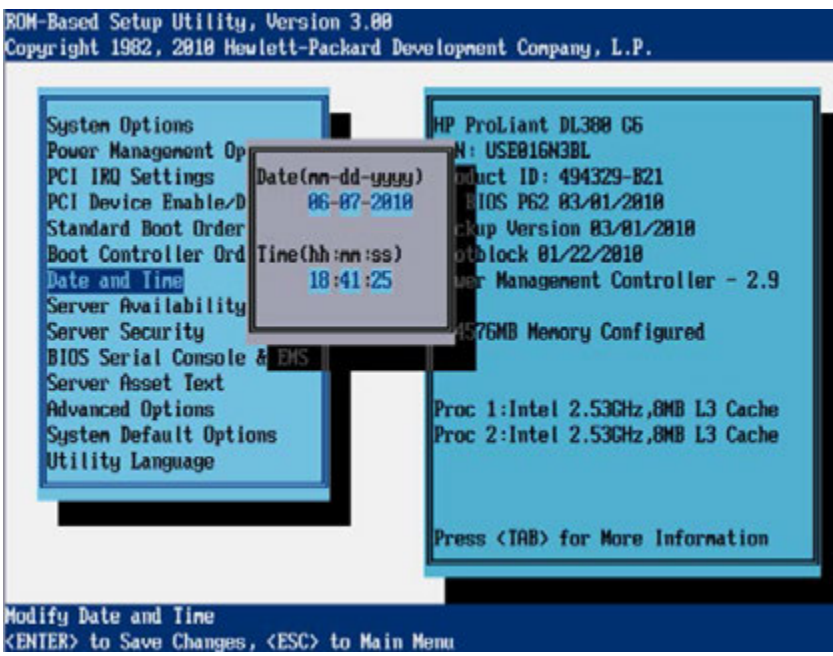
Appendix D.1: BIOS Settings for HP Blade and Rack Mount Servers

Step	In this procedure you will configure BIOS settings for HP hardware.					
<p>1.</p> <input type="checkbox"/>	<p>Access the HP server's console.</p>	<p>Connect to the server's console using one of the access methods described in Section 2.1.2.</p>				
<p>2.</p> <input type="checkbox"/>	<p>Access the HP server's console according to its hardware type</p>	<p>For Rack Mount Servers (RMS), connect to the server's console using one of the access methods described in Section 2.1.2.</p> <p>For Blade servers:</p> <ol style="list-style-type: none"> 1. Navigate to the IP address of the active OA. Login as an administrative user. 2. Navigate to Enclosure Information > Device Bays ><Blade 1>> iLO 3. Click on Integrated Remote Console <div style="border: 1px solid gray; padding: 5px;"> <p>Primary: 103_03_03</p> <ul style="list-style-type: none"> - Enclosure Information <ul style="list-style-type: none"> + Enclosure Settings + Active Onboard Administrator + Standby Onboard Administrator - Device Bays <ul style="list-style-type: none"> - 1. blade01 <ul style="list-style-type: none"> iLO Port Mapping + 2. blade02 + 3. blade03 + 4. blade04 + 5. DSR02blade05 + 6. hostname1303224145 + 7. hostname1303224159 + 9. DSR03blade09 + 10. DSR03blade10 + 11. DSR04blade11 <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="background-color: #cccccc;">Model</td> <td>iLO2</td> </tr> <tr> <td style="background-color: #cccccc;">Firmware Version</td> <td>1.81 Jan 15 2010</td> </tr> </table> <p>iLO Remote Management</p> <p><i>Clicking the links in this section will open the req. does not require an iLO username or password to</i></p> <p><i>If your browser settings prevent new popup window</i></p> <p>Web Administration Access the iLO web user interface.</p> <p>Integrated Remote Console Access the system KVM and control Virtual Power Explorer)</p> <p>Integrated Remote Console Fullscreen Re-size the Integrated Remote Console to the same client desktop.</p> </div> <p>Note: This will launch the iLO interface for that blade. If this is the first time the iLO is being accessed, you will be prompted to install an addon to your web browser, follow the on screen instructions to do so.</p>	Model	iLO2	Firmware Version	1.81 Jan 15 2010
Model	iLO2					
Firmware Version	1.81 Jan 15 2010					

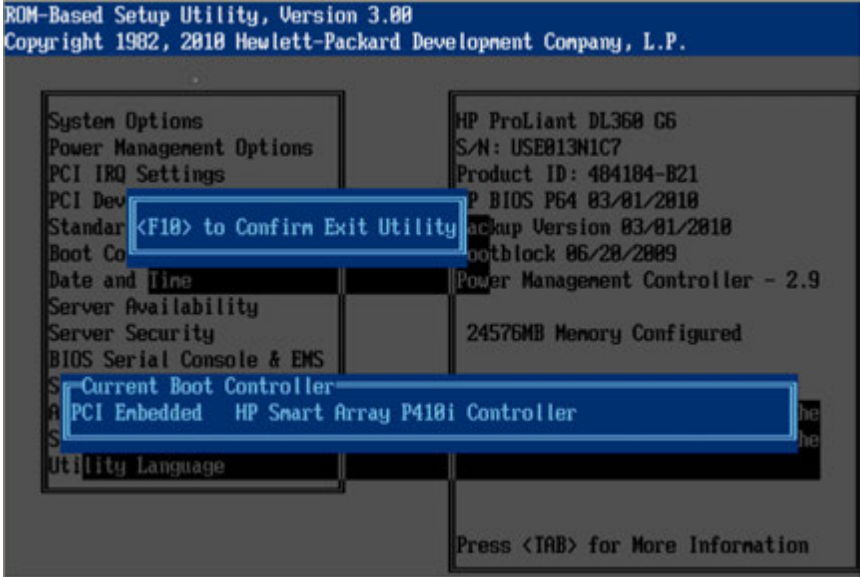
Appendix D.1: BIOS Settings for HP Blade and Rack Mount Servers

<p>3.</p> <input type="checkbox"/>	<p>Access the Server BIOS</p>	<p>Reboot the server.</p> <p>For Blade, this can be achieved by selecting Cold Boot from under the Integrated Console's Power Switch menu.</p> <p>For RMS, this can be achieved by pressing and holding the power button until the server turns off, then after approximately 5-10 seconds press the power button to enable power.</p> <p>As soon as you see F9=Setup in the lower left corner of the screen, press [F9] to access the BIOS setup screen. You may be required to press [F9] 2-3 times. The F9=Setup will change to F9 Pressed once it is accepted. See example below.</p>  <p>Expected Result: ROM-Based Setup Utility is accessed and the ROM-Based Setup Utility menu will be displayed.</p>
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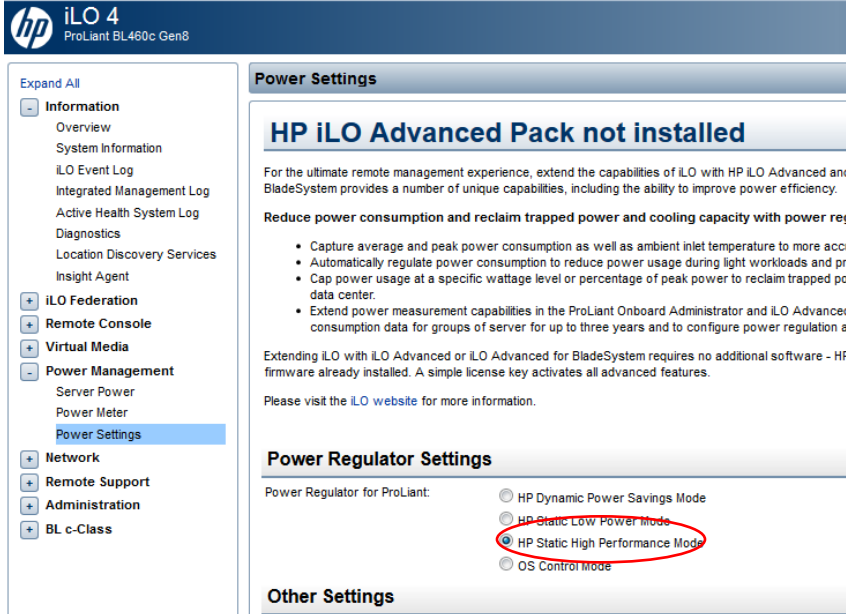
Appendix D.1: BIOS Settings for HP Blade and Rack Mount Servers

<p>4.</p> <input type="checkbox"/>	<p>Set Server CMOS Clock</p>	<p>Scroll to <i>Date and Time</i> and press [ENTER]</p> <p>Set the date and time and press [ENTER].</p>  <p>Expected Result: Correct Time & Date is set.</p>
<p>5.</p> <input type="checkbox"/>	<p>Configure iLO serial port settings <i>(RMS Only)</i></p>	<p>For RMS only, the serial ports on HP DL360 G6 rack mount servers need to be configured so the serial port used by the BIOS and TPD are connected to the “VSP” on the iLO. This will allow the remote administration of the servers without the need for external terminal servers. If this configuration has not been completed correctly and the server rebooted, the syscheck “syscheck -v hardware serial” test will fail.</p> <p>Select System Options option and press [ENTER].</p> <p>Select Serial Port Options option and press [ENTER].</p> <p>Change Embedded Serial Port to COM2 and press [ENTER].</p> <p>Change Virtual Serial Port to COM1 and press [ENTER].</p> <p>Press <ESC> two times</p>
<p>6.</p> <input type="checkbox"/>	<p>Configure Power Profile settings</p>	<p>The Power Profile on HP servers used in UDR need to be configured for optimum UDR software performance on both RMS and blade hardware.</p> <p>Select Power Management Options option and press [ENTER].</p> <p>Select HP Power Profile option and press [ENTER].</p> <p>Change it to Maximum Performance and press [ENTER].</p>

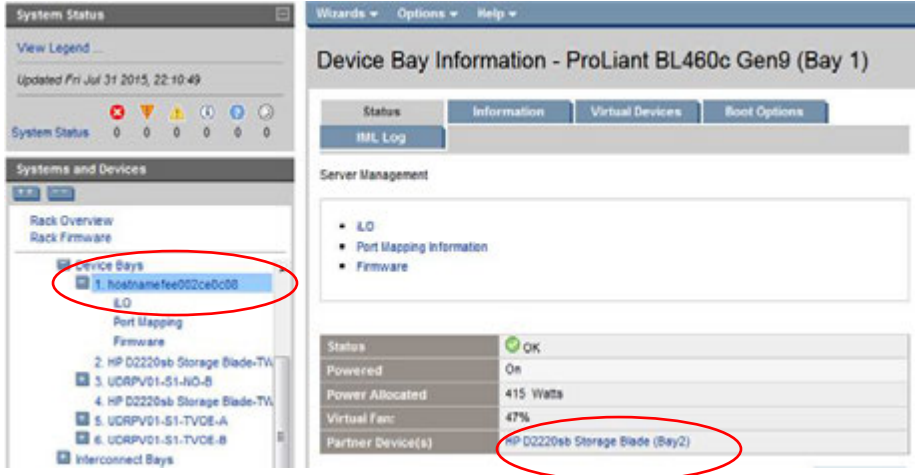
Appendix D.1: BIOS Settings for HP Blade and Rack Mount Servers

<p>7.</p> <input type="checkbox"/>	<p>Configure Power Regulator settings</p>	<p>The Power Regulator on HP servers used in SDM need to be configured for optimum SDM software performance on both RMS and blade hardware.</p> <p>Still under Power Management Options options...</p> <p>Select HP Power Regulator option and press [ENTER].</p> <p><i>Note:</i> A note may appear to say certain processors support only one power state. If this appears, press [ESC] to clear it.</p> <p>Change setting to HP Static High Performance Mode and press [ENTER].</p>
<p>8.</p> <input type="checkbox"/>	<p>Save Configuration and Exit</p>	<p>Press <ESC> two times</p> <p>Press [F10] to save the configuration and exit. The server will reboot</p>  <p>Expected Result: Settings are saved and server reboots.</p>

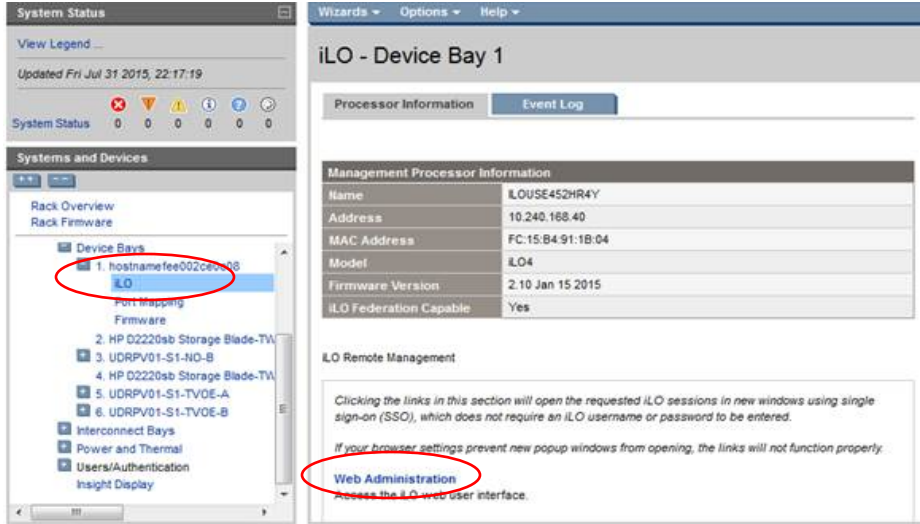
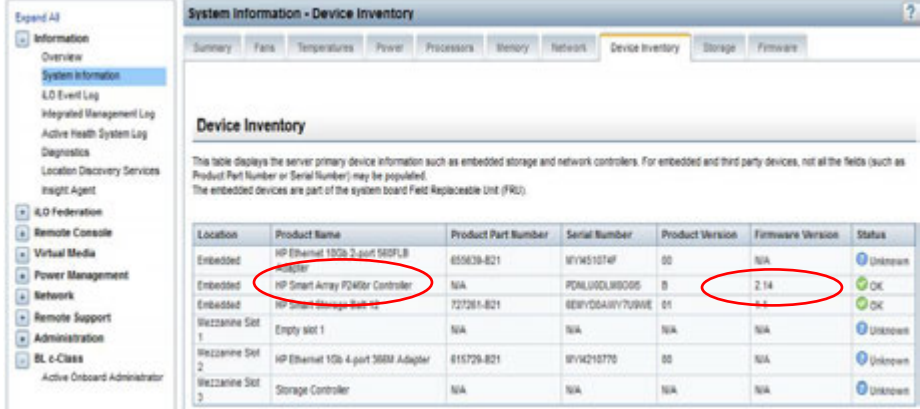
Appendix D.1: BIOS Settings for HP Blade and Rack Mount Servers

<p>9.</p>	<p>Confirm the HP server's Power Regulator setting.</p>	<p>If not already connected to the server's iLO, connect using Appendix A.1 Accessing the iLO VGA Redirection Window for HP.</p> <p>On the HP Server's iLO:</p> <ol style="list-style-type: none"> 1. Navigate to Power Management>Power Settings 2. Confirm Power Regulator for ProLiant is set to: 'HP Static High Performance Mode' 
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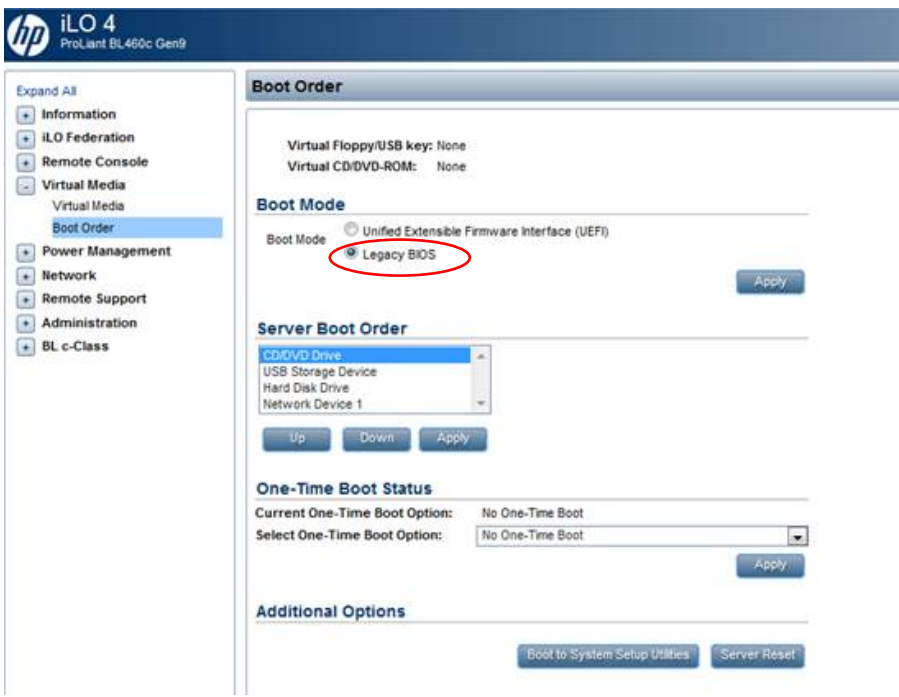
The following steps 10 – 12 are for HP Gen9 hardware only for NOAMPs.

<p>10.</p>	<p>Launch an approved web browser and connect to the ActiveOAILO interface</p> <p>Verify the Partner Device(s).</p>	<p>In the left tree menu Click: Device Bays -> #. HOSTNAME</p>  <p>Note: Ensure that Partner Device(s) is HPD2220sb not D2200sb</p>
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Appendix D.1: BIOS Settings for HP Blade and Rack Mount Servers

<p>11.</p> <p>Server ILO: Login blade iLO</p>	<p>In left tree menu Click: iLO then Web Administration</p>	 <p>The screenshot shows the iLO Web Administration interface. On the left, the 'Systems and Devices' tree is expanded to 'Device Bays', where 'iLO' is selected. The main area displays 'iLO - Device Bay 1' with tabs for 'Processor Information' and 'Event Log'. Under 'Management Processor Information', fields like Name (ILOUSE452HR4Y), Address (10.240.168.40), and MAC Address (FC:15:B4:91:1B:04) are visible. At the bottom, the 'Web Administration' link is circled in red.</p>																																																	
<p>12.</p> <p>Server ILO: Verify HP Smart Array Controller</p>	<p>From left tree menu Click: System Information, then click the Device Inventory tab.</p>	 <p>The screenshot shows the 'System Information - Device Inventory' page. The left navigation tree is expanded to 'System Information', and the 'Device Inventory' tab is selected. The main content area displays a table of device information. The table has columns for Location, Product Name, Product Part Number, Serial Number, Product Version, Firmware Version, and Status. The row for 'HP Smart Array P246br Controller' has '2.14' circled in red in the Firmware Version column.</p> <table border="1"> <thead> <tr> <th>Location</th> <th>Product Name</th> <th>Product Part Number</th> <th>Serial Number</th> <th>Product Version</th> <th>Firmware Version</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td>Embedded</td> <td>HP Ethernet 10Gb 2-port 560FLB</td> <td>855839-821</td> <td>8V451074F</td> <td>00</td> <td>N/A</td> <td>Unknown</td> </tr> <tr> <td>Embedded</td> <td>HP Smart Array P246br Controller</td> <td>N/A</td> <td>P0ALV0LKB005</td> <td>0</td> <td>2.14</td> <td>OK</td> </tr> <tr> <td>Embedded</td> <td>HP Smart Array P440r</td> <td>727261-821</td> <td>8BRY05A0VY7UWE</td> <td>01</td> <td>2.1</td> <td>OK</td> </tr> <tr> <td>Wezzanine Slot 1</td> <td>Empty slot 1</td> <td>N/A</td> <td>N/A</td> <td>N/A</td> <td>N/A</td> <td>Unknown</td> </tr> <tr> <td>Wezzanine Slot 2</td> <td>HP Ethernet 10Gb 4-port 380i Adapter</td> <td>815726-821</td> <td>8V4210770</td> <td>00</td> <td>N/A</td> <td>Unknown</td> </tr> <tr> <td>Wezzanine Slot 3</td> <td>Storage Controller</td> <td>N/A</td> <td>N/A</td> <td>N/A</td> <td>N/A</td> <td>Unknown</td> </tr> </tbody> </table>	Location	Product Name	Product Part Number	Serial Number	Product Version	Firmware Version	Status	Embedded	HP Ethernet 10Gb 2-port 560FLB	855839-821	8V451074F	00	N/A	Unknown	Embedded	HP Smart Array P246br Controller	N/A	P0ALV0LKB005	0	2.14	OK	Embedded	HP Smart Array P440r	727261-821	8BRY05A0VY7UWE	01	2.1	OK	Wezzanine Slot 1	Empty slot 1	N/A	N/A	N/A	N/A	Unknown	Wezzanine Slot 2	HP Ethernet 10Gb 4-port 380i Adapter	815726-821	8V4210770	00	N/A	Unknown	Wezzanine Slot 3	Storage Controller	N/A	N/A	N/A	N/A	Unknown
Location	Product Name	Product Part Number	Serial Number	Product Version	Firmware Version	Status																																													
Embedded	HP Ethernet 10Gb 2-port 560FLB	855839-821	8V451074F	00	N/A	Unknown																																													
Embedded	HP Smart Array P246br Controller	N/A	P0ALV0LKB005	0	2.14	OK																																													
Embedded	HP Smart Array P440r	727261-821	8BRY05A0VY7UWE	01	2.1	OK																																													
Wezzanine Slot 1	Empty slot 1	N/A	N/A	N/A	N/A	Unknown																																													
Wezzanine Slot 2	HP Ethernet 10Gb 4-port 380i Adapter	815726-821	8V4210770	00	N/A	Unknown																																													
Wezzanine Slot 3	Storage Controller	N/A	N/A	N/A	N/A	Unknown																																													
<p>Ensure HP Smart Array controller is P246br and firmware version is at least 2.14.</p> <p>The following step 13 is for HP Gen9 hardware only.</p>																																																			

Appendix D.1: BIOS Settings for HP Blade and Rack Mount Servers

13.	<p>Server ILO:</p> <p>Verify the Boot Mode</p>	<p>From left tree menu Click: Virtual Media > Boot Order</p>  <p>Note 1: Ensure the Boot Mode on Gen9 is set to “Legacy BIOS”</p> <p>Note 2: If the BIOS Mode setting must be changed, the server will need to be in a power off state which can be applied under Power Management > Server Power menu.</p>
THIS PROCEDURE HAS BEEN COMPLETED		

NOTE: These settings are current as of Document 820-6641-01, Revision B. (Manufacturing Acceptance Test Plan, Subscriber Data Management Rack Mount Servers). Please refer to the latest revision for current values.

D.2 Oracle RMS Firmware Upgrade

This procedure will upgrade the server firmware. The actual firmware is to be downloaded at the My Oracle Support Site.

Needed material:

- Oracle Firmware Upgrade Pack, Release Notes 3.1.x, E60195 [11]
- Oracle Firmware Upgrade Pack, Upgrade Guide, 3.1.x, E60196 [12]
- Access to My Oracle Support Site (MOS)

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

Appendix D.2: Oracle RMS Firmware Upgrade

Step	Procedure	Result
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Oracle Communications User Data Repository Installation and Configuration Guide

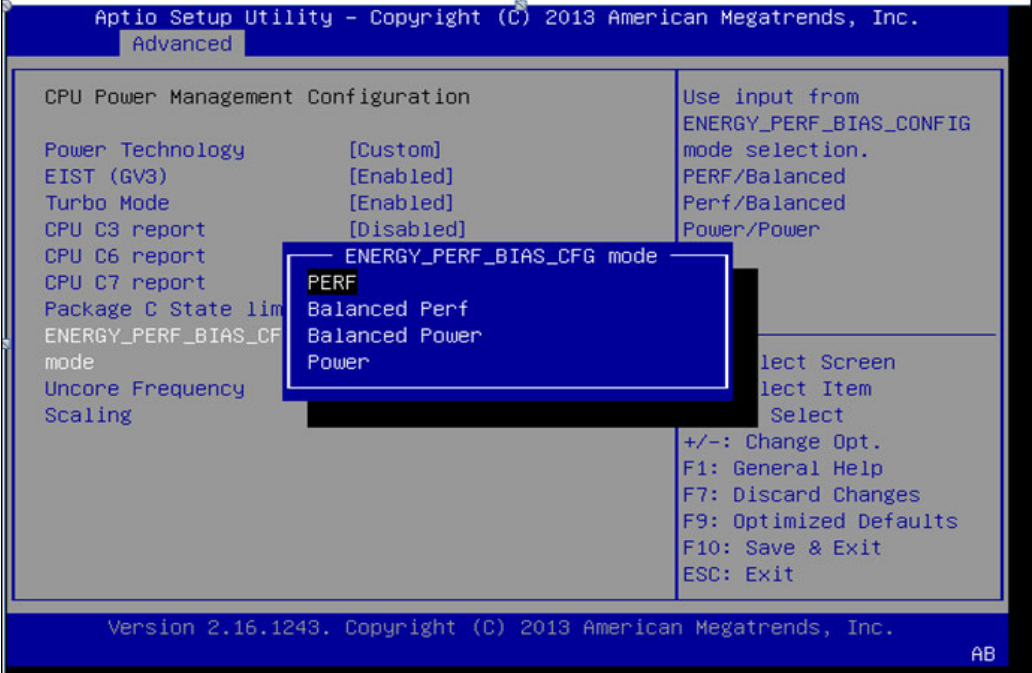
Step	Procedure	Result
1. <input type="checkbox"/>	<i>Upgrade Firmware if necessary</i>	The Oracle Firmware Upgrade Pack (FUP) consists of documentation used to assist in the upgrading of Oracle rack mount servers. The pack consists of Release Notes and an Upgrade Guide (refer to Needed Material above). 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 FUP Release Notes E60195 [11] for directions on how to acquire the firmware.
THIS PROCEDURE HAS BEEN COMPLETED		

D.3 BIOS Settings for Oracle RMS Servers

This procedure will configure BIOS settings for Oracle Rack Mount Servers.

Appendix D.3: Bios Settings for Oracle RMS Servers

Step	Procedure	Result
1. <input type="checkbox"/>	Access the Oracle server's console.	Connect to the server's console using Appendix A.2 Accessing the iLo VGA Redirection Window for OracleRMS Servers or Appendix A.3 Accessing the iLo Console for Oracle RMS Servers.
2. <input type="checkbox"/>	Oracle server's console Reboot the server and press F2 Key	Reboot the server. After the server is powered on, press the F2 key when prompted to access the Setup Utility. <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <pre style="font-family: monospace; font-size: 0.9em;"> Aptio Setup Utility - Copyright (C) 2011 American Megatrends, Inc. Main Advanced IO Boot Save & Exit Project Version 21.0.2.1 System Date [Fri 09/26/2014] System Time [15:32:55] QPI Link Speed 8.0 GT/s Total Memory 128 GB (DDR3) Current Memory Speed 1600 MHz USB Devices: 1 Drive, 1 Keyboard, 1 Mouse, 3 Hubs BMC Status Healthy BMC Firmware Revision 3.1.0.18 r72481 ▶ Product Information ▶ CPU Information ▶ DIMM Information ▶ Security Setting Set the Date. Use Tab to switch between Date elements. ** : Select Screen ↑↓ : Select Item Enter : Select +/- : Change Opt. F1 : General Help (CTRL+Q from serial keyboard) Q : Scroll Help Pane Up A : Scroll Help Pane Down ESC : Exit Version 21.14.1219. Copyright (C) 2011 American Megatrends, Inc. AB </pre> </div>
3. <input type="checkbox"/>	Oracle server's console	Set the server date and time to GMT (Greenwich Mean Time).

Step	Procedure	Result
<p>4.</p> <input type="checkbox"/>	<p>Oracle server's console</p>	<p>Go to the Advanced Menu.</p>  <p>1) Select Processors.</p> <p>2) Select CPU Power Management Configuration.</p> <p>3) If Energy Performance is not set to [Performance], select Energy Performance and press Enter.</p> <p>4) In the resulting menu, select the Performance option and press Enter.</p> <p>5) Press <ESC> to return to the Advanced menu. For X5-2 servers, press the Escape key once to return to the Advanced menu. For other servers, press the Escape key twice to return to the Advanced menu.</p> <p>6) Select the Exit or Save & Exit menu and press Enter on Save Changes and Reset</p> <p>7) Answer Yes to the prompt for confirmation</p>
<p>5.</p> <input type="checkbox"/>	<p>Oracle server's console</p>	<p>Go to the Save & Exit menu.</p> <p>a) Select Save Changes and Reset</p>
<p>THIS PROCEDURE HAS BEEN COMPLETED</p>		

Appendix E. Configuring Disk Array (NO Network Element Servers)

This procedure contains steps to configure disk array before installing the application.

E.1 Configuring RMS Disk Array (NO Network Element Servers)

Appendix E.1: Configuring RMS Disk Array on NO Network Element Servers

Step	Procedure	Result
1. <input type="checkbox"/>	<i>Access the HP server's console.</i>	Connect to the HP server's console using one of the access methods described in Section 2.1.2 .
2. <input type="checkbox"/>	<i>Enter command to show physical drives</i>	# <code>hpssacli ctrl all show config</code>

Appendix E.1: Configuring RMS Disk Array on NO Network Element Servers

Step	Procedure	Result
<p>3.</p> <input type="checkbox"/>	<p>View output from the above command</p>	<p>Verify that there are two slots: Slot 2 should have eight unassigned physical drives, Slot 0 should have one logical drive with two 900.1 GB physical drives and four unassigned physical drives.</p> <p><i>NOTE: If this command does not show two slots with fourteen total physical drives, the hardware does not conform to a disk array system and neither the material in this or the next section applies to the system (in such case, this procedure must be skipped).</i></p> <p><i>NOTE: If this command shows all drives are assigned, you may be installing onto hardware that has been through a prior installation (in such case, perform Appendix M.I Removing RMS Disk Array Configuration before returning to this step).</i></p> <pre>Smart Array P420 in Slot 2 (sn: PDKRH0ARH3X0CO) unassigned physicaldrive 1I:1:1 (port 1I:box 1:bay 1, SAS, 146 GB, OK) physicaldrive 1I:1:2 (port 1I:box 1:bay 2, SAS, 146 GB, OK) physicaldrive 1I:1:3 (port 1I:box 1:bay 3, SAS, 146 GB, OK) physicaldrive 1I:1:4 (port 1I:box 1:bay 4, SAS, 146 GB, OK) physicaldrive 2I:1:5 (port 2I:box 1:bay 5, SAS, 146 GB, OK) physicaldrive 2I:1:6 (port 2I:box 1:bay 6, SAS, 146 GB, OK) physicaldrive 2I:1:7 (port 2I:box 1:bay 7, SAS, 146 GB, OK) physicaldrive 2I:1:8 (port 2I:box 1:bay 8, SAS, 146 GB, OK) SEP (Vendor ID PMCSIERA, Model SRCv8x6G) 380 (WWID: 5001438025183C4F) Smart Array P420i in Slot 0 (Embedded) (sn: 5001438025A44EF0) array A (SAS, Unused Space: 0 MB) logicaldrive 1 (838.3 GB, RAID 1, OK) physicaldrive 1I:2:1 (port 1I:box 2:bay 1, SAS, 900.1 GB, OK) physicaldrive 1I:2:2 (port 1I:box 2:bay 2, SAS, 900.1 GB, OK) unassigned physicaldrive 1I:2:3 (port 1I:box 2:bay 3, SAS, 146 GB, OK) physicaldrive 1I:2:4 (port 1I:box 2:bay 4, SAS, 146 GB, OK) physicaldrive 2I:2:5 (port 2I:box 2:bay 5, SAS, 146 GB, OK) physicaldrive 2I:2:6 (port 2I:box 2:bay 6, SAS, 146 GB, OK) SEP (Vendor ID PMCSIERA, Model SRCv8x6G) 380 (WWID: 5001438025A44EFF)</pre>
<p>4.</p> <input type="checkbox"/>	<p>Create first Slot 2 assignment</p>	<pre># hpssacli ctrl slot=2 create type=ld \ drives=1I:1:1,1I:1:2,1I:1:3,1I:1:4 raid=1+0 stripsize=256</pre> <p><i>NOTE: This command returns no output.</i></p>
<p>5.</p> <input type="checkbox"/>	<p>Create second Slot 2 assignment</p>	<pre># hpssacli ctrl slot=2 create type=ld \ drives=2I:1:5,2I:1:6,2I:1:7,2I:1:8 raid=1+0 stripsize=256</pre> <p><i>NOTE: This command returns no output.</i></p>

Appendix E.1: Configuring RMS Disk Array on NO Network Element Servers

Step	Procedure	Result
6. <input type="checkbox"/>	Create Slot 0 assignment	<pre># hpssacli ctrl slot=0 create type=ld drives=allunassigned \ raid=1+0 stripsize=256</pre> <p><i>NOTE: This command returns no output.</i></p>
7. <input type="checkbox"/>	Enter command to show physical drives	<pre># hpssacli ctrl all show config</pre>

Appendix E.1: Configuring RMS Disk Array on NO Network Element Servers

Step	Procedure	Result
<p>8.</p> <div style="border: 1px solid black; width: 20px; height: 20px; margin-left: 5px;"></div>	<p><i>View output from the above command</i></p>	<p>Verify output of the previous command. This should appear like the example output below. Verify that there are four logical drives: three logical drives with four physical drives, and a single logical drive with two physical drives.</p> <pre> Smart Array P420 in Slot 2 (sn: PDKRH0ARH3X0HB) array A (SAS, Unused Space: 0 MB) logicaldrive 1 (273.4 GB, OK, RAID 1+0, OK) physicaldrive 1I:1:1 (port 1I:box 1:bay 1, SAS, 146 GB, OK) physicaldrive 1I:1:2 (port 1I:box 1:bay 2, SAS, 146 GB, OK) physicaldrive 1I:1:3 (port 1I:box 1:bay 3, SAS, 146 GB, OK) physicaldrive 1I:1:4 (port 1I:box 1:bay 4, SAS, 146 GB, OK) array B (SAS, Unused Space: 0 MB) logicaldrive 2 (273.4 GB, OK, RAID 1+0, OK) physicaldrive 2I:1:5 (port 2I:box 1:bay 5, SAS, 146 GB, OK) physicaldrive 2I:1:6 (port 2I:box 1:bay 6, SAS, 146 GB, OK) physicaldrive 2I:1:7 (port 2I:box 1:bay 7, SAS, 146 GB, OK) physicaldrive 2I:1:8 (port 2I:box 1:bay 8, SAS, 146 GB, OK) SEP (Vendor ID PMCSIERA, Model SRCv8x6G) 380 (WWID: 500143802518449F) Smart Array P420i in Slot 0 (Embedded) (sn: 5001438025A465B0) array A (SAS, Unused Space: 0 MB) logicaldrive 1 (838.3 GB, RAID 1, OK) physicaldrive 1I:2:1 (port 1I:box 2:bay 1, SAS, 900.1 GB, OK) physicaldrive 1I:2:2 (port 1I:box 2:bay 2, SAS, 900.1 GB, OK) array B (SAS, Unused Space: 0 MB) logicaldrive 2 (273.4 GB, OK, RAID 1+0, OK) physicaldrive 1I:2:3 (port 1I:box 2:bay 3, SAS, 146 GB, OK) physicaldrive 1I:2:4 (port 1I:box 2:bay 4, SAS, 146 GB, OK) physicaldrive 2I:2:5 (port 2I:box 2:bay 5, SAS, 146 GB, OK) physicaldrive 2I:2:6 (port 2I:box 2:bay 6, SAS, 146 GB, OK) SEP (Vendor ID PMCSIERA, Model SRCv8x6G) 380 (WWID: 5001438025A465BF) </pre>

Appendix E.1: Configuring RMS Disk Array on NO Network Element Servers

Step	Procedure	Result
9. <input type="checkbox"/>	Check for existing physical volumes	<pre># pvs</pre> <pre>[root@hostname1380908951 ~]# pvs PV VG Fmt Attr PSize PFree /dev/sda2 vgroot lvm2 a-- 838.06g 827.06g</pre> <p>NOTE: If additional devices <code>/dev/sdb</code>, <code>/dev/sdc</code>, and <code>/dev/sdd</code> are displayed by this command then physical volumes are already configured. In such case continue to Step 13 of this procedure.</p>
10. <input type="checkbox"/>	Create physical volume sdb	<pre># pvcreate /dev/sdb</pre> <p>Physical volume <code>"/dev/sdb"</code> successfully created</p>
11. <input type="checkbox"/>	Create physical volume sdc	<pre># pvcreate /dev/sdc</pre> <p>Physical volume <code>"/dev/sdc"</code> successfully created</p>
12. <input type="checkbox"/>	Create physical volume sdd	<pre># pvcreate /dev/sdd</pre> <p>Physical volume <code>"/dev/sdd"</code> successfully created</p>
13. <input type="checkbox"/>	Execute the following <code>syscheck/restart</code> steps in order	<pre>#syscheck --reconfig disk smart # service smartd restart # syscheck disk smart</pre>
THIS PROCEDURE HAS BEEN COMPLETED		

E.2 Configuring RMS Disk Array With Low Speed Drives (NO Network Element Servers)

Appendix E.2: Configuring RMS Disk Array With Low Speed Drives on NO Network Element Servers

Step	Procedure	Result
1. <input type="checkbox"/>	Access the HP server's console.	Connect to the HP server's console using one of the access methods described in Section 2.1.2 .
2. <input type="checkbox"/>	Enter command to show physical drives	<pre># hpssacli ctrl all show config</pre>

Appendix E.2: Configuring RMS Disk Array With Low Speed Drives on NO Network Element Servers

Step	Procedure	Result
<p>3.</p> <input type="checkbox"/>	<p>View output from the above command</p>	<p><i>NOTE: If this command does not show two slots with eight total physical drives, the hardware does not conform to a disk array system and neither the material in this or the next section applies to the system (in such case, this procedure must be skipped).</i></p> <p><i>NOTE: If this command shows all drives are assigned, you may be installing onto hardware that has been through a prior installation (in such case, perform Appendix M.1 Removing RMS Disk Array Configuration before returning to this step).</i></p> <pre>Smart Array P420 in Slot 2 (sn: PDKRH0ARH4T0VP) Internal Drive Cage at Port 1I, Box 1, OK Internal Drive Cage at Port 2I, Box 1, OK array A (SAS, Unused Space: 0 MB) logicaldrive 1 (1.1 TB, RAID 1+0, OK) physicaldrive 1I:1:1 (port 1I:box 1:bay 1, SAS, 600 GB, OK) physicaldrive 1I:1:2 (port 1I:box 1:bay 2, SAS, 600 GB, OK) physicaldrive 1I:1:3 (port 1I:box 1:bay 3, SAS, 600 GB, OK) physicaldrive 1I:1:4 (port 1I:box 1:bay 4, SAS, 600 GB, OK) array B (SAS, Unused Space: 0 MB) logicaldrive 2 (558.9 GB, RAID 1, OK) physicaldrive 2I:1:5 (port 2I:box 1:bay 5, SAS, 600 GB, OK) physicaldrive 2I:1:6 (port 2I:box 1:bay 6, SAS, 600 GB, OK) SEP (Vendor ID PMCSIERA, Model SRCv8x6G) 380 (WWID: 500143802751AD2F) Smart Array P420i in Slot 0 (Embedded) (sn: 5001438025AB3150) Internal Drive Cage at Port 1I, Box 2, OK Internal Drive Cage at Port 2I, Box 0, OK array A (SAS, Unused Space: 0 MB) logicaldrive 1 (838.3 GB, RAID 1, OK) physicaldrive 1I:2:1 (port 1I:box 2:bay 1, SAS, 900.1 GB, OK) physicaldrive 1I:2:2 (port 1I:box 2:bay 2, SAS, 900.1 GB, OK) SEP (Vendor ID PMCSIERA, Model SRCv8x6G) 380 (WWID: 5001438025AB315F)</pre>
<p>4.</p> <input type="checkbox"/>	<p>Create first Slot 2 assignment</p>	<pre># hpssacli ctrl slot=2 create type=ld \ drives=1I:1:1,1I:1:2,1I:1:3,1I:1:4 raid=1+0 stripsize=256</pre> <p><i>NOTE: This command returns no output.</i></p>
<p>5.</p> <input type="checkbox"/>	<p>Create second Slot 2 assignment</p>	<pre># hpssacli ctrl slot=2 create type=ld \ drives=2I:1:5,2I:1:6 stripsize=256</pre> <p><i>NOTE: This command returns no output.</i></p>

Appendix E.2: Configuring RMS Disk Array With Low Speed Drives on NO Network Element Servers

