

**Oracle® Communications Diameter Signaling  
Router**

DSR Software Installation and Configuration Procedure Part

2/2

Release 5.X,6.X

**909-2278-001**

April 2014

**ORACLE®**

**Oracle Communications Diameter Signaling Router Software Installation Procedure, Release 5.X,6.0**

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*Note: This document represents the 2<sup>nd</sup> part of the DSR 5.X/6.X Installation Process. Prior to executing this document, make sure that the 1<sup>st</sup> part was fully executed..*

**DSR 5.X Installs:** Use document *909-2282-001* as Part I

**DSR 6.X Installs:** Use document *ES 4118-01 TKDSR* as Part I



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## 1.0 INTRODUCTION

### 1.1 Purpose and Scope

This document describes the application-related installation procedures for an HP C-class Diameter Signaling Router 5.X/6.X system.

***This document assumes that platform-related configuration has already been done. Before executing this document, please ensure that all procedures [10] or [12] have already been performed successfully.***

The audience for this document includes Tekelec customers as well as these groups: Software System, Product Verification, Documentation, and Customer Service including Software Operations and First Office Application.

### 1.2 References

#### 1.2.1 External

- [1] *HP Solutions Firmware Upgrade Pack Release Notes*, 910-6611-001 Rev A, July 2012
- [2] *Diameter Signaling Router 5.0 Networking Interconnect Technical References*, TR007133/4/5/6/7/8/9, v. 1.0 or greater, P. Mouallem, 2013
- [3] *Diameter Signaling Router 5.0 Release Notes*, 910-6829-001, Latest Revision
- [4] *TPD Initial Product Manufacture*, 909-2130-001, v. 1.0 or greater, D. Knierim, Latest Revision.
- [5] *Platform 6.x Configuration Procedure Reference*, 909-2297-001, Tekelec, 2014
- [6] *DSR 4.0 Communication Agent*, 910-6575-001, Latest Revision, Tekelec, 2012
- [7] *DSR 4.0 Full Address Based Resolution (FABR)*, 910-6578-001, Latest Revision, Tekelec, 2012
- [8] *DSR 4.1 Full Address Based Resolution (FABR)*, 910-6634-001, Latest Revision, Tekelec, 2012
- [9] *HP Solutions Firmware Upgrade Pack Upgrade Procedures 2.2*, 909-2234-001, Latest Revision.
- [10] *Policy DRA Activation*, WI006835, Latest Revision, Tekelec 2012
- [11] *DSR 5.0 Base Hardware and Software Installation*, 909-2282-001, Latest Revision, Tekelec 2012
- [12] *DSR 6.0 Base Hardware and Software Installation*, ES4118-01 TKDSR, Latest Revision, Oracle 2014
- [13] *IPFE Installation and Configuration*, WI006931, latest version, Mahoney
- [14] *CPA Activation Feature Work Instruction*, WI006780, latest version, Moore
- [15] *CPA User Guide*, 910-6635-001, Rev A (4.1)
- [16] *DSR Meta Administration Feature Activation*, WI006761, latest version, Fisher
- [17] *DSR FABR Feature Activation*, WI006771, latest version, Karmarkar
- [18] *FABR User Guide*, 910-6634-001, Rev B (4.1.5)
- [19] *DSR RBAR Feature Activation*, WI006763, latest version, Fisher
- [20] *RBAR User Guide*, 910-6634-001, Rev B
- [21] *DSR 4.0 – Per connection ingress message control* . WI006764
- [22] *SDS SW Installation and Configuration Guide*, UG006385, Tekelec

#### 1.2.2 Internal (Tekelec)

The following are references internal to Tekelec. They are provided here to capture the source material used to create this document. Internal references are only available to Tekelec personnel.