Step	Procedure	Result
<p>6.</p> <input type="checkbox"/>	<p>Enter command to show physical drives</p>	<pre># hpssacli ctrl all show config</pre>
<p>7.</p> <input type="checkbox"/>	<p>View output from the above command</p>	<p>Verify output of the previous command. This should appear like the example output below. Verify that there are four logical drives: three logical drives with four physical drives, and a single logical drive with two physical drives.</p> <pre>Smart Array P420 in Slot 2 (sn: PDKRH0ARH4T0VP) Internal Drive Cage at Port 1I, Box 1, OK Internal Drive Cage at Port 2I, Box 1, OK array A (SAS, Unused Space: 0 MB) logicaldrive 1 (1.1 TB, RAID 1+0, OK) physicaldrive 1I:1:1 (port 1I:box 1:bay 1, SAS, 600 GB, OK) physicaldrive 1I:1:2 (port 1I:box 1:bay 2, SAS, 600 GB, OK) physicaldrive 1I:1:3 (port 1I:box 1:bay 3, SAS, 600 GB, OK) physicaldrive 1I:1:4 (port 1I:box 1:bay 4, SAS, 600 GB, OK) array B (SAS, Unused Space: 0 MB) logicaldrive 2 (558.9 GB, RAID 1, OK) physicaldrive 2I:1:5 (port 2I:box 1:bay 5, SAS, 600 GB, OK) physicaldrive 2I:1:6 (port 2I:box 1:bay 6, SAS, 600 GB, OK) SEP (Vendor ID PMCSIERA, Model SRCv8x6G) 380 (WWID: 500143802751AD2F) Smart Array P420i in Slot 0 (Embedded) (sn: 5001438025AB3150) Internal Drive Cage at Port 1I, Box 2, OK Internal Drive Cage at Port 2I, Box 0, OK array A (SAS, Unused Space: 0 MB) logicaldrive 1 (838.3 GB, RAID 1, OK) physicaldrive 1I:2:1 (port 1I:box 2:bay 1, SAS, 900.1 GB, OK) physicaldrive 1I:2:2 (port 1I:box 2:bay 2, SAS, 900.1 GB, OK) SEP (Vendor ID PMCSIERA, Model SRCv8x6G) 380 (WWID: 5001438025AB315F)</pre>
<p>8.</p> <input type="checkbox"/>	<p>Check for existing physical volumes</p>	<pre># pvs [root@hostname1380908951 ~]# pvs PV VG Fmt Attr PSize PFree /dev/sda2 vgroot lvm2 a-- 838.06g 827.06g</pre> <p>NOTE: If additional devices /dev/sdb, /dev/sdc/, and /dev/sdd are displayed by this command then physical volumes are already configured. In such case continue to Step 11 of this procedure.</p>

Appendix E.2: Configuring RMS Disk Array With Low Speed Drives on NO Network Element Servers

Step	Procedure	Result
9. <input type="checkbox"/>	Create physical volume sdb	# <code>pvcreate /dev/sdb</code> Physical volume "/dev/sdb" successfully created
10. <input type="checkbox"/>	Create physical volume sdc	# <code>pvcreate /dev/sdc</code> Physical volume "/dev/sdc" successfully created
11. <input type="checkbox"/>	Execute the following <code>syscheck/restart</code> steps in order	# <code>syscheck --reconfig disk smart</code> # <code>service smartd restart</code> # <code>syscheck disk smart</code>
THIS PROCEDURE HAS BEEN COMPLETED		

E.3 Configuring Blade Disk Array (NO Network Element Servers with Sidecar)

Appendix E.3: Configuring Blade Disk Array on NO Network Element Servers with Sidecar

Step	Procedure	Result
1. <input type="checkbox"/>	Access the HP server's console.	Connect to the HP server's console using one of the access methods described in Section 2.1.2 .
2. <input type="checkbox"/>	Enter command to show physical drives	# <code>hpssacli ctrl all show config</code>

Appendix E.3: Configuring Blade Disk Array on NO Network Element Servers with Sidecar

Step	Procedure	Result
<p>3.</p> <input type="checkbox"/>	<p>View output from the above command</p>	<p>Verify that there are two slots: Slot 0 should one logical drive with two 900.1 GB physical drives, Slot 3 should have an twelve (12) unassigned physical drives.</p> <p><i>NOTE: If this command does not show two slots with fourteen total physical drives, the hardware does not conform to a disk array system and neither the material in this or the next section applies to the system (in such case, this procedure must be skipped).</i></p> <p><i>NOTE: If this command shows all drives are assigned, you may be installing onto hardware that has been through a prior installation (in such case, perform Appendix M.2 Removing Blade Disk Array Configuration (Sidecar) before returning to this step).</i></p> <pre>Smart Array P220i in Slot 0 (Embedded) (sn: PCQVU0CRH5V2JU) array A (SAS, Unused Space: 0 MB) logicaldrive 1 (838.3 GB, RAID 1, OK) physicaldrive 1I:1:1 (port 1I:box 1:bay 1, SAS, 900.1 GB, OK) physicaldrive 1I:1:2 (port 1I:box 1:bay 2, SAS, 900.1 GB, OK) SEP (Vendor ID PMCSIERA, Model SRCv4x6G) 380 (WWID: 5001438028DDB56F) Smart Array P410i in Slot 3 (sn: 5001438025905EB0) unassigned physicaldrive 1I:1:1 (port 1I:box 1:bay 1, SAS, 146 GB, OK) physicaldrive 1I:1:2 (port 1I:box 1:bay 2, SAS, 146 GB, OK) physicaldrive 1I:1:3 (port 1I:box 1:bay 3, SAS, 146 GB, OK) physicaldrive 1I:1:4 (port 1I:box 1:bay 4, SAS, 146 GB, OK) physicaldrive 1I:1:5 (port 1I:box 1:bay 5, SAS, 146 GB, OK) physicaldrive 1I:1:6 (port 1I:box 1:bay 6, SAS, 146 GB, OK) physicaldrive 1I:1:7 (port 1I:box 1:bay 7, SAS, 146 GB, OK) physicaldrive 1I:1:8 (port 1I:box 1:bay 8, SAS, 146 GB, OK) physicaldrive 1I:1:9 (port 1I:box 1:bay 9, SAS, 146 GB, OK) physicaldrive 1I:1:10 (port 1I:box 1:bay 10, SAS, 146 GB, OK) physicaldrive 1I:1:11 (port 1I:box 1:bay 11, SAS, 146 GB, OK) physicaldrive 1I:1:12 (port 1I:box 1:bay 12, SAS, 146 GB, OK) Expander 250 (WWID: 50014380251F83E6, Port: 1I, Box: 1)</pre>
<p>4.</p> <input type="checkbox"/>	<p>Create Slot 3 assignment</p>	<pre># hpssacli ctrl slot=3 create type=ld \ drives=allunassigned raid=1+0 stripsize=256</pre> <p><i>NOTE: This command returns no output.</i></p>
<p>5.</p> <input type="checkbox"/>	<p>Enter command to show physical drives</p>	<pre># hpssacli ctrl all show config</pre>

Appendix E.3: Configuring Blade Disk Array on NO Network Element Servers with Sidecar

Step	Procedure	Result
<p>6.</p> <div style="border: 1px solid black; width: 20px; height: 20px; margin-left: 5px;"></div>	<p><i>View output from the above command</i></p>	<p>Verify output of the previous command. This should appear like the example output below. Verify that there are four logical drives: three logical drives with four physical drives, and a single logical drive with two physical drives.</p> <pre> Smart Array P220i in Slot 0(Embedded) (sn: PCQVU0CRH5V2JU) array A (SAS, Unused Space: 0 MB) logicaldrive 1(838.3 GB, RAID 1, OK) physicaldrive 1I:1:1 (port 1I:box 1:bay 1, SAS, 900.1 GB, OK) physicaldrive 1I:1:2 (port 1I:box 1:bay 2, SAS, 900.1 GB, OK) SEP (Vendor ID PMCSIERA, Model SRCv4x6G) 380 (WWID: 5001438028DDB56F) Smart Array P410i in Slot 3(sn: 5001438025905EB0) array A (SAS, Unused Space: 0 MB) logicaldrive 1(820.2 GB, RAID 1+0, OK) physicaldrive 1I:1:1 (port 1I:box 1:bay 1, SAS, 146 GB, OK) physicaldrive 1I:1:2 (port 1I:box 1:bay 2, SAS, 146 GB, OK) physicaldrive 1I:1:3 (port 1I:box 1:bay 3, SAS, 146 GB, OK) physicaldrive 1I:1:4 (port 1I:box 1:bay 4, SAS, 146 GB, OK) physicaldrive 1I:1:5 (port 1I:box 1:bay 5, SAS, 146 GB, OK) physicaldrive 1I:1:6 (port 1I:box 1:bay 6, SAS, 146 GB, OK) physicaldrive 1I:1:7 (port 1I:box 1:bay 7, SAS, 146 GB, OK) physicaldrive 1I:1:8 (port 1I:box 1:bay 8, SAS, 146 GB, OK) physicaldrive 1I:1:9 (port 1I:box 1:bay 9, SAS, 146 GB, OK) physicaldrive 1I:1:10 (port 1I:box 1:bay 10, SAS, 146 GB, OK) physicaldrive 1I:1:11 (port 1I:box 1:bay 11, SAS, 146 GB, OK) physicaldrive 1I:1:12 (port 1I:box 1:bay 12, SAS, 146 GB, OK) Expander 250 (WWID: 50014380251F83E6, Port: 1I, Box: 1) </pre>

Appendix E.3: Configuring Blade Disk Array on NO Network Element Servers with Sidecar

Step	Procedure	Result
7. <input type="checkbox"/>	Check for existing physical volumes	<pre># pvs</pre> <p>For Normal Capacity (Gen8 and Gen8+):</p> <pre>[root@hostname1380908951 ~]# pvs PV VG Fmt Attr PSize PFree /dev/sda2 vgroot lvm2 a-- 838.06g 827.06g</pre> <p>For Low Capacity (Gen8 and Gen8+):</p> <pre>[root@hostname1380908951 ~]# pvs PV VG Fmt Attr PSize PFree /dev/sda2 vgroot lvm2 a-- 819.03g 827.06g</pre> <p>For Normal Capacity (Gen9):</p> <pre>[root@BL9080501-Gen9-no-a ~]# pvs PV VG Fmt Attr PSize PFree /dev/sdb2 vgroot lvm2 a-- 838.06g 827.06g</pre> <p>For Low Capacity (Gen9):</p> <pre>[root@BL9080501-Gen9-no-a ~]# pvs PV VG Fmt Attr PSize PFree /dev/sdb2 vgroot lvm2 a-- 819.03g 827.06g</pre> <p>NOTE: If an additional device <code>/dev/sdb</code> is displayed by this command then physical volumes are already configured. In such case continue to Step 9 of this procedure.</p>
8. <input type="checkbox"/>	Create physical volume <code>sdb</code>	<pre># pvcreate /dev/sdb</pre> <p>Physical volume <code>"/dev/sdb"</code> successfully created</p>
9. <input type="checkbox"/>	Create volume group <code>stripe_vg</code>	<p>**Don't execute for Low Capacity C-Class</p> <pre># vgcreate stripe_vg /dev/sdb</pre> <p>Volume group <code>"stripe_vg"</code> successfully created</p>
10. <input type="checkbox"/>	Create logical volume <code>rundb</code>	<p>**Don't execute for Low Capacity C-Class</p> <pre># lvcreate -L 385G --alloc anywhere --name rundb stripe_vg</pre> <p>Rounding size (98560 extents) up to stripe boundary size (98562 extents) Logical volume <code>"rundb"</code> created</p>

Appendix E.3: Configuring Blade Disk Array on NO Network Element Servers with Sidecar

Step	Procedure	Result
11. <input type="checkbox"/>	Make filesystem on <i>rundb</i>	<p>**Don't execute for Low Capacity C-Class</p> <pre># mkfs -t ext4 /dev/strip_vg/rundb mke2fs 1.43-WIP (20-Jun-2013) Filesystem label= OS type: Linux Block size=4096 (log=2) Fragment size=4096 (log=2) Stride=0 blocks, Stripe width=0 blocks 25231360 inodes, 100925440 blocks 5046272 blocks (5.00%) reserved for the super user First data block=0 Maximum filesystem blocks=4294967296 3080 block groups 32768 blocks per group, 32768 fragments per group 8192 inodes per group Superblock backups stored on blocks: 32768, 98304, 163840, 229376, 294912, 819200, 884736, 1605632, 2654208, 4096000, 7962624, 11239424, 20480000, 23887872, 71663616, 78675968 Allocating group tables: done Writing inode tables: done Creating journal (32768 blocks): done Writing superblocks and filesystem accounting information: done This filesystem will be automatically checked every 22 mounts or 180 days, whichever comes first. Use tune2fs -c or -i to override.</pre>
Execute the following step 12 on Gen9 servers only!		
12. <input type="checkbox"/>	Execute the following <i>syscheck/restart</i> steps in order	<pre>#syscheck --reconfig disk smart # service smartd restart # syscheck disk smart</pre>
THIS PROCEDURE HAS BEEN COMPLETED		

E.4 Configuring Oracle RMS Disk Array (NO Network Element Servers)

Appendix E.4: Configuring Oracle RMSDisk Array on NO Network Element Servers

Step	Procedure	Result
1. <input type="checkbox"/>	Access the Oracle RMSserver's console.	Connect to the server's console using A.2 Accessing the iLo VGA Redirection Window for OracleRMS Servers or ssh to the server or Appendix A.3 Accessing the iLo Console for Oracle RMS Servers.

Appendix E.4: Configuring Oracle RMSDisk Array on NO Network Element Servers

Step	Procedure	Result																																																																																														
<p>2.</p> <input type="checkbox"/>	<p><i>Remove prior RAID configuration if necessary</i></p>	<p>If the hardware has been through a prior installation, perform Appendix M.3: Removing RMS Disk Array Configuration for Oracle Servers before continuing.</p>																																																																																														
<p>3.</p> <input type="checkbox"/>	<p><i>Configure Disk Array</i></p>	<pre># raidconfig create raid --stripe-size 128 --level 10 -d c0d2,c0d3,c0d4,c0d5</pre> <pre>[root@UDRPV09-S1-TVOE-B ~]# raidconfig create raid --stripe-size 128 --level 10 -d c0d2,c0d3,c0d4,c0d5</pre> <pre>Create RAID level 10 using the following disk(s):</pre> <pre> Disk c0d2 (controller 0 slot 2)</pre> <pre> Disk c0d3 (controller 0 slot 3)</pre> <pre> Disk c0d4 (controller 0 slot 4)</pre> <pre> Disk c0d5 (controller 0 slot 5) [y/n]? y</pre> <pre>RAID created successfully</pre> <pre>[root@UDRPV09-S1-TVOE-B ~]# █</pre>																																																																																														
<p>4.</p> <input type="checkbox"/>	<p><i>Verify the disk array configuration</i></p>	<pre># raidconfig list all</pre> <p>The disk array configuration should be as shown:</p> <pre>CONTROLLER c0</pre> <pre>=====</pre> <table border="1"> <thead> <tr> <th>Manufacturer</th> <th>Model</th> <th>F/W Version</th> <th>RAID Volumes</th> <th>Disks</th> </tr> </thead> <tbody> <tr> <td>LSI Logic</td> <td>MegaRAID 9361-8i</td> <td>4.230.40-3739</td> <td>2</td> <td>6</td> </tr> </tbody> </table> <pre>RAID Volumes</pre> <pre>=====</pre> <table border="1"> <thead> <tr> <th>ID</th> <th>Name</th> <th>Device</th> <th>Status</th> <th>Num Disks</th> <th>Level</th> <th>Size (GiB)</th> </tr> </thead> <tbody> <tr> <td>c0r0</td> <td></td> <td>/dev/sda</td> <td>OK</td> <td>2</td> <td>1</td> <td>1117</td> </tr> <tr> <td>c0r1</td> <td></td> <td>/dev/sdb</td> <td>OK</td> <td>4</td> <td>10</td> <td>743</td> </tr> </tbody> </table> <pre>DISKS In Use</pre> <pre>=====</pre> <table border="1"> <thead> <tr> <th>ID</th> <th>Chassis</th> <th>Slot</th> <th>RAID ID</th> <th>Status</th> <th>Type</th> <th>Media</th> <th>Spare</th> <th>Size (GiB)</th> </tr> </thead> <tbody> <tr> <td>c0d0</td> <td>0</td> <td>0</td> <td>c0r0</td> <td>OK</td> <td>sas</td> <td>HDD</td> <td>-</td> <td>1117</td> </tr> <tr> <td>c0d1</td> <td>0</td> <td>1</td> <td>c0r0</td> <td>OK</td> <td>sas</td> <td>HDD</td> <td>-</td> <td>1117</td> </tr> <tr> <td>c0d2</td> <td>0</td> <td>2</td> <td>c0r1</td> <td>OK</td> <td>sas</td> <td>SSD</td> <td>-</td> <td>372</td> </tr> <tr> <td>c0d3</td> <td>0</td> <td>3</td> <td>c0r1</td> <td>OK</td> <td>sas</td> <td>SSD</td> <td>-</td> <td>372</td> </tr> <tr> <td>c0d4</td> <td>0</td> <td>4</td> <td>c0r1</td> <td>OK</td> <td>sas</td> <td>SSD</td> <td>-</td> <td>372</td> </tr> <tr> <td>c0d5</td> <td>0</td> <td>5</td> <td>c0r1</td> <td>OK</td> <td>sas</td> <td>SSD</td> <td>-</td> <td>372</td> </tr> </tbody> </table>	Manufacturer	Model	F/W Version	RAID Volumes	Disks	LSI Logic	MegaRAID 9361-8i	4.230.40-3739	2	6	ID	Name	Device	Status	Num Disks	Level	Size (GiB)	c0r0		/dev/sda	OK	2	1	1117	c0r1		/dev/sdb	OK	4	10	743	ID	Chassis	Slot	RAID ID	Status	Type	Media	Spare	Size (GiB)	c0d0	0	0	c0r0	OK	sas	HDD	-	1117	c0d1	0	1	c0r0	OK	sas	HDD	-	1117	c0d2	0	2	c0r1	OK	sas	SSD	-	372	c0d3	0	3	c0r1	OK	sas	SSD	-	372	c0d4	0	4	c0r1	OK	sas	SSD	-	372	c0d5	0	5	c0r1	OK	sas	SSD	-	372
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<p>5.</p> <input type="checkbox"/>	<p><i>Reboot the server</i></p>	<p>Reboot the tvoe server (to make changes from /dev/sdc to /dev/sdb)</p> <pre># reboot</pre>																																																																																														

Appendix E.4: Configuring Oracle RMSDisk Array on NO Network Element Servers

Step	Procedure	Result
<p>6.</p> <input type="checkbox"/>	<p><i>Execute the following syscheck/restart steps in order</i></p>	<pre>#syscheck --reconfig disk smart # service smartd restart # syscheck disk smart</pre>

Appendix F. Installing Operating Systems

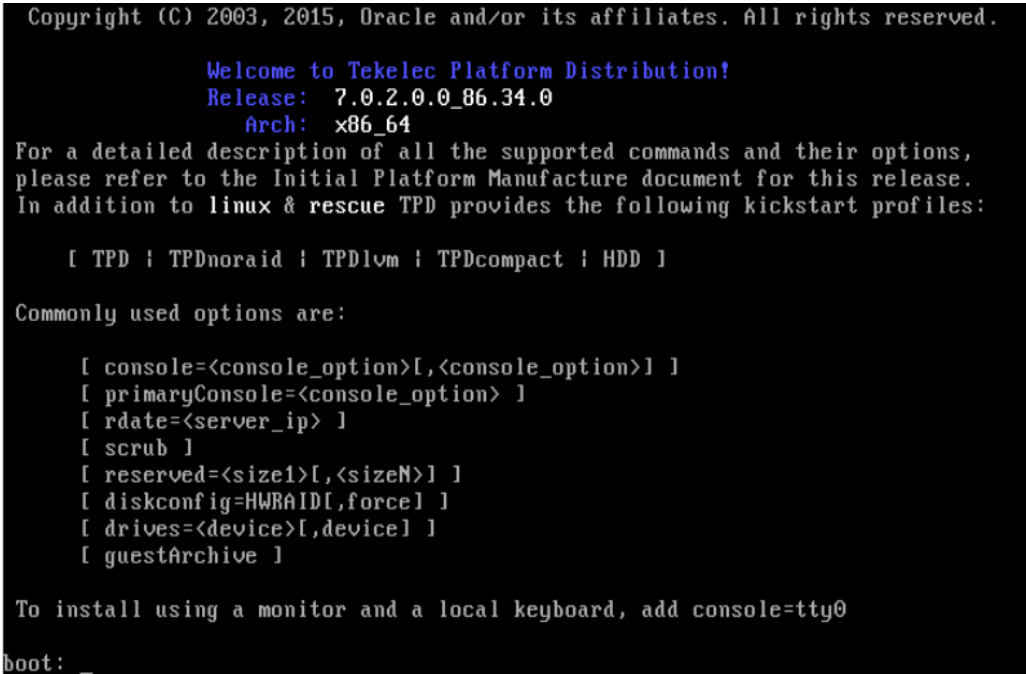
This procedure contains steps to apply server configuration scripts to rack mount servers.

F.1 Installing Operating Systems with ILO

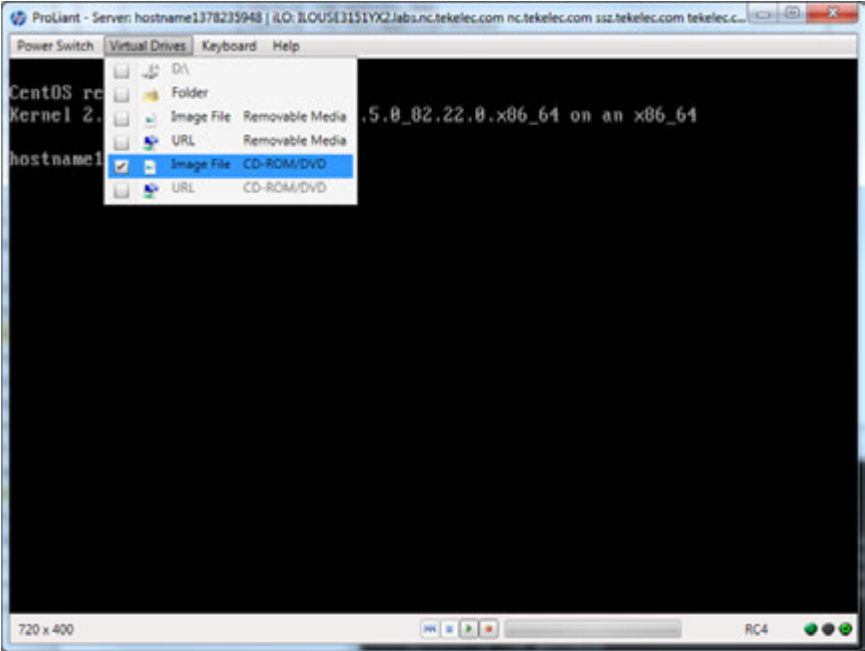
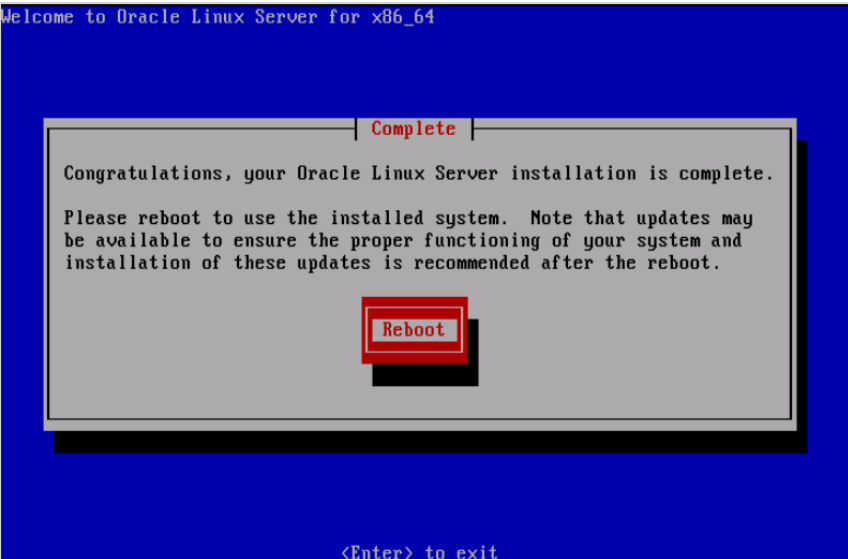
Appendix F.1: Installing Operating Systems with ILO

Step	Procedure	Result
1. <input type="checkbox"/>	<i>Access the HP server's console.</i>	Connect to the HP server's console using one of the access methods described in Section 2.1.2 .
2. <input type="checkbox"/>	<i>Mount the media containing the TPD/TVOE software. [TVOE for low capacity configurations]</i>	Follow steps defined in ... Appendix C.1 Mounting Physical Media on HP Servers or Appendix C.2 Mounting Virtual Media on HP Servers ... to mount the OS software.
3. <input type="checkbox"/>	<i>Initiate a reboot of the server.</i>	# reboot Broadcast message from sathiya@sathiya-laptop (/dev/pts/1) at 11:28 ... The system is going down for reboot NOW!

Appendix F.1: Installing Operating Systems with ILO

Step	Procedure	Result
<p>4.</p> <input type="checkbox"/>	<p>Begin Platform Installation process</p>	<p>Once the server reboots, it will reboot from the TPD media and a boot prompt shall be displayed. IPM the server using the following command <u>exactly</u> as shown below <i>Note: no space between the HWRAID, comma, and force: HWRAID,force</i></p> <pre>TPDnoraid diskconfig=HWRAID,force console=tty0</pre>  <p>boot: _</p>

Appendix F.1: Installing Operating Systems with ILO

Step	Procedure	Result
<p>5.</p> <p><input type="checkbox"/></p>	<p><i>Platform installation Complete</i></p> <p><i>When you are finished using the mounted drive, unmount it by...</i></p> <p>1) running umount</p> <p>2) Selecting Virtual Drives menu and clicking the drive option in use to remove its check mark.</p>	<p>Platform installation process takes about 30 minutes, you will see several messages and screens in the process.</p> <p>Once the Platform installation is complete, you will be prompted to press Enter as shown in second screen shot below. (Note: unmount before selecting “Enter”)</p> <p>Remove the USB driver or unmount the ISO image from the iLO and press Enter to reboot the server. Note that the CD may eject automatically.</p> <pre># umount /dev/<device_name></pre>  <p>The screenshot shows the iLO interface with a 'Virtual Drives' menu open. The menu includes options for 'Image File', 'URL', and 'CD-ROM/DVD'. The 'Image File' option is selected, and a sub-menu is visible showing 'Removable Media' and 'CD-ROM/DVD' options. The background shows a terminal window with the text 'CentOS rc Kernel 2.' and 'hostname1'.</p>  <p>The screenshot shows the Oracle Linux Server installation completion screen. The text reads: 'Welcome to Oracle Linux Server for x86_64', 'Complete', 'Congratulations, your Oracle Linux Server installation is complete.', 'Please reboot to use the installed system. Note that updates may be available to ensure the proper functioning of your system and installation of these updates is recommended after the reboot.', and a red 'Reboot' button. At the bottom, it says '<Enter> to exit'.</p>

Appendix F.1: Installing Operating Systems with ILO

Step	Procedure	Result
6. <input type="checkbox"/>	Server Reboot	Once the management server reboots, you should see a login prompt. Note that during the first system boot, swap files may be initialized and activated. Each swap file will take about 2 minutes.
7. <input type="checkbox"/>	Verify that the TPD release is 7.0.2.x	# <code>getPlatRev</code> 7.0.2.0.0-86.34.0
8. <input type="checkbox"/>	Execute "alarmMgr" command to verify health of the server before Application install.	# <code>alarmMgr --alarmStatus</code> <i>NOTE: This command should return no output on a healthy system.</i>
9. <input type="checkbox"/>	Execute "verifyIPM" as a secondary way to verify health of the server before Application install.	# <code>verifyIPM</code> <i>NOTE: This command should return no output on a healthy system.</i>
THIS PROCEDURE HAS BEEN COMPLETED		

F.2 Installing Operating Systems with PM&C

Appendix F.2: Installing Operating Systems with PM&C

Step	Procedure	Result
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<p>1.</p> <p><input type="checkbox"/></p>	<p>PM&C GUI:</p> <p>Login to PM&C GUI</p>	<p>Open web browser and enter: <a href="http://<pmac_management_network_ip>">http://<pmac_management_network_ip></p> <p>Login as pmacadmin user.</p> 																																																																																				
<p>2.</p> <p><input type="checkbox"/></p>	<p>PM&C GUI:</p> <p>Select...</p> <p><u>Main Menu</u></p> <p>→ Software</p> <p>→ Software Inventory</p> <p>...as shown on the right.</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</th> </tr> </thead> <tbody> <tr> <td>RMS: pc9000705</td> <td>192.168.1.5</td> <td>pc9000705-TVOE</td> <td>TPD (x86_64)</td> <td>7.0.2.0.0-86.32.0</td> <td>TVOE</td> <td>3.0.1</td> </tr> <tr> <td>RMS: pc9000705</td> <td>192.168.1.18</td> <td>pc9000705-mp1</td> <td>TPD (x86_64)</td> <td>7.0.2.0.0-86.34.0</td> <td>UDR</td> <td>12.1</td> </tr> <tr> <td>Guest: pc9000705-mp1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>RMS: pc9000705</td> <td>192.168.1.20</td> <td>pc9000705-mp2</td> <td>TPD (x86_64)</td> <td>7.0.2.0.0-86.34.0</td> <td>UDR</td> <td>12.1</td> </tr> <tr> <td>Guest: pc9000705-mp2</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>RMS: pc9000705</td> <td>192.168.1.21</td> <td>pc9000705-no-a</td> <td>TPD (x86_64)</td> <td>7.0.2.0.0-86.34.0</td> <td>UDR</td> <td>12.1</td> </tr> <tr> <td>Guest: pc9000705-no-a</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>RMS: pc9000705</td> <td>192.168.1.19</td> <td>pc9000705-so-a</td> <td>TPD (x86_64)</td> <td>7.0.2.0.0-86.34.0</td> <td>UDR</td> <td>12.1</td> </tr> <tr> <td>Guest: pc9000705-so-a</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>RMS: pc9000705</td> <td>192.168.1.1</td> <td>pc9000705-pmac</td> <td>TPD (x86_64)</td> <td>7.0.1.0.0-86.20.0</td> <td>PMAC</td> <td>6.0.1</td> </tr> <tr> <td>Guest: pmac</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Ident	IP Address	Hostname	Plat Name	Plat Version	App Name	App	RMS: pc9000705	192.168.1.5	pc9000705-TVOE	TPD (x86_64)	7.0.2.0.0-86.32.0	TVOE	3.0.1	RMS: pc9000705	192.168.1.18	pc9000705-mp1	TPD (x86_64)	7.0.2.0.0-86.34.0	UDR	12.1	Guest: pc9000705-mp1							RMS: pc9000705	192.168.1.20	pc9000705-mp2	TPD (x86_64)	7.0.2.0.0-86.34.0	UDR	12.1	Guest: pc9000705-mp2							RMS: pc9000705	192.168.1.21	pc9000705-no-a	TPD (x86_64)	7.0.2.0.0-86.34.0	UDR	12.1	Guest: pc9000705-no-a							RMS: pc9000705	192.168.1.19	pc9000705-so-a	TPD (x86_64)	7.0.2.0.0-86.34.0	UDR	12.1	Guest: pc9000705-so-a							RMS: pc9000705	192.168.1.1	pc9000705-pmac	TPD (x86_64)	7.0.1.0.0-86.20.0	PMAC	6.0.1	Guest: pmac						
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RMS: pc9000705	192.168.1.18	pc9000705-mp1	TPD (x86_64)	7.0.2.0.0-86.34.0	UDR	12.1																																																																																
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RMS: pc9000705	192.168.1.20	pc9000705-mp2	TPD (x86_64)	7.0.2.0.0-86.34.0	UDR	12.1																																																																																
Guest: pc9000705-mp2																																																																																						
RMS: pc9000705	192.168.1.21	pc9000705-no-a	TPD (x86_64)	7.0.2.0.0-86.34.0	UDR	12.1																																																																																
Guest: pc9000705-no-a																																																																																						
RMS: pc9000705	192.168.1.19	pc9000705-so-a	TPD (x86_64)	7.0.2.0.0-86.34.0	UDR	12.1																																																																																
Guest: pc9000705-so-a																																																																																						
RMS: pc9000705	192.168.1.1	pc9000705-pmac	TPD (x86_64)	7.0.1.0.0-86.20.0	PMAC	6.0.1																																																																																
Guest: pmac																																																																																						

3. **PM&C GUI:**

1) Highlight the desired servers based on its hardware identity...

*Note: You may select multiple blades/servers for simultaneous upgrade to the same release by holding the **Ctrl** (Control) key while selecting lines with the mouse.*

2) Click on the **Install OS** button.

Software Inventory

Filter ▼

Ident	IP Address	Hostname	Plat Name	Plat Version	App
Enc:11901 Bay:1F	192.168.1.132	hostname2486a3ab0f86	TPD (x86_64)	6.7.0.0.0-84.8.0	
Enc:11901 Bay:3F	192.168.1.131	hostname4ac7d19a257e	TPD (x86_64)	6.7.0.0.0-84.8.0	
Enc:11901 Bay:5F	192.168.1.133	BL119111305-TVOE	TPD (x86_64)	6.7.0-84.7.0	TVO
Enc:11901 Bay:5F Guest: UDR_S2_MP1					
Enc:11901 Bay:5F Guest: UDR_S2_MP2					
Enc:11901 Bay:5F Guest: UDR_SO_2A					
Enc:11901 Bay:6F	192.168.1.130	BL119111306-TVOE	TPD (x86_64)	6.7.0-84.7.0	TVO
Enc:11901 Bay:6F Guest: UDR_S2_MP3					

Install OS
Upgrade
Accept Upgrade
Reject Upgrade

Regenerate Guest Device Mapping ISO
Refresh

4. **PM&C GUI:**

1) Select the desired **Image Name** of the OS software.

2) Click on the **Start Software Install** button.

3) Click on the popup dialog box **OK** button.

Software Install - Select Image

Targets

Entity	Status
Host: pc9000705-tvoe Guest: MP1	
Host: pc9000705-tvoe Guest: NOA	
Host: pc9000705-tvoe Guest: SOA	

Select Image

Image Name	Type	Architecture	Description
TPD.install-7.0.1.0.0_86.17.0-OracleLinux6.6-x86_64	Bootable	x86_64	

Start Software Install

You have selected to install a bootable OS iso on the selected targets.

The following targets already have an Application:

- Enc:11901 Bay:5F ==> TVOE
- Enc:11901 Bay:6F ==> TVOE
- Enc:11902 Bay:5F ==> TVOE
- Enc:11902 Bay:6F ==> TVOE

Are you sure you want to install TVOE-2.7.0.0.0_84.8.0-x86_64 on the listed entities?

OK
Cancel

5.

PM&C GUI:

Upgrade Tasks will appear for each upgrade started this way under the left column **Status**.

6.

PM&C GUI:

Select...

Main Menu
→ **Task Monitoring**

...as shown on the right.

Note: Install tasks may be monitored for completion on this screen.

ID	Task	Target	Status
125	Install OS	Enc:701 Bay:4E Guest: SO-B	Waiting for target server to boot
124	Install OS	Enc:701 Bay:4E Guest: MP-3	Waiting for target server to boot
123	Install OS	Enc:701 Bay:3E Guest: SO-A	Waiting for target server to boot
122	Install OS	Enc:701 Bay:3E Guest: MP-1	Waiting for target server to boot
121	Upgrade	Enc:701 Bay:2E	Success

7.

PM&C GUI:

Look for install completion in the **Status** column.

ID	Task	Target	Status
173	Install OS	Enc:701 Bay:4E Guest: SO-B	Done: TPD.install-6.5.0_82.22.0-CentOS6.4-x86_64
172	Install OS	Enc:701 Bay:4E Guest: MP-3	Done: TPD.install-6.5.0_82.22.0-CentOS6.4-x86_64
171	Install OS	Enc:701 Bay:3E Guest: SO-A	Done: TPD.install-6.5.0_82.22.0-CentOS6.4-x86_64

Execute steps 8-9 for all Gen9 installations EXCEPT for “Normal Capacity SO/MP Host Installs”

8.

Run `vgscan`

Run the following command on **Gen9** server only:

```
# vgscan
```

Reading all physical volumes. This may take a while...
Found volume group "vgroot" using metadata type lvm2

9.