- [1] *Formal Peer Review Process*, PD001866, v6.21, Nov 2008

### 1.3 Acronyms

An alphabetized list of acronyms used in the document:

**Table 1. Acronyms**

Acronym	Definition
BIOS	Basic Input Output System
CD	Compact Disk
DVD	Digital Versatile Disc
EBIPA	Enclosure Bay IP Addressing
FRU	Field Replaceable Unit
HP c-Class	HP blade server offering
iLO	Integrated Lights Out manager
IPM	Initial Product Manufacture – the process of installing TPD on a hardware platform
MSA	Modular Smart Array
NB	NetBackup
OA	HP Onboard Administrator
OS	Operating System (e.g. TPD)
RMS	Rack Mounted Server
PM&C	Platform Management & Configuration
SAN	Storage Area Network
SFTP	Secure File Transfer Protocol
SNMP	Simple Network Management Protocol
TPD	Tekelec Platform Distribution
TVOE	Tekelec Virtual Operating Environment
VM	Virtual Machine
VSP	Virtual Serial Port

### 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"/> <b>ServerX:</b> Connect to the console of the server	Establish a connection to the server using cu on the terminal server/console. \$ <b>cu -l /dev/ttyS7</b>
---	---	---

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

<b>Management Server</b>	HP ProLiant DL360/ DL380 or Sun Netra Rack Mount Seerver deployed to run TVOE and host a virtualized PM&C application. Can also host a virtualized NOAMP. It is also used to configure the Aggregation switches (via the PM&C) and to serve other configuration purposes.
<b>PM&amp;C Application</b>	PM&C is an application that provides platform-level management functionality for HP G6 system, such as the capability to manage and provision platform components of the system so it can host applications.

## 2.0 GENERAL DESCRIPTION

This document defines the steps to execute the initial installation of the Diameter Signaling Router (DSR) 5.X/6.X application on new HP C-Class Hardware.

DSR 5.0 and DSR 6.0 installation paths are shown in the figures below. The general timeline for all processes to perform a software installation/configuration and upgrade is also included below.

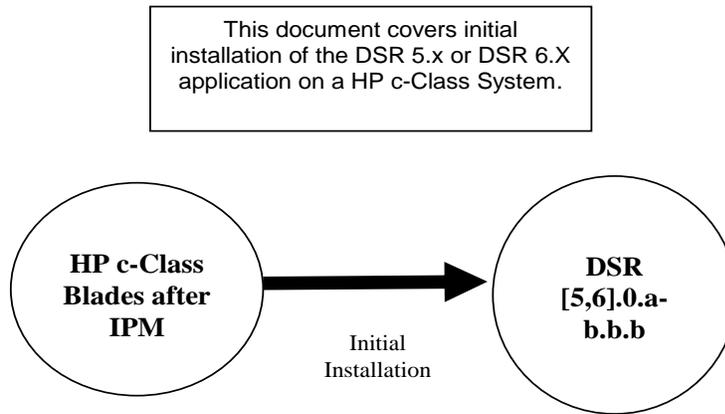


Figure 2. Initial Application Installation Path – Example shown

### 3.0 INSTALL OVERVIEW

This section provides a brief overview of the recommended method for installing the source release software that is installed and running on an HP c-Class system to the Target Release software. The basic install process and approximate time required is outlined in Table 2.

#### 3.1 Required Materials

1. One (1) target release Application Media, or a target-release ISO
2. **5.X Installs** - One (1) **ISO** of TPD release 6.5.0-80.25.0 64 bits, [or later shipping baseline as per Tekelec ECO](#)
3. **6.X Installs** - One (1) **ISO** of TPD release 6.7.0-84.8.0 64 bits, [or later shipping baseline as per Tekelec ECO](#)

#### 3.2 Installation Overview

This section describes the overall strategy to be employed for a single or multi-site DSR 5.X/6.X installation. It also lists the procedures required for installation with estimated times. Section 3.2.1 discusses the overall install strategy and includes an installation flow chart that can be used to determine exactly which procedures should be run for an installation. Section 3.2.2 lists the steps required to install a DSR 5.X/6.X system. These latter sections expand on the information from the matrix and provide a general timeline for the installation. DSR 6.X introduces some new features not in 5.X, however the application installation process is very similar with the few exceptions noted at certain places in the install procedure.