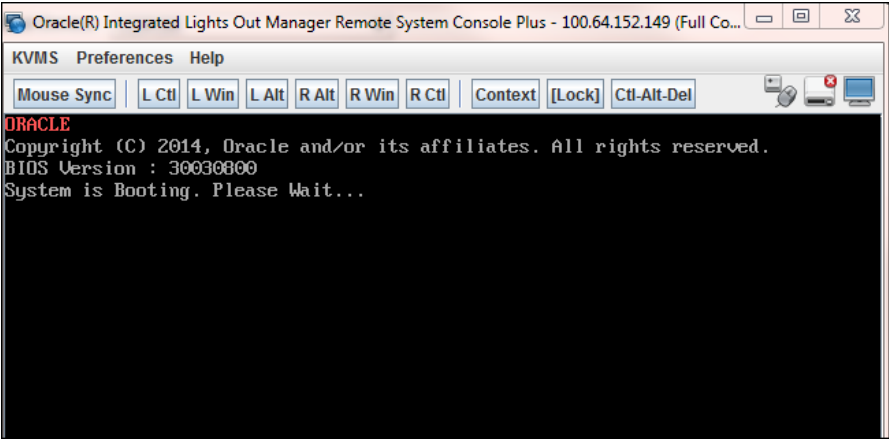
Execute the following `syscheck/restart` steps in order

```
# syscheck --reconfig disk smart
# service smartd restart
# syscheck disk smart
```

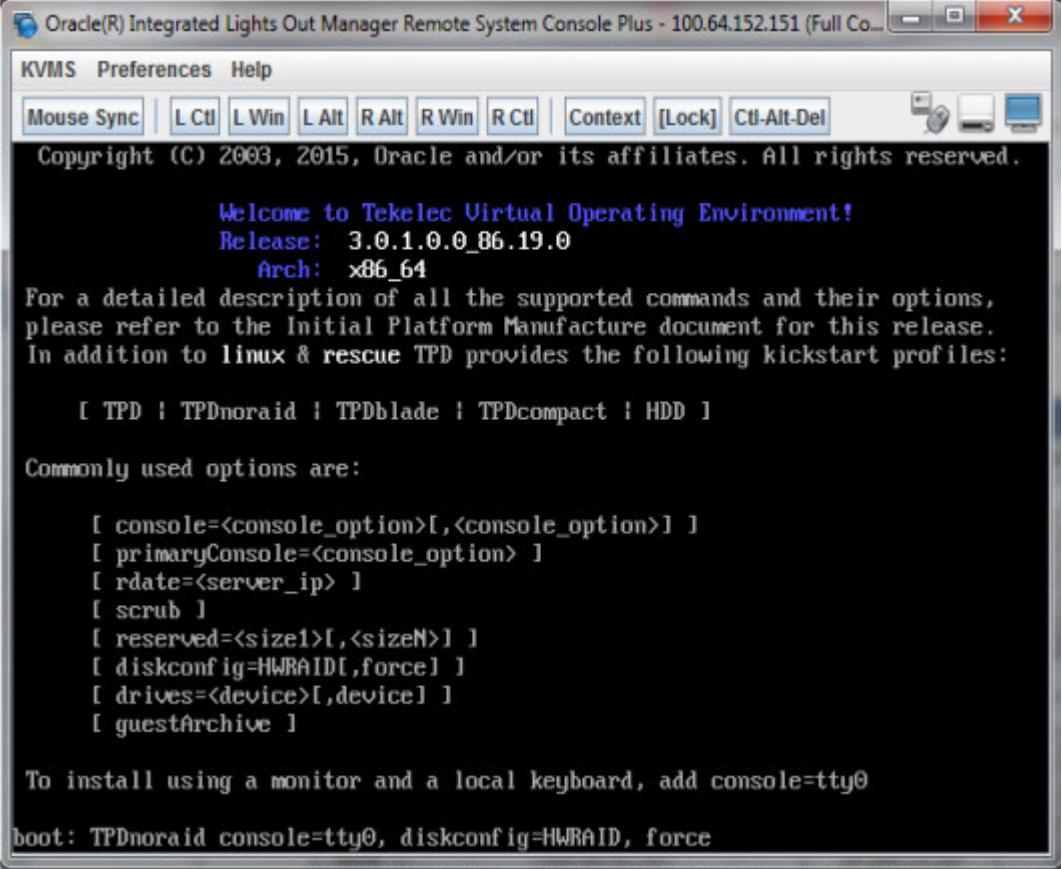
THIS PROCEDURE HAS BEEN COMPLETED

F.3 Installing Operating Systems with ILO for OracleRMS

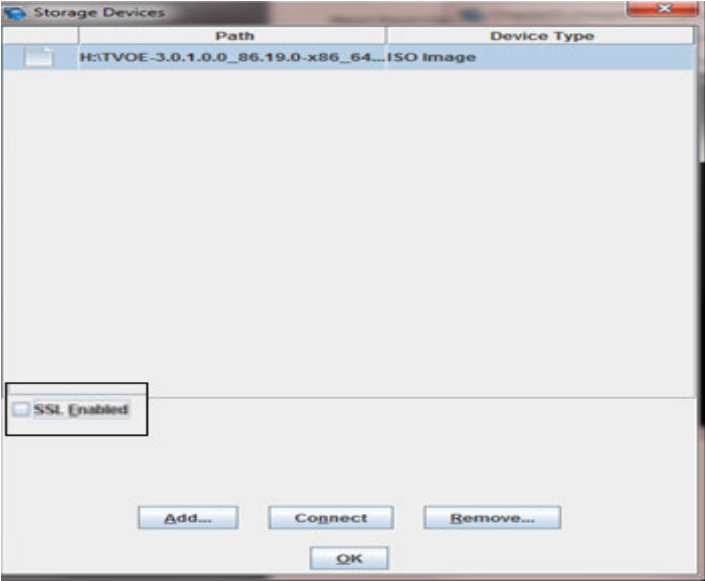
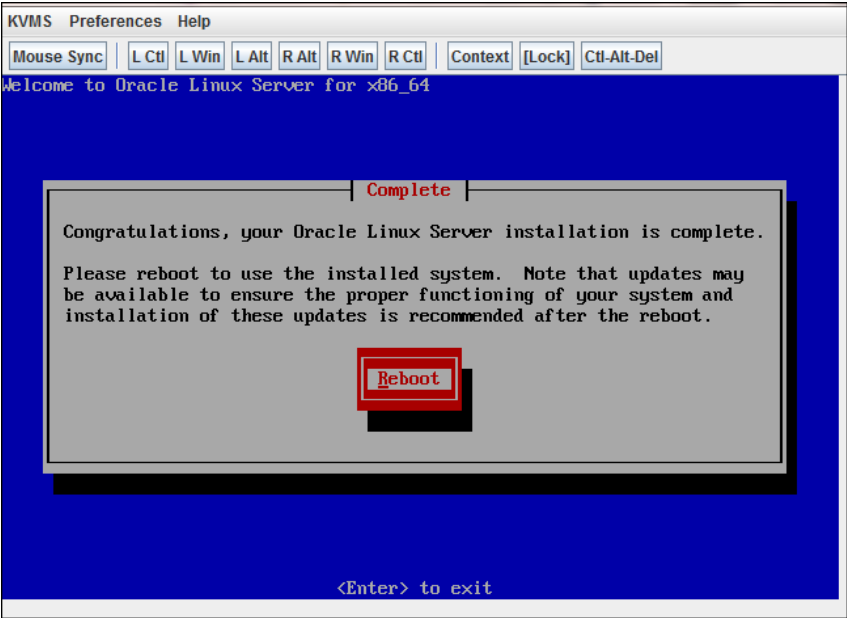
Appendix F.3: Installing Operating Systems with ILO for OracleRMS

Step	Procedure	Result
<p>1.</p> <input type="checkbox"/>	<p><i>Mount the media containing the OS software.</i></p>	<p>Follow steps defined in ...</p> <p>Appendix C.3 Mounting Virtual Media on Oracle RMS Servers ... to mount the OS software.</p>
<p>2.</p> <input type="checkbox"/>	<p><i>iLO Console window</i></p> <p><i>Login as root user</i></p> <p><i>Initiate a reboot of the server.</i></p>	<p># <code>reboot</code></p> <p>The system is going down for reboot NOW!</p>  <p>The screenshot shows a terminal window titled "Oracle(R) Integrated Lights Out Manager Remote System Console Plus - 100.64.152.149 (Full Co...". The terminal content includes: "KVMS Preferences Help", a toolbar with buttons like "Mouse Sync", "L Ctl", "L Win", "L Alt", "R Alt", "R Win", "R Ctl", "Context", "[Lock]", and "Ctl-Alt-Del", and the text: "ORACLE Copyright (C) 2014, Oracle and/or its affiliates. All rights reserved. BIOS Version : 30030800 System is Booting. Please Wait..."</p>

Appendix F.3: Installing Operating Systems with ILO for OracleRMS

Step	Procedure	Result
<p>3.</p> <input type="checkbox"/>	<p><i>Begin Platform Installation process</i></p>	<p>Once the server reboots, it will reboot from the TPD media and a boot prompt shall be displayed. IPM the server using the following command <u>exactly</u> as shown below (no space between HWRAID and force):</p> <p><code>TPDnoraaid console=tty0, diskconfig=HWRAID,force</code></p> 

Appendix F.3: Installing Operating Systems with ILO for OracleRMS

Step	Procedure	Result
<p>4.</p> <p><input type="checkbox"/></p>	<p><i>Platform installation Complete</i></p> <p>Uncheck SSL Enabled checkbox before disconnecting (if not done already)</p> <p><i>From iLO console:</i></p> <p><i>To Disconnect the ISO image:</i></p> <p><i>Go to KVMS/Storage and select "Disconnect"</i></p>	<p>Platform installation process takes about 30 minutes, you will see several messages and screens in the process. Once the Platform installation is complete, you will be prompted to press "Enter" as shown in second diagram.</p> <p>Disconnect the ISO image from the iLO and press Enter to reboot the server.</p>  
<p>5.</p> <p><input type="checkbox"/></p>	<p><i>Post Server Reboot</i></p>	<p>Once the management server reboots, you should see a login prompt. Note that during the first system boot, swap files may be initialized and activated. Each swap file will take about 2 minutes. Log back into the system as root.</p>

Appendix F.3: Installing Operating Systems with ILO for OracleRMS

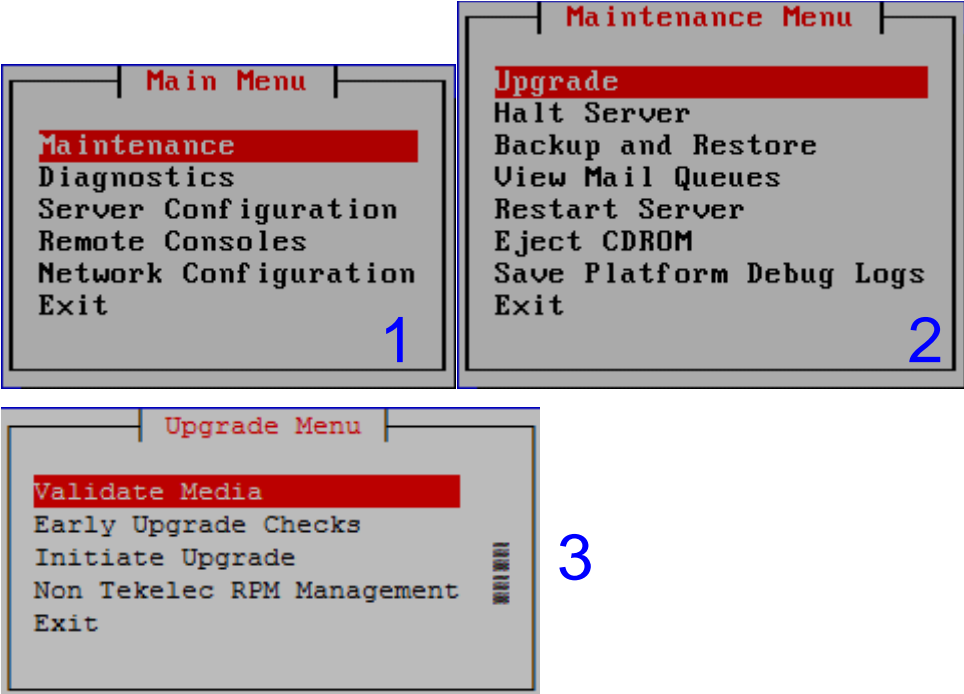
Step	Procedure	Result
<p>6.</p> <input type="checkbox"/>	<p>Verify that the TPD release is 7.0.2.x.</p>	<pre># getPlatRev 7.0.2.0.0-86.34.0</pre>
<p>7.</p> <input type="checkbox"/>	<p>Execute "alarmMgr" command to verify health of the server before Application install.</p>	<pre># alarmMgr --alarmStatus</pre> <p><i>NOTE: This command should return no output on a healthy system.</i></p>
<p>8.</p> <input type="checkbox"/>	<p>Execute "verifyIPM" as a secondary way to verify health of the server before Application install.</p>	<pre># verifyIPM</pre> <p><i>NOTE: This command should return no output on a healthy system.</i></p>
<p>THIS PROCEDURE HAS BEEN COMPLETED</p>		

Appendix G. Installing UDR Application

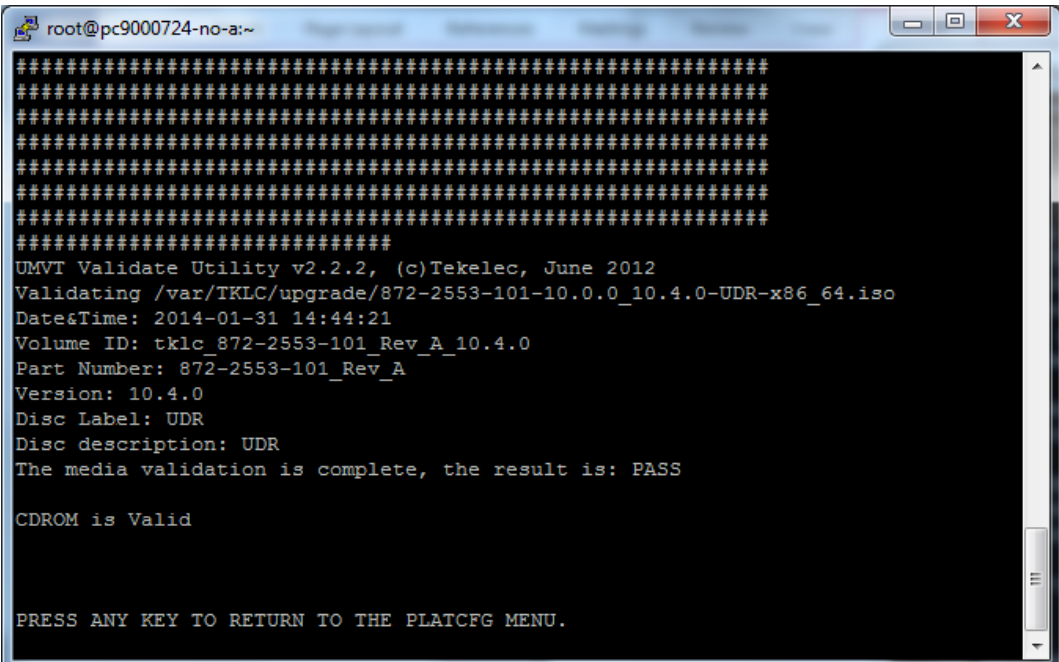
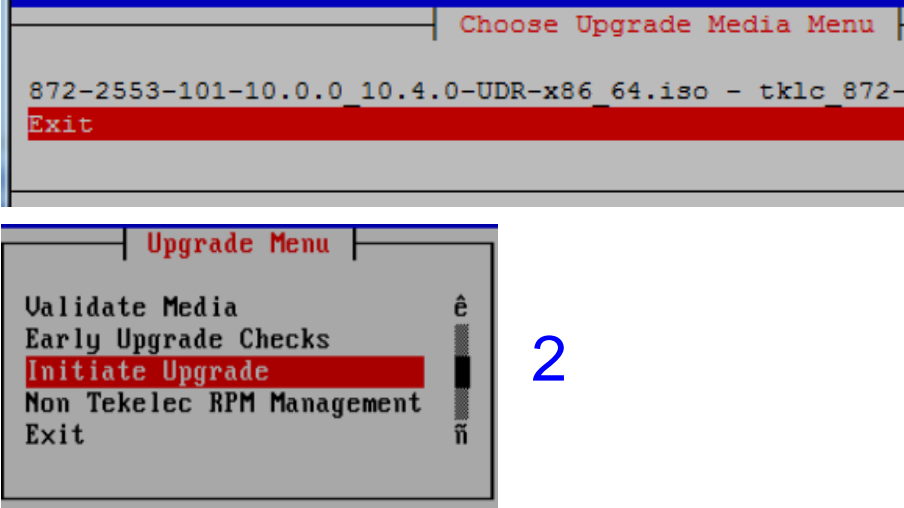
This procedure contains steps to apply server configuration scripts to rack mount servers.

G.1 Installing UDR Application with ILO

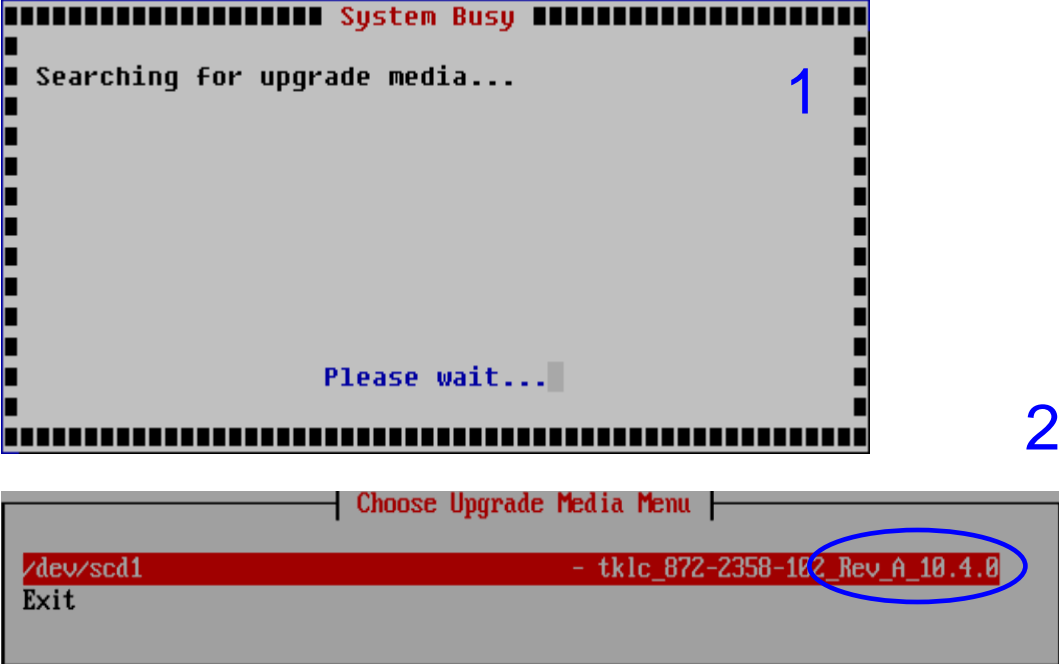
Appendix G.1: Install UDR Application with ILO

Step	Procedure	Result
1. <input type="checkbox"/>	Access the HP server's console.	Connect to the HP server's console using one of the access methods described in Section 2.1.2 .
2. <input type="checkbox"/>	Mount the media containing the UDR software.	Follow steps defined in... C.1 Mounting Physical Media on HP Servers or C.2 Mounting Virtual Media on HP Servers ...to mount the UDR software.
3. <input type="checkbox"/>	Login to the "platcfg" utility.	[root@hostname1260476221 ~]# <code>su - platcfg</code>
4. <input type="checkbox"/>	From the "platcfg" Main Menu... Select each option as shown on the right, pressing the <ENTER> key after each selection.	 <p>The screenshots illustrate the navigation steps:</p> <ul style="list-style-type: none"> 1. Main Menu: Shows options: Maintenance (highlighted), Diagnostics, Server Configuration, Remote Consoles, Network Configuration, Exit. 2. Maintenance Menu: Shows options: Upgrade (highlighted), Halt Server, Backup and Restore, View Mail Queues, Restart Server, Eject CDROM, Save Platform Debug Logs, Exit. 3. Upgrade Menu: Shows options: Validate Media (highlighted), Early Upgrade Checks, Initiate Upgrade, Non Tekelec RPM Management, Exit.

Appendix G.1: Install UDR Application with ILO

Step	Procedure	Result
<p>5.</p> <p><input type="checkbox"/></p>	<p>From the “platcfg” Main Menu...</p> <p>Verify “CDROM is Valid.”</p> <p>..... then press any key to return to platcfg menu.</p>	
<p>6.</p> <p><input type="checkbox"/></p>	<p>From the “platcfg” Main Menu...</p> <p>Select each option as shown on the right, pressing the <ENTER> key after each selection.</p>	

Appendix G.1: Install UDR Application with ILO

Step	Procedure	Result
<p>7.</p> <input type="checkbox"/>	<p>Verify that the Application release level shown matches the target release.</p>	
<p>8.</p> <input type="checkbox"/>	<p>Output similar to that shown on the right may be observed as the Application install progresses.</p>	<pre> Determining if we should upgrade... Install product is TPD Install product record exists in /etc/tekelec.cfg Install products match Stopping cron service... Checking for stale RPM DB locks... Installing public key /mnt/upgrade/upgrade/pub_keys/MySQL_public_key.asc... Installing public key /mnt/upgrade/upgrade/pub_keys/RPM-GPG-KEY-redhat-beta... Installing public key /mnt/upgrade/upgrade/pub_keys/RPM-GPG-KEY-redhat-release... . Checking for any missing packages or files Checking for missing files... No missing files found. Checking if upgrade is supported Current platform version: 5.0.0-72.28.0 Target platform version: 5.0.0-72.28.0 Minimum supported version: 4.2.0-70.60.0 Upgrade from same release as current is supported Evaluate if there are any packages to upgrade Evaluating if there are packages to upgrade... </pre>

Appendix G.1: Install UDR Application with ILO


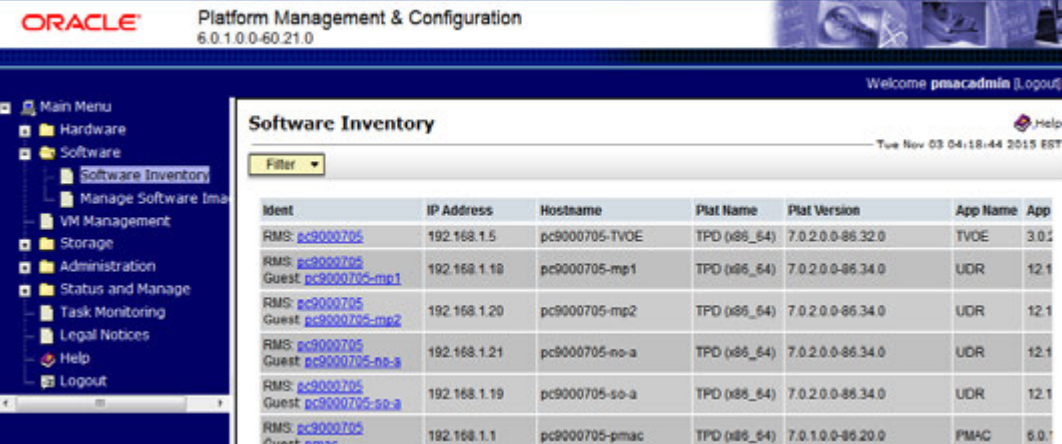
Step	Procedure	Result
<p>9.</p> <input type="checkbox"/>	<p>Output similar to that shown on the right may be observed as the Application install progresses.</p>	<pre>Adding /usr/TKLC/plat/etc/rpm.d/plat.TKLCplat.macro to /etc/rpm/macros... [OK] Adding /usr/TKLC/plat/etc/rpm.d/plat.TPD-provd.macro to /etc/rpm/macros... [OK] Updating /etc/rpm/macros... Now dispatching /mnt/upgrade/upgrade/ugwrap --noexecdispatch OK] Initializing Upgrade Wrapper... package TKLCappworks is not installed TKLCappworks is not installed, therefore this must be an initial install. Validating Distribution... Validating cdrom... ##### #####</pre>
<p>10.</p> <input type="checkbox"/>	<p>Output similar to that shown on the right may be observed as the server initiates a post-install reboot.</p>	<pre>scsi7 : SCSI emulation for USB Mass Storage devices scsi8 : SCSI emulation for USB Mass Storage devices input: Intel(R) Multidevice as /class/input/input3 input: USB HID v1.01 Mouse [Intel(R) Multidevice] on usb-0000:00:1d.3-1 input: Intel(R) Multidevice as /class/input/input4 input: USB HID v1.01 Keyboard [Intel(R) Multidevice] on usb-0000:00:1d.3-1 Restarting system. - machine restart █</pre>
<p>11.</p> <input type="checkbox"/>	<p>After the server has completed reboot... Log back into the server as the "root" user.</p>	<pre>CentOS release 5.6 (Final) Kernel 2.6.18-238.19.1.el5prere15.0.0_72.22.0 on an x86_64 hostname1260476221 login:root Password: <root_password></pre>
<p>12.</p> <input type="checkbox"/>	<p>Output similar to that shown on the right will appear as the server returns to a command prompt.</p>	<pre>*** TRUNCATED OUTPUT *** ===== This system has been upgraded but the upgrade has not yet been accepted or rejected. Please accept or reject the upgrade soon. ===== VPATH=/opt/TKLCcomcol/runcm5.16:/opt/TKLCcomcol/cm5.16 PRODPATH= RELEASE=5.16 RUNID=00 VPATH=/var/TKLC/rundb:/usr/TKLC/appworks:/usr/TKLC/awpcommon:/usr/TKLC/co magent-gui:/usr/TKLC/comagent:/usr/TKLC/udr PRODPATH=/opt/comcol/prod RUNID=00 [root@hostname1260476221 ~]#</pre>

Appendix G.1: Install UDR Application with ILO

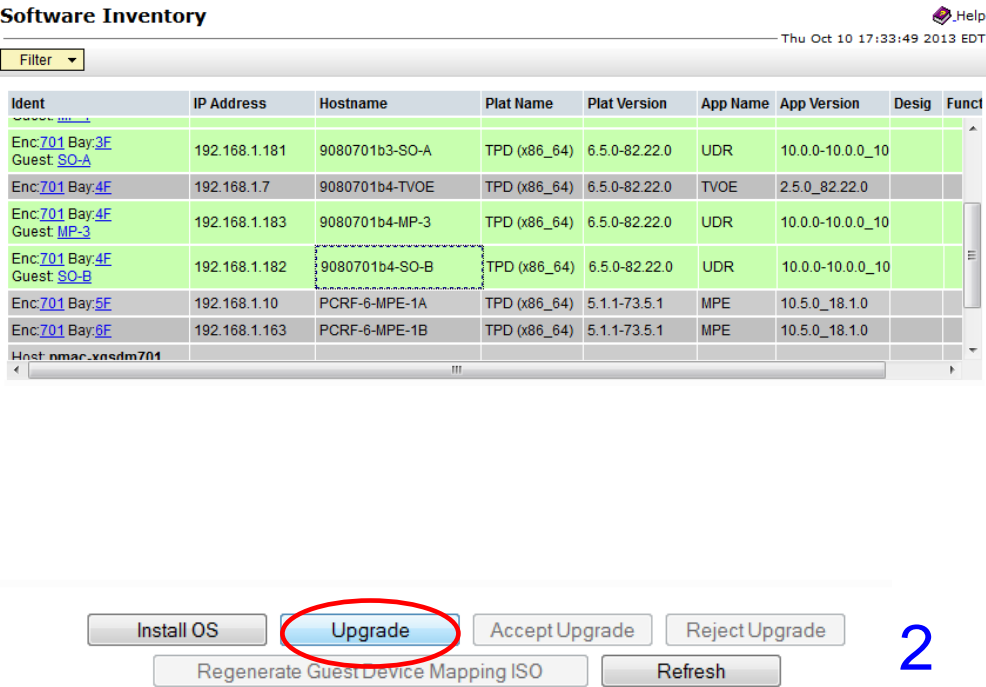
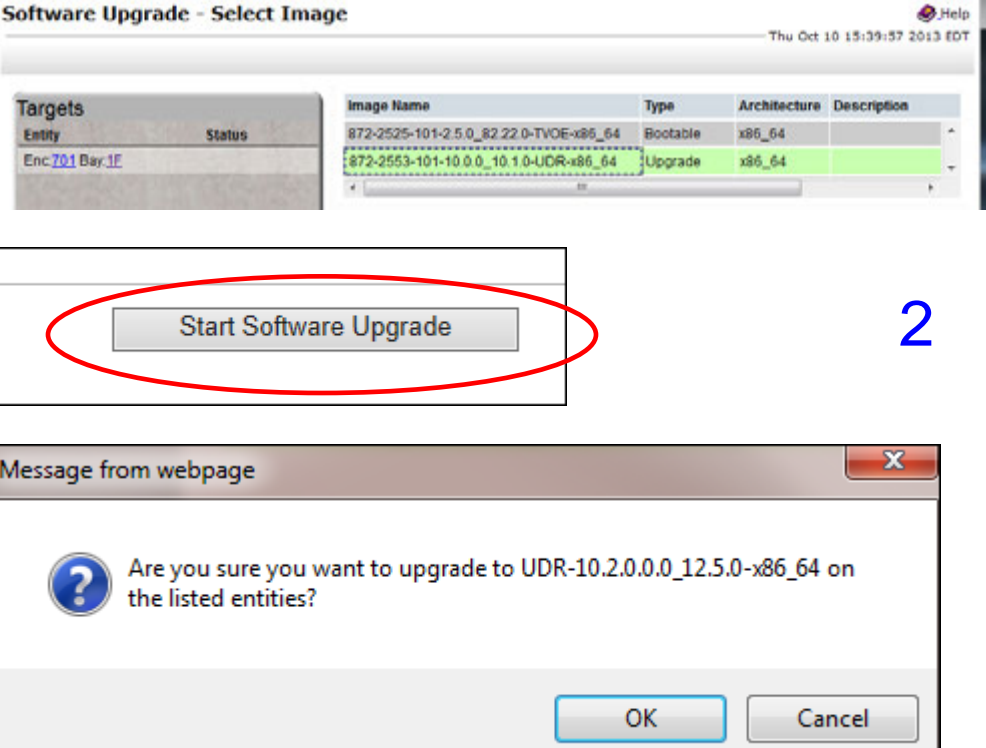
Step	Procedure	Result
<p>13.</p> <input type="checkbox"/>	<p>Verify successful upgrade.</p> <p>Command will generate no output if no issues are found.</p>	<p># verifyUpgrade</p> <p><i>NOTE: This command should return no output on a healthy system.</i></p>
<p>14.</p> <input type="checkbox"/>	<p>Verify that the Application release level shown matches the target release.</p>	<pre>[admusr@pc9000724-no-a ~]\$ appRev Install Time: Tue Dec 8 06:16:58 2015 Product Name: UDR Product Release: 12.1.0.0.0_13.5.0 Base Distro Product: TPD Base Distro Release: 7.0.2.0.0_86.36.0 Base Distro ISO: TPD.install-7.0.2.0.0_86.36.0-OracleLinux6.6-x86_64.iso ISO name: UDR-12.1.0.0.0_13.5.0-x86_64.iso OS: OracleLinux 6.6</pre>
<p>15.</p> <input type="checkbox"/>	<p>TVOE Management Server iLO:</p> <p>Reboot the server</p>	<p>Reboot the server:</p> <p>#init 6</p> <p>Wait until the reboot completes and re-login with TVOE root credentials.</p>
<p>16.</p> <input type="checkbox"/>	<p>TVOE Management Server iLO:</p> <p>Verify server health</p>	<p>Verify server health:</p> <p>#alarmMgr --alarmStatus</p> <p><i>Note: This command should return only one alarm related to pending upgrade acceptance.</i></p>
<p>THIS PROCEDURE HAS BEEN COMPLETED</p>		

G.2 Installing UDR Application with PM&C

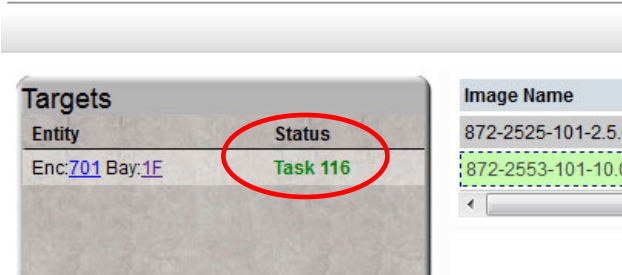

Appendix G.2: Installing UDR Application with PM&C

Step	Procedure	Result																																																	
<p>1.</p> <p><input type="checkbox"/></p>	<p>PM&C GUI:</p> <p>Login to PM&C GUI</p>	<p>Open web browser and enter: <a href="http://<pmac_management_network_ip>">http://<pmac_management_network_ip></p> <p>Login as pmacadmin user.</p> 																																																	
<p>2.</p> <p><input type="checkbox"/></p>	<p>PM&C GUI:</p> <p>Select...</p> <p>Main Menu → Software → Software Inventory</p> <p>...as shown on the right.</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</th> </tr> </thead> <tbody> <tr> <td>RMS: pc9000705</td> <td>192.168.1.5</td> <td>pc9000705-TV0E</td> <td>TPD (x86_64)</td> <td>7.0.2.0.0-86.32.0</td> <td>TV0E</td> <td>3.0.1</td> </tr> <tr> <td>RMS: pc9000705 Guest: pc9000705-mp1</td> <td>192.168.1.18</td> <td>pc9000705-mp1</td> <td>TPD (x86_64)</td> <td>7.0.2.0.0-86.34.0</td> <td>UDR</td> <td>12.1</td> </tr> <tr> <td>RMS: pc9000705 Guest: pc9000705-mp2</td> <td>192.168.1.20</td> <td>pc9000705-mp2</td> <td>TPD (x86_64)</td> <td>7.0.2.0.0-86.34.0</td> <td>UDR</td> <td>12.1</td> </tr> <tr> <td>RMS: pc9000705 Guest: pc9000705-no-a</td> <td>192.168.1.21</td> <td>pc9000705-no-a</td> <td>TPD (x86_64)</td> <td>7.0.2.0.0-86.34.0</td> <td>UDR</td> <td>12.1</td> </tr> <tr> <td>RMS: pc9000705 Guest: pc9000705-so-a</td> <td>192.168.1.19</td> <td>pc9000705-so-a</td> <td>TPD (x86_64)</td> <td>7.0.2.0.0-86.34.0</td> <td>UDR</td> <td>12.1</td> </tr> <tr> <td>RMS: pc9000705 Guest: pmac</td> <td>192.168.1.1</td> <td>pc9000705-pmac</td> <td>TPD (x86_64)</td> <td>7.0.1.0.0-86.20.0</td> <td>PM&C</td> <td>6.0.1</td> </tr> </tbody> </table>	Ident	IP Address	Hostname	Plat Name	Plat Version	App Name	App	RMS: pc9000705	192.168.1.5	pc9000705-TV0E	TPD (x86_64)	7.0.2.0.0-86.32.0	TV0E	3.0.1	RMS: pc9000705 Guest: pc9000705-mp1	192.168.1.18	pc9000705-mp1	TPD (x86_64)	7.0.2.0.0-86.34.0	UDR	12.1	RMS: pc9000705 Guest: pc9000705-mp2	192.168.1.20	pc9000705-mp2	TPD (x86_64)	7.0.2.0.0-86.34.0	UDR	12.1	RMS: pc9000705 Guest: pc9000705-no-a	192.168.1.21	pc9000705-no-a	TPD (x86_64)	7.0.2.0.0-86.34.0	UDR	12.1	RMS: pc9000705 Guest: pc9000705-so-a	192.168.1.19	pc9000705-so-a	TPD (x86_64)	7.0.2.0.0-86.34.0	UDR	12.1	RMS: pc9000705 Guest: pmac	192.168.1.1	pc9000705-pmac	TPD (x86_64)	7.0.1.0.0-86.20.0	PM&C	6.0.1
Ident	IP Address	Hostname	Plat Name	Plat Version	App Name	App																																													
RMS: pc9000705	192.168.1.5	pc9000705-TV0E	TPD (x86_64)	7.0.2.0.0-86.32.0	TV0E	3.0.1																																													
RMS: pc9000705 Guest: pc9000705-mp1	192.168.1.18	pc9000705-mp1	TPD (x86_64)	7.0.2.0.0-86.34.0	UDR	12.1																																													
RMS: pc9000705 Guest: pc9000705-mp2	192.168.1.20	pc9000705-mp2	TPD (x86_64)	7.0.2.0.0-86.34.0	UDR	12.1																																													
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RMS: pc9000705 Guest: pc9000705-so-a	192.168.1.19	pc9000705-so-a	TPD (x86_64)	7.0.2.0.0-86.34.0	UDR	12.1																																													
RMS: pc9000705 Guest: pmac	192.168.1.1	pc9000705-pmac	TPD (x86_64)	7.0.1.0.0-86.20.0	PM&C	6.0.1																																													

Appendix G.2: Installing UDR Application with PM&C

Step	Procedure	Result																																																															
<p>3.</p> <p><input type="checkbox"/></p>	<p>PM&C GUI:</p> <p>1) Highlight the desired server or servers based on the Guest name and hardware hostIdentity...</p> <p><i>Note: You may select multiple servers for simultaneous upgrade to the same release by holding the Ctrl (Control) key while selecting lines with the mouse.</i></p> <p>2) Click on the Upgrade button.</p>	 <p>Software Inventory</p> <p>Thu Oct 10 17:33:49 2013 EDT</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>Funct</th> </tr> </thead> <tbody> <tr> <td>Enc:701 Bay:3E Guest:SO-A</td> <td>192.168.1.181</td> <td>9080701b3-SO-A</td> <td>TPD (x86_64)</td> <td>6.5.0-82.22.0</td> <td>UDR</td> <td>10.0.0-10.0.0_10</td> <td></td> <td></td> </tr> <tr> <td>Enc:701 Bay:4E</td> <td>192.168.1.7</td> <td>9080701b4-TVOE</td> <td>TPD (x86_64)</td> <td>6.5.0-82.22.0</td> <td>TVOE</td> <td>2.5.0_82.22.0</td> <td></td> <td></td> </tr> <tr> <td>Enc:701 Bay:4E Guest:MP-3</td> <td>192.168.1.183</td> <td>9080701b4-MP-3</td> <td>TPD (x86_64)</td> <td>6.5.0-82.22.0</td> <td>UDR</td> <td>10.0.0-10.0.0_10</td> <td></td> <td></td> </tr> <tr> <td>Enc:701 Bay:4E Guest:SO-B</td> <td>192.168.1.182</td> <td>9080701b4-SO-B</td> <td>TPD (x86_64)</td> <td>6.5.0-82.22.0</td> <td>UDR</td> <td>10.0.0-10.0.0_10</td> <td></td> <td></td> </tr> <tr> <td>Enc:701 Bay:5E</td> <td>192.168.1.10</td> <td>PCRF-6-MPE-1A</td> <td>TPD (x86_64)</td> <td>5.1.1-73.5.1</td> <td>MPE</td> <td>10.5.0_18.1.0</td> <td></td> <td></td> </tr> <tr> <td>Enc:701 Bay:6E</td> <td>192.168.1.163</td> <td>PCRF-6-MPE-1B</td> <td>TPD (x86_64)</td> <td>5.1.1-73.5.1</td> <td>MPE</td> <td>10.5.0_18.1.0</td> <td></td> <td></td> </tr> </tbody> </table> <p>Buttons: Install OS, Upgrade, Accept Upgrade, Reject Upgrade, Regenerate Guest Device Mapping ISO, Refresh</p>	Ident	IP Address	Hostname	Plat Name	Plat Version	App Name	App Version	Desig	Funct	Enc:701 Bay:3E Guest:SO-A	192.168.1.181	9080701b3-SO-A	TPD (x86_64)	6.5.0-82.22.0	UDR	10.0.0-10.0.0_10			Enc:701 Bay:4E	192.168.1.7	9080701b4-TVOE	TPD (x86_64)	6.5.0-82.22.0	TVOE	2.5.0_82.22.0			Enc:701 Bay:4E Guest:MP-3	192.168.1.183	9080701b4-MP-3	TPD (x86_64)	6.5.0-82.22.0	UDR	10.0.0-10.0.0_10			Enc:701 Bay:4E Guest:SO-B	192.168.1.182	9080701b4-SO-B	TPD (x86_64)	6.5.0-82.22.0	UDR	10.0.0-10.0.0_10			Enc:701 Bay:5E	192.168.1.10	PCRF-6-MPE-1A	TPD (x86_64)	5.1.1-73.5.1	MPE	10.5.0_18.1.0			Enc:701 Bay:6E	192.168.1.163	PCRF-6-MPE-1B	TPD (x86_64)	5.1.1-73.5.1	MPE	10.5.0_18.1.0		
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<p>4.</p> <p><input type="checkbox"/></p>	<p>PM&C GUI:</p> <p>1) Select the desired Image Name of the UDR software.</p> <p>2) Click on the Upgrade button.</p> <p>3) Click on the popup dialog box OK button.</p>	 <p>Software Upgrade - Select Image</p> <p>Thu Oct 10 15:39:57 2013 EDT</p> <table border="1"> <thead> <tr> <th>Targets</th> <th>Image Name</th> <th>Type</th> <th>Architecture</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Entity</td> <td>872-2525-101-2.5.0_82.22.0-TVOE-x86_64</td> <td>Bootable</td> <td>x86_64</td> <td></td> </tr> <tr> <td>Enc:701 Bay:1E</td> <td>872-2553-101-10.0.0_10.1.0-UDR-x86_64</td> <td>Upgrade</td> <td>x86_64</td> <td></td> </tr> </tbody> </table> <p>Buttons: Start Software Upgrade</p> <p>Message from webpage</p> <p>Are you sure you want to upgrade to UDR-10.2.0.0.0_12.5.0-x86_64 on the listed entities?</p> <p>Buttons: OK, Cancel</p>	Targets	Image Name	Type	Architecture	Description	Entity	872-2525-101-2.5.0_82.22.0-TVOE-x86_64	Bootable	x86_64		Enc:701 Bay:1E	872-2553-101-10.0.0_10.1.0-UDR-x86_64	Upgrade	x86_64																																																	
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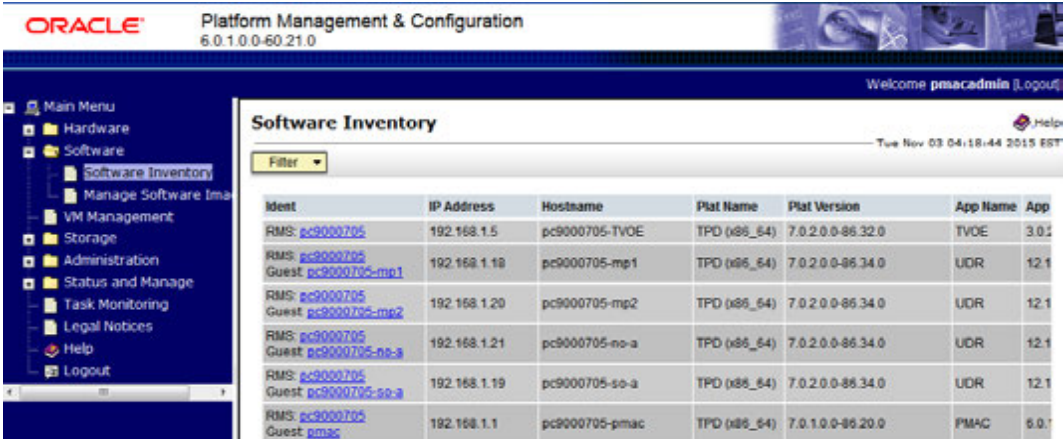
Appendix G.2: Installing UDR Application with PM&C

Step	Procedure	Result																												
<p>5.</p> <p><input type="checkbox"/></p>	<p>PM&C GUI:</p> <p><i>Upgrade Tasks</i> will appear for each upgrade started this way under the left column Status.</p>	<p>Software Upgrade - Select Image</p> 																												
<p>6.</p> <p><input type="checkbox"/></p>	<p>PM&C GUI:</p> <p>Select...</p> <p>Main Menu → Task Monitoring</p> <p>...as shown on the right.</p> <p><i>Note: Upgrade tasks may be monitored for completion on this screen.</i></p>	<p>Background Task Monitoring</p>  <table border="1"> <thead> <tr> <th>ID</th> <th>Task</th> <th>Target</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td>117</td> <td>Upgrade</td> <td>Enc:701 Bay:2F</td> <td>Task ID assigned</td> </tr> <tr> <td>116</td> <td>Upgrade</td> <td>Enc:701 Bay:1F</td> <td>Invalid. TPD indicated that upgrade not needed.</td> </tr> <tr> <td>115</td> <td>Add Image</td> <td></td> <td>Done: 872-2553-101-10.0_10.1.0-UDR-x86_64</td> </tr> <tr> <td>114</td> <td>Delete Image</td> <td></td> <td>872-2553-101-10.0_10.1.0-UDR-x86_64</td> </tr> <tr> <td>112</td> <td>Add Image</td> <td></td> <td>Done: TPD.install-6.5.1_82.26.0-CentOS6.4-x86_64</td> </tr> <tr> <td>111</td> <td>Backup PM&C</td> <td></td> <td>PM&C Backup successful</td> </tr> </tbody> </table>	ID	Task	Target	Status	117	Upgrade	Enc:701 Bay:2F	Task ID assigned	116	Upgrade	Enc:701 Bay:1F	Invalid. TPD indicated that upgrade not needed.	115	Add Image		Done: 872-2553-101-10.0_10.1.0-UDR-x86_64	114	Delete Image		872-2553-101-10.0_10.1.0-UDR-x86_64	112	Add Image		Done: TPD.install-6.5.1_82.26.0-CentOS6.4-x86_64	111	Backup PM&C		PM&C Backup successful
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<p>7.</p> <p><input type="checkbox"/></p>	<p>PM&C GUI:</p> <p>Look for successful upgrade completion under the Status column</p>	<table border="1"> <thead> <tr> <th>ID</th> <th>Task</th> <th>Target</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td>105</td> <td>Upgrade</td> <td>RMS: pc9000712 Guest: SOA</td> <td>Success</td> </tr> <tr> <td>104</td> <td>Upgrade</td> <td>RMS: pc9000712 Guest: MP2</td> <td>Success</td> </tr> <tr> <td>103</td> <td>Upgrade</td> <td>RMS: pc9000712 Guest: MP1</td> <td>Success</td> </tr> </tbody> </table>	ID	Task	Target	Status	105	Upgrade	RMS: pc9000712 Guest: SOA	Success	104	Upgrade	RMS: pc9000712 Guest: MP2	Success	103	Upgrade	RMS: pc9000712 Guest: MP1	Success												
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<p>THIS PROCEDURE HAS BEEN COMPLETED</p>																														

Appendix H. Accept Application Installation on PM&C Managed Servers

This procedure will accept the UDR Application Installation / Upgrade with PM&C.

Appendix H: Accept Application Installatin on PM&C Managed Servers

Step	Procedure	Result																																																								
<p>1.</p> <input type="checkbox"/>	<p>PM&C GUI:</p> <p>Login to PM&C GUI</p>	<p>Open web browser and enter: <a href="http://<pmac_management_network_ip>">http://<pmac_management_network_ip></p> <p>Login as pmacadmin user.</p> 																																																								
<p>2.</p> <input type="checkbox"/>	<p>PM&C GUI:</p> <p>Select...</p> <p>Main Menu →Software →Software Inventory</p> <p>...as shown on the right.</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</th> </tr> </thead> <tbody> <tr> <td>RMS: pc9000705</td> <td>192.168.1.5</td> <td>pc9000705-TV0E</td> <td>TPD (x86_64)</td> <td>7.0.2.0.0-86.32.0</td> <td>TV0E</td> <td>3.0.1</td> </tr> <tr> <td>RMS: pc9000705</td> <td>192.168.1.18</td> <td>pc9000705-mp1</td> <td>TPD (x86_64)</td> <td>7.0.2.0.0-86.34.0</td> <td>UDR</td> <td>12.1</td> </tr> <tr> <td>RMS: pc9000705</td> <td>192.168.1.20</td> <td>pc9000705-mp2</td> <td>TPD (x86_64)</td> <td>7.0.2.0.0-86.34.0</td> <td>UDR</td> <td>12.1</td> </tr> <tr> <td>RMS: pc9000705</td> <td>192.168.1.21</td> <td>pc9000705-no-a</td> <td>TPD (x86_64)</td> <td>7.0.2.0.0-86.34.0</td> <td>UDR</td> <td>12.1</td> </tr> <tr> <td>Guest: pc9000705-no-a</td> <td>192.168.1.19</td> <td>pc9000705-so-a</td> <td>TPD (x86_64)</td> <td>7.0.2.0.0-86.34.0</td> <td>UDR</td> <td>12.1</td> </tr> <tr> <td>RMS: pc9000705</td> <td>192.168.1.1</td> <td>pc9000705-pmac</td> <td>TPD (x86_64)</td> <td>7.0.1.0.0-86.20.0</td> <td>PMAC</td> <td>6.0.1</td> </tr> <tr> <td>Guest: pmac</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Ident	IP Address	Hostname	Plat Name	Plat Version	App Name	App	RMS: pc9000705	192.168.1.5	pc9000705-TV0E	TPD (x86_64)	7.0.2.0.0-86.32.0	TV0E	3.0.1	RMS: pc9000705	192.168.1.18	pc9000705-mp1	TPD (x86_64)	7.0.2.0.0-86.34.0	UDR	12.1	RMS: pc9000705	192.168.1.20	pc9000705-mp2	TPD (x86_64)	7.0.2.0.0-86.34.0	UDR	12.1	RMS: pc9000705	192.168.1.21	pc9000705-no-a	TPD (x86_64)	7.0.2.0.0-86.34.0	UDR	12.1	Guest: pc9000705-no-a	192.168.1.19	pc9000705-so-a	TPD (x86_64)	7.0.2.0.0-86.34.0	UDR	12.1	RMS: pc9000705	192.168.1.1	pc9000705-pmac	TPD (x86_64)	7.0.1.0.0-86.20.0	PMAC	6.0.1	Guest: pmac						
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Appendix H: Accept Application Installatin on PM&C Managed Servers

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Enc:701 Bay:5E	192.168.1.110	PCRf-6-MPE-1A	TPD (x86_64)	5.1.1-73.5.1	MPE	10.5.0_18.1.0																																																											
Enc:701 Bay:6E	192.168.1.163	PCRf-6-MPE-1B	TPD (x86_64)	5.1.1-73.5.1	MPE	10.5.0_18.1.0																																																											
<p>4.</p> <p><input type="checkbox"/></p>	<p>PM&C GUI:</p> <p>Select...</p> <p>Main Menu →Task Monitoring</p> <p>...as shown on the right.</p> <p><i>Note: Acceptance tasks may be monitored for completion on this screen.</i></p>	<p>Main Menu</p> <ul style="list-style-type: none"> Hardware <ul style="list-style-type: none"> System Inventory System Configuration Software <ul style="list-style-type: none"> Software Inventory Manage Software Images VM Management Storage Administration Status and Manage Task Monitoring Help Logout <p>Background Task Monitoring</p> <table border="1"> <thead> <tr> <th>ID</th> <th>Task</th> <th>Target</th> </tr> </thead> <tbody> <tr> <td>128</td> <td>Accept Upgrade</td> <td>Enc:701 Bay:1F</td> </tr> <tr> <td>127</td> <td>Accept Upgrade</td> <td>Enc:701 Bay:2F</td> </tr> <tr> <td>126</td> <td>Backup PM&C</td> <td></td> </tr> <tr> <td>125</td> <td>Install OS</td> <td>Enc:701 Bay:4E Guest: SO-B</td> </tr> <tr> <td>124</td> <td>Install OS</td> <td>Enc:701 Bay:4E Guest: MP-3</td> </tr> </tbody> </table>	ID	Task	Target	128	Accept Upgrade	Enc:701 Bay:1F	127	Accept Upgrade	Enc:701 Bay:2F	126	Backup PM&C		125	Install OS	Enc:701 Bay:4E Guest: SO-B	124	Install OS	Enc:701 Bay:4E Guest: MP-3																																													
ID	Task	Target																																																															
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125	Install OS	Enc:701 Bay:4E Guest: SO-B																																																															
124	Install OS	Enc:701 Bay:4E Guest: MP-3																																																															
<p>THIS PROCEDURE HAS BEEN COMPLETED</p>																																																																	

Appendix I. PM&C Deployment and Configuration

This procedure contains steps to deploy and configure PM&C on TVOE Servers.

I.1 Deploying PM&C on TVOE Server

Appendix I.1: Deploying PM&C on TVOE Server

Step	Procedure	Result
1. <input type="checkbox"/>	Access the TVOE Server console.	Connect to the TVOE Server console using one of the access methods as described in Appendix A or ssh to the server.
2. <input type="checkbox"/>	TVOE Server (SSH): Login as "admusr" user.	login as: <code>admusr</code> password: <code><admusr_password></code>
3. <input type="checkbox"/>	TVOE Server (SSH): Switch to "root" user.	\$ <code>su -</code> password: <code><root_password></code>
4. <input type="checkbox"/>	TVOE Server (SSH): Mount the media containing the PM&C software.	Follow steps defined in ... C.1 Mounting Physical Media on HP Servers or C.2 Mounting Virtual Media on HP Servers Or For Oracle RMS servers, copy the media to "/var/TKLC/upgrade" on TVOE server ... to mount the PM&C software.
5. <input type="checkbox"/>	TVOE Server (SSH): Mount PM&C media location	Using the device location identified in step 4, mount the PM&C ISO with this command: <code>#mount -o loop <media_device> /mnt</code>

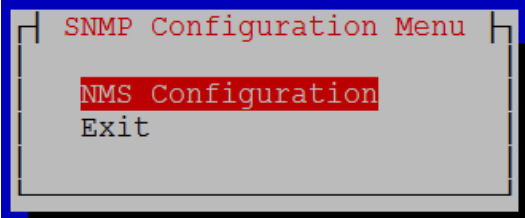
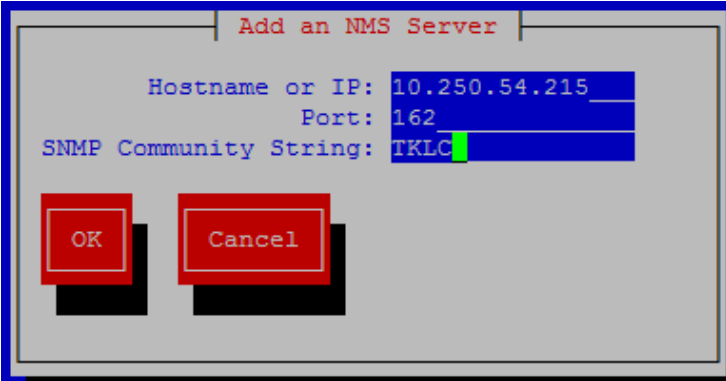
Appendix I.1: Deploying PM&C on TVOE Server

Step	Procedure	Result
<p>6.</p> <input type="checkbox"/>	<p>TVOE Management Server (SSH):</p> <p><i>Deploy PM&C</i></p>	<p><i>Note:</i> Some lab deployments may host TVOE and PMAC on the XMI network/bridge instead of on a separate routable management network.</p> <p>Using the pmac-deploy script, deploy the PM&C</p> <pre>#cd /mnt/upgrade</pre> <p>Deploy PM&C by running the following command (on one line, without line breaks):</p> <p>** Note: If installing multiple RMS servers, control IP needs to be changed.</p> <p><u>Command Syntax:</u></p> <pre>#!/pmac-deploy --controlIP=192.168.1.1 --managementBridge=<management or xmi> --guest=<PMAC_Name> --hostname=<PMAC_Hostname> --managementIP=<PMAC_Management_ip_address> --managementNM=<PMAC_Management_netmask> --routeGW=<PMAC_Management_gateway_address> --ntpserver=<TVOE_Management_server_ip_address></pre> <p><u>Example:</u></p> <pre>#!/pmac-deploy --controlIP=192.168.1.1 --managementBridge= xmi --guest=pmac --hostname=pc9000712-pmac --managementIP=10.250.37.149--managementNM=255.255.255.192 --routeGW=10.250.37.129 --ntpserver=10.250.37.147</pre> <p>The PM&C will deploy and boot.</p> <p>The management and control network will come up based on the settings that were provided to the pmac-deploy script. This process takes about 5-10 minutes.</p>
<p>7.</p> <input type="checkbox"/>	<p>TVOE Management Server (SSH):</p> <p><i>Unmount the media</i></p>	<p>Unmount the DVD media using the following command:</p> <pre>#cd /</pre> <pre>#umount /mnt</pre>

Appendix I.1: Deploying PM&C on TVOE Server


Step	Procedure	Result
<p>8.</p> <input type="checkbox"/>	<p>TVOE Server (SSH):</p> <p>Log into the virtual PM&C server</p>	<p>Login using virsh, and wait until you see the login prompt:</p> <pre>#virsh Welcome to virsh, the virtualization interactive terminal. Type: 'help' for help with commands 'quit' to quit virsh #list Id Name State ----- 2 pmac running</pre> <p>Log into the virtual PM&C server using PM&C root credentials.</p> <pre>virsh #console pmac Connected to domain pmac Escape character is ^] <ENTER> PMAC-pc9000632 login: admusr Password:<admusr_password> [admusr@PMAC-pc9000632 ~]\$ sudo su - Switch to root [root@PMAC-pc9000632 ~]#</pre>
<p>9.</p> <input type="checkbox"/>	<p>Virtual PM&C:</p> <p>Verify the PM&C is configured correctly on the first boot</p>	<p>Verify the PM&C configured correctly on first boot.</p> <pre># ls /usr/TKLC/plat/etc/deployment.d/</pre> <p><i>NOTE: This command should return no output on a healthy system.</i></p>
<p>10.</p> <input type="checkbox"/>	<p>Virtual PM&C:</p> <p>Set Timezone</p>	<p>Determine the TimeZone to be used for the PM&C, and set the PM&C timezone</p> <p><i>Note: Valid time zones can be found in Appendix P.</i></p> <pre>#set_pmac_tz.pl <timezone></pre> <p><u>Example:</u></p> <pre>#set_pmac_tz.pl America/New_York</pre>

Appendix I.1: Deploying PM&C on TVOE Server

Step	Procedure	Result
<p>11.</p> <p><input type="checkbox"/></p>	<p>Virtual PM&C:</p> <p>Configure SNMP</p>	<p>ConfigureSNMPtrap destination by running the following:</p> <pre>#su - platcfg</pre> <p>1.Navigate to Network Configuration >SNMP Configuration >NMS Configuration.</p>  <p>2. Select Edit and then choose 'Add a New NMS Server'.</p> <p>3.The 'Add an NMS Server' page will be displayed.</p>  <p>4.Complete the form by entering in all information about the SNMP trap destination.</p> <p>5.Select OK tofinalize the configuration.</p> <p>6.The 'NMS Server Action Menu' will now be displayed.</p> <p>7.Select Exit. The following dialoguewill then be presented: 'Do you want to restart the Alarm Routing Service?'</p> <p>8.Select Yes and then wait a few seconds while the Alarm Routing Service is restarted.</p> <p>9.At that timethe 'SNMP Configuration Menu' will be presented.</p> <p>10.Exit platcfg.</p> <p><i>Note: All alarm information will then be sent to the NMS located at the destination.</i></p>
<p>12.</p> <p><input type="checkbox"/></p>	<p>Virtual PM&C:</p> <p>Reboot PM&C server</p>	<p>Reboot the PM&C server to ensure all processes are started with the new Time Zone:</p> <pre>#init 6</pre>
<p>THIS PROCEDURE HAS BEEN COMPLETED</p>		

I.2 Configure PM&C Application

Appendix I.2: Configure PM&C Application

Step	Procedure	Result
<p>1.</p> <p><input type="checkbox"/></p>	<p>PM&C GUI:</p> <p><i>Login to PM&C GUI</i></p>	<p>Open web browser and enter: <a href="http://<pmac_management_network_ip>">http://<pmac_management_network_ip></p> <p>Login as pmacadmin user.</p> 

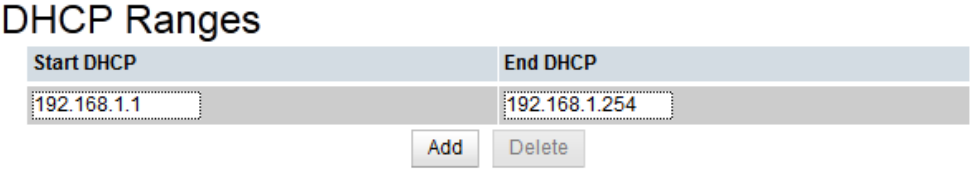
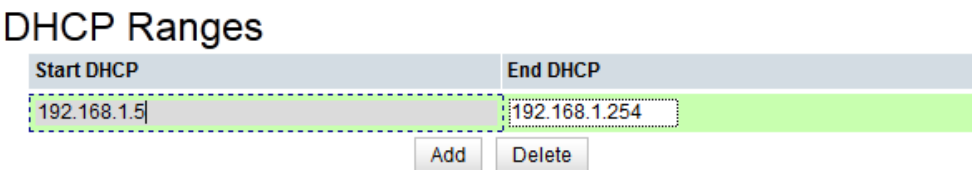
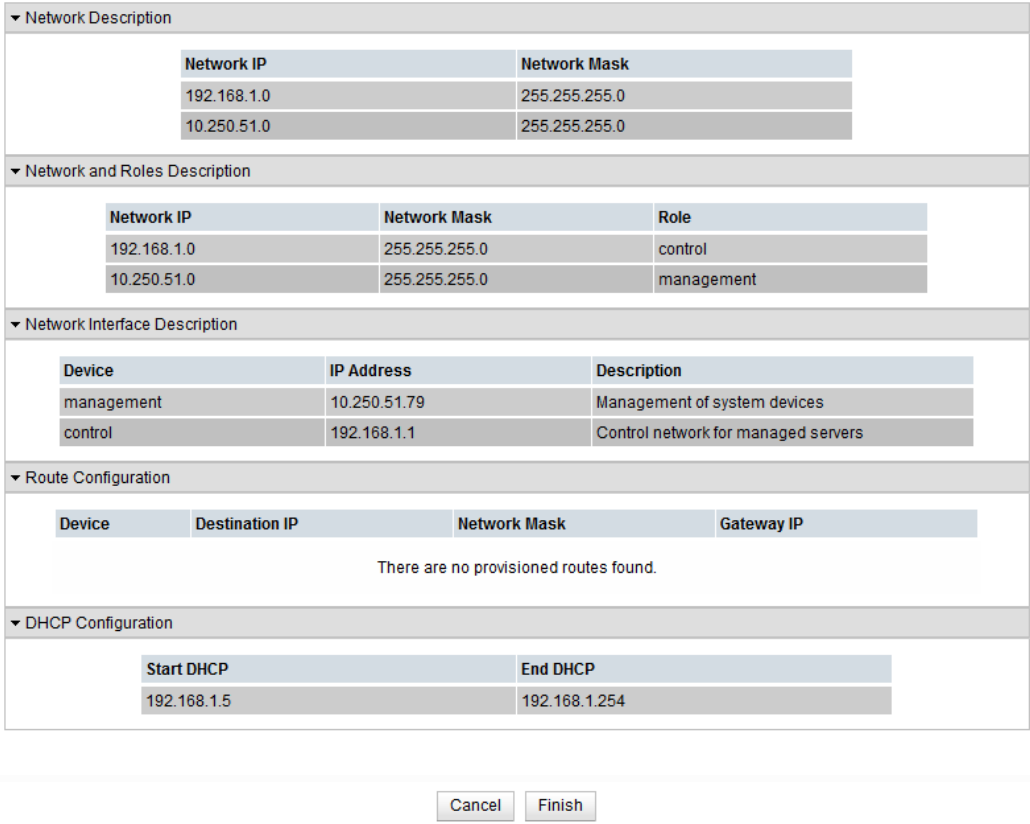
Appendix I.2: Configure PM&C Application

Step	Procedure	Result																																
<p>2.</p> <p><input type="checkbox"/></p>	<p>PM&C GUI:</p> <p>Select a profile</p>	<p>The first time that the PM&C GUI is opened, an initialization screen appears and will look similar to the screen shown below:</p> <div> <p>Profiles</p> <table border="1"> <thead> <tr> <th>File Name</th> <th>Name</th> <th>Comment</th> <th>Version</th> </tr> </thead> <tbody> <tr> <td>TVOE</td> <td>PM&C TVOE Guest</td> <td>Manage systems from a TVOE hosted PM&C</td> <td>6.0.0</td> </tr> </tbody> </table> <p style="text-align: center;"><input type="button" value="Initialize"/></p> </div> <p>Select the TVOE profile and click on “Initialize” button, then following screen will display</p> <div> <p style="text-align: center;"><input type="button" value="Cancel"/> <input type="button" value="Next"/></p> <table border="1"> <thead> <tr> <th>Feature</th> <th>Description</th> <th>Role</th> <th>Enabled</th> </tr> </thead> <tbody> <tr> <td>DEVICE.NETWORK.NETBOOT</td> <td>Network device PXE initialization</td> <td>management</td> <td><input type="checkbox"/></td> </tr> <tr> <td>DEVICE.NTP</td> <td>PM&C as a time server</td> <td>management</td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>PMAC.MANAGED</td> <td>Remote management of PM&C server</td> <td>management</td> <td><input type="checkbox"/></td> </tr> <tr> <td>PMAC.REMOTE.BACKUP</td> <td>Remote server for backup</td> <td>management</td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>PMAC.NETBACKUP</td> <td>NetBackup client</td> <td>management</td> <td><input type="checkbox"/></td> </tr> </tbody> </table> <p style="text-align: center;"><input type="button" value="Add Role"/></p> </div> <p><i>Note: If you have missed the initialization process, please navigate to this GUI page: Administration → PM&C Configuration → Feature Configuration</i></p> <p>Make sure that the enable checkbox is checked for the following features only:</p> <ol style="list-style-type: none"> 1. DEVICE.NTP 2. PMAC,REMOTE.BACKUP <p>Click on “Next”button</p> <p><i>Note: If you have missed the initialization process, you will need to click on “Apply” button, then navigate to this GUI page Administration → PM&C Configuration → Network Configuration and click on the “ReConfigure” button.</i></p>	File Name	Name	Comment	Version	TVOE	PM&C TVOE Guest	Manage systems from a TVOE hosted PM&C	6.0.0	Feature	Description	Role	Enabled	DEVICE.NETWORK.NETBOOT	Network device PXE initialization	management	<input 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"/>
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PMAC.REMOTE.BACKUP	Remote server for backup	management	<input checked="" type="checkbox"/>																															
PMAC.NETBACKUP	NetBackup client	management	<input type="checkbox"/>																															

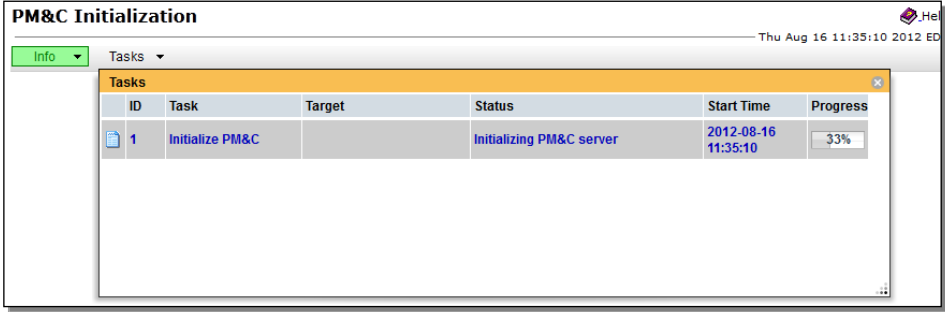
Appendix I.2: Configure PM&C Application

Step	Procedure	Result									
<p>3.</p> <input type="checkbox"/>	<p>PM&C GUI: <i>Network Description</i></p>	<p>You will see this default screen similar to:</p> <table border="1"> <thead> <tr> <th>Network IP</th> <th>Network Mask</th> </tr> </thead> <tbody> <tr> <td>192.168.1.0</td> <td>255.255.255.0</td> </tr> <tr> <td>10.250.51.0</td> <td>255.255.255.0</td> </tr> </tbody> </table> <p style="text-align: center;"> <input type="button" value="Add"/> <input type="button" value="Delete"/> </p> <p>Enter the <code>Network IPs</code> and <code>Netmasks</code> for the control and Management Networks. Click on “Next” button.</p>	Network IP	Network Mask	192.168.1.0	255.255.255.0	10.250.51.0	255.255.255.0			
Network IP	Network Mask										
192.168.1.0	255.255.255.0										
10.250.51.0	255.255.255.0										
<p>4.</p> <input type="checkbox"/>	<p>PM&C GUI: <i>Network Roles</i></p>	<p>You will see this default screen similar to:</p> <table border="1"> <thead> <tr> <th>Network IP</th> <th>Network Mask</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>10.250.51.0</td> <td>255.255.255.0</td> <td>management</td> </tr> </tbody> </table> <p style="text-align: center;"> <input type="button" value="Add"/> <input type="button" value="Delete"/> </p> <p>Verify the roles and update if necessary. Click on “Next” button.</p>	Network IP	Network Mask	Role	192.168.1.0	255.255.255.0	control	10.250.51.0	255.255.255.0	management
Network IP	Network Mask	Role									
192.168.1.0	255.255.255.0	control									
10.250.51.0	255.255.255.0	management									
<p>5.</p> <input type="checkbox"/>	<p>PM&C GUI: <i>Network Interface</i></p>	<p>You will see this default screen similar to:</p> <table border="1"> <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>10.250.51.89</td> <td>Management of system devices</td> </tr> </tbody> </table> <p style="text-align: center;"> <input type="button" value="Add"/> <input type="button" value="Delete"/> </p> <p>Verify the IP addresses for each Device and update if necessary. Click on “Next” button.</p>	Device	IP Address	Description	control	192.168.1.1	Control network for managed servers	management	10.250.51.89	Management of system devices
Device	IP Address	Description									
control	192.168.1.1	Control network for managed servers									
management	10.250.51.89	Management of system devices									
<p>6.</p> <input type="checkbox"/>	<p>PM&C GUI: <i>Network Route</i></p>	<p>You will see this default screen similar to:</p> <table border="1"> <thead> <tr> <th>Device</th> <th>Destination IP</th> <th>Network Mask</th> <th>Gateway IP</th> </tr> </thead> <tbody> </tbody> </table> <p style="text-align: center;"> <input type="button" value="Add"/> <input type="button" value="Delete"/> </p> <p>No routes are required. Click on “Next” button when done.</p>	Device	Destination IP	Network Mask	Gateway IP					
Device	Destination IP	Network Mask	Gateway IP								

Appendix I.2: Configure PM&C Application


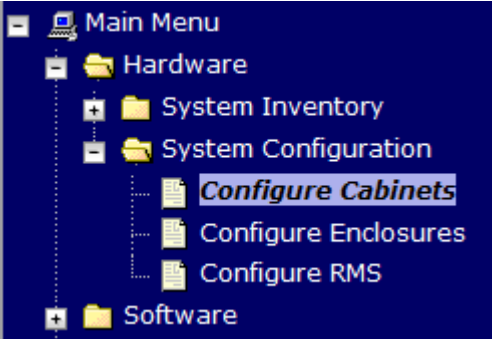
Step	Procedure	Result
<p>7.</p> <input type="checkbox"/>	<p>PM&C GUI: <i>DHCP Ranges</i></p>	<p>You will see this default screen similar to:</p>  <p>Set the Starting address in range to 192.168.1.5 and the Ending address in range to 192.168.1.254.</p>  <p>Click on “Next” button when done.</p>
<p>8.</p> <input type="checkbox"/>	<p>PM&C GUI: <i>Summary Settings</i></p>	<p>The following summary screen will be displayed.</p>  <p>Verify the values, and click “Finish” button when done</p>

Appendix I.2: Configure PM&C Application

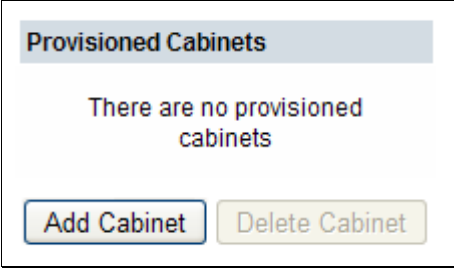
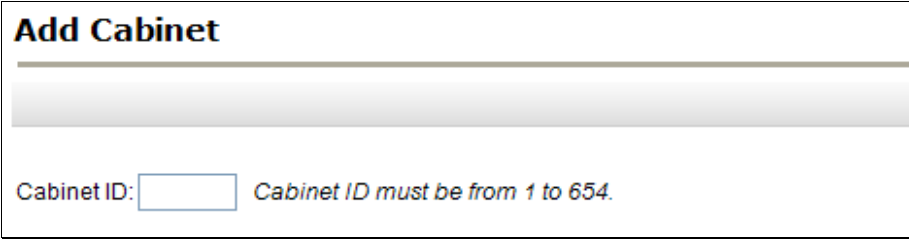
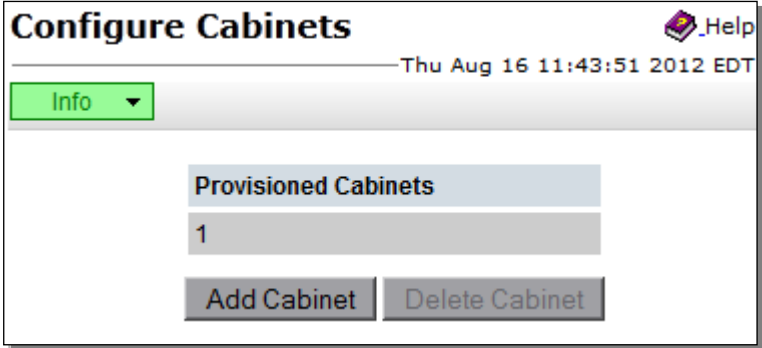
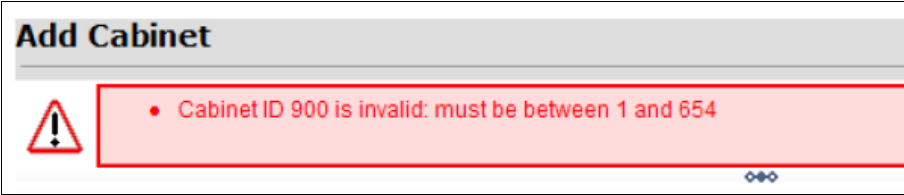
Step	Procedure	Result														
<p>9.</p> <input type="checkbox"/>	<p>PM&C GUI: Complete the configuration</p>	<p>The following summary screen will be displayed, click on Tasks to view the Initialization Progress</p>  <p>Navigate to GUI page “Main Menu → Task Monitoring“ for status of this task.</p> <table border="1"> <thead> <tr> <th>ID</th> <th>Task</th> <th>Target</th> <th>Status</th> <th>Running Time</th> <th>Start Time</th> <th>Progress</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Initialize PM&C</td> <td></td> <td>PM&C initialized</td> <td>0:00:25</td> <td>2012-08-16 11:35:10</td> <td>100%</td> </tr> </tbody> </table> <p>Wait till the Progress bar turns green, that signifies that the PM&C Initialization was successful.</p>	ID	Task	Target	Status	Running Time	Start Time	Progress	1	Initialize PM&C		PM&C initialized	0:00:25	2012-08-16 11:35:10	100%
ID	Task	Target	Status	Running Time	Start Time	Progress										
1	Initialize PM&C		PM&C initialized	0:00:25	2012-08-16 11:35:10	100%										
<p>10.</p> <input type="checkbox"/>	<p>PM&C GUI: Set the PM&C Application GUI Site Settings</p>	<p>Navigate to GUI page: Main Menu → Administration → GUI Site Settings</p> <p>Set the "Site name" field to a descriptive name</p> <p>Set the "Welcome Message" field that is displayed upon login.</p> <p>Verify values, and click “Update Settings” button when done</p>														
<p>11.</p> <input type="checkbox"/>	<p>Virtual PM&C SSH: Perform PM&C application backup and save backup file</p>	<p>Perform PM&C application backup by executing this command: #pmacadm backup</p> <p>The command output will be similar to this: # PM&C backup been successfully initiated as task ID 7</p> <p><i>Note: The backup runs as a background task. To check the status of the background task use the PM&C GUI Task Monitor page, or issue the command " pmaccli getBgTasks ". The result should eventually be "PM&C Backup successful" and the background task should indicate "COMPLETE".</i></p> <p><i>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.</i></p> <p>The PM&C backup must be moved to a remote server. Transfer (sftp, scp, rsync, or preferred utility) the PM&C backup file to an appropriate remote server.</p>														
<p>THIS PROCEDURE HAS BEEN COMPLETED</p>																

I.3 Add Cabinet to PM&C System Inventory

Appendix I.3: Add Cabinet to PM&C System Inventory


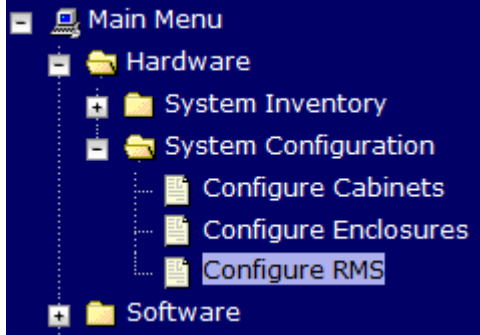
Step	Procedure	Result
<p>1.</p> <p><input type="checkbox"/></p>	<p>PM&C GUI: <i>Login to PM&C GUI</i></p>	<p>Open web browser and enter: <a href="http://<pmac_management_network_ip>">http://<pmac_management_network_ip></p> <p>Login as pmacadmin user.</p> 
<p>2.</p> <p><input type="checkbox"/></p>	<p>PM&C GUI: <i>Configure Cabinets</i></p>	<p>Navigate to this GUI page: Main Menu→Hardware→System Configuration→Configure Cabinets.</p> 

Appendix I.3: Add Cabinet to PM&C System Inventory

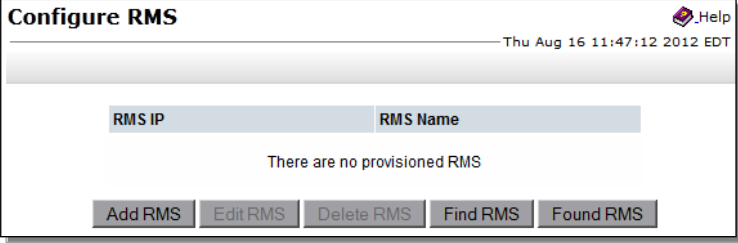
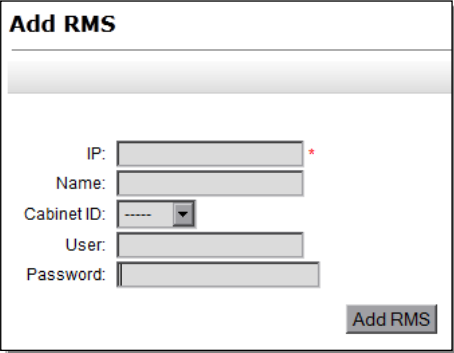
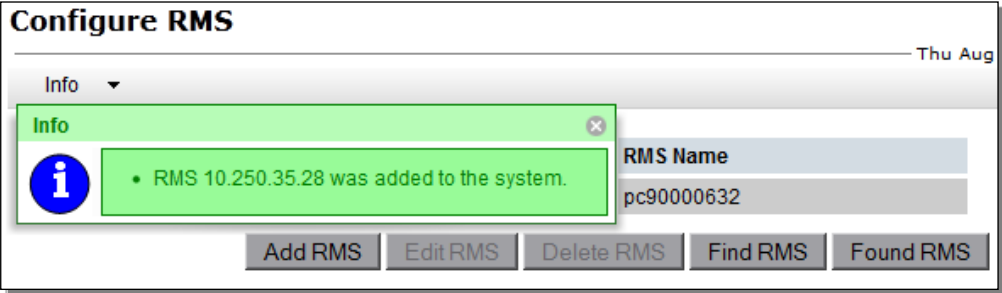
Step	Procedure	Result
<p>3.</p> <input type="checkbox"/>	<p>PM&C GUI: <i>Navigate to Configure Cabinet</i></p>	<p>On the Configure Cabinets panel click on “Add Cabinet” button</p> 
<p>4.</p> <input type="checkbox"/>	<p>PM&C GUI: <i>Enter Cabinet ID</i></p>	<p>Enter the value for Cabinet ID and press Add Cabinet.</p> 
<p>5.</p> <input type="checkbox"/>	<p>PM&C GUI: <i>Check Errors</i></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>THIS PROCEDURE HAS BEEN COMPLETED</p>		

I.4 Add Rack Mount Server to PM&C System Inventory

Appendix I.4: Add Rack Mount Server To PM&C System Inventory

Step	Procedure	Result
<p>1.</p> <input type="checkbox"/>	<p>PM&C GUI: Login to PM&C GUI</p>	<p>Open web browser and enter: <a href="http://<pmac_management_network_ip>">http://<pmac_management_network_ip></p> <p>Login as pmacadmin user.</p> 
<p>2.</p> <input type="checkbox"/>	<p>PM&C GUI: Configure RMS</p>	<p>Navigate to this GUI page: Main Menu→Hardware→System Configuration→Configure RMS</p> 


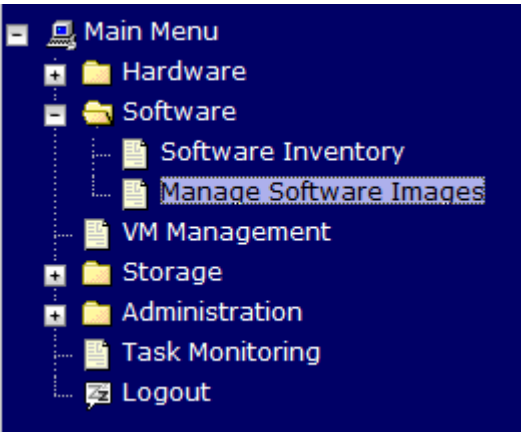
Appendix I.4: Add Rack Mount Server To PM&C System Inventory

Step	Procedure	Result
<p>3.</p> <input type="checkbox"/>	<p>PM&C GUI: <i>Add RMS</i></p>	<p>On the Configure Cabinets panel click on Add RMS</p>  <p>The screenshot shows a window titled "Configure RMS" with a timestamp "Thu Aug 16 11:47:12 2012 EDT". It features two input fields: "RMS IP" and "RMS Name". Below these fields, it states "There are no provisioned RMS". At the bottom, there are five buttons: "Add RMS", "Edit RMS", "Delete RMS", "Find RMS", and "Found RMS".</p>
<p>4.</p> <input type="checkbox"/>	<p>PM&C GUI: <i>Enter RMS Information</i></p>	<p>Enter the management port (iLO) IP Address of the rack mount server (this is the TVOE server upon which the current PM&C is hosted). Enter the User and Password login credentials for the ILO. Then press Add RMS.</p>  <p>The screenshot shows a window titled "Add RMS" with the following fields: "IP:" (with a red asterisk), "Name:", "Cabinet ID:" (with a dropdown arrow), "User:", and "Password:". An "Add RMS" button is located at the bottom right.</p> <p>Note: The PM&C contains default credentials for the management port, however if you know the default credentials will not work to log into the RMS ILO then please enter valid credentials for the rack mount server management port.</p>
<p>5.</p> <input type="checkbox"/>	<p>PM&C GUI: <i>Check Errors</i></p>	<p>If no error is reported to the user you will see the following:</p>  <p>The screenshot shows the "Configure RMS" window with a green information box overlaid. The box contains an information icon and the text "RMS 10.250.35.28 was added to the system." In the background, the "RMS Name" field is visible with the value "pc90000632".</p>
<p>THIS PROCEDURE HAS BEEN COMPLETED</p>		

Appendix J. Adding Software Images to PM&C Server

This procedure contains steps to add software images to PM&C, including TPD, TVOE, and UDR application images.

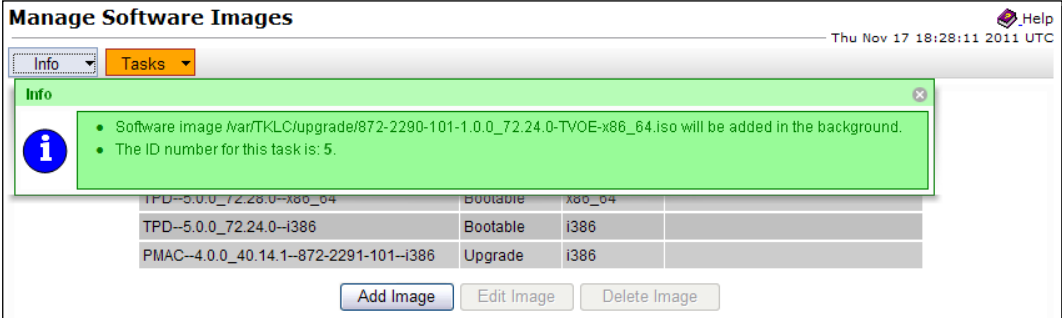
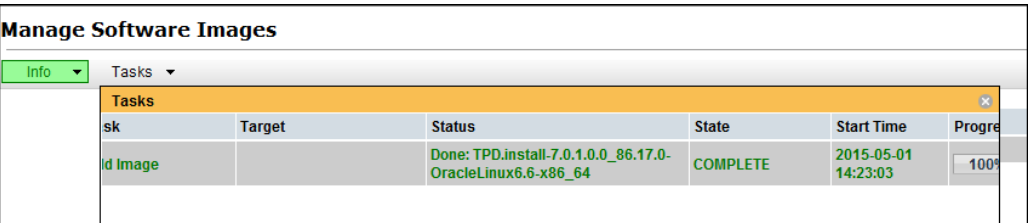
Appendix J: Add Software Images To PM&C Server

Step	Procedure	Result
<p>1.</p> <input type="checkbox"/>	<p>Load TPD ISO image to PM&C server</p>	<p>Use sftp to transfer the iso image to the PM&C server in the <code>/var/TKLCS/mac/image/isoimages/home/smacftpusr/</code> directory as pmacftpusr user:</p> <ul style="list-style-type: none"> • Change to the directory where your TPD, TVOE, or UDR ISO images are located • Using sftp, connect to the PM&C management server <pre># sftp pmacftpusr@<pmac_management_network_ip> # put <image>.iso</pre> • After the image transfer is 100% complete, close the connection <pre># quit</pre>
<p>2.</p> <input type="checkbox"/>	<p>PM&C GUI: Login to PM&C GUI</p>	<p>Open web browser and enter: <a href="http://<pmac_management_network_ip>">http://<pmac_management_network_ip></p> <p>Login as pmacadmin user.</p> 
<p>3.</p> <input type="checkbox"/>	<p>PM&C GUI: Navigate to Manage Software Images</p>	<p>Navigate to this GUI page: Main Menu → Software → Manage Software Images</p> 

Appendix J: Add Software Images To PM&C Server

Step	Procedure	Result
<p>4.</p> <p><input type="checkbox"/></p>	<p>PM&C GUI:</p> <p>Add TPD image</p>	<p>Select “Add Image” button at the bottom of the screen</p> <div style="border: 1px solid gray; padding: 5px; margin: 10px 0;"> <p style="text-align: center;"> <input type="button" value="Add Image"/> <input type="button" value="Edit Image"/> <input type="button" value="Delete Selected"/> </p> </div> <hr/> <p>The image transferred to PM&C will appear in the list as a local file <code>"/var/TKLC/..."</code>.</p> <div style="border: 1px solid gray; padding: 10px; margin: 10px 0;"> <p>Add Software 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"> ○ <code>/var/TKLC/upgrade/*.iso</code> ○ <code>/var/TKLC/smac/image/isoimages/home/smacftpusr/*.iso</code> <p>Note: CD and USB images mounted on PM&C's VM host must first be made accessible to the PM&C VM guest. To do this, see VM Management.</p> <p>Path: <input type="text" value="/var/TKLC/upgrade/TPD.install-7.0.1.0.0_86.17.0-OracleLinux6.6-x86_64.i"/></p> <p>Description: <input type="text"/></p> <hr/> <p style="text-align: center;"><input type="button" value="Add New Image"/></p> </div> <p>Select the appropriate path, enter an appropriate image description and press “Add New Image” button.</p>

Appendix J: Add Software Images To PM&C Server

Step	Procedure	Result
5. <input type="checkbox"/>	PM&C GUI: Monitor the Add Image status	The “ Manage Software Images ” page is then re-displayed with a new background task entry in the table at the top of the page: 
6. <input type="checkbox"/>	PM&C GUI: Wait until the Add Image task finishes	When the task is complete, its text changes to green and its Progress column indicates "100%". Check that the correct image name appears in the Status column: 
7. <input type="checkbox"/>	PM&C GUI: Load UDR ISO image to PM&C server	To load UDR ISO image to PM&C server, repeat steps 1 through 6 of this Procedure.
8.	PM&C Server: SSH to Server	Follow the Steps 8 - 16 only for C Class Systems SSH to PM&C Server as admusr.
9.	PM&C Server: Switch to root	% sudo su -
10.	PM&C Server: Create new xml directory	% mkdir -p /usr/TKLC/smac/etc/switch/xml
11.	PM&C Server: Create new backup directory	% mkdir -p /usr/TKLC/smac/etc/switch/backup

Appendix J: Add Software Images To PM&C Server

Step	Procedure	Result
12.	PM&C Server: cd to new xml directory	% cd /usr/TKLC/smac/etc/switch/xml
13.	PM&C Server: Mount ISO	% mount /var/TKLC/smac/image/repository/UDR-<release>-x86_64.iso /mnt -o loop
14.	PM&C Server: Copy the xml templates	% cp /mnt/upgrade/overlay/UDR_NetConfig_Templates.zip /usr/TKLC/smac/etc/switch/xml
15.	PM&C Server: Unmount the directory	% umount /mnt
16.	PM&C Server: Unzip the xml templates	% unzip UDR_NetConfig_Templates.zip
THIS PROCEDURE HAS BEEN COMPLETED		

Appendix K. Applying Server Configuration

K.1 Applying Server Configuration with ILO

This procedure contains steps to apply server configuration scripts to rack mount servers.

Appendix K.1: Applying Server Configuration with ILO

Step	In this procedure you will apply server configuration scripts to rack mount servers.	
<p>1.</p> <input type="checkbox"/>	<p>Access the server's ILO VGA.</p>	<p>Connect to the server's ILO VGA using one of the the access methods described in Appendix A.1 based on server type.</p>
<p>2.</p> <input type="checkbox"/>	<p>ILO Remote Console:</p> <p><i>Mount the media containing the server configuration script.</i></p>	<p>Follow steps defined in...</p> <p>C.1 Mounting Physical Media on HP Servers</p> <p style="text-align: center;">or</p> <p>C.2 Mounting Virtual Media on HP Servers</p> <p>Or</p> <p>0</p> <p>Mounting Virtual Media on Oracle RMS Servers</p> <p>...to mount the physical (USB) or local (vital) media containing the server configuration script.</p> <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Server. <p><input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP -B</p>

Appendix K.1: Applying Server Configuration with ILO

<p>3.</p> <input type="checkbox"/>	<p>ILO Remote Console:</p> <p>Copy the server configuration file to the “/var/tmp” directory on the server, making sure to rename the file by omitting the server hostname from the file name.</p> <p>NOTE: <i>The server will poll the /var/tmp directory for the presence of the configuration file and automatically execute it when found.</i></p>	<p>Example:</p> <p>TKLCConfigData<.server_hostname>.sh → will translate to →TKLCConfigData.sh</p> <pre>[root@pc9040833-no-a ~]# cp -p /<mount-point>/TKLCConfigData.NO-A.sh /var/tmp/TKLCConfigData.sh [root@pc9040833-no-a ~]#</pre> <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Server. <p><input type="checkbox"/>NOAMP-A <input type="checkbox"/>NOAMP -B</p>
<p>4.</p> <input type="checkbox"/>	<p>ILO Remote Console:</p> <p>After the script completes, a broadcast message will be sent to the terminal.</p> <p>Ignore the output shown and press the <ENTER> key to return to the command prompt.</p> <p>NOTE: <i>The user should be aware that the time to complete this step varies by server and may take from 3-20 minutes to complete.</i></p>	<p>*** NO OUTPUT FOR ≈ 3-20 MINUTES ***</p> <p>Broadcast message from root (Thu Dec 1 09:41:24 2011):</p> <p>Server configuration completed successfully! See /var/TKLC/appw/logs/Process/install.log for details.</p> <p>Please remove the USB flash drive if connected and reboot the server.</p> <p><ENTER></p> <pre>[root@pc9040833-no-a ~]#</pre> <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Server. <p><input type="checkbox"/>NOAMP-A <input type="checkbox"/>NOAMP -B</p>


Appendix K.1: Applying Server Configuration with ILO

<p>5.</p> <input type="checkbox"/>	<p>ILO Remote Console:</p> <p>Configure the time zone.</p>	<pre>[root@pc9040833-no-a ~]# set_ini_tz.pl <time zone></pre> <p>Note: The following command example uses America/New_York time zone. Replace, as appropriate, with the time zone you have selected for this installation. For UTC, use "Etc/UTC". See Appendix P for a list of valid time zones.</p> <pre>[root@pc9040833-no-a ~]# set_ini_tz.pl "America/New_York"</pre> <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Server. <p><input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP -B</p>
<p>6.</p> <input type="checkbox"/>	<p>ILO Remote Console:</p> <p>Initiate a reboot of the UDR Server.</p>	<pre>[root@pc9040833-no-a ~]# init 6</pre> <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Server. <p><input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP -B</p>
<p>7.</p> <input type="checkbox"/>	<p>ILO Remote Console:</p> <p>Output similar to that shown on the right may be observed as the server initiates a post-install reboot.</p>	<pre>scsi7 : SCSI emulation for USB Mass Storage devices scsi8 : SCSI emulation for USB Mass Storage devices input: Intel(R) Multidevice as /class/input/input3 input: USB HID v1.01 Mouse [Intel(R) Multidevice] on usb-0000:00:1 input: Intel(R) Multidevice as /class/input/input4 input: USB HID v1.01 Keyboard [Intel(R) Multidevice] on usb-0000:0 Restarting system. - machine restart █</pre>
<p>8.</p> <input type="checkbox"/>	<p>ILO Remote Console:</p> <p>After the server has completed reboot...</p> <p>Log back into the server as the “root” user.</p>	<pre>CentOS release 5.6 (Final) Kernel 2.6.18-238.19.1.el5prere15.0.0_72.22.0 on an x86_64 hostname1260476221 login:root Password: <root_password></pre>

Appendix K.1: Applying Server Configuration with ILO

<p>9.</p> <p><input type="checkbox"/></p>	<p>ILO Remote Console:</p> <p>Output similar to that shown on the right will appear as the server access the command prompt.</p>	<p>*** TRUNCATED OUTPUT ***</p> <pre> VPATH=/opt/TKLCcomcol/runcm5.16:/opt/TKLCcomcol/cm5.16 PRODPATH= RELEASE=5.16 RUNID=00 VPATH=/var/TKLC/rundb:/usr/TKLC/appworks:/usr/TKLC/awpcommon:/usr/TKLC/awptransportmgr:/usr/TKLC/awpss7:/usr/TKLC/exhr PRODPATH=/opt/comcol/prod RUNID=00 [root@pc9040833-no-a ~]# </pre> <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Server. <p><input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP -B</p>
<p>10.</p> <p><input type="checkbox"/></p>	<p>ILO Remote Console:</p> <p>Verify that the XMI and IMI IP addresses entered in Procedure 5 Step 18 have been applied.</p> <p>NOTE: For RMS systems XMI and IMI are called by their device names: XMI = eth01 IMI = eth02</p> <p>NOTE: The server's XMI & IMI addresses can be verified by reviewing the server configuration through the UDR GUI.</p> <p><i>i.e.</i> <u>Main Menu</u> → Configuration → Servers</p> <p>Scroll to line entry containing the server's hostname.</p>	<pre> [root@pc9040725-no-a ~]# ifconfig grep in grep -v inet6 control Link encap:Ethernet HWaddr 52:54:00:6C:3C:B4 inet addr:192.168.1.11 Bcast:192.168.1.255 Mask:255.255.255.0 imi Link encap:Ethernet HWaddr 52:54:00:F6:DC:4A inet addr:169.254.2.2 Bcast:169.254.2.255 Mask:255.255.255.0 lo Link encap:Local Loopback inet addr:127.0.0.1 Mask:255.0.0.0 xmi Link encap:Ethernet HWaddr 52:54:00:0F:1F:3B inet addr:10.250.39.19 Bcast:10.250.39.31 Mask:255.255.255.240 </pre> <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Server. <p><input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP -B</p>

Appendix K.1: Applying Server Configuration with ILO

<p>11.</p> <p><input type="checkbox"/></p>	<p>ILO Remote Console:</p> <p>Use the “ntpq” command to verify that the server has connectivity to the assigned Primary and Secondary NTP server(s).</p>	<pre>[root@pc9040725-no-a ~]# ntpq -np remote refid st t when poll reach delay offset jitter ===== *10.250.32.10 192.5.41.209 2 u 651 1024 377 0.339 0.583 0.048 +10.250.32.51 192.5.41.209 2 u 656 1024 377 0.416 0.641 0.086 [root@pc9040725-no-a ~]#</pre> <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Server. <p><input type="checkbox"/>NOAMP-A <input type="checkbox"/>NOAMP -B</p>
		<p>IF CONNECTIVITY TO THE NTP SERVER(S) CANNOT BE ESTABLISHED, STOP AND EXECUTE THE FOLLOWING STEPS:</p>
<ul style="list-style-type: none"> • Have the customer IT group provide a network path from the OAM server IP to the assigned NTP IP addresses. <p>ONCE NETWORK CONNECTIVITY IS ESTABLISHED TO THE ASSIGNED NTP IP ADDRESSES, THEN RESTART THIS PROCEDURE BEGINNING WITH STEP 6.</p>		
<p>12.</p> <p><input type="checkbox"/></p>	<p>ILO Remote Console:</p> <p>Execute a “alarmMgr” to verify the current health of the server</p>	<pre># alarmMgr --alarmStatus</pre> <p>NOTE: This command should return no output on a healthy system.</p> <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Server. <p><input type="checkbox"/>NOAMP-A <input type="checkbox"/>NOAMP -B</p>
<p>13.</p> <p><input type="checkbox"/></p>	<p>ILO Remote Console:</p> <p>Exit session for the desired server</p>	<pre># exit logout Connection to 192.168.1.16 closed. #</pre> <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Server. <p><input type="checkbox"/>NOAMP-A <input type="checkbox"/>NOAMP -B</p>
<p>THIS PROCEDURE HAS BEEN COMPLETED</p>		

K.2 Applying Server Configuration with PM&C

Oracle Communications User Data Repository Installation and Configuration Guide

This procedure contains steps to apply server configuration scripts to virtual servers.

Appendix K.2: Applying Server Configuration with PM&C

Step	In this procedure you will apply server configuration scripts to virtual servers.	
<p>1.</p> <input type="checkbox"/>	<p>NOAMP Server A:</p> <p>Connect to the NOAMP-A Server terminal at the Primary NOAMP site</p>	<p>SSH from PM&C: Use the Primary NOAMP-A XMI IP_address.</p> <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Server. <p><input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B</p> <p><input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4</p> <p>Gen-9 Normal Capacity Configuration:</p> <p><input type="checkbox"/> MP-5 <input type="checkbox"/> MP-6</p>
<p>2.</p> <input type="checkbox"/>	<p>NOAMP Server A:</p> <p>1) Access the command prompt.</p> <p>2) Log into the Primary NOAMP-A server as the “admusr” user..</p>	<p>login as: <code>admusr</code></p> <p>root@10.250.xx.yy's password:<admusr_password></p> <p>Last login: Mon Jul 30 10:33:19 2012 from 10.250.80.199</p> <p>\$</p> <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Server. <p><input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B</p> <p><input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4</p> <p>Gen-9 Normal Capacity Configuration:</p> <p><input type="checkbox"/> MP-5 <input type="checkbox"/> MP-6</p>

Appendix K.2: Applying Server Configuration with PM&C

<p>3.</p> <input type="checkbox"/>	<p>NOAMP Server A:</p> <p>Output similar to that shown on the right will appear as the server access the command prompt.</p>	<p>*** TRUNCATED OUTPUT ***</p> <pre>VPATH=/opt/TKLCcomcol/runcm5.16:/opt/TKLCcomcol/cm5.16 PRODPATH= RELEASE=5.16 RUNID=00 VPATH=/var/TKLC/rundb:/usr/TKLC/appworks:/usr/TKLC/awpcommon:/usr/TKLC/awptransportmgr:/usr/TKLC/awpss7:/usr/TKLC/exhr PRODPATH=/opt/comcol/prod RUNID=00 [admusr@pc9040833-no-a ~]\$</pre> <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Server. <p><input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B</p> <p><input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4</p> <p>Gen-9 Normal Capacity Configuration:</p> <p><input type="checkbox"/> MP-5 <input type="checkbox"/> MP-6</p>
<p>4.</p> <input type="checkbox"/>	<p>NOAMP Server A:</p> <p>Switch to root user.</p>	<pre>1. [admusr@pc9040833-no-a ~]\$ su - password: <root_password></pre> <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Server. <p><input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B</p> <p><input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4</p>
<p>5.</p> <input type="checkbox"/>	<p>NOAMP Server A:</p> <p>Change directory into the file management space</p>	<pre>[root@pc9040833-no-a ~]# cd /var/TKLC/db/filemgmt</pre> <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Server. <p><input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B</p> <p><input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4</p> <p>Gen-9 Normal Capacity Configuration:</p> <p><input type="checkbox"/> MP-5 <input type="checkbox"/> MP-6</p>

Appendix K.2: Applying Server Configuration with PM&C

<p>6.</p> <input type="checkbox"/>	<p>NOAMP Server A:</p> <p>Get a directory listing and find the desired servers configuration files</p> <p>Note: Server names are in red.</p>	<pre>[root@pc9040833-no-a ~]# ls -ltr TKLCConfigData*.sh</pre> <p>*** TRUNCATED OUTPUT ***</p> <pre>-rw-rw-rw- 1 root root 1257 Aug 17 14:01 TKLCConfigData.NOAMP-A.sh -rw-rw-rw- 1 root root 1311 Aug 17 14:30 TKLCConfigData.NO-B.sh</pre> <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Server. <p> <input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B <input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4 </p> <p>Gen-9 Normal Capacity Configuration:</p> <p> <input type="checkbox"/> MP-5 <input type="checkbox"/> MP-6 </p>
<p>7.</p> <input type="checkbox"/>	<p>NOAMP Server A:</p> <p>Copy the configuration files found in the previous step to the PM&C. server that manages the desired server</p>	<p>Note: The below example shows copying 2 files. Any number of configuration files can be copied in one step.</p> <pre>[root@pc9040833-no-a ~]# scp -p <configuration_file-a><configuration_file-b> admusr@<Desired_PMAC_IP>:/tmp admusr@10.250.39.4's password:<admusr_password> TKLCConfigData.so-carync-a.sh 100% 1741 1.7KB/s 00:00 TKLCConfigData.so-carync-b.sh 100% 1741 1.7KB/s 00:00 [root@no-mrsvnc-a filemgmt]#</pre> <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Server. <p> <input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B <input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4 </p> <p>Gen-9 Normal Capacity Configuration:</p> <p> <input type="checkbox"/> MP-5 <input type="checkbox"/> MP-6 </p>

Appendix K.2: Applying Server Configuration with PM&C

<p>8.</p> <input type="checkbox"/>	<p>NOAMP Server A:</p> <p>Exit the ssh session to NOAMP Server A:</p>	<pre>[root@pc9040833-no-a ~]# exit logout Connection to 192.168.1.4 closed. #</pre> <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Server. <p> <input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B <input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4 </p> <p>Gen-9 Normal Capacity Configuration:</p> <p> <input type="checkbox"/> MP-5 <input type="checkbox"/> MP-6 </p>
<p>9.</p> <input type="checkbox"/>	<p>PM&C Server:</p> <p>Connect to the PM&C Server terminal that manages the desired server</p>	<p>Connect to the PM&C server’s terminal using one of the access methods described in Section 2.1.2 for HP Servers or [Appendix 0 Accessing the iLo VGA Redirection Window for Oracle Accessing the iLo VGA Redirection Window for Oracle RMS servers or Appendix A.3 Accessing the iLo Console for Oracle RMS Servers].</p> <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Server. <p> <input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B <input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4 </p> <p>Gen-9 Normal Capacity Configuration:</p> <p> <input type="checkbox"/> MP-5 <input type="checkbox"/> MP-6 </p>

Appendix K.2: Applying Server Configuration with PM&C

<p>10.</p> <p><input type="checkbox"/></p>	<p>PM&C Server:</p> <p>Copy the server configuration file to the Control IP for the desired server</p> <p>Note: An example of how to find the Control IP is shown in, Procedure 3: Create, IPM and Install Application on all Virtual Machines, Step 12.</p>	<p>Note: The name of the configuration file varies for each server. The output is just an example.</p> <pre>admusr@pmac ~]\$ scp -p /tmp/<configuration_file> admusr@<DesiredServer_Control_IP>: /tmp/ admusr@192.168.1.10's password: <admusr_password> TKLCCconfigData.so-carync-a.sh 100% 1741 1.7KB/s 00:00 [root@pmac ~]</pre> <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Server. <p><input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B</p> <p><input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4</p> <p>Gen-9 Normal Capacity Configuration:</p> <p><input type="checkbox"/> MP-5 <input type="checkbox"/> MP-6</p>
<p>11.</p> <p><input type="checkbox"/></p>	<p>PM&C Server:</p> <p>Connect to the desired server console from the PM&C Server Console</p>	<p>Using an SSH client such as putty, ssh to the virtual server using root credentials and the < Control IP Address > from pmac.</p> <pre>[root@PMAC-pc9040833 ~]# ssh admusr@<DesiredServer_Control_IP> admusr@192.168.1.10's password: <admusr_password></pre> <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Server. <p><input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B</p> <p><input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4</p> <p>Gen-9 Normal Capacity Configuration:</p> <p><input type="checkbox"/> MP-5 <input type="checkbox"/> MP-6</p>

Appendix K.2: Applying Server Configuration with PM&C

<p>12.</p> <input type="checkbox"/>	<p>Desired Server:</p> <p>Output similar to that shown on the right will appear as the server access the command prompt</p>	<p>*** TRUNCATED OUTPUT ***</p> <pre>VPATH=/opt/TKLCcomcol/runcm5.16:/opt/TKLCcomcol/cm5.16 PRODPATH= RELEASE=5.16 RUNID=00 VPATH=/var/TKLC/rundb:/usr/TKLC/appworks:/usr/TKLC/awpcommon:/usr/TKLC/comagent-gui:/usr/TKLC/comagent:/usr/TKLC/exhr PRODPATH=/opt/comcol/prod RUNID=00 [admusr@hostname1326744539 ~]\$</pre> <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Server. <p> <input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B <input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4 </p> <p>Gen-9 Normal Capacity Configuration:</p> <p> <input type="checkbox"/> MP-5 <input type="checkbox"/> MP-6 </p>
<p>13.</p> <input type="checkbox"/>	<p>Desired Server:</p> <p>Switch to root user.</p>	<pre>[admusr@hostname1326744539 ~]\$ su - password: <root_password></pre> <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Server. <p> <input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B <input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4 </p> <p>Gen-9 Normal Capacity Configuration:</p> <p> <input type="checkbox"/> MP-5 <input type="checkbox"/> MP-6 </p>

Appendix K.2: Applying Server Configuration with PM&C

<p>14. <input type="checkbox"/></p>	<p>Desired Server:</p> <p>Copy the server configuration file to the “/var/tmp” directory on the server, making sure to rename the file by omitting the server hostname from the file name.</p> <p>NOTE: <i>The server will poll the /var/tmp directory for the presence of the configuration file and automatically execute it when found.</i></p>	<p>Example: TKLCConfigData<.server_hostname>.sh → will translate to →TKLCConfigData.sh</p> <pre>[root@pc9040833-no-a ~]# cp -p /tmp/TKLCConfigData.NO-B.sh /var/tmp/TKLCConfigData.sh [root@pc9040833-no-a ~]#</pre> <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Server. <p><input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B</p> <p><input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4</p> <p>Gen-9 Normal Capacity Configuration:</p> <p><input type="checkbox"/> MP-5 <input type="checkbox"/> MP-6</p>
<p>15. <input type="checkbox"/></p>	<p>Desired Server:</p> <p>After the script completes, a broadcast message will be sent to the terminal.</p> <p>Ignore the output shown and press the <ENTER> key to return to the command prompt.</p> <p>NOTE: <i>The user should be aware that the time to complete this step varies by server and may take from 3-20 minutes to complete.</i></p>	<p>*** NO OUTPUT FOR ≈ 3-20 MINUTES ***</p> <p>Broadcast message from root (Thu Dec 1 09:41:24 2011):</p> <p>Server configuration completed successfully! See /var/TKLC/appw/logs/Process/install.log for details.</p> <p>Please remove the USB flash drive if connected and reboot the server. <ENTER></p> <pre>[root@pc9040833-no-a ~]#</pre> <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Server. <p><input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B</p> <p><input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4</p> <p>Gen-9 Normal Capacity Configuration:</p> <p><input type="checkbox"/> MP-5 <input type="checkbox"/> MP-6</p>

Appendix K.2: Applying Server Configuration with PM&C

<p>16.</p> <input type="checkbox"/>	<p>Desired Server:</p> <p>Configure the time zone.</p>	<pre>[root@pc9040833-no-a ~]# set_ini_tz.pl <time zone></pre> <p>Note: The following command example uses America/New_York time zone. Replace, as appropriate, with the time zone you have selected for this installation. For UTC, use "Etc/UTC". See Appendix P for a list of valid time zones.</p> <pre>[root@pc9040833-no-a ~]# set_ini_tz.pl "America/New_York"</pre> <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Server. <p><input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B</p> <p><input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4</p> <p>Gen-9 Normal Capacity Configuration:</p> <p><input type="checkbox"/> MP-5 <input type="checkbox"/> MP-6</p>
<p>17.</p> <input type="checkbox"/>	<p>Desired Server:</p> <p>Initiate a reboot of the UDR Server.</p>	<pre>[root@pc9040833-no-a ~]# init 6</pre> <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Server. <p><input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B</p> <p><input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4</p> <p>Gen-9 Normal Capacity Configuration:</p> <p><input type="checkbox"/> MP-5 <input type="checkbox"/> MP-6</p>


Appendix K.2: Applying Server Configuration with PM&C

<p>18.</p> <input type="checkbox"/>	<p>PM&C Server:</p> <p>The SSH session for the desired server was terminated by previous step.</p> <p>Output similar to that shown on the right may be observed.</p>	<p>The previous step should cause the ssh session to the desired server to close and user should return to the PM&C server console prompt. The user should see output similar to the below output:</p> <pre>Connection to 192.168.1.16 closed by remote host. Connection to 192.168.1.16 closed. #</pre> <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Server. <p><input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B</p> <p><input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4</p> <p>Gen-9 Normal Capacity Configuration:</p> <p><input type="checkbox"/> MP-5 <input type="checkbox"/> MP-6</p>
<p>19.</p> <input type="checkbox"/>	<p>PM&C Server:</p> <p>Wait until server reboot is done. Then, SSH into the desired server using the Control IP Address.</p> <p>Output similar to that shown on the right may be observed</p>	<p>Wait about 9 minutes until the server reboot is done.</p> <p>Using an SSH client such as putty, ssh to the desired server using root credentials and the <Control IP Address>.</p> <pre>[root@PMAC-pc9040833 ~]# ssh admusr@192.168.1.xx admusr@192.168.1.20's password: <admusr_password></pre> <p>Note: If the server isn't up, wait a few minutes and re-enter the <code>ssh</code> command. You can also try running the <code>ping 192.168.1.xx</code> command to see if the server is up.</p> <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Server. <p><input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B</p> <p><input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4</p> <p>Gen-9 Normal Capacity Configuration:</p> <p><input type="checkbox"/> MP-5 <input type="checkbox"/> MP-6</p>

Appendix K.2: Applying Server Configuration with PM&C

<p>20.</p> <p><input type="checkbox"/></p>	<p>Desired Server:</p> <p>Output similar to that shown on the right will appear as the server access the command prompt.</p>	<p>*** TRUNCATED OUTPUT ***</p> <pre> VPATH=/opt/TKLCcomcol/runcm5.16:/opt/TKLCcomcol/cm5.16 PRODPATH= RELEASE=5.16 RUNID=00 VPATH=/var/TKLC/rundb:/usr/TKLC/appworks:/usr/TKLC/awpcommon:/usr/TKLC/awptransportmgr:/usr/TKLC/awpss7:/usr/TKLC/exhr PRODPATH=/opt/comcol/prod RUNID=00 [admusr@pc9040833-no-a ~]\$ </pre> <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Server. <p> <input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B <input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4 </p> <p>Gen-9 Normal Capacity Configuration:</p> <p> <input type="checkbox"/> MP-5 <input type="checkbox"/> MP-6 </p>
<p>21.</p> <p><input type="checkbox"/></p>	<p>Desired Server:</p> <p>Switch to root user.</p>	<pre> [admusr@hostname1326744539 ~]\$ su - password: <root_password> </pre> <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Server. <p> <input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B <input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4 </p> <p>Gen-9 Normal Capacity Configuration:</p> <p> <input type="checkbox"/> MP-5 <input type="checkbox"/> MP-6 </p>

Appendix K.2: Applying Server Configuration with PM&C

<p>22.</p> <p><input type="checkbox"/></p>	<p>Desired Server:</p> <p>Verify that the XMI and IMI IP addresses entered in Procedure 5 Step 18 have been applied</p> <p>NOTE: The server's XMI and IMI addresses can be verified by reviewing the server configuration through the UDR GUI.</p> <p><i>i.e.</i> Main Menu → Configuration → Servers</p> <p>Scroll to line entry containing the server's hostname.</p>	<pre>[root@pc9040725-no-a ~]# ifconfig grep in grep -v inet6 control Link encap:Ethernet HWaddr 52:54:00:6C:3C:B4 inet addr:192.168.1.11 Bcast:192.168.1.255 Mask:255.255.255.0 imi Link encap:Ethernet HWaddr 52:54:00:F6:DC:4A inet addr:169.254.2.2 Bcast:169.254.2.255 Mask:255.255.255.0 lo Link encap:Local Loopback inet addr:127.0.0.1 Mask:255.0.0.0 xmi Link encap:Ethernet HWaddr 52:54:00:0F:1F:3B inet addr:10.250.39.19 Bcast:10.250.39.31 Mask:255.255.255.240</pre> <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Server. <p><input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B</p> <p><input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4</p> <p>Gen-9 Normal Capacity Configuration:</p> <p><input type="checkbox"/> MP-5 <input type="checkbox"/> MP-6</p>
<p>23.</p> <p><input type="checkbox"/></p>	<p>Desired Server:</p> <p>Use the “ntpq” command to verify that the server has connectivity to the assigned Primary and Secondary NTP server(s).</p>	<pre>[root@pc9040725-no-a ~]# ntpq -np remote refid st t when poll reach delay offset jitter ===== ===== *10.250.32.10 192.5.41.209 2 u 651 1024 377 0.339 0.583 0.048 +10.250.32.51 192.5.41.209 2 u 656 1024 377 0.416 0.641 0.086 [root@pc9040725-no-a ~]#</pre> <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Server. <p><input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B</p> <p><input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4</p> <p>Gen-9 Normal Capacity Configuration:</p> <p><input type="checkbox"/> MP-5 <input type="checkbox"/> MP-6</p>
<div style="display: flex; align-items: center;">  <p>IF CONNECTIVITY TO THE NTP SERVER(S) CANNOT BE ESTABLISHED, STOP AND EXECUTE THE FOLLOWING STEPS:</p> </div>		

Appendix K.2: Applying Server Configuration with PM&C

	<ul style="list-style-type: none"> Have the customer IT group provide a network path from the OAM server IP to the assigned NTP IP addresses. 	<p>ONCE NETWORK CONNECTIVITY IS ESTABLISHED TO THE ASSIGNED NTP IP ADDRESSES, THEN RESTART THIS PROCEDURE BEGINNING WITH STEP 17</p>
<p>24.</p> <input type="checkbox"/>	<p>Desired Server:</p> <p>Execute a “alarmMgr” to verify the current health of the server</p>	<pre># alarmMgr --alarmStatus</pre> <p>NOTE: This command should return no output on a healthy system.</p> <ul style="list-style-type: none"> “Check off” the associated Check Box as addition is completed for each Server. <p><input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B</p> <p><input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4</p> <p>Gen-9 Normal Capacity Configuration:</p> <p><input type="checkbox"/> MP-5 <input type="checkbox"/> MP-6</p>
<p>25.</p> <input type="checkbox"/>	<p>Desired Server:</p> <p>Exit the SSH session for the desired server</p>	<pre># exit</pre> <pre>logout</pre> <pre>Connection to 192.168.1.16 closed.</pre> <pre>#</pre> <ul style="list-style-type: none"> “Check off” the associated Check Box as addition is completed for each Server. <p><input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B</p> <p><input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4</p> <p>Gen-9 Normal Capacity Configuration:</p> <p><input type="checkbox"/> MP-5 <input type="checkbox"/> MP-6</p>

Appendix K.2: Applying Server Configuration with PM&C

<p>26.</p> <input type="checkbox"/>	<p>PM&C Server:</p> <p>Optional Step: If the desired server is managed by a different PM&C server, do this step.</p> <p>Exit the SSH session for the second PM&C server</p>	<pre># exit logout Connection to 192.168.1.4 closed. #</pre> <ul style="list-style-type: none"> • “Check off” the associated Check Box as addition is completed for each Server. <p> <input type="checkbox"/> NOAMP-A <input type="checkbox"/> NOAMP-B <input type="checkbox"/> SOAM-A <input type="checkbox"/> SOAM-B <input type="checkbox"/> MP-1 <input type="checkbox"/> MP-2 <input type="checkbox"/> MP-3 <input type="checkbox"/> MP-4 </p> <p>Gen-9 Normal Capacity Configuration:</p> <input type="checkbox"/> MP-5 <input type="checkbox"/> MP-6
<p>Repeat steps 1 - 26 for each remaining server.</p>		
<p>27.</p> <input type="checkbox"/>	<p>PM&C Server:</p> <p>Close PM&C Server Console</p>	<p>PM&C Server:</p> <p>Close PM&C Server Console</p>
<p>THIS PROCEDURE HAS BEEN COMPLETED</p>		

Appendix L. Configure TVOE Network

This procedure contains steps to apply server configuration scripts to virtual servers.

L.1 Configure TVOE Network for Normal or Low Capacity C-Class Configurations

This procedure will configure the network on TVOE servers that will host SOAM and MP VM Guests (Normal capacity configuration) or NOAMP/SOAM and MP VM Guests (Low capacity configuration).





Requirements:

- An understanding of the topology being deployed, as outlined in reference [6].
- Interconnects should conform to reference [6].

Appendix L.1: Configure TVOE Network for Normal or Low Capacity C-Class Configurations

Step	Procedure	Result
1. <input type="checkbox"/>	Access the server's console.	Connect to the tvoe server's console using one of the access methods described in Section 2.1.2. (switch to root user)
2. <input type="checkbox"/>	TVOE server: Add VLAN for XMI	<pre>#netAdm add --device=bond0.<xmi_vlan> Interface bond0.# added</pre>
3. <input type="checkbox"/>	TVOE server: Add VLAN for IMI	<pre>#netAdm add --device=bond0.<imi_vlan> Interface bond0.# added</pre>
4. <input type="checkbox"/>	TVOE server: Add VLAN for management	<p>Note: Some lab deployments may host TVOE and PMAC on the XMI network/bridge instead of a separate routable management. This step is only required if the deployment has a separate management network.</p> <pre>#netAdm add --device=bond0.<management_vlan> Interface bond0.# added</pre>

Appendix L.1: Configure TVOE Network for Normal or Low Capacity C-Class Configurations

Step	Procedure	Result
<p>5.</p> <p><input type="checkbox"/></p>	<p>TVOE server:</p> <p><i>Topology Check</i></p>	<p><u>The next steps will depend on your system topology. If you are unfamiliar with which topology you are deploying, access your Onboard Administrator (OA) web interface and look at "Rack Overview."</u></p> <p><u>This will present the rear view of the enclosure.</u></p> <p><u>Highlighted in red are a single pair of enclosure switches on a system without a dedicated signaling path (Topology 1/1A and Topology 3/3A) :</u></p> <div> <p>Rack Topology Rack Power and Thermal</p> <hr/> <p>Enclosure: xgSDM-6_and_xgSDM-7</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Front View</p>  </div> <div style="text-align: center;"> <p>Rear View</p>  </div> </div> </div> <p><u>Highlighted in red are two pairs of enclosure switches on a system with dedicated signaling path (Topology 4/4A) :</u></p> <div> <p>Rack Topology Rack Power and Thermal</p> <hr/> <p>Enclosure: 121_08_23_xgSDM5_Site1</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Front View</p>  </div> <div style="text-align: center;"> <p>Rear View</p>  </div> </div> </div>

Appendix L.1: Configure TVOE Network for Normal or Low Capacity C-Class Configurations

Step	Procedure	Result
<p>6.</p> <input type="checkbox"/>	<p>TVOE server:</p> <p>Add bond for signalling</p> <p>[Topology 4 only]</p>	<p>Topology 4 and Topology 4A ONLY:</p> <p>Deployments with two pairs of enclosure switches (Topology 4 and Topology 4A in reference [6]) will host XSI on bond1:</p> <pre>#netAdm add --device=bond1 --onboot=yes --bootproto=none</pre> <p>Interface bond1 added</p>
<p>7.</p> <input type="checkbox"/>	<p>TVOE server:</p> <p>Bond interfaces eth11 and eth12 for signalling</p> <p>[Topology 4 only]</p>	<p>Topology 4 and Topology 4A ONLY:</p> <p>Deployments with two pairs of enclosure switches (Topology 4 and Topology 4A in reference [6]) will host XSI on bond1:</p> <pre>#netAdm set --device=bond1 --bondInterfaces=eth11,eth12</pre> <p>Interface bond1 updated</p>
<p>8.</p> <input type="checkbox"/>	<p>TVOE server:</p> <p>Add VLAN for XSI-1</p>	<p>Deployments with only one pair of enclosure switches (Topology 1/1A and Topology 3/3A in reference [6]) will create XSI VLAN on bond0:</p> <pre>#netAdm add --device=bond0.<xsi1_vlan></pre> <p>Interface bond0.# added</p> <p>. . . or . . .</p> <p>Deployments with two pairs of enclosure switches (Topology 4 and Topology 4A in reference [6]) will create XSI VLAN on bond1:</p> <pre>#netAdm add --device=bond1.<xsi1_vlan></pre> <p>Interface bond1.# added</p>
<p>Repeat Step 8 for additional XSI networks if they are present, each using its own unique <xsi_vlan> number.</p>		
<p>9.</p> <input type="checkbox"/>	<p>TVOE server:</p> <p>Add bridge network for XMI</p>	<pre>#netAdm add --name=xmi --type=Bridge --bridgeInterface=bond0.<xmi_vlan></pre> <p>Bridge xmi added!</p>
<p>10.</p> <input type="checkbox"/>	<p>TVOE server:</p> <p>Add bridge network for IMI</p>	<pre>#netAdm add --name=imi --type=Bridge --bridgeInterface=bond0.<imi_vlan></pre> <p>Bridge imi added!</p>
<p>11.</p> <input type="checkbox"/>	<p>TVOE server:</p> <p>Add bridge network for management</p>	<p>Note: Some lab deployments may host TVOE and PMAC on the XMI network/bridge instead of a separate routable management. This step is only required if the deployment has a separate management network.</p> <pre>#netAdm add --name=management --type=Bridge \ --bridgeInterface=bond0.<management_vlan></pre> <p>Bridge management added!</p>

Appendix L.1: Configure TVOE Network for Normal or Low Capacity C-Class Configurations

Step	Procedure	Result
12. <input type="checkbox"/>	TVOE server: Add bridge network for XSI-1	Deployments with only one pair of enclosure switches (Topology 1/1A and Topology 3/3A in reference [6]) will create XSI VLAN on bond0 : #netAdm add --name=xsil --type=Bridge \ --bridgeInterface=bond0.<xsil_vlan> Bridge xsil added! . . . or . . . Deployments with two pairs of enclosure switches (Topology 4 and Topology 4A in reference [6]) will create XSI VLAN on bond1 : #netAdm add --name=xsil --type=Bridge \ --bridgeInterface=bond1.<xsil_vlan> Bridge xsil added!
Repeat Step 12 for additional XSI networks if they are present, each using its own unique <xsil_vlan> number.		
Execute steps 13 and 14 if deployment hosts TVOE and PMAC on the XMI network/bridge.		
13. <input type="checkbox"/>	TVOE server: Assign TVOE host an address on XMI network	#netAdm set --type=Bridge --name=xmi--bootproto=none \ --address=<TVOE_XMI_address> --netmask=<tvoe_xmi_netmask> Bridge xmi updated!
14. <input type="checkbox"/>	TVOE Server: Add the default route to XMI	#netAdm add --route=default --gateway=<xmi_default_route_ip>\ \ --device=xmi Route to xmi added!
Execute steps 15 and 16 if deployment hosts TVOE and PMAC on a separate routable management network.		
15. <input type="checkbox"/>	TVOE server: Assign TVOE host an address on management network	#netAdm set --type=Bridge --name=management --bootproto=none \ --address=<TVOE_management_address> --netmask=<management_netmask> Bridge management updated!
16. <input type="checkbox"/>	TVOE Server: Add the default route to management	#netAdm add --route=default -- gateway=<management_default_route_ip>\ \ --device=management Route to management added!
17. <input type="checkbox"/>	TVOE Server: Additional Configuration	Execute steps in L.6: Configure TVOE Server (Hostname, Time Zone, SNMP, NTP, etc) to complete the TVOE Server Configuration.
THIS PROCEDURE HAS BEEN COMPLETED		

L.2 Configure TVOE Network for Topology 7 (HP RMS & Oracle RMS with 8 ports)

This section for Topology 7 deployment requires **HP DL380** or **Oracle X5-2** rack mount servers.

Requirements:

- An understanding of the topology being deployed, as outlined in reference [6].
- Interconnects should conform to reference [6]. (**<nicx> values in the procedure below can be found in a table in section 2.0 in this document)

Appendix L.2: Configure TVOE Network for Topology 7 (HP RMS and Oracle RMS with 8 ports)

Step	Procedure	Result
1. <input type="checkbox"/>	Access the server's console.	Connect to the TVOE server's console using one of the access methods described in Section 2.1.2. for HP OR one of the access methods described in Appendix A.2: Accessing the iLo VGA Redirection Window for OracleRMS Servers or Appendix A.3 Accessing the iLo Console for Oracle RMS Servers. (switch to root user)
2. <input type="checkbox"/>	TVOE server: Create bond0 device	<p>Verify the bond0 network by running the following command</p> <pre>#netAdm query --device=bond0 Protocol: none IP Address: Netmask: On Boot: yes Bonded Mode: active-backup Monitor: MII Interval: 100 Enslaving: < nic1 nic2> Type: Bonding Bridge: Member of bridge control</pre> <p>If bond0 exists and is enslaving nic1 and nic2 (refer to E58607-01[6] for device name assignment), continue onto Step 3. Otherwise the bond must be created with these following commands:</p> <pre>#netAdm add --device=bond0--onboot=yes --type=Bonding \ --mode=active-backup --miimon=100 Interface bond0 added</pre> <p>Execute the following to set the slave interfaces:</p> <pre>#netAdm set --device=<nic1> --type=Ethernet \ --master=control --slave=yes Interface <ethernet_interface_1> updated</pre> <pre>#netAdm set --device=<nic2> --type=Ethernet \ --master=control --slave=yes Interface <ethernet_interface_2> updated</pre>

Appendix L.2: Configure TVOE Network for Topology 7 (HP RMS and Oracle RMS with 8 ports)

Step	Procedure	Result
3. <input type="checkbox"/>	TVOE server: <i>Reset control network</i>	<p>Verify the control network by running the following command</p> <pre>#netAdm query --type=Bridge --name=control</pre> <p>Bridge Name: control On Boot: yes Protocol: dhcp Persistent: yes Promiscuous: no Bridge Interface: bond0</p> <p>If the output matches the one above with Bridge Interface bond0, the Control Bridge must be modified with the following command to remove bond interface zero. Also, need to reset “onboot =yes”. Otherwise continue onto Step 4. Note:The control network needs to be removed from bond0 when PMAC is to be run on each Oracle RMS Server.</p> <pre>#netAdm set --type=Bridge --name=control --delBridgeInt=bond0</pre> <p>Bridge control updated</p> <pre># netAdm set --device=bond0 --onboot=yes</pre> <p>Interface bond0 updated</p>
4. <input type="checkbox"/>	TVOE server: <i>Add VLAN for IMI</i>	<pre>#netAdm add --device=bond0.<imi_vlan></pre> <p>Interface bond0.# added</p>
5. <input type="checkbox"/>	TVOE server: <i>Add bridge network for IMI</i>	<pre># netAdm add --name=imi --type=Bridge --bridgeInterface=bond0.<imi_vlan></pre> <p>Bridge imi added!</p>
6. <input type="checkbox"/>	TVOE server: <i>Add Bond for XMI network</i>	<pre># netAdm add --device=bond1 --onboot=yes --bootproto=none</pre> <p>Interface bond1 added</p>
7. <input type="checkbox"/>	TVOE server: <i>Update Bond interfaces for XMI network</i>	<pre># netAdm set --device=bond1 --bondInterfaces=<nic3>,<nic5></pre> <p>Interface bond1 updated</p>
8. <input type="checkbox"/>	TVOE server: <i>Add VLAN for XMI</i>	<pre># netAdm add --device=bond1.<xmi_vlan></pre> <p>Interface bond1.# added</p>
9. <input type="checkbox"/>	TVOE server: <i>Add Bridge network for XMI</i>	<pre># netAdm add --name=xmi --type=Bridge --bridgeInterface=bond1.<xmi_vlan>></pre>

Appendix L.2: Configure TVOE Network for Topology 7 (HP RMS and Oracle RMS with 8 ports)

Step	Procedure	Result
<p>Note: Some deployments may host TVOE and PMAC on the XMI network/bridge instead of a separate routable management. Execute steps 10-12 if deployment hosts TVOE and PMAC on a separate routable management network. If XMI network/bridge is used execute steps 13-14.</p>		
10. <input type="checkbox"/>	<p>TVOE server:</p> <p>Add VLAN for management</p>	<pre># netAdm add --device=bond1.<management_vlan></pre> <p>Interface bond1.#added</p>
11. <input type="checkbox"/>	<p>TVOE server:</p> <p>Add Bridge and TVOE IP on management network</p>	<pre># netAdm add --name=management --type=Bridge \ --bridgeInterface=bond1.<management_vlan> \ --bootproto=none --onboot=yes \ --address=<tvoe_management_address> \ --netmask=<management_netmask></pre> <p>Bridge management added!</p>
12. <input type="checkbox"/>	<p>TVOE Server:</p> <p>Add the default route to management network</p>	<pre>#netAdm add --route=default --gateway=<management_default_route_ip>\ --device=management</pre> <p>Route to management added</p>
Execute steps 13-14 if the deployment hosts TVOE and PMAC on the XMI network/bridge.		
13. <input type="checkbox"/>	<p>TVOE server:</p> <p>Update Bridge and TVOE IP on XMI network</p>	<pre># netAdm set --name=xmi --type=Bridge \ --bridgeInterface=bond1.<xmi_vlan> \ --bootproto=none --onboot=yes \ --address=<tvoe_xmi_IP> \ --netmask=<tvoe_xmi_netmask></pre> <p>Bridge xmi added!</p>
14. <input type="checkbox"/>	<p>TVOE Server:</p> <p>Add the default route to xmi network</p>	<pre>#netAdm add --route=default --gateway=<xmi_default_route_ip>\ --device=xmi</pre> <p>Route to xmi added</p>
15. <input type="checkbox"/>	<p>TVOE server:</p> <p>Add bond 2 interface</p>	<pre>netAdm add --device=bond2 --onboot=yes --bootproto=none</pre> <p>Interface bond2 added</p>
16. <input type="checkbox"/>	<p>TVOE server:</p> <p>Update Bond2 with eth interfaces</p>	<pre>netAdm set --device=bond2 --bondInterfaces==<nic4>,<nic7></pre> <p>Interface bond2 updated</p>
17. <input type="checkbox"/>	<p>TVOE server:</p> <p>Add VLAN for XSI1</p>	<pre># netAdm add --device=bond2.<xs11_vlan></pre> <p>Interface bond2.# added</p>
18. <input type="checkbox"/>	<p>TVOE server:</p> <p>Add bridge network for XSI1</p>	<pre># netAdm add --name=xs11 --type=Bridge\ --bridgeInterface=bond2.<xs11_vlan></pre> <p>Bridge xs11 added!</p>

Appendix L.2: Configure TVOE Network for Topology 7 (HP RMS and Oracle RMS with 8 ports)

Step	Procedure	Result
<p>19.</p> <input type="checkbox"/>	<p>TVOE server: (Topology 7E only) Signaling Network2 Configuration</p>	<p>a. For Topology 7E only (optional)</p> <ul style="list-style-type: none"> i. Add Bond3 Interface for XSI2 network # netAdm add --device=bond3 --onboot=yes --bootproto=none ii. Bond interfaces for XSI2 network # netAdm set --device=bond3 --bondInterfaces=<nic6>,<nic8> iii. Add VLAN for XSI2 # netAdm add --device=bond3.<xsi2_vlan> iv. Add Bridge for XSI2 network # netAdm add --name=xsi2 --type=Bridge --bridgeInterface=bond3.<xsi2_vlan>
<p>20.</p> <input type="checkbox"/>	<p>TVOE Server: Additional Configuration</p>	<p>Execute steps in L.6:Configure TVOE Server (Hostname, Time Zone, SNMP, NTP, etc) to complete the TVOE Server Configuration.</p>
<p>THIS PROCEDURE HAS BEEN COMPLETED</p>		

L.3 Configure TVOE Network for Topology 7 (Oracle RMSwith 6 ports)

This section for Topology 7 deployment requires **Oracle X5-2**rack mount servers.

Requirements:

- An understanding of the topology being deployed, as outlined in reference [6].
- Interconnects should conform to reference [6]. (** <nicx> values in the procedure below can be found in a table in section 2.0 in this document)

Appendix L.3: Configure TVOE Network for Topology 7 (Oracle RMS with 6 ports)

Step	Procedure	Result
<p>1.</p> <input type="checkbox"/>	<p>Access the server's console.</p>	<p>Connect to the server's ILO VGA using the access method described in Appendix A.2: Accessing the iLo VGA Redirection Window for OracleRMS Servers or Appendix A.3 Accessing the iLo Console for Oracle RMS Servers. (switch to root)</p>
<p>2.</p> <input type="checkbox"/>	<p>TVOE server:</p> <p>Create bond0 device</p>	<p>Verify the bond0 network by running the following command</p> <pre>#netAdm query --device=bond0 Protocol: none IP Address: Netmask: On Boot: yes Bonded Mode: active-backup Monitor: MII Interval: 100 Enslaving: < nic1 nic2> Type: Bonding Bridge: Member of bridge control</pre> <p>If bond0 exists and is enslaving nic1 and nic2 (refer to E58607-01[6] for device name assignment), continue onto Step 4. Otherwise the bond must be created with these following commands:</p> <pre>#netAdm add --device=bond0--onboot=yes --type=Bonding \ --mode=active-backup --miimon=100 Interface bond0 added</pre> <p>Execute the following to set the slave interfaces:</p> <pre>#netAdm set --device=<nic1> --type=Ethernet \ --master=control --slave=yes Interface <ethernet_interface_1> updated</pre> <pre>#netAdm set --device=<nic2> --type=Ethernet \ --master=control --slave=yes Interface <ethernet_interface_2> updated</pre>

Appendix L.3: Configure TVOE Network for Topology 7 (Oracle RMS with 6 ports)

Step	Procedure	Result
3. <input type="checkbox"/>	TVOE server: <i>Reset control network</i>	<p>Verify the control network by running the following command</p> <pre>#netAdm query --type=Bridge --name=control Bridge Name: control On Boot: yes Protocol: dhcp Persistent: yes Promiscuous: no Hwaddr: 00:10:e0:68:b6:5e MTU: Delay : 4 Multicast Snooping : 0 Bridge Interface: bond0</pre> <p>If the output matches the one above with Bridge Interface bond0, the Control Bridge must be modified with the following command to remove bond interface zero. Also, need to reset “onboot=yes”. Otherwise continue onto Step 4. Note: The control network needs to be removed from bond0 when PMAC is to be run on each Oracle RMS Server.</p> <pre>#netAdm set --type=Bridge --name=control --delBridgeInt=bond0</pre> <p>Bridge control updated!</p> <pre># netAdm set --device=bond0 --onboot=yes</pre> <p>Interface bond0 updated</p>
4. <input type="checkbox"/>	TVOE server: <i>Add VLAN for IMI</i>	<pre># netAdm add --device=bond0.<imi_vlan></pre> <p>Interface bond0.# added</p>
5. <input type="checkbox"/>	TVOE server: <i>Add bridge network for IMI</i>	<pre># netAdm add --name=imi --type=Bridge --bridgeInterface=bond0.<imi_vlan></pre> <p>Bridge imi added!</p>
6. <input type="checkbox"/>	TVOE server: <i>Add Bond 1 network</i>	<pre># netAdm add --device=bond1 --onboot=yes --bootproto=none</pre> <p>Interface bond1 added</p>
7. <input type="checkbox"/>	TVOE server: <i>Update Bond1 interfaces for network</i>	<pre># netAdm set --device=bond1 --bondInterfaces=<nic3>,<nic5></pre> <p>Interface bond1 updated</p>
8. <input type="checkbox"/>	TVOE server: <i>Add Bond 2 network</i>	<pre># netAdm add --device=bond2 --onboot=yes --bootproto=none</pre> <p>Interface bond2 added</p>

Appendix L.3: Configure TVOE Network for Topology 7 (Oracle RMS with 6 ports)

Step	Procedure	Result
9. <input type="checkbox"/>	TVOE server: Update Bond2 interfaces for network	<pre># netAdm set --device=bond2 --bondInterfaces=<nic6>,<nic7></pre> Interface bond2 updated
10. <input type="checkbox"/>	TVOE server: Add VLAN for XMI	For Topology 7: <pre>#netAdm add --device=bond1.<xmi_vlan></pre> Interface bond1.# added For Topology 7E: <pre># netAdm add --device=bond0.<xmi_vlan></pre> Interface bond0.# added
11. <input type="checkbox"/>	TVOE server: Add bridge network for XMI	For Topology 7: <pre># netAdm add --name=xmi --type=Bridge --bridgeInterface=bond1.<xmi_vlan>></pre> For topology 7E: <pre># netAdm add --name=xmi --type=Bridge --bridgeInterface=bond0.<xmi_vlan>></pre>
<p>Note:Some deployments may host TVOE and PMAC on the XMI network/bridge instead of a separate routable management. Execute steps 12-14 if deployment hosts TVOE and PMAC on a separate routable management network. Or, execute steps 15-16, if the deployment hosts TVOE and PMAC on the XMI network/bridge.</p>		
12. <input type="checkbox"/>	TVOE server: Add VLAN for management	For Topology 7: <pre>#netAdm add --device=bond1.<management_vlan></pre> Interface bond1.# added For Topology 7E: <pre>#netAdm add --device=bond0.<management_vlan></pre> Interface bond0.# added
13. <input type="checkbox"/>	TVOE server: Add bridge network for management	For Topology 7: <pre># netAdm add --name=management --type=Bridge --bridgeInterface=bond1.<management_vlan> --bootproto=none --onboot=yes --address=<TVOE_management_address>--netmask=<management_netmask></pre> For Topology 7E: <pre># netAdm add --name=management --type=Bridge --bridgeInterface=bond0.<management_vlan> --bootproto=none --onboot=yes --address=<TVOE_management_address>--netmask=<management_netmask></pre> Bridge management added!

Appendix L.3: Configure TVOE Network for Topology 7 (Oracle RMS with 6 ports)

Step	Procedure	Result
14. <input type="checkbox"/>	Add the default route to management	<pre>#netAdm add --route=default --gateway=<management_default_route_ip> --device=management</pre> <p>Route to management added!</p>
Execute steps 15-16 if not using a separate routable Management network		
15. <input type="checkbox"/>	TVOE server: Update Bridge network for XMI	For Topology 7: <pre># netAdm set --name=xmi --type=Bridge --bridgeInterface=bond1.<xmi_vlan> --bootproto=none -onboot=yes --address=<tvoe_IP> --netmask=<xmi_network_netmask></pre> <p>For Topology 7E: <pre># netAdm set --name=xmi --type=Bridge --bridgeInterface=bond0.<xmi_vlan> --bootproto=none -onboot=yes --address=<tvoe_IP> --netmask=<xmi_network_netmask></pre> <p>Bridge xmi added!</p></p>
16. <input type="checkbox"/>	TVOE Server: Add the default route to xmi network	<pre>#netAdm add --route=default --device=xmi \ --gateway=<xmi_gateway_ip></pre> <p>Route to xmi added</p>
17. <input type="checkbox"/>	TVOE server: Add VLAN for XSI1	For Topology 7: <pre># netAdm add --device=bond2.<xsi1_vlan></pre> <p>Interface bond2.# added</p> <p>For Topology 7E: <pre># netAdm add --device=bond1.<xsi1_vlan></pre> <p>Interface bond1.# added</p></p>
18. <input type="checkbox"/>	TVOE server: Add bridge network for XSI1	For Topology 7: <pre># netAdm add --name=xsi1 --type=Bridge --bridgeInterface= bond2.<xsi1_vlan></pre> <p>For Topology 7E: <pre># netAdm add --name=xsi1 --type=Bridge --bridgeInterface= bond1.<xsi1_vlan></pre> <p>Bridge xsi1 added!</p></p>
19. <input type="checkbox"/>	TVOE server: Add VLAN for XSI2	For Topology 7E only: <pre># netAdm add --device=bond2.<xsi2_vlan></pre> <p>Interface bond2.# added</p>
20. <input type="checkbox"/>	TVOE server: Add bridge network for XSI2	For Topology 7E only: <pre># netAdm add --name=xsi2 --type=Bridge \ --bridgeInterface=bond2.<xsi2_vlan></pre> <p>Bridge xsi2 added!</p>

Appendix L.3: Configure TVOE Network for Topology 7 (Oracle RMS with 6 ports)

<i>Step</i>	<i>Procedure</i>	<i>Result</i>
21. <input type="checkbox"/>	TVOE Server: <i>Additional Configuration</i>	Execute steps in L.6:Configure TVOE Server (Hostname, Time Zone, SNMP, NTP, etc) to complete the TVOE Server Configuration.
THIS PROCEDURE HAS BEEN COMPLETED		

L.4 Configure TVOE Network for Topology 7 (Oracle RMSwith 4 ports)

This section for Topology 7 deployment requires **Oracle X5-2 Config 2** (LOM and two dual port PCI) rack mount servers.

Requirements:

- An understanding of the topology being deployed, as outlined in reference [6].
- Interconnects should conform to reference [6]. (** <nicx> values in the procedure below can be found in a table in section 2.0 in this document)

Appendix L.4: Configure TVOE Network for Topology 7 (Oracle RMS with 4 ports)

<i>Step</i>	<i>Procedure</i>	<i>Result</i>
1. <input type="checkbox"/>	<i>Access the server's console.</i>	Connect to the server's iLO VGA using the access method described in Appendix A. 2: Accessing the iLo VGA Redirection Window for OracleRMS Servers or Appendix A.3Accessing the iLo Console for Oracle RMS Servers. (switch to root)

Appendix L.4: Configure TVOE Network for Topology 7 (Oracle RMS with 4 ports)

Step	Procedure	Result
2. <input type="checkbox"/>	TVOE server: Create <i>bond0</i> device	<p>Verify the <code>bond0</code> network by running the following command</p> <pre>#netAdm query --device=bond0 Protocol: none IP Address: Netmask: On Boot: yes Bonded Mode: active-backup Monitor: MII Interval: 100 Enslaving: < nic1 nic2> Type: Bonding Bridge: Member of bridge control</pre> <p>If <code>bond0</code> exists and is enslaving <code>nic1</code> and <code>nic2</code>(refer to E58607-01[6] for device name assignment), continue onto Step 3. Otherwise the bond must be created with these following commands:</p> <pre>#netAdm add --device=bond0--onboot=yes --type=Bonding \ --mode=active-backup --miimon=100 Interface bond0 added</pre> <p>Execute the following to set the slave interfaces:</p> <pre>#netAdm set --device=<nic1> --type=Ethernet \ --master=control --slave=yes Interface <ethernet_interface_1> updated</pre> <pre>#netAdm set --device=<nic2> --type=Ethernet \ --master=control --slave=yes Interface <ethernet_interface_2> updated</pre>

Appendix L.4: Configure TVOE Network for Topology 7 (Oracle RMS with 4 ports)

Step	Procedure	Result
<p>3.</p> <input type="checkbox"/>	<p>TVOE server:</p> <p>Reset control network</p>	<p>Verify the control network by running the following command</p> <pre>#netAdm query --type=Bridge --name=control</pre> <p>Bridge Name: control On Boot: yes Protocol: dhcp Persistent: yes Promiscuous: no Hwaddr: 00:10:e0:68:b6:5e MTU: Delay : 4 Multicast Snooping : 0 Bridge Interface: bond0</p> <p>If the output matches the one above with Bridge Interface bond0, the Control Bridge must be modified with the following command to remove bond interface zero. Also, need to reset “onboot=yes”. Otherwise continue onto Step 4. The control network needs to be removed from bond0 when PMAC is to be run on each Oracle RMS Server.</p> <pre>#netAdm set --type=Bridge --name=control --delBridgeInt=bond0</pre> <p>Bridge control updated!</p> <pre># netAdm set --device=bond0 --onboot=yes</pre> <p>Interface bond0 updated</p>
<p>4.</p> <input type="checkbox"/>	<p>TVOE server:</p> <p>Add VLAN for IMI</p>	<pre># netAdm add --device=bond0.<imi_vlan></pre> <p>Interface bond0.# added</p>
<p>5.</p> <input type="checkbox"/>	<p>TVOE server:</p> <p>Add Bridge network for IMI</p>	<pre># netAdm add --name=imi --type=Bridge --bridgeInterface=bond0.<imi_vlan></pre> <p>Bridge imi added!</p>
<p>6.</p> <input type="checkbox"/>	<p>TVOE server:</p> <p>Add VLAN for XMI</p>	<pre>#netAdm add --device=bond0.<xmi_vlan></pre> <p>Interface bond0.# added</p>
<p>7.</p> <input type="checkbox"/>	<p>TVOE server:</p> <p>Add Bridge network fro XMI</p>	<pre># netAdm add --name=xmi --type=Bridge --bridgeInterface=bond0.<xmi_vlan>></pre>
<p>Note:Some deployments may host TVOE and PMAC on the XMI network/bridge instead of a separate routable management. Execute steps 8-10 if the deployment hosts TVOE and PMAC on a separate routable management network. Or execute steps 11-12, if the deployment hosts TVOE and PMAC on the XMI network/bridge</p>		
<p>8.</p> <input type="checkbox"/>	<p>TVOE server:</p> <p>Add VLAN for management</p>	<pre>#netAdm add --device=bond0.<management_vlan></pre> <p>Interface bond0.# added</p>

Appendix L.4: Configure TVOE Network for Topology 7 (Oracle RMS with 4 ports)

Step	Procedure	Result
9. <input type="checkbox"/>	TVOE server: Add bridge and TVOE IP on management network	<pre># netAdm add --name=management --type=Bridge \ --bridgeInterface=bond0.<management_vlan\ --bootproto=none --onboot=yes \ --address=<TVOE_management_address\ --netmask=<management_netmask></pre> Bridge management added!
10. <input type="checkbox"/>	Add the default route to management	<pre>netAdm add --route=default --gateway=<management_default_route_ip\ --device=management</pre> Route to management added!
Execute steps 11-12, if the deployment hosts TVOE and PMAC on the XMI network/bridge.		
11. <input type="checkbox"/>	TVOE server: Update bridge network for XMI	<pre># netAdm set --name=xmi --type=Bridge \ --bridgeInterface=bond0.<xmi_vlan\ --bootproto=none --onboot=yes \ --address=<tvoe_xmi_IP\ --netmask=<xmi_network_netmask></pre> Bridge xmi added!
12. <input type="checkbox"/>	TVOE Server: Add the default route to xmi network	<pre>#netAdm add --route=default --device=xmi \ --gateway=<xmi_gateway_ip></pre> Route to xmi added
13. <input type="checkbox"/>	TVOE server: Add bond1 interface	<pre># netAdm add --device=bond1 --onboot=yes --bootproto=none</pre> Interface bond1 added
14. <input type="checkbox"/>	TVOE server: Update Bond1 with eth interfaces	<pre># netAdm set --device=bond1 --bondInterfaces=<nic5>,<nic6></pre> Interface bond1 updated
15. <input type="checkbox"/>	TVOE server: Add VLAN for XS11	<pre># netAdm add --device=bond1.<xsi1_vlan></pre> Interface bond1.# added
16. <input type="checkbox"/>	TVOE server: Add bridge network for XS11	<pre># netAdm add --name=xsi1 --type=Bridge \ --bridgeInterface=bond1.<xsi1_vlan></pre> Bridge xsi1 added!
17. <input type="checkbox"/>	TVOE server: Topology 7E only Signaling Network2 Configuration	For Topology 7E only (optional) i. Add VLAN for XS12 <pre># netAdm add --device=bond1.<xsi2_vlan></pre> Interface bond1.# added ii. Add bridge for XS12 network <pre># netAdm add --name=xsi2 --type=Bridge -- \ bridgeInterface=bond1.<xsi2_vlan></pre> Bridge xsi1 added!

Appendix L.4: Configure TVOE Network for Topology 7 (Oracle RMS with 4 ports)

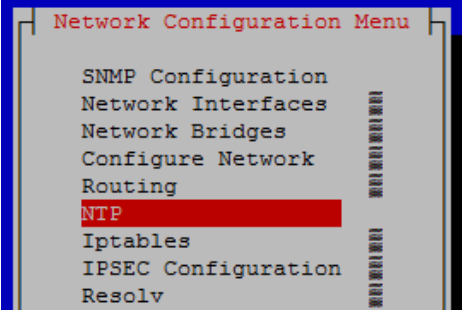
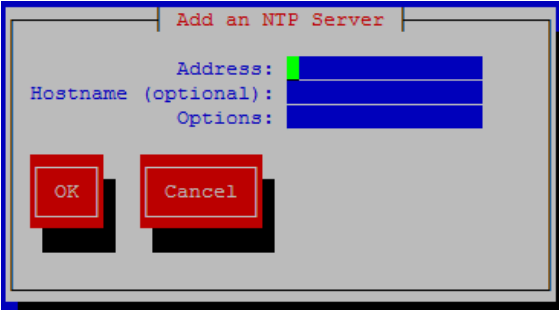

<i>Step</i>	<i>Procedure</i>	<i>Result</i>
18. <input type="checkbox"/>	TVOE Server: <i>Additional Configuration</i>	Execute steps in L.6:Configure TVOE Server (Hostname, Time Zone, SNMP, NTP, etc) to complete the TVOE Server Configuration.
THIS PROCEDURE HAS BEEN COMPLETED		

L.5 Configure Additional NTP Server (Setup Recommendation)

Appendix L.5: Configure Additional NTP Server (Setup Recommendation)

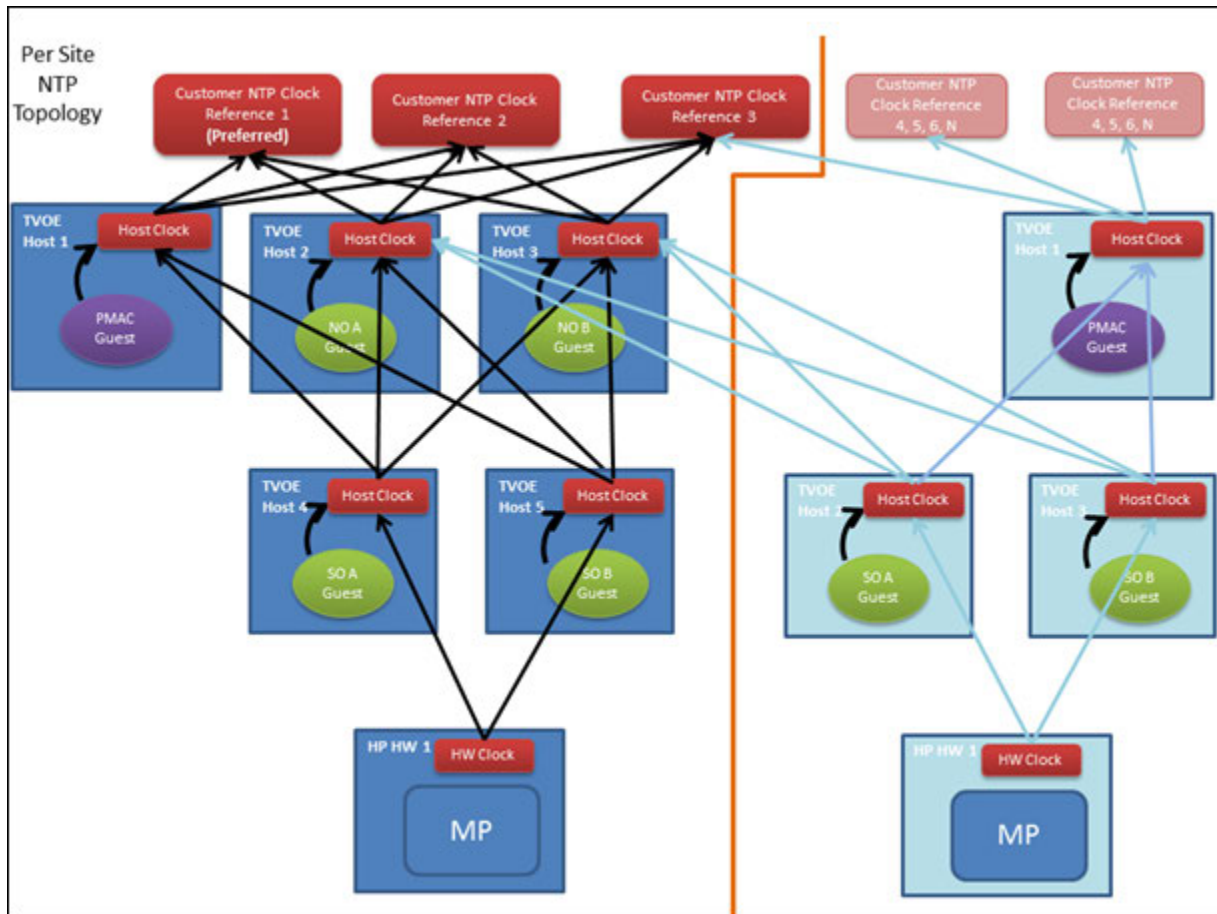
<i>Step</i>	<i>Procedure</i>	<i>Result</i>
1. <input type="checkbox"/>	<i>Access the server's console.</i>	Connect to the server's console using one of the access methods described in Section 2.1.2.

Appendix L.5: Configure Additional NTP Server (Setup Recommendation)

Step	Procedure	Result
<p>2.</p> <p><input type="checkbox"/></p>	<p>TVOE Server:</p> <p>Add additional NTP server.</p>	<p>Set the server hostname by running the following:</p> <pre>#su - platcfg</pre> <p>1. Navigate to Network Configuration > NTP.</p>  <p>2. Select Edit, then “Add a New NTP Server.”</p> <p>3. Enter the IP Address of the additional NTP server.</p>  <p>4. Select OK.</p> <p>5. Jump back to Step 2 if more NTP servers need to be added.</p> <p>5. Select Exit.</p> <p>6. Select Yes to restart ntp Service.</p>  <p>7. Select Exittwice to leave platcfg.</p>
<p>3.</p> <p><input type="checkbox"/></p>	<p>Desired Server:</p> <p>Use the “ntpq” command to verify that the server has connectivity to the assigned NTP servers.</p>	<pre># ntpq -np remote refid st t when poll reach delay offset jitter ----- *10.250.32.10 192.5.41.209 2 u 651 1024 377 0.339 0.583 0.048 +10.250.32.51 192.5.41.209 2 u 656 1024 377 0.416 0.641 0.086 2. #</pre>
<p>THIS PROCEDURE HAS BEEN COMPLETED</p>		

Example Diagram with multiple NTP servers:

Care should be taken to ensure that all NTP references are reachable through the appropriate networking configuration. It is recommended to have minimum of 3 and up to 4 external NTP servers for reliable functioning of NTP service.



L.6 Configure TVOE Server (Hostname, Time Zone, SNMP, NTP, etc)

The following are additional configuration steps required after configuring the TVOE network.

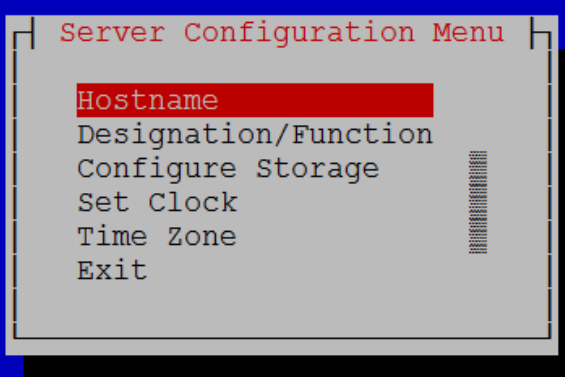
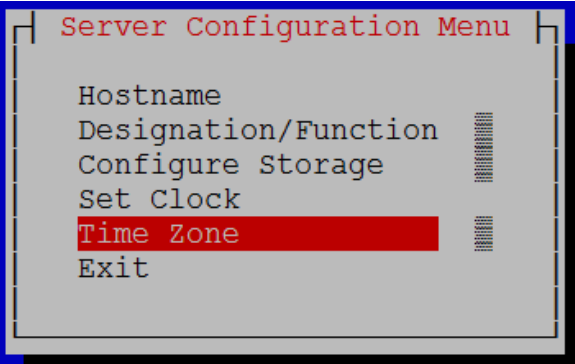
Requirements:

- An understanding of the topology being deployed, as outlined in reference [6].

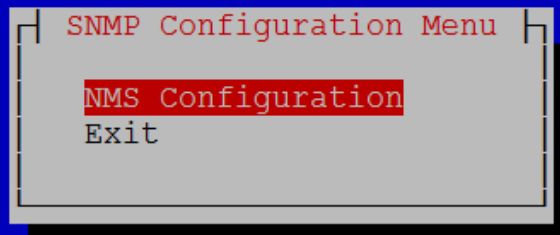
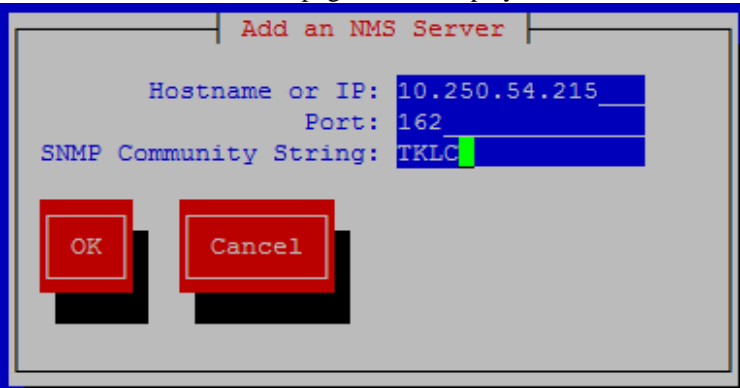
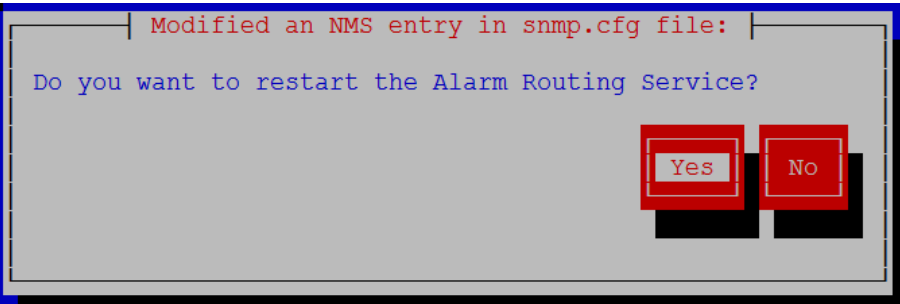
Appendix L.6: Configure TVOE Server (Hostname, Time Zone, SNMP, NTP, etc)

Step	Procedure	Result
1.	Access the server's console.	Connect to the server's ILO VGA using the access method described in Appendix A. 2: Accessing the iLo VGA Redirection Window for OracleRMS Servers or Appendix A.3 Accessing the iLo Console for Oracle RMS Servers. (switch to root)

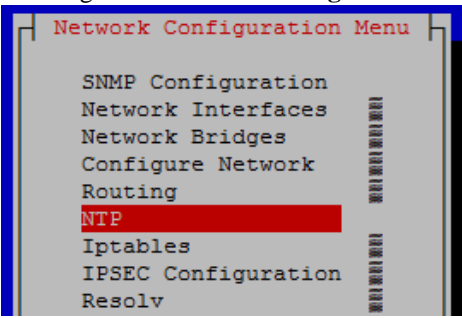
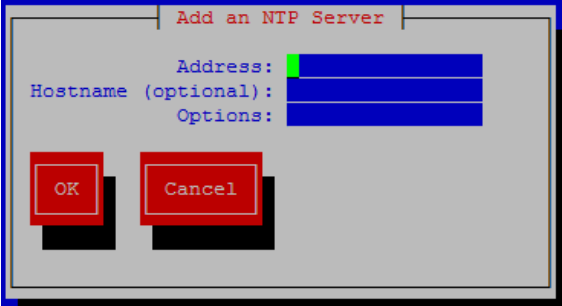
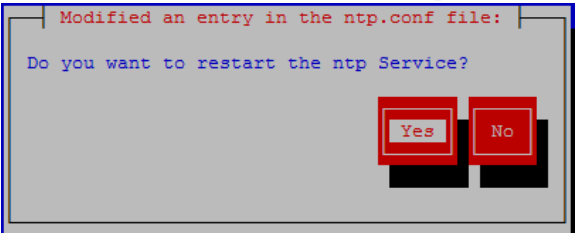
Appendix L.6: Configure TVOE Server (Hostname, Time Zone, SNMP, NTP, etc)

Step	Procedure	Result
<p>2.</p> <input type="checkbox"/>	<p>TVOE Server: Set Hostname</p>	<p>Set the server hostname by running the following: #su - platcfg</p> <ol style="list-style-type: none"> 1. Navigate to Server Configuration > Hostname  <ol style="list-style-type: none"> 2. Select Edit 3. Set TVOE Management Server hostname 4. Press OK. 5. Navigate out of Hostname
<p>3.</p> <input type="checkbox"/>	<p>TVOE Server: Set Time Zone and/or Hardware Clock</p>	<p>Set the time zone and/or hardware clock</p> <ol style="list-style-type: none"> 1. Navigate to Server Configuration > Time Zone  <ol style="list-style-type: none"> 2. Select Edit. 3. Set the time zone 4. Answer yes to “Set Hardware Clock to GMT”. 5. Press YES 6. Navigate out of Server Configuration

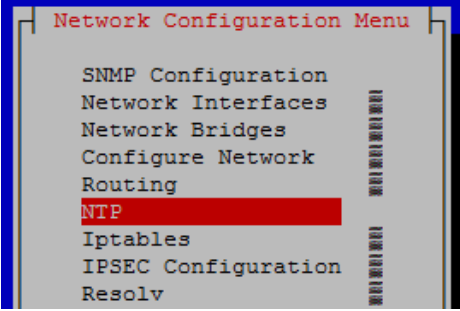
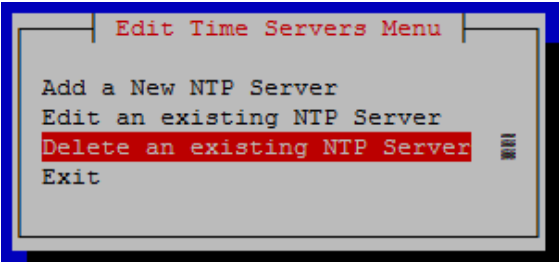
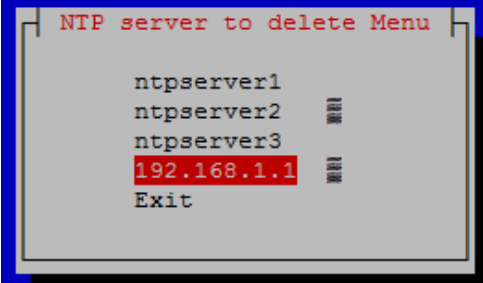
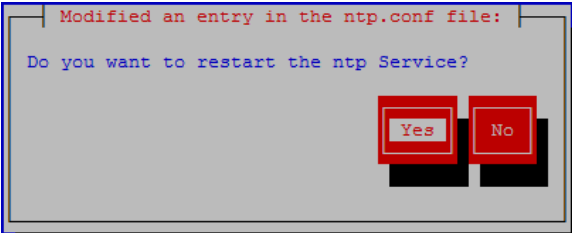
Appendix L.6: Configure TVOE Server (Hostname, Time Zone, SNMP, NTP, etc)

Step	Procedure	Result
<p>4.</p> <p><input type="checkbox"/></p>	<p>TVOE Server:</p> <p>Configure SNMP trap destination</p>	<p>ConfigureSNMP trap destination.</p> <p>1.Navigate to Network Configuration >SNMP Configuration >NMS Configuration.</p>  <p>2. Select Edit and then choose 'Add a New NMS Server'.</p> <p>3.The 'Add an NMS Server' page will be displayed.</p>  <p>4.Complete the form by entering in all information about the SNMP trap destination.</p> <p>5.Select OK tofinalize the configuration.</p> <p>6.The 'NMS Server Action Menu' will now be displayed.</p> <p>7.Select Exit. The following dialoguewill then be presented:</p>  <p>8.Select Yes and then wait a few seconds while the Alarm Routing Service is restarted.</p> <p>9.At that timethe SNMP Configuration Menu will be presented.</p> <p><i>Note: All alarm information will then be sent to the NMS located at the destination.</i></p>

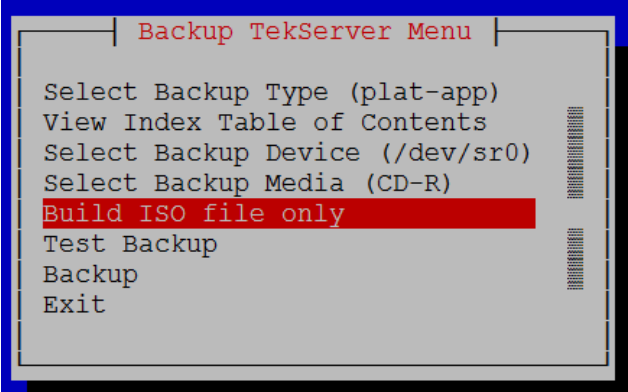
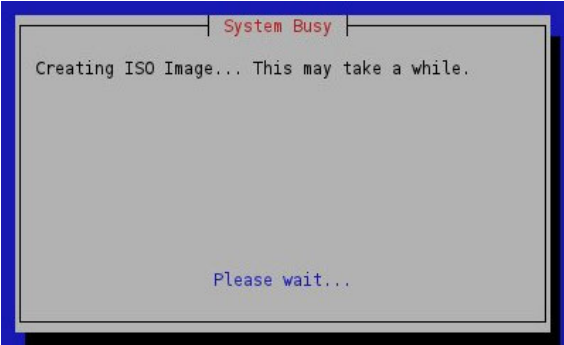
Appendix L.6: Configure TVOE Server (Hostname, Time Zone, SNMP, NTP, etc)

Step	Procedure	Result
<p>5.</p> <p><input type="checkbox"/></p>	<p>TVOE Server:</p> <p>Configure NTP</p>	<ol style="list-style-type: none"> Navigate to Network Configuration > NTP.  <ol style="list-style-type: none"> Select Edit, then “Add a New NTP Server.” Enter the IP Address of a Customer provided NTP server.  <ol style="list-style-type: none"> Select OK. Select Exit. Select Yes to restart ntp Service.  <ol style="list-style-type: none"> Select Exit.

Appendix L.6: Configure TVOE Server (Hostname, Time Zone, SNMP, NTP, etc)

Step	Procedure	Result
<p>6.</p> <p><input type="checkbox"/></p>	<p>TVOE Server:</p> <p>Delete all default NTP servers.</p>	<ol style="list-style-type: none"> Navigate to Network Configuration > NTP.  Select Edit, then “Delete an existing NTP Server.”  Select the 192.168.1.1 NTP address.  Select OK. Select Exit. Select Yes to restart ntp Service.  Select Exit twice to leave platcfg.
<p>7.</p> <p><input type="checkbox"/></p>	<p>TVOE Server:</p> <p>Reboot the server</p>	<p>Reboot the server:</p> <pre># init 6</pre> <p>Wait until the reboot completes and re-login with TVOE root credentials.</p>

Appendix L.6: Configure TVOE Server (Hostname, Time Zone, SNMP, NTP, etc)

Step	Procedure	Result
<p>8.</p> <input type="checkbox"/>	<p>TVOE Server: Verify server health</p>	<p>Verify server health: # <code>alarmMgr --alarmStatus</code> <i>Note: This command should return no output on a healthy system.</i></p>
<p>9.</p> <input type="checkbox"/>	<p>TVOE Server: Perform a TVOE backup</p>	<p>Login as platcfg user. The platcfg main menu will be shown #<code>su - platcfg</code></p> <ol style="list-style-type: none"> 1. Navigate to Maintenance>Backup and Restore>Backup Platform (CD/DVD) 2. The 'Backup TekServer Menu' page will now be shown.  <ol style="list-style-type: none"> 3. Select Build ISO file only. <p><i>Note: Creating the ISO image may happen so quickly that this screen may only appear for an instant.</i></p>  <ol style="list-style-type: none"> 4. After the ISO is created, platcfg will return to the Backup TekServer Menu as shown in step 2. 5. The ISO has been created and is located in the <code>/var/TKLC/bkp/</code> directory. An example filename of a backup file that was created is: <code>"hostname1307466752-plat-app-201104171705.iso"</code> 6. Exit platcfg.

Appendix L.6: Configure TVOE Server (Hostname, Time Zone, SNMP, NTP, etc)

Step	Procedure	Result
<p>10.</p> <input type="checkbox"/>	<p>Customer Server SSH:</p> <p><i>Copy backup image to the customer server</i></p>	<p>Login to the customer server and copy backup image to the customer server where it can be safely stored.</p> <p>If the customer system is a Linux system, please execute the following command to copy the backup image to the customer system.</p> <pre># scp tvoexfer@<TVOE_IP_Address>:backup/* /path/to/destination/</pre> <p>When prompted, enter the tvoexfer user password and press Enter.</p> <p>An example of the output looks like:</p> <pre># scp tvoexfer@<TVOE IP Address>:backup/* /path/to/destination/ tvoexfer@10.24.34.73's password: hostname1301859532-plat-app-301104171705.iso 100% 134MB 26.9MB/s 00:05</pre> <p>The TVOE backup file has now been successfully placed on the Customer System.</p>
<p>THIS PROCEDURE HAS BEEN COMPLETED</p>		

Appendix M. Removing Disk Array Configuration

This procedure contains steps to remove a prior disk array configuration. This is useful towards re-installing UDR on hardware with disk arrays that have hosted prior UDR instances. The steps here are only to be run after TPD is installed and before UDR application is installed.

M.1 Removing RMS Disk Array Configuration for HP

Appendix M.1: Removing RMS Disk Array Configuration

Step	Procedure	Result
1. <input type="checkbox"/>	Access the server's console.	Connect to the RMS server's console using one of the access methods described in Section 2.1.2 .
2. <input type="checkbox"/>	Change to root user home directory	<code>#cd</code>
3. <input type="checkbox"/>	Remove volume group or storage pool	<pre># lvs stripe_vg LV VG Attr LSize Pool Origin Data% Move Log Cpy%Sync Convert rundb stripe_vg -wa-ao---- 385.01g If stripe_vg is present then remove it #vgremove stripe_vg Do you really want to remove volume group "stripe_vg" containing 1 logical volumes? [y/n]: y Do you really want to remove active logical volume rundb? [y/n]: y # virsh pool-list Name State Autostart ----- stripePool_vg active yes vgguests active yes If stripePool_vg is present then remove it with below steps # virsh pool-destroy stripePool_vg Pool stripePool_vg destroyed # virsh pool-undefine stripePool_vg Pool stripePool_vg has been undefined # vgremove stripePool_vg Volume group "stripePool_vg" successfully removed</pre>

Appendix M.1: Removing RMS Disk Array Configuration

Step	Procedure	Result
<p>4.</p> <input type="checkbox"/>	<p><i>Remove all three physical volumes sdb, sdc, & sdd</i></p>	<pre>#pvremove /dev/sdb Labels on physical volume "/dev/sdb" successfully wiped #pvremove /dev/sdc Labels on physical volume "/dev/sdc" successfully wiped #pvremove /dev/sdd Labels on physical volume "/dev/sdd" successfully wiped</pre>
<p>5.</p> <input type="checkbox"/>	<p><i>Delete logical drive slot 2 ld 1</i></p>	<pre># hpssacli ctrl all show config</pre>

Appendix M.1: Removing RMS Disk Array Configuration

Step	Procedure	Result
<p>6.</p> <input type="checkbox"/>	<p>Verify output matches expected values</p>	<p>IMPORTANT:If output from <code>show config</code> differs from the example here, you must adjust the <code>slot</code> and <code>ld</code> parameters in the commands to follow. There should be two slots (numbered 2 and 0), each with two logical drives (1 and 2). Slot 0 should contain a <code>logicaldrive</code> of two physical disks: <i>it is important not to delete this logical drive.</i></p> <pre>Smart Array P420 in Slot 2 (sn: PDKRH0ARH3X0HB) array A (SAS, Unused Space: 0 MB) logicaldrive 1 (273.4 GB, RAID 1+0, OK) physicaldrive 1I:1:1 (port 1I:box 1:bay 1, SAS, 146 GB, OK) physicaldrive 1I:1:2 (port 1I:box 1:bay 2, SAS, 146 GB, OK) physicaldrive 1I:1:3 (port 1I:box 1:bay 3, SAS, 146 GB, OK) physicaldrive 1I:1:4 (port 1I:box 1:bay 4, SAS, 146 GB, OK) array B (SAS, Unused Space: 0 MB) logicaldrive 2 (273.4 GB, RAID 1+0, OK) physicaldrive 2I:1:5 (port 2I:box 1:bay 5, SAS, 146 GB, OK) physicaldrive 2I:1:6 (port 2I:box 1:bay 6, SAS, 146 GB, OK) physicaldrive 2I:1:7 (port 2I:box 1:bay 7, SAS, 146 GB, OK) physicaldrive 2I:1:8 (port 2I:box 1:bay 8, SAS, 146 GB, OK) SEP (Vendor ID PMCSIERA, Model SRCv8x6G) 380 (WWID: 500143802518449F) Smart Array P420i in Slot 0 (Embedded) (sn: 5001438025A465B0) array A (SAS, Unused Space: 0 MB) logicaldrive 1 (838.3 GB, RAID 1, OK) physicaldrive 1I:2:1 (port 1I:box 2:bay 1, SAS, 900.1 GB, OK) physicaldrive 1I:2:2 (port 1I:box 2:bay 2, SAS, 900.1 GB, OK) array B (SAS, Unused Space: 0 MB) logicaldrive 2 (273.4 GB, RAID 1+0, OK) physicaldrive 1I:2:3 (port 1I:box 2:bay 3, SAS, 146 GB, OK) physicaldrive 1I:2:4 (port 1I:box 2:bay 4, SAS, 146 GB, OK) physicaldrive 2I:2:5 (port 2I:box 2:bay 5, SAS, 146 GB, OK) physicaldrive 2I:2:6 (port 2I:box 2:bay 6, SAS, 146 GB, OK) SEP (Vendor ID PMCSIERA, Model SRCv8x6G) 380 (WWID: 5001438025A465BF)</pre>
<p>7.</p> <input type="checkbox"/>	<p>Delete logical drive slot 2 ld 1</p>	<pre>#hpssacli ctrl slot=2 ld 1 delete Warning: Deleting the specified device(s) will result in data being lost. Continue? (y/n) y</pre>

Appendix M.1: Removing RMS Disk Array Configuration

Step	Procedure	Result
8. <input type="checkbox"/>	Delete logical drive slot 2 ld 2	<pre>#hpssacli ctrl slot=2 ld 2 delete</pre> Warning: Deleting the specified device(s) will result in data being lost. Continue? (y/n) y
9. <input type="checkbox"/>	Delete logical drive slot 0 ld 1	<pre>#hpssacli ctrl slot=0 ld 2 delete</pre> Warning: Deleting the specified device(s) will result in data being lost. Continue? (y/n) y
10. <input type="checkbox"/>	Execute the following syscheck/restart steps in order	<pre>#syscheck --reconfig disk smart # service smartd restart # syscheck disk smart</pre>
THIS PROCEDURE HAS BEEN COMPLETED		

M.2 Removing Blade Disk Array Configuration (Sidecar)

Appendix M.2: Removing Blade Disk Array Configuration (Sidecar)

Step	Procedure	Result
1. <input type="checkbox"/>	Access the server's console.	Connect to the blade server's console using one of the access methods described in Section 2.1.2 .
2. <input type="checkbox"/>	Change to root user home directory	<pre>#cd</pre>

Appendix M.2: Removing Blade Disk Array Configuration (Sidecar)

Step	Procedure	Result
<p>3.</p>	<p><i>Remove volume group or storage pool</i></p>	<pre> ** Execute For Low Capacity C-Class only # lvs stripe_vg LV VG Attr LSize Pool Origin Data% Move Log Cpy%Sync Convert rundb stripe_vg -wa-ao---- 385.01g If stripe_vg is present then remove it #vgremove stripe_vg Do you really want to remove volume group "stripe_vg" containing 1 logical volumes? [y/n]: y Do you really want to remove active logical volume rundb? [y/n]: y Volume group "stripe_vg" successfully removed # virsh pool-list Name State Autostart ----- stripePool_vg active yes vgguests active yes If stripePool_vg is present then remove it with below steps # virsh pool-destroy stripePool_vg Pool stripePool_vg destroyed # virsh pool-undefine stripePool_vg Pool stripePool_vg has been undefined # vgremove stripePool_vg Volume group "stripePool_vg" successfully removed </pre>
<p>4.</p> <p><input type="checkbox"/></p>	<p><i>Remove volume group</i></p>	<pre> **Don't execute for Low Capacity C-Class #vgremove stripe_vg Do you really want to remove volume group "stripe_vg" containing 1 logical volumes? [y/n]:y Do you really want to remove active logical volume rundb? [y/n]:y Note: if the following output appears after the first question – “Logical volume stripe_vg/rundb contains a filesystem in use”. Execute the following steps below and repeat the command above: # prod.dbdown -i # service comcol stop # umount /dev/mapper/stripe_vg-rundb </pre>

Appendix M.2: Removing Blade Disk Array Configuration (Sidecar)

Step	Procedure	Result
<p>5.</p> <input type="checkbox"/>	<p>Check for existing physical volumes</p>	<pre># pvs PV VG Fmt Attr PSize PFree /dev/sda lvm2 --- 820.21g 820.21g /dev/sdb2 vgroot lvm2 a-- 838.06g 827.06g</pre>
<p>6.</p> <input type="checkbox"/>	<p>From Step 5, Remove physical volume that does not have vgroot Note: This volume can vary</p>	<p>Remove the physical volume that does not have vgroot or vgguests from step 5.</p> <pre>#pvremove /dev/sda Labels on physical volume "/dev/sda" successfully wiped</pre> <p>NOTE: Systems with bare-metal NOAMPs will only have a vgroot volume, but systems with VM NOAMPs over TVOE will have a vgroot and a vgguests volume.</p>
<p>7.</p> <input type="checkbox"/>	<p>Display the Configuration</p>	<pre># hpssacli ctrl all show config</pre>

Appendix M.2: Removing Blade Disk Array Configuration (Sidecar)

Step	Procedure	Result
<p>8.</p> <input type="checkbox"/>	<p>Verify output matches expected values</p>	<p>IMPORTANT:If output from <code>show config</code> differs from the example here, you must adjust the <code>slot</code> and <code>ld</code> parameters in the commands to follow. There should be two slots (numbered 0 and 3). Slot 0 should contain a <code>logicaldrive</code> of two physical disks: <i>it is important not to delete this logical drive.</i></p> <pre>Smart Array P220i in Slot 0(Embedded) (sn: PCQVU0CRH5V2JU) array A (SAS, Unused Space: 0 MB) logicaldrive 1(838.3 GB, RAID 1, OK) physicaldrive 1I:1:1 (port 1I:box 1:bay 1, SAS, 900.1 GB, OK) physicaldrive 1I:1:2 (port 1I:box 1:bay 2, SAS, 900.1 GB, OK) SEP (Vendor ID PMCSIERA, Model SRCv4x6G) 380 (WWID: 5001438028DDB56F) Smart Array P410i in Slot 3(sn: 5001438025905EB0) array A (SAS, Unused Space: 0 MB) logicaldrive 1(820.2 GB, RAID 1+0, OK) physicaldrive 1I:1:1 (port 1I:box 1:bay 1, SAS, 146 GB, OK) physicaldrive 1I:1:2 (port 1I:box 1:bay 2, SAS, 146 GB, OK) physicaldrive 1I:1:3 (port 1I:box 1:bay 3, SAS, 146 GB, OK) physicaldrive 1I:1:4 (port 1I:box 1:bay 4, SAS, 146 GB, OK) physicaldrive 1I:1:5 (port 1I:box 1:bay 5, SAS, 146 GB, OK) physicaldrive 1I:1:6 (port 1I:box 1:bay 6, SAS, 146 GB, OK) physicaldrive 1I:1:7 (port 1I:box 1:bay 7, SAS, 146 GB, OK) physicaldrive 1I:1:8 (port 1I:box 1:bay 8, SAS, 146 GB, OK) physicaldrive 1I:1:9 (port 1I:box 1:bay 9, SAS, 146 GB, OK) physicaldrive 1I:1:10 (port 1I:box 1:bay 10, SAS, 146 GB, OK) physicaldrive 1I:1:11 (port 1I:box 1:bay 11, SAS, 146 GB, OK) physicaldrive 1I:1:12 (port 1I:box 1:bay 12, SAS, 146 GB, OK) Expander 250 (WWID: 50014380251F83E6, Port: 1I, Box: 1)</pre>
<p>9.</p> <input type="checkbox"/>	<p>Delete logical drive slot 3 ld 1</p>	<pre>#hpssacli ctrl slot=3 ld 1 delete Warning: Deleting the specified device(s) will result in data being lost. Continue? (y/n) y</pre>
<p>THIS PROCEDURE HAS BEEN COMPLETED</p>		

M.3 Removing RMS Disk Array Configuration for Oracle Servers

Appendix M.3: Removing RMS Disk Array Configuration for Oracle Servers

Step	Procedure	Result
1. <input type="checkbox"/>	Access the server's console.	Connect to the RMS server's console using one of the access methods described in Appendix A.2 Accessing the iLo VGA Redirection Window for Oracle RMS Servers or Appendix A.3 Accessing the iLo Console for Oracle RMS Servers. (switch to root)
2. <input type="checkbox"/>	Change to root user home directory	<code>#cd</code>
3. <input type="checkbox"/>	Check for presence of stripePool	<pre># lvsstripePool_vg LV VG Attr LSize Pool Origin Data% Move Log Cpy%Sync Convert UDRNOSunX5_pool_vg.img stripe_vg -wa- ao----- 743.00g # virsh pool-list Name State Autostart ----- stripePool_vg active yes vgguests active yes</pre>
4. <input type="checkbox"/>	Remove the stripePool disk array if present in step 3.	<pre># virsh pool-destroy stripePool_vg Pool stripePool_vg destroyed # virsh pool-undefine stripePool_vg Pool stripePool_vg has been undefined # vgremove stripePool_vg Volume group "stripePool_vg" successfully removed # raidconfig list all -r c0r1 RAID Volumes ===== ID Name Device Status Num Disks Level Size (GiB) ----- c0r1 /dev/sdb OK 4 10 743</pre>
5. <input type="checkbox"/>	Remove volume /dev/sdb	<pre># pvremove /dev/sdb Labels on physical volume "/dev/sdb" successfully wiped # raidconfig delete raid -r c0r1</pre>
6. <input type="checkbox"/>	Execute the following syscheck/restart steps in order	<pre>#syscheck --reconfig disk smart # service smartd restart # syscheck disk smart</pre>
THIS PROCEDURE HAS BEEN COMPLETED		

Appendix N. Creating an XML file for Installing UDR Network Elements

UDR Network Elements can be created by using an XML configuration file. The customer is required to create individual XML files for each of their UDR Network Elements. The format for each of these XML files is identical.

Below is an example of the SDM_NOAMP_NE.xml file. The highlighted values are values that the user must update.

NOTE: The **Description** column in this example includes comments for this document only. **Do not include** the Description column in the actual XML file used during installation.

Table 10– UDRXML NOAMP Network Element Configuration File

XML File Text	Description
<networkelement>	
<name>NOAMP_NE</name>	Unique identifier used to label a Network Element. [Range = 1-32 character string. Valid characters are alphanumeric and underscore. Must contain at least one alpha and must not start with a digit.]
<ntpserver>	
<ntpserver>10.250.32.10</ntpserver>	IP Address of the first NTP server. There must be at least one NTP server IP address defined.
<ntpserver>10.250.32.51</ntpserver>	IP Address of second NTP server, if it exists; otherwise, this line must be deleted.
</ntpserver>	
<networks>	
<network>	
<name>XMI</name>	Name of customer external network. Note: Do NOT change this name.
<vlanId>3</vlanId>	The VLAN ID to use for this VLAN. [Range = 2-4094.]
<ip>10.250.39.16</ip>	The network address of this VLAN [Range = A valid IP address]
<mask>255.255.255.240</mask>	Subnetting to apply to servers within this VLAN
<gateway>10.250.39.17</gateway>	The gateway router interface address associated with this network [Range = A valid IP address]
<isDefault>>true</isDefault>	Indicates whether this is the network with a default gateway. [Range = true/false]
</network>	
<network>	
<name>IMI</name>	Name of customer internal network. Note: Do NOT change this name.
<vlanId>4</vlanId>	The VLAN ID to use for this VLAN. [Range = 2-4094.]
<ip>169.254.2.0</ip>	The network address of this VLAN [Range = A valid IP address]
<mask>255.255.255.0</mask>	Subnetting to apply to servers within this VLAN
<gateway>169.254.2.1</gateway>	The gateway router interface address associated with this network [Range = A valid IP address]
<isDefault>>false</isDefault>	Indicates whether this is the network with a default gateway. [Range = true/false]
</network>	
</networks>	
</networkelement>	

Appendix O. 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 not that at the writing of this document, the supported versions of Netbackup in UDR12.1 are 7.1 and 7.5.

O.1 NetBackup Client Installation using Platcfg

NOTE: Execute the following procedure to switch/migrate to having netBackup installed via platcfg instead of using NBAutoInstall (Push Configuration)

Prerequisites:

- 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.

Note: If a procedural STEP fails to execute successfully, STOP and contact the Customer Care Center.

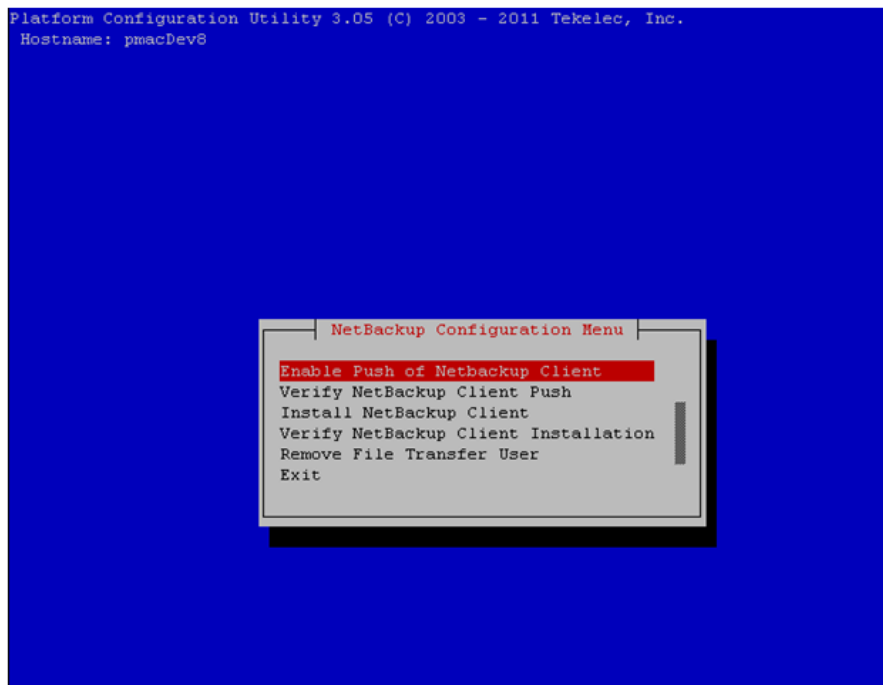
1. Application server iLO: Login and launch the integrated remote console

- SSH to the application Server (PM&C or NOAMP) as root using the management network for the PM&C or XMI network for the NOAMP.

2. Application server iLO: Configure NetBackup Client on application server

su - platcfg

- Navigate to **NetBackup Configuration**



3. Application server iLO: Enable Push of NetBackup Client

- Navigate to **NetBackup Configuration > Enable Push of NetBackup Client**



- Select **Yes** to initialize the server and enable the NetBackup client software push.

4. Application server iLO: Verify NetBackup Client software push is enabled.

- Navigate to **NetBackup Configuration > Verify NetBackup Client Push**



- Verify list entries indicate **"OK"** for NetBackup client software environment.
- Select **"Exit"** to return to NetBackup Configuration menu.

5. NetBackup server: Push appropriate NetBackup Client software to application server

Note: The NetBackup server is not an application asset. Access to the NetBackup server, and location path of the NetBackup Client software is under the control of the customer. Below are the steps that are required on the NetBackup server to push the NetBackup Client software to the application server. These example steps assume the NetBackup server is executing in a Linux environment.

Note: The backup server is supported by the customer, and the backup utility software provider. If this procedural STEP, executed at the backup utility server, fails to execute successfully, STOP and contact the Customer Care Center of the backup and restore utility software provider that is being used at this site.

- Log in to the NetBackup server using password provided by customer:
- Navigate to the appropriate NetBackup Client software path:

Note: The input below is only used as an example. (7.5 in the path below refers to the NetBackup version. If installed a different version (e.g. 7.1), replace 7.5 with 7.1)

```
# cd /usr/opensv/netbackup/client/Linux/7.5
```

- Execute the sftp_to client NetBackup utility using the application IP address and applicationnetbackup user;

```
# ./sftp_to_client <application IP> netbackup
```

```
Connecting to 192.168.176.31
```

```
netbackup@192.168.176.31's password:
```

- Enter application server netbackup user password; the following NetBackup software output is expected, observe the sftp completed successfully:

```
File "/usr/opensv/netbackup/client/Linux/6.5/.sizes" not found.
```

```
Couldn't rename file "/tmp/bp.6211/sizes" to "/tmp/bp.6211/.sizes": No such file or directory
```

```
File "/usr/opensv/NB-Java.tar.Z" not found.
```

```
./sftp_to_client: line 793: [: : integer expression expected
```

```
./sftp_to_client: line 793: [: : integer expression expected
```

```
./sftp_to_client: line 793: [: : integer expression expected
```

```
./sftp_to_client: line 793: [: : integer expression expected
```

```
./sftp_to_client: line 793: [: : integer expression expected
```

```
./sftp_to_client: line 793: [: : integer expression expected
```

```
./sftp_to_client: line 793: [: : integer expression expected
```

```
./sftp_to_client: line 793: [: : integer expression expected
```

```
./sftp_to_client: line 793: [: : integer expression expected
```

```
./sftp_to_client: line 793: [: : integer expression expected
```

```
./sftp_to_client: line 793: [: : integer expression expected
```

```
sftp completed successfully.
```

```
The root user on 192.168.176.31 must now execute the command "sh /tmp/bp.6211/client_config [-L]". The optional argument, "-L",
```

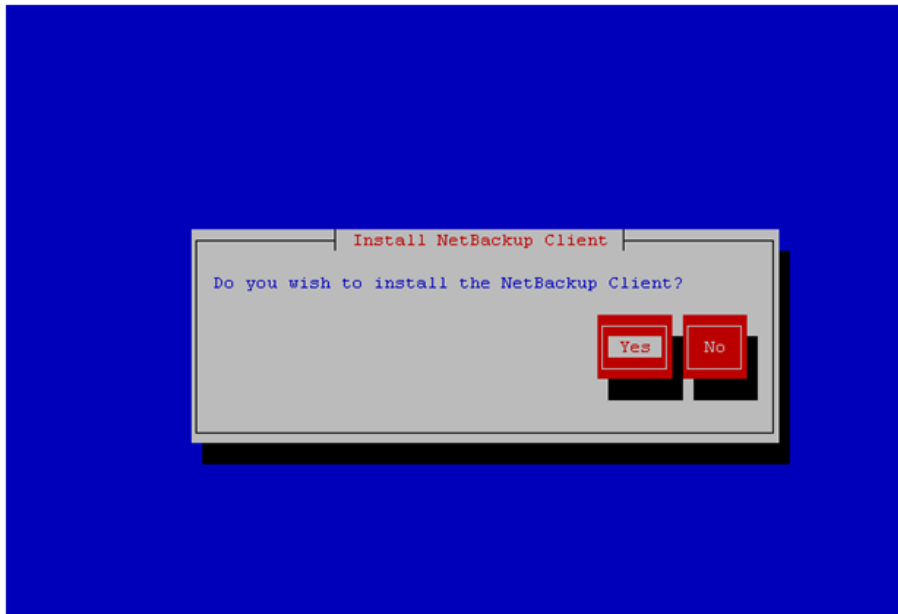
```
is used to avoid modification of the client's current bp.conf file.
```

```
#
```

Note: Although the command executed above instructs you to execute the client_config command, **DO NOT** execute that command, as it shall be executed by platcfg in the next step.

6. Application server iLO: Install NetBackup Client software on application server.

- Navigate to **NetBackup Configuration > Install NetBackup Client**



- Verify list entries indicate "OK" for NetBackup client software installation
- Select "Exit" to return to NetBackup Configuration menu

7. Application server iLO: Verify NetBackup Client software installation on the application server.

- Navigate to **NetBackup Configuration > Verify NetBackup Client Installation.**



- Verify list entries indicate "OK" for NetBackup Client software installation.
- Select "Exit" to return to NetBackup Configuration menu.

8. Application server iLO: Disable NetBackup Client software transfer to the application server.

- Navigate to **NetBackup Configuration > Remove File Transfer User**



- Select "Yes" to remove the NetBackup file transfer user from the application server

9. Application server iLO: Exit platform configuration utility (platcfg)

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

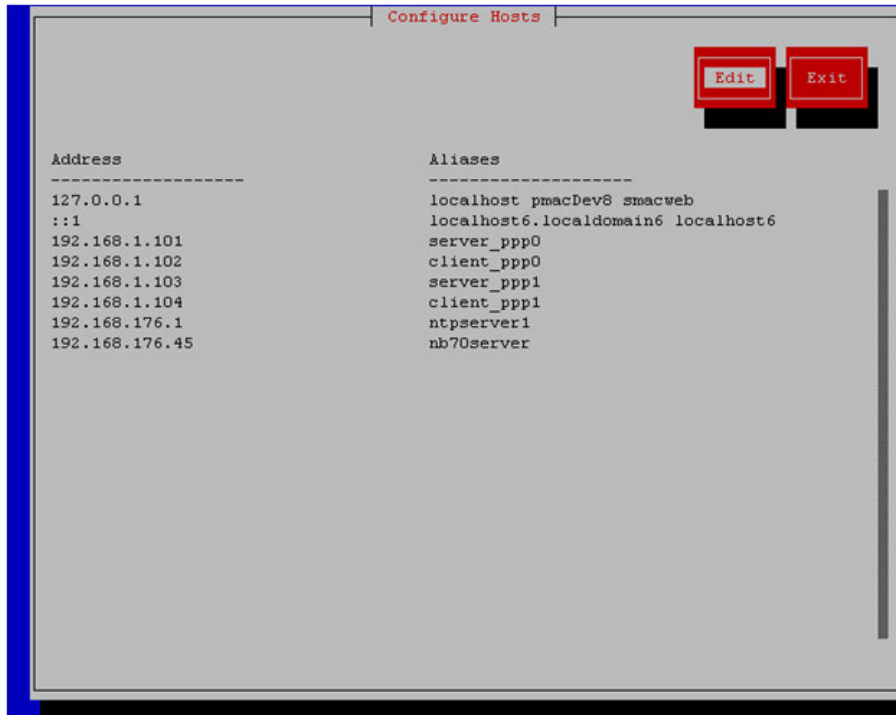
Note: After the successful transfer and installation of the NetBackup client software the NetBackup servers hostname can be found in the NetBackup "/usr/opensv/netbackup/bp.conf" file, identified by the "SERVER" configuration parameter. The NetBackup server hostname and IP address must be added to the application server's hosts file.

- List NetBackup servers hostname:

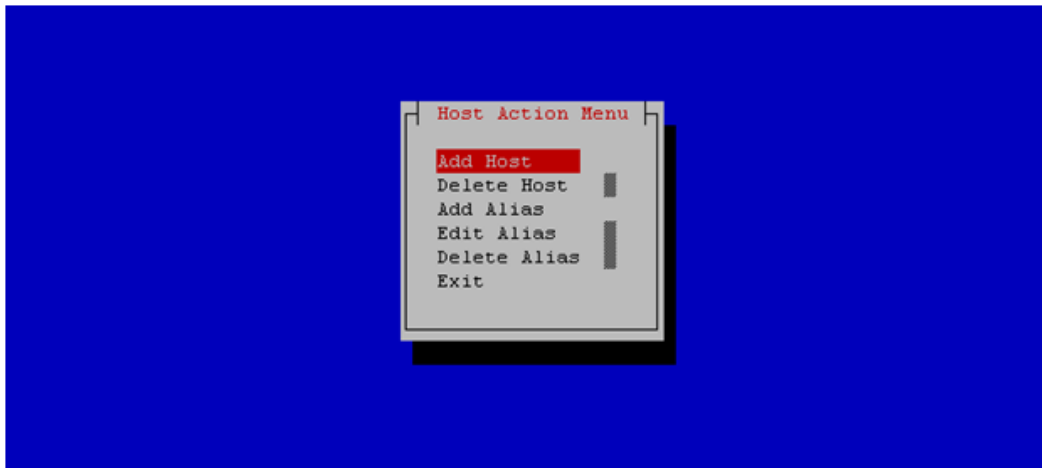
```
# cat /usr/opensv/netbackup/bp.conf  
SERVER = nb70server  
CLIENT_NAME = pmacDev8
```

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

```
# 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

11. Application server iLO: Create links to NetBackup client notify scripts on application server where NetBackup expects to find them.

Note: Copy notify scripts from appropriate path on application server for given application.

```
# ln -s <path>/bpstart_notify /usr/opensv/netbackup/bin/bpstart_notify
# ln -s <path>/bpend_notify /usr/opensv/netbackup/bin/bpend_notify
```

An example of <path> is /usr/TKLC/plat/sbin

12. Application server iLO: NetBackup Client software installation complete.

O.2 NetBackup Client Installation & Upgrade with AutoInstall

NOTE: Execute the following procedure to switch/migrate to having netBackup installed via NBAutoInstall (Push Configuration) instead of manual installation using platcfg.

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.

Note: If the customer does not have a way to push and install Netbackup Client, then use *NetbackupClient Install/Upgrade with platcfg*.

Note: It is required that this procedure is executed before the customer does the Netbackup Client install.

Prerequisites:

- 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.

1. Application server iLO: Login and launch the integrated remote console

Oracle Communications User Data Repository Installation and Configuration Guide

- SSH to the application Server (PM&C or NOAMP) as root using the management network for the PM&C or XMI network for the NOAMP.

2. Application server iLO: Enable nbAutoInstall

```
# /usr/TKLC/plat/bin/nbAutoInstall --enable
```

3. Application server iLO: Create links to NetBackup client notify scripts on application server where NetBackup expects to find them.

```
# mkdir -p /usr/opensv/netbackup/bin/  
# ln -s <path>/bpstart_notify /usr/opensv/netbackup/bin/bpstart_notify  
# ln -s <path>/bpend_notify /usr/opensv/netbackup/bin/bpend_notify
```

An example of <path> is /usr/TKLC/plat/sbin

4. Application server iLO: Verify NetBackup configuration file

- Open */usr/opensv/netbackup/bp.conf* and make sure it points to the NetBackup Server using the following command:

```
# vi /usr/opensv/netbackup/bp.conf
```

Verify that the highlighted Server name matches the NetBackup Server, and verify that the CLIENT_NAME matches the hostname or IP of the local client machine, if they do not, update them as necessary.

```
SERVER = nb75server  
CLIENT_NAME = 10.250.10.185  
CONNECT_OPTIONS = localhost 1 0 2
```

- Edit */etc/hosts* using the following command and add the NetBackup server

```
# vi /etc/hosts
```

```
e.g.: 192.168.176.45      nb75server
```

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.

Appendix P. List of Frequently Used Time Zones

This table lists several valid timezone strings that can be used for the time zone setting in a CSV file, or as the time zone parameter when manually setting a DSR blade timezone. For an exhaustive list of **ALL** timezones, log onto the PM&C server console and view the text file: [/usr/share/zoneinfo/zone.tab](#)

Table 11- List of Selected Time Zone Values

Time Zone Value	Description	Universal Time Code (UTC) Offset
<i>Etc/UTC</i>	GMT	0
<i>America/New_York</i>	Eastern Time	UTC-05
<i>America/Chicago</i>	Central Time	UTC-06
<i>America/Denver</i>	Mountain Time	UTC-07
<i>America/Phoenix</i>	Mountain Standard Time - Arizona	UTC-07
<i>America/Los_Angeles</i>	Pacific Time	UTC-08
<i>America/Anchorage</i>	Alaska Time	UTC-09
<i>Pacific/Honolulu</i>	Hawaii	UTC-10
<i>Africa/Johannesburg</i>		UTC+02
<i>America/Mexico_City</i>	Central Time - most locations	UTC-06
<i>Africa/Monrovia</i>		UTC+00
<i>Asia/Tokyo</i>		UTC+09
<i>America/Jamaica</i>		UTC-05
<i>Europe/Rome</i>		UTC+01

<i>Asia/Hong_Kong</i>		UTC+08
<i>Pacific/Guam</i>		UTC+10
<i>Europe/Athens</i>		UTC+02
<i>Europe/London</i>		UTC+00
<i>Europe/Paris</i>		UTC+01
<i>Europe/Madrid</i>	mainland	UTC+01
<i>Africa/Cairo</i>		UTC+02
<i>Europe/Copenhagen</i>		UTC+01
<i>Europe/Berlin</i>		UTC+01
<i>Europe/Prague</i>		UTC+01
<i>America/Vancouver</i>	Pacific Time - west British Columbia	UTC-08
<i>America/Edmonton</i>	Mountain Time - Alberta, east British Columbia & westSaskatchewan	UTC-07
<i>America/Toronto</i>	Eastern Time - Ontario - most locations	UTC-05
<i>America/Montreal</i>	Eastern Time - Quebec - most locations	UTC-05
<i>America/Sao_Paulo</i>	South & Southeast Brazil	UTC-03
<i>Europe/Brussels</i>		UTC+01
<i>Australia/Perth</i>	Western Australia - most locations	UTC+08

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<i>Australia/Sydney</i>	New South Wales - most locations	UTC+10
<i>Asia/Seoul</i>		UTC+09
<i>Africa/Lagos</i>		UTC+01
<i>Europe/Warsaw</i>		UTC+01
<i>America/Puerto_Rico</i>		UTC-04
<i>Europe/Moscow</i>	Moscow+00 - west Russia	UTC+04
<i>Asia/Manila</i>		UTC+08
<i>Atlantic/Reykjavik</i>		UTC+00
<i>Asia/Jerusalem</i>		UTC+02

Appendix Q. Add additional MPs to Low Capacity Oracle RMS after upgrade


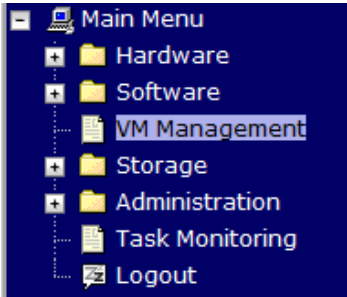
From UDR 12.1 release, Oracle RMS supports 2 MP Virtual Machines in Low Capacity configuration. UDR 10.2 release supports only one MP Virtual Machine. This procedure documents how to add the additional MP Virtual Machine, install the TPD Operating System and UDR application on the VM Guests after the upgrade from UDR 10.2 Release.. This procedure can only be used only when customer upgrades an UDR installed on Oracle RMS from UDR 10.2 Release to 12.1.

Requirements:

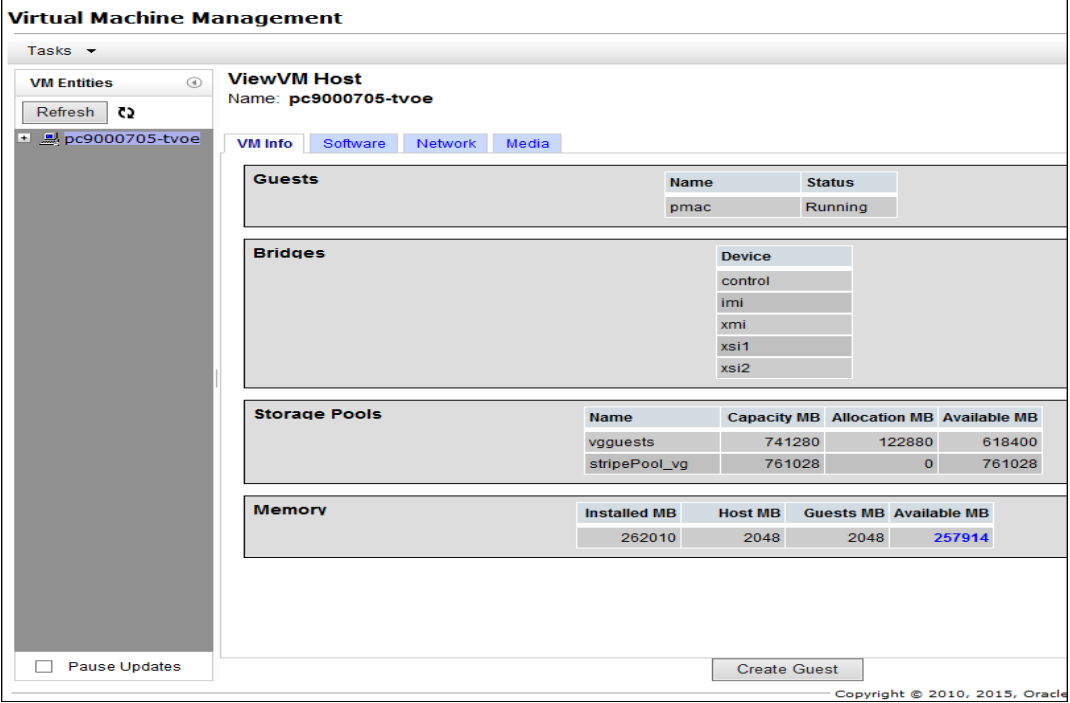
- All UDR Network Elements have been upgraded to 12.1 version
- vCPU num for NO SO and MP have been modified according to 12.1 requirement
- Disk usage for NO, SO and MP have been modified according to 12.1 requirement

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

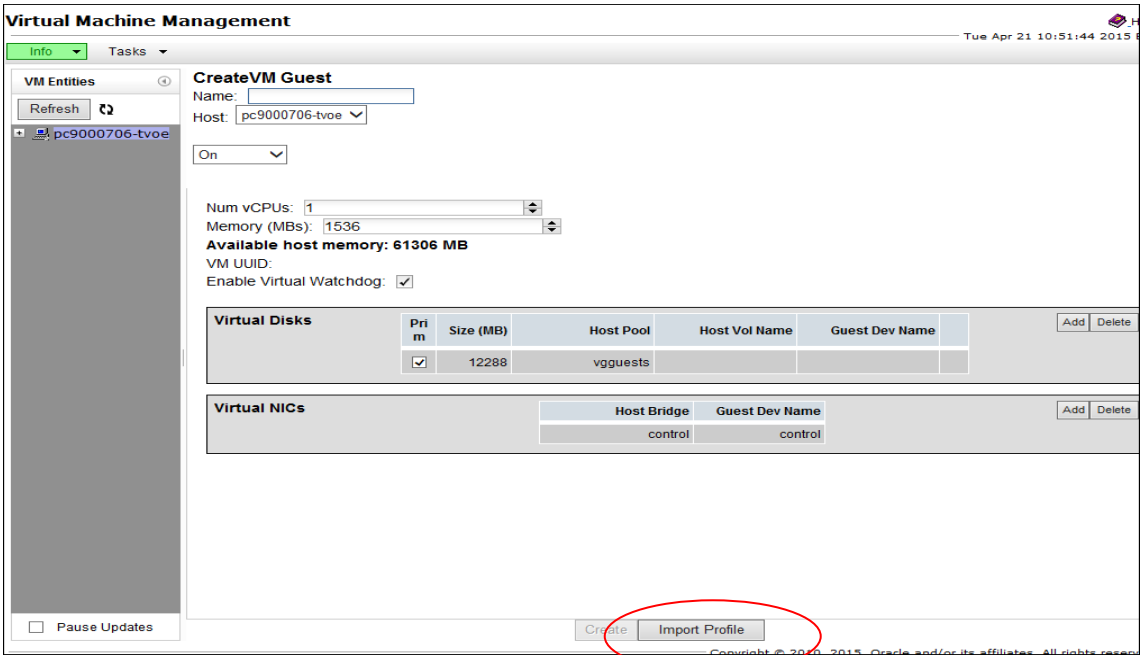
Appendix R: Add additional MPs to Low Capacity Oracle RMS after upgrade

Step	Procedure	Result
1. <input type="checkbox"/>	Add image to manage - ment server.	Follow Appendix J Adding Software Images to PM&C Server to add TPD and UDR software images to this PM&C repository.
2. <input type="checkbox"/>	PM&C GUI: Login to PM&C GUI	Open web browser and enter: <a href="http://<pmac_management_network_ip>">http://<pmac_management_network_ip> Login as pmacadmin user. 
3. <input type="checkbox"/>	PM&C GUI: Navigate to VM Management menu	Navigate to the VM Management menu 

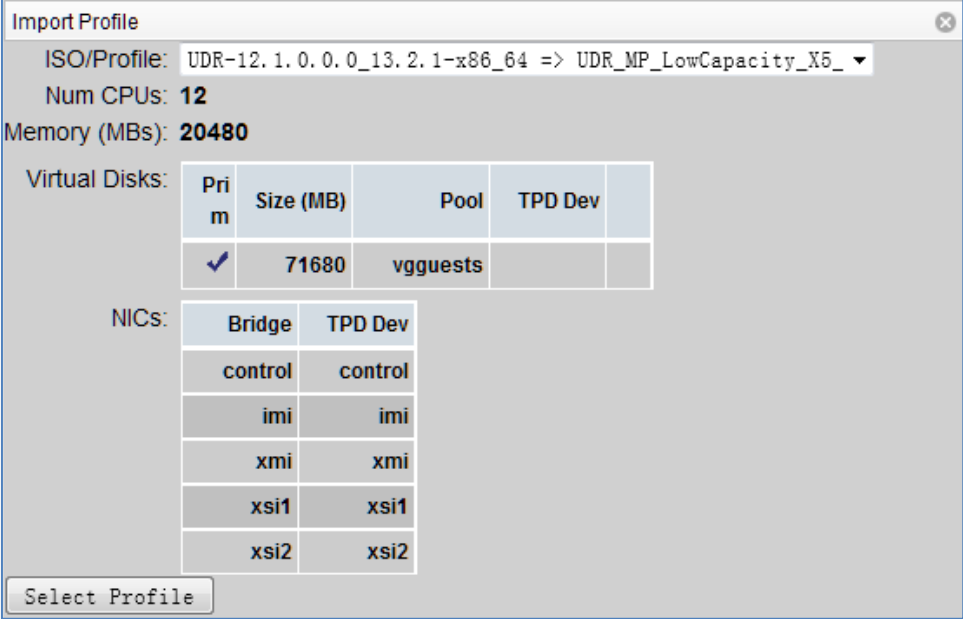
Appendix R: Add additional MPs to Low Capacity Oracle RMS after upgrade

Step	Procedure	Result
<p>4.</p> <p><input type="checkbox"/></p>	<p>PM&C GUI:</p> <p>Select the desired Server and create the VM Guest</p>	<p>Select the desired 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> <ul style="list-style-type: none"> • Check-off the associated Check Box as addition is completed for the VM. <p><input type="checkbox"/>TVOE Host-A(MP-3) <input type="checkbox"/>TVOE Host-B(MP-4)</p>

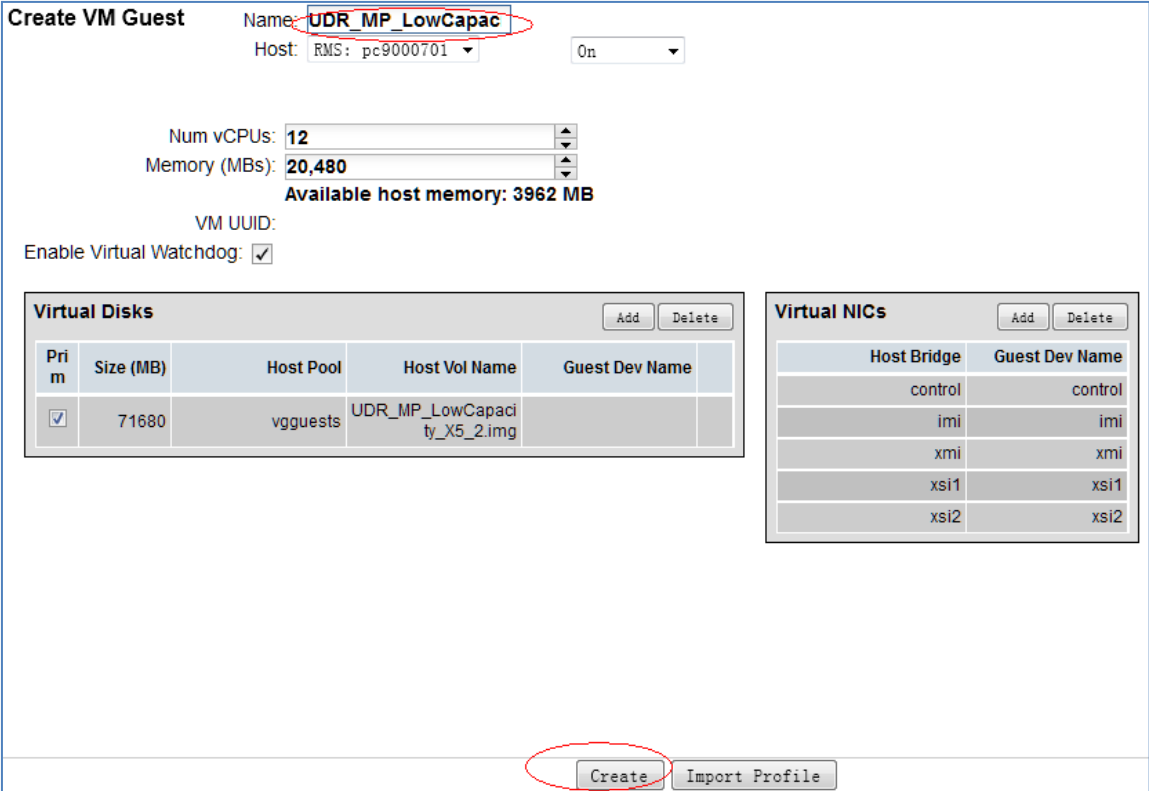
Appendix R: Add additional MPs to Low Capacity Oracle RMS after upgrade

Step	Procedure	Result
<p>5.</p> <p><input type="checkbox"/></p>	<p>PM&C GUI:</p> <p>Click on the Import Profile dialogue button</p>	<p>A “Create VM Guest” window is displayed that is similar to the below..</p>  <p>Click “Import Profile” button .</p> <ul style="list-style-type: none"> • Check-off the associated Check Box as addition is completed for the VM. <p><input type="checkbox"/>TVOE Host-A(MP-3) <input type="checkbox"/>TVOE Host-B(MP-4)</p>

Appendix R: Add additional MPs to Low Capacity Oracle RMS after upgrade

Step	Procedure	Result
<p>6.</p> <p><input type="checkbox"/></p>	<p>PM&C GUI:</p> <p>Select the desired ISO/Profile value</p>	<p>Select the desired ISO/Profile.</p> <p>In this step, use the “UDR_MP_LowCapacity_X5_2” profile</p>  <p>Click “Select Profile” button.</p> <ul style="list-style-type: none"> • Check-off the associated Check Box as addition is completed for the VM. <p><input type="checkbox"/>TVOE Host-A(MP-3) <input type="checkbox"/>TVOE Host-B(MP-4)</p>

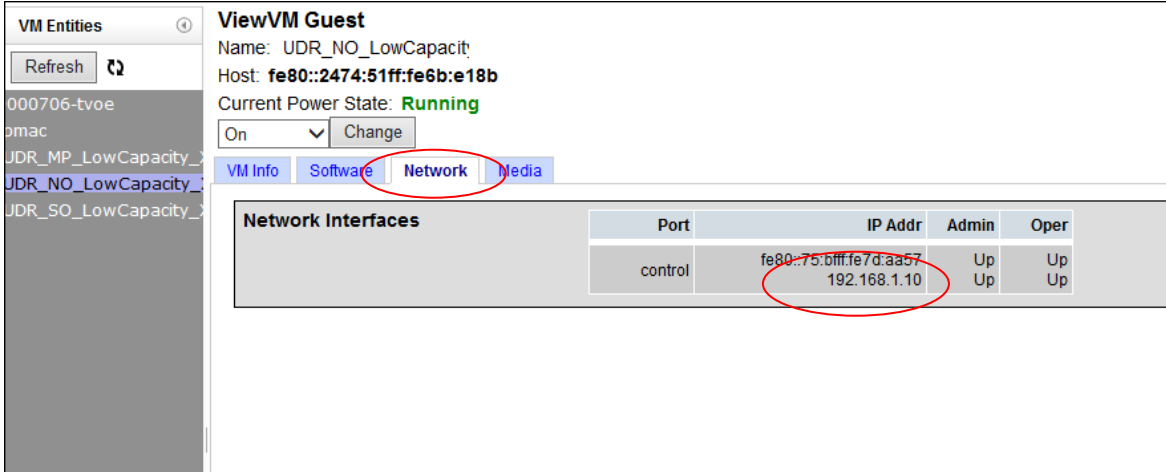
Appendix R: Add additional MPs to Low Capacity Oracle RMS after upgrade

Step	Procedure	Result																
<p>7.</p> <p><input type="checkbox"/></p>	<p>PM&C GUI:</p> <p>Override the VM Guest Name to make it unique for the site</p>	<p>A “Create VM Guest” window is displayed that is similar to the below:</p>  <p>Override the Name field to something like: MP3 or MP4, etc. (Don’t use hyphens in the name) You could also include a location within the Name value such as MPMRSVNCA. (This will not become the ultimate hostname. It is just an internal tag for the VM host manager.)</p> <p>Click Create button</p> <ul style="list-style-type: none"> Record the Site VM Guest Name of each VM that is added in the space provided below: Check-off the associated Check Box as addition is completed for the VM. <p><input type="checkbox"/>TVOE Host-A(MP-3) <input type="checkbox"/>TVOE Host-B(MP-4)</p>																
<p>8.</p> <p><input type="checkbox"/></p>	<p>PM&C GUI:</p> <p>Select...</p> <p>Main Menu →Task Monitoring</p> <p>...as shown on the right.</p>	<p>Background Task Monitoring</p> <p style="text-align: right;">Tue Apr 21 11:09</p> <p>Filter ▾</p> <table border="1"> <thead> <tr> <th>ID</th> <th>Task</th> <th>Target</th> <th>Status</th> <th>State</th> <th>Running Time</th> <th>Start Time</th> <th>Progress</th> </tr> </thead> <tbody> <tr> <td>10</td> <td>VirtAction: Create</td> <td>Host IP: ...51ff:fe6b:e18b Guest: UDR_MP_LowCapacity_X52</td> <td>Guest creation completed (UDR_MP_LowCapacity_X52)</td> <td>COMPLETE</td> <td>0:00:08</td> <td>2015-04-21 11:09:51</td> <td>100%</td> </tr> </tbody> </table> <ul style="list-style-type: none"> Check-off the associated Check Box as addition is completed for the VM. <p><input type="checkbox"/>TVOE Host-A(MP-3) <input type="checkbox"/>TVOE Host-B(MP-4)</p>	ID	Task	Target	Status	State	Running Time	Start Time	Progress	10	VirtAction: Create	Host IP: ...51ff:fe6b:e18b Guest: UDR_MP_LowCapacity_X52	Guest creation completed (UDR_MP_LowCapacity_X52)	COMPLETE	0:00:08	2015-04-21 11:09:51	100%
ID	Task	Target	Status	State	Running Time	Start Time	Progress											
10	VirtAction: Create	Host IP: ...51ff:fe6b:e18b Guest: UDR_MP_LowCapacity_X52	Guest creation completed (UDR_MP_LowCapacity_X52)	COMPLETE	0:00:08	2015-04-21 11:09:51	100%											

Appendix R: Add additional MPs to Low Capacity Oracle RMS after upgrade

Step	Procedure	Result																
<p>9.</p> <input type="checkbox"/>	<p>PM&C GUI:</p> <p>Verify that Create VM task successfully completes.</p> <p>The user should see a screen similar to the one on the right with Progress value of 100%.</p>	<p>Verify that the Virtual Machine successfully created.</p> <div> <p>Background Task Monitoring Tue Apr 21 10:50</p> <p>Filter ▾</p> <table border="1"> <thead> <tr> <th>ID</th> <th>Task</th> <th>Target</th> <th>Status</th> <th>State</th> <th>Running Time</th> <th>Start Time</th> <th>Progress</th> </tr> </thead> <tbody> <tr> <td>7</td> <td>VirtAction: Create</td> <td>Host IP: ...51ff:fe6b:e18b Guest: UDR_NO_LowCapacity_X52</td> <td>Guest creation completed (UDR_NO_LowCapacity_X52)</td> <td>COMPLETE</td> <td>0:00:10</td> <td>2015-04-21 10:49:53</td> <td>100%</td> </tr> </tbody> </table> </div> <ul style="list-style-type: none"> Check-off the associated Check Box as addition is completed for the VM. <p><input type="checkbox"/>TVOE Host-A(MP-3) <input type="checkbox"/>TVOE Host-B(MP-4)</p>	ID	Task	Target	Status	State	Running Time	Start Time	Progress	7	VirtAction: Create	Host IP: ...51ff:fe6b:e18b Guest: UDR_NO_LowCapacity_X52	Guest creation completed (UDR_NO_LowCapacity_X52)	COMPLETE	0:00:10	2015-04-21 10:49:53	100%
ID	Task	Target	Status	State	Running Time	Start Time	Progress											
7	VirtAction: Create	Host IP: ...51ff:fe6b:e18b Guest: UDR_NO_LowCapacity_X52	Guest creation completed (UDR_NO_LowCapacity_X52)	COMPLETE	0:00:10	2015-04-21 10:49:53	100%											
<p>Note: Steps 4 -9 may be completed for each VM Guest that this PM&C administers before proceeding on to the next step. This way you may install and upgrade multiple VM Guests in parallel.</p>																		
<p>10.</p> <input type="checkbox"/>	<p>Install Operating System (TPD)</p>	<p>Follow steps defined in ...</p> <p>Appendix F.2</p> <p>Installing Operating Systems with PM&C</p> <p>... to install TPD software on VM Guests.</p> <ul style="list-style-type: none"> Check-off the associated Check Box as addition is completed for the VM. <p><input type="checkbox"/>TVOE Host-A(MP-3) <input type="checkbox"/>TVOE Host-B(MP-4)</p>																

Appendix R: Add additional MPs to Low Capacity Oracle RMS after upgrade

Step	Procedure	Result
<p>11.</p> <input type="checkbox"/>	<p><i>PM&C GUI:</i></p> <p>Get and record control IP address of VM Guest</p>	<p>Navigate to the VM Management menu</p> <p>Select the VM Guest Name from the VM Entities list, and click “Network” tab</p>  <p>Determine control IP address of VM Guest and record it.</p> <ul style="list-style-type: none"> Record the Site control IP Address of each VM that is added in the space provided below: Check-off the associated Check Box as addition is completed for the VM. <p><input type="checkbox"/>TVOE Host-A(MP-3) <input type="checkbox"/>TVOE Host-B(MP-4)</p>
<p>12.</p> <input type="checkbox"/>	<p><i>Install UDR application software.</i></p>	<p>Follow steps defined in ...</p> <p>Appendix G.2</p> <p>Installing UDR Application with PM&C</p> <p>... to install UDR software.</p> <ul style="list-style-type: none"> Check-off the associated Check Box as addition is completed for the VM. <p><input type="checkbox"/>TVOE Host-A(MP-3) <input type="checkbox"/>TVOE Host-B(MP-4)</p>
<p>13.</p> <input type="checkbox"/>	<p>Repeat Steps 4 – 12 for each Virtual Machine to install its operating system and application software.</p>	

Appendix R: Add additional MPs to Low Capacity Oracle RMS after upgrade

Step	Procedure	Result
<p>14.</p> <input type="checkbox"/>	<p><i>Perform upgrade acceptance.</i></p>	<p>Follow steps defined in ...</p> <p>Appendix H: Accept Application Installation on PM&C Managed Servers</p> <p>... to accept upgrade.</p> <ul style="list-style-type: none"> • Check-off the associated Check Box as addition is completed for the VM. <p><input type="checkbox"/>TVOE Host-A (MP-3)<input type="checkbox"/>TVOE Host-B(MP-4)</p>
<p>15.</p> <input type="checkbox"/>	<p><i>Create Configuration for newly added Servers(All Sites).</i></p>	<p>Follow steps 9 through 28 defined in ...</p> <p>8.2 Create Configuration for Remaining Servers (All Sites).</p> <p>... to create server configuration for newly added MPs</p> <p>Note: Only do step #9 to step #28 for newly added MPs</p>
<p>16.</p> <input type="checkbox"/>	<p><i>Configuring MP Server Group</i></p>	<p>Follow steps 14 through 23 defined in ...</p> <p>8.6 Configuring MP Server Groups (All SOAM sites)</p> <p>... to create server groupconfiguration for newly added MPs.</p> <p>Note: Only do step #13 to step #23 for newly added MPs</p>
<p>17.</p> <input type="checkbox"/>	<p><i>Configuring MP Signaling Interfaces(All SOAM Sites)</i></p>	<p>Follow steps defined in ...</p> <p>8.7 Configure MP Signaling Interfaces (All SOAM Sites)</p> <p>... to configure signaling interfaces for newly added MPs.</p>
<p>18.</p> <input type="checkbox"/>	<p><i>Configuring SPR Application on MP(All SOAM Sites)</i></p>	<p>Follow steps defined in ...</p> <p>8.8 Configure SPR Application on MP(All SOAM Sites)</p> <p>... to configure SPR Applicationon newly added MPs.</p>
<p>THIS PROCEDURE HAS BEEN COMPLETED</p>		

Appendix R. Adding additional MPs to Gen9 Normal Capacity Config after upgrade


This procedure will create Virtual Machine (VM) Guests for the additional MP servers, install the TPD Operating System and UDR application on the VM Guests. This step can only be used when upgrading Gen 9 Normal Capacity Configuration to 12.x release in which 2 additional MPs are required (3 MPs for each SOAM).

Requirements:

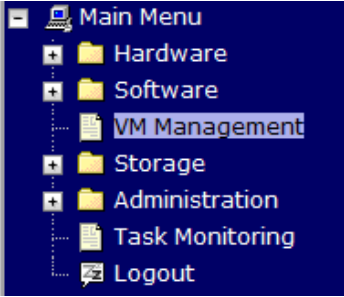
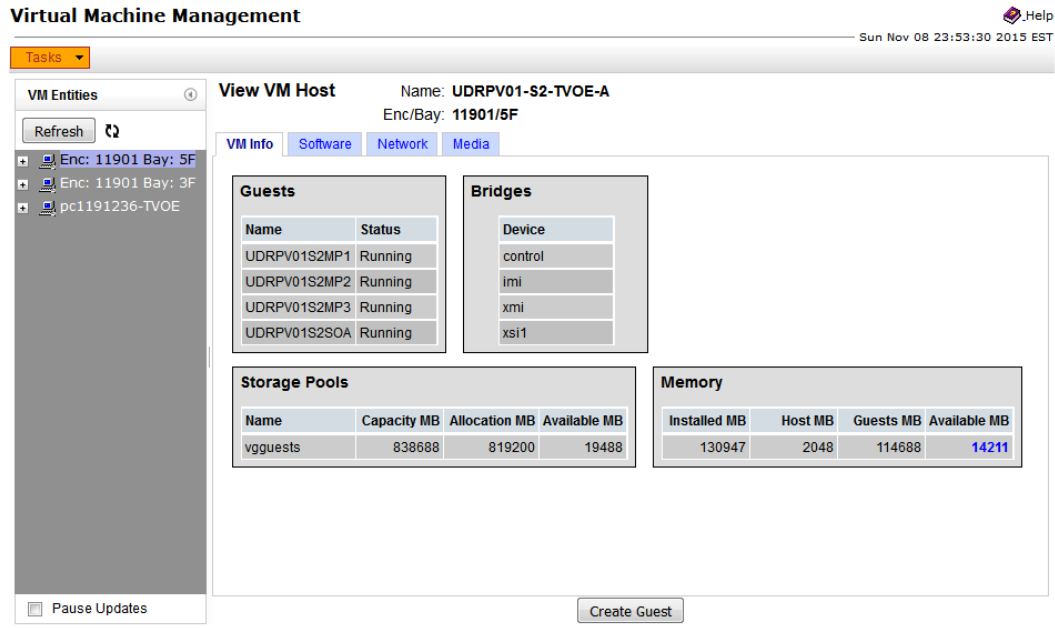
- All UDR Network Elements have been upgraded to 12.1 version
- vCPU num and RAM allocation for each existing MP have been modified according to 12.1 requirement (Each MP should have vCPU num = “14” and RAM = “32768 MB”)

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

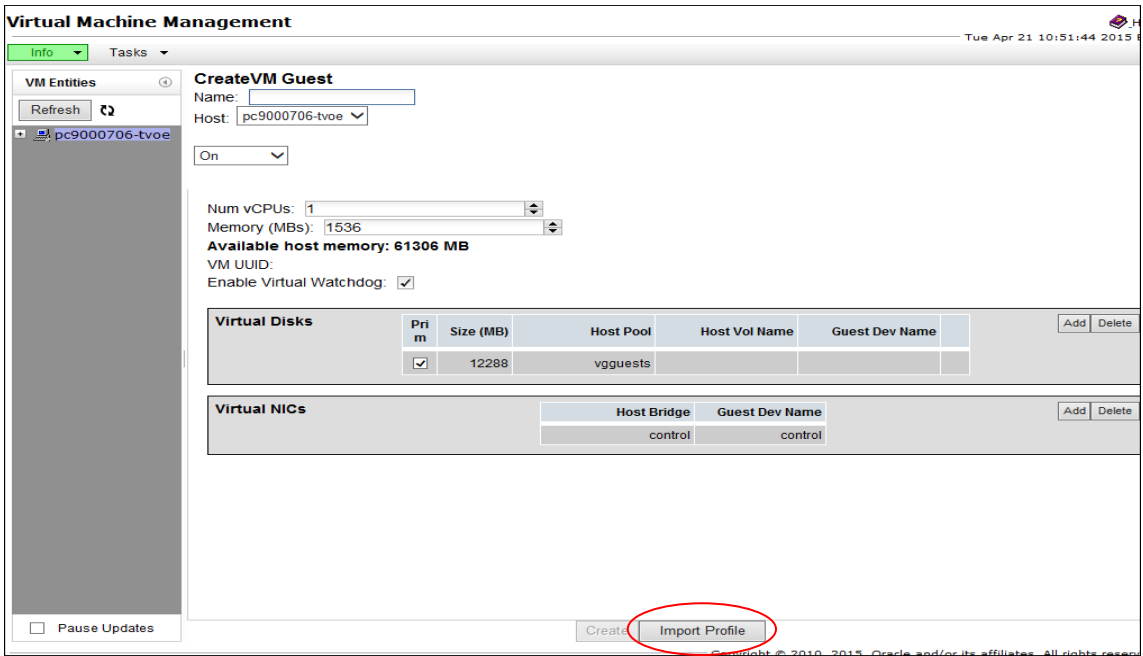
Appendix S: Add additional MPs to Gen9 Normal Capacity Configuration after upgrade

Step	Procedure	Result
1. <input type="checkbox"/>	Add image to management server.	Follow Appendix J: Adding Software Images to PM&C Server to add TPD and UDR software images to this PM&C repository.
2. <input type="checkbox"/>	PM&C GUI: Login to PM&C GUI	Open web browser and enter: <a href="http://<pmac_management_network_ip>">http://<pmac_management_network_ip> Login as pmacadmin user. 

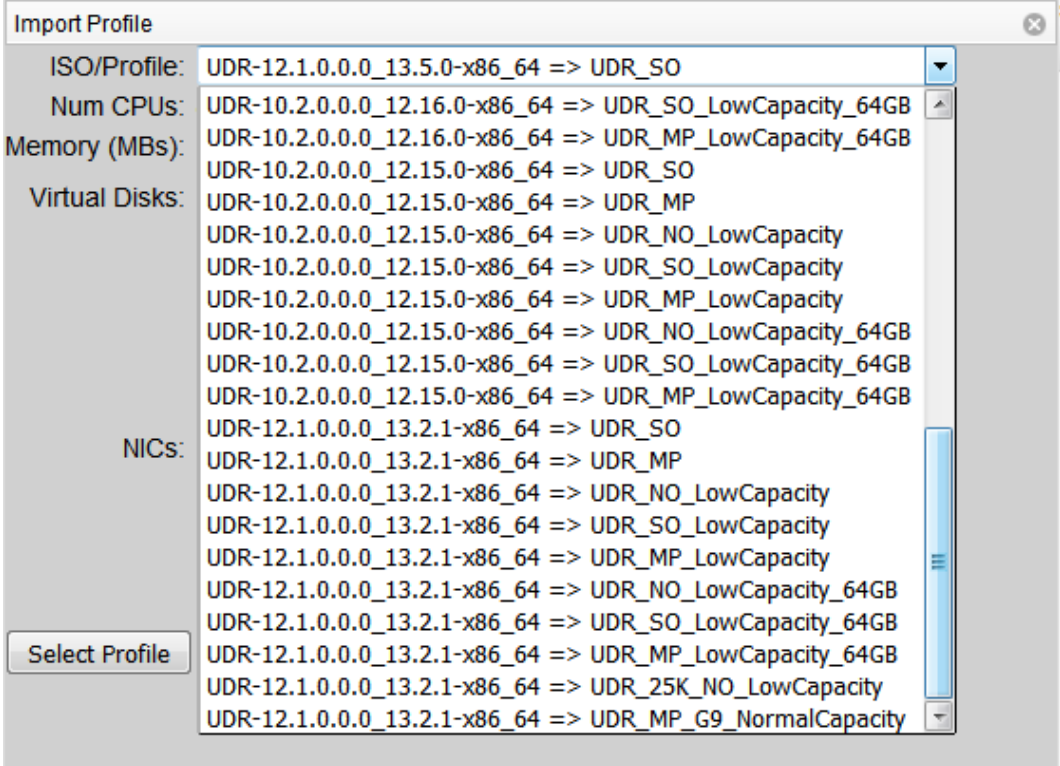
Appendix S: Add additional MPs to Gen9 Normal Capacity Configuration after upgrade

Step	Procedure	Result
<p>3.</p> <p><input type="checkbox"/></p>	<p>PM&C GUI:</p> <p>Navigate to the <i>VM Management</i> menu</p>	<p>Navigate to the VM Management menu</p> 
<p>4.</p> <p><input type="checkbox"/></p>	<p>PM&C GUI:</p> <p>Select the desired 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>Select the desired Server and create the VM Guest</p>	<p>Select the desired 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> <ul style="list-style-type: none"> • Check-off the associated Check Box as addition is completed for the VM. <p><input type="checkbox"/>MP-5</p> <p><input type="checkbox"/>MP-6</p>

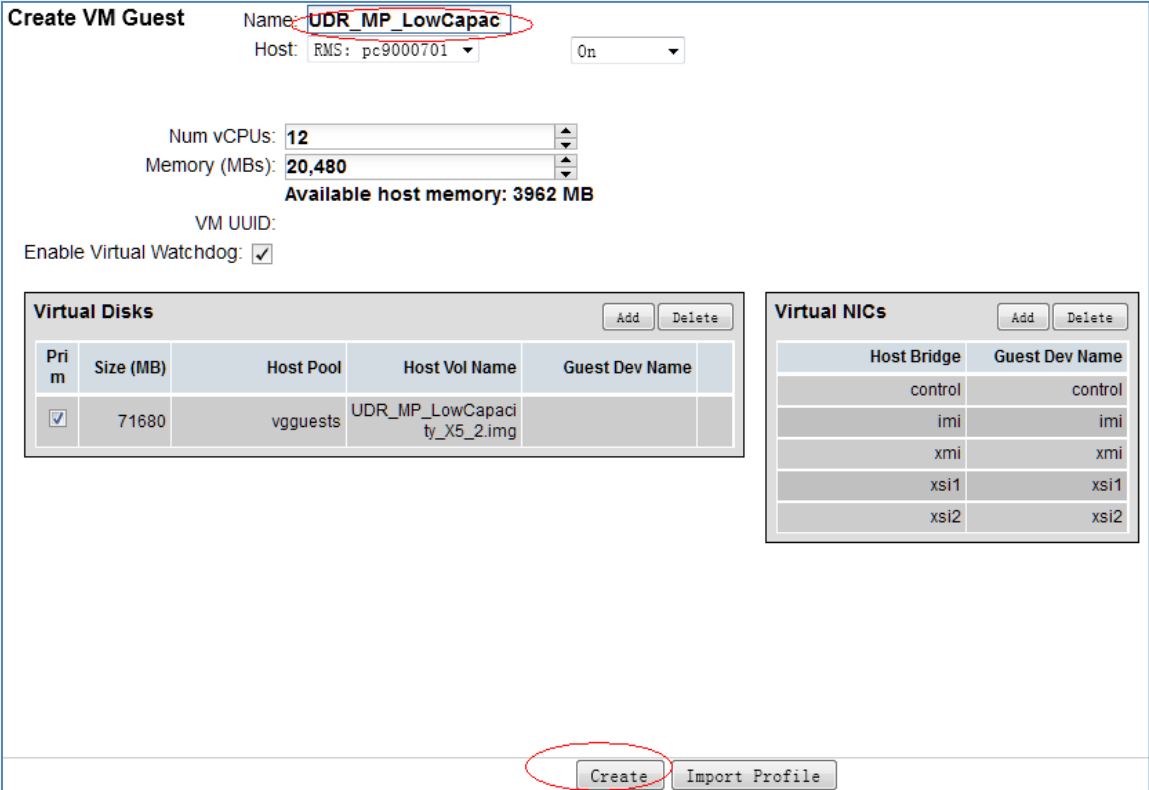
Appendix S: Add additional MPs to Gen9 Normal Capacity Configuration after upgrade

Step	Procedure	Result
<p>5.</p> <p><input type="checkbox"/></p>	<p>PM&C GUI:</p> <p><i>Click on the Import Profile dialogue button</i></p>	<p>A “Create VM Guest” window is displayed that is similar to the below.:</p>  <p>Click “Import Profile” button .</p> <ul style="list-style-type: none"> • Check-off the associated Check Box as addition is completed for the VM. <p><input type="checkbox"/>MP-5</p> <p><input type="checkbox"/>MP-6</p>

Appendix S: Add additional MPs to Gen9 Normal Capacity Configuration after upgrade

Step	Procedure	Result
<p>6.</p> <input type="checkbox"/>	<p>PM&C GUI:</p> <p>Select the desired ISO/Profile value</p>	<p>Select the desired ISO/Profile.</p> <p>In this step, use the “UDR_MP_G9_NormalCapacity” profile</p>  <p>Click “Select Profile” button.</p> <ul style="list-style-type: none"> • Check-off the associated Check Box as addition is completed for the VM. <p><input type="checkbox"/>MP-5</p> <p><input type="checkbox"/>MP-6</p>

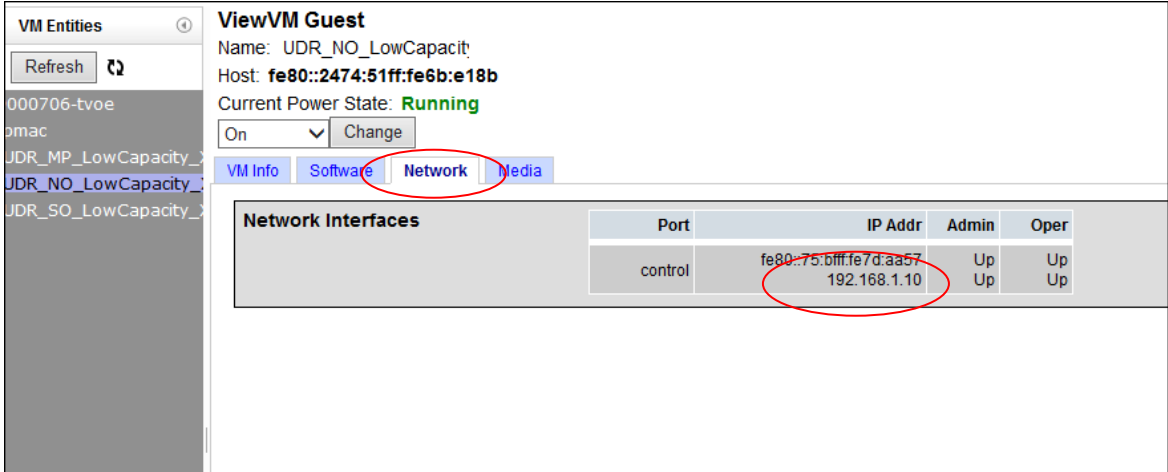
Appendix S: Add additional MPs to Gen9 Normal Capacity Configuration after upgrade

Step	Procedure	Result
<p>7.</p> <p><input type="checkbox"/></p>	<p>PM&C GUI:</p> <p><i>Override the VM Guest Name to make it unique for the site</i></p>	<p>A “Create VM Guest” window is displayed that is similar to the below:</p>  <p>Override the Name field to something like: MP3 or MP4, etc. (Don’t use hyphens in the name) You could also include a location within the Name value such as MPMRSVNCA. (This will not become the ultimate hostname. It is just an internal tag for the VM host manager.)</p> <p>Click “Create” button</p> <ul style="list-style-type: none"> Record the Site VM Guest Name of each VM that is added in the space provided below: Check-off the associated Check Box as addition is completed for the VM. <p><input type="checkbox"/>MP-5</p> <p><input type="checkbox"/>MP-6</p>

Appendix S: Add additional MPs to Gen9 Normal Capacity Configuration after upgrade

Step	Procedure	Result																
<p>8.</p> <input type="checkbox"/>	<p>PM&C GUI:</p> <p>Select...</p> <p>Main Menu → Task Monitoring</p> <p>...as shown on the right.</p>	<p>Background Task Monitoring Tue Apr 21 11:09</p> <p>Filter ▾</p> <table border="1"> <thead> <tr> <th>ID</th> <th>Task</th> <th>Target</th> <th>Status</th> <th>State</th> <th>Running Time</th> <th>Start Time</th> <th>Progress</th> </tr> </thead> <tbody> <tr> <td>10</td> <td>VirtAction: Create</td> <td>Host IP:51ff:fe6b:e18b Guest: UDR_MP_LowCapacity_X52</td> <td>Guest creation completed (UDR_MP_LowCapacity_X52)</td> <td>COMPLETE</td> <td>0:00:08</td> <td>2015-04-21 11:09:51</td> <td>100%</td> </tr> </tbody> </table> <ul style="list-style-type: none"> Check-off the associated Check Box as addition is completed for the VM. <p><input type="checkbox"/> MP-5</p> <p><input type="checkbox"/> MP-6</p>	ID	Task	Target	Status	State	Running Time	Start Time	Progress	10	VirtAction: Create	Host IP:51ff:fe6b:e18b Guest: UDR_MP_LowCapacity_X52	Guest creation completed (UDR_MP_LowCapacity_X52)	COMPLETE	0:00:08	2015-04-21 11:09:51	100%
ID	Task	Target	Status	State	Running Time	Start Time	Progress											
10	VirtAction: Create	Host IP:51ff:fe6b:e18b Guest: UDR_MP_LowCapacity_X52	Guest creation completed (UDR_MP_LowCapacity_X52)	COMPLETE	0:00:08	2015-04-21 11:09:51	100%											
<p>9.</p> <input type="checkbox"/>	<p>PM&C GUI:</p> <p>Verify that Create VM task successfully completes.</p> <p>The user should see a screen similar to the one on the right with Progress value of 100%.</p>	<p>Verify that the Virtual Machine successfully created.</p> <p>Background Task Monitoring Tue Apr 21 10:50</p> <p>Filter ▾</p> <table border="1"> <thead> <tr> <th>ID</th> <th>Task</th> <th>Target</th> <th>Status</th> <th>State</th> <th>Running Time</th> <th>Start Time</th> <th>Progress</th> </tr> </thead> <tbody> <tr> <td>7</td> <td>VirtAction: Create</td> <td>Host IP:51ff:fe6b:e18b Guest: UDR_NO_LowCapacity_X52</td> <td>Guest creation completed (UDR_NO_LowCapacity_X52)</td> <td>COMPLETE</td> <td>0:00:10</td> <td>2015-04-21 10:49:53</td> <td>100%</td> </tr> </tbody> </table> <ul style="list-style-type: none"> Check-off the associated Check Box as addition is completed for the VM. <p><input type="checkbox"/> MP-5</p> <p><input type="checkbox"/> MP-6</p>	ID	Task	Target	Status	State	Running Time	Start Time	Progress	7	VirtAction: Create	Host IP:51ff:fe6b:e18b Guest: UDR_NO_LowCapacity_X52	Guest creation completed (UDR_NO_LowCapacity_X52)	COMPLETE	0:00:10	2015-04-21 10:49:53	100%
ID	Task	Target	Status	State	Running Time	Start Time	Progress											
7	VirtAction: Create	Host IP:51ff:fe6b:e18b Guest: UDR_NO_LowCapacity_X52	Guest creation completed (UDR_NO_LowCapacity_X52)	COMPLETE	0:00:10	2015-04-21 10:49:53	100%											
<p>Note: Steps 4 -9 may be completed for each VM Guest that this PM&C administers before proceeding on to the next step. This way you may install and upgrade multiple VM Guests in parallel.</p>																		
<p>10.</p> <input type="checkbox"/>	<p>Install Operating System (TPD)</p>	<p>Follow steps defined in ...</p> <p>Appendix F.2 Installing Operating Systems with PM&C</p> <p>... to install TPD software on VM Guests.</p> <ul style="list-style-type: none"> Check-off the associated Check Box as addition is completed for the VM. <p><input type="checkbox"/> MP-5</p> <p><input type="checkbox"/> MP-6</p>																

Appendix S: Add additional MPs to Gen9 Normal Capacity Configuration after upgrade

Step	Procedure	Result
<p>11.</p> <input type="checkbox"/>	<p><i>PM&C GUI:</i></p> <p>Get and record control IP address of VM Guest</p>	<p>Navigate to the VM Management menu</p> <p>Select the VM Guest Name from the VM Entities list, and click “Network” tab</p>  <p>Determine control IP address of VM Guest and record it.</p> <ul style="list-style-type: none"> Record the Site control IP Address of each VM that is added in the space provided below: Check-off the associated Check Box as addition is completed for the VM. <p><input type="checkbox"/> MP-5</p> <p><input type="checkbox"/> MP-6</p>
<p>12.</p> <input type="checkbox"/>	<p><i>Install UDR application software.</i></p>	<p>Follow steps defined in ...</p> <p>Appendix G.2 Installing UDR Application with PM&C</p> <p>... to install UDR software.</p> <ul style="list-style-type: none"> Check-off the associated Check Box as addition is completed for the VM. <p><input type="checkbox"/> MP-5</p> <p><input type="checkbox"/> MP-6</p>
<p>13.</p> <input type="checkbox"/>	<p>Repeat Steps 4 – 12 for each Virtual Machine to install its operating system and application software.</p>	

Appendix S: Add additional MPs to Gen9 Normal Capacity Configuration after upgrade

Step	Procedure	Result
<p>14.</p> <input type="checkbox"/>	<p><i>Perform upgrade acceptance.</i></p>	<p>Follow steps defined in ...</p> <p>Appendix H: Accept Application Installation on PM&C Managed Servers</p> <p>... to accept upgrade.</p> <ul style="list-style-type: none"> • Check-off the associated Check Box as addition is completed for the VM. <p><input type="checkbox"/>MP-5</p> <p><input type="checkbox"/>MP-6</p>
<p>15.</p> <input type="checkbox"/>	<p><i>Create Configuration for newly added Servers(All Sites).</i></p>	<p>Follow steps 9 through 28 defined in ...</p> <p>8.2 Create Configuration for Remaining Servers (All Sites)</p> <p>... to create server configuration for newly added MPs</p> <p>Note: Only do step #9 to step #28 for newly added MPs</p>
<p>16.</p> <input type="checkbox"/>	<p><i>Configuring MP Server Group</i></p>	<p>Follow steps defined in ...</p> <p>8.6: Configuring MP Server Groups (All SOAM sites)</p> <p>... to create server groupconfiguration for newly added MPs.</p> <p>Note: Only do step #13 to step #23 for newly added MPs</p>
<p>17.</p> <input type="checkbox"/>	<p><i>Configuring MP Signaling Interfaces(All SOAM Sites)</i></p>	<p>Follow steps defined in ...</p> <p>8.7: Configure MP Signaling Interfaces (All SOAM Sites)</p> <p>... to configure signaling interfaces for newly added MPs.</p>
<p>18.</p> <input type="checkbox"/>	<p><i>Configuring SPR Application on MP(All SOAM Sites)</i></p>	<p>Follow steps defined in ...</p> <p>8.8 : Configure SPR Application on MP(All SOAM Sites)</p> <p>... to configure SPR Applicationon newly added MPs.</p>
<p>THIS PROCEDURE HAS BEEN COMPLETED</p>		

Appendix S. Contacting My Oracle Support (MOS)

MOS (<https://support.oracle.com>) is your initial point of contact for all product support and training needs. A representative at Customer Access Support (CAS) can assist you with MOS registration.

Call the CAS main number at 1-800-223-1711 (toll-free in the US), or call the Oracle Support hotline for your local country from the list at <http://www.oracle.com/us/support/contact/index.html>. When calling, make the selections in the sequence shown below on the Support telephone menu:

- [1] Select 2 for New Service Request
- [2] Select 3 for Hardware, Networking and Solaris Operating System Support
- [3] Select 2 for Non-technical issue

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.

MOS is available 24 hours a day, 7 days a week, 365 days a year.