##### 3.2.1 Installation Strategy

A successful installation of DSR requires careful planning and assessment of all configuration materials and installation variables. Once a site survey has been conducted with the customer, the installer should use this section to map out the exact procedure list that will be executed at each site.

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

1. An overall installation requirement is decided upon. Among the data that should be collected:
  - The total number of sites
  - The number of servers at each site and their role(s)
  - Does DSR's networking interface terminate on a Layer 2 or Layer 3 boundary?
  - Number of enclosures at each site -- if any at all.
  - Will NOAMPs use rack-mount servers or server blades?
  - (Per Site) Will MP's be in N+0 configuration or in active/standby?
  - What timezone should be used across the entire collection of DSR sites?
  - Will SNMP traps be viewed at the NOAM, or will an external NMS be used? (Or both?)
2. A site survey (NAPD) is conducted with the customer to determine exact networking and site details. **NOTE: XMI and IMI addresses are difficult to change once configured. It is very important that these addresses are well planned and not expected to change after a site is installed.**
3. For each SOAM /MP/DR-NOAM only site (i.e. sites **NOT containing the main NOAMP server**), the installer will execute the procedures in document [11] / [12] to set up the PMAC, HP enclosures, and switches. Then, using the procedures in *this* document, all servers will be IPM-ed with the proper TPD and DSR application ISO image. (Figure 4 details the exact procedures that are to be executed for the 2<sup>nd</sup> part of this install) When this is complete, all non-NOAMP sites will be reachable through the network and ready for further installation when the primary NOAMP site is brought up.
4. The installer will then move to the "main" site that will contain the primary NOAMP. Again, [11] / [12] will be executed for this site. Then, moving on to the procedures in *this document*, Figure 4 is consulted to determine the procedure list. During this install, he will "bring up" the other sub-sites (if they exist) that were

configured in step 3. For single sites where the NOAMP/SOAM/MPs are all located together, then step 3 is skipped and the entire install is covered by this step.

5. Once the primary NOAMP site has been installed according to [11] / [12] and this document, then full DSR installation is complete.

**Note:** An alternative install strategy will swap steps 3 & 4. The main NOAMP site is installed *first*, then the sub-sites (DR-NOAM, SOAM/MP only) are installed and brought up on the NOAMP as they are configured. This approach is perfectly valid, but is not reflected in the flow-charts/diagrams shown here.

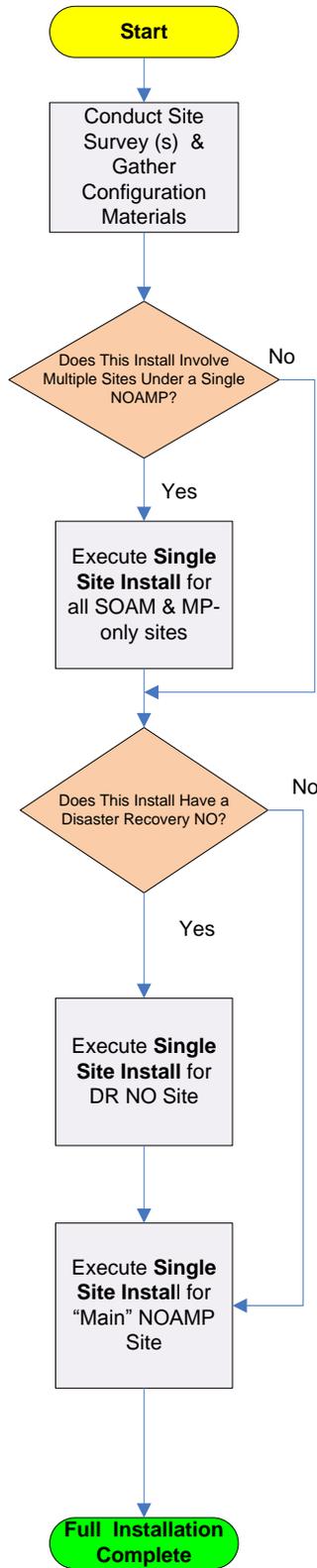


Figure 3 - DSR Installation - High Level Sequence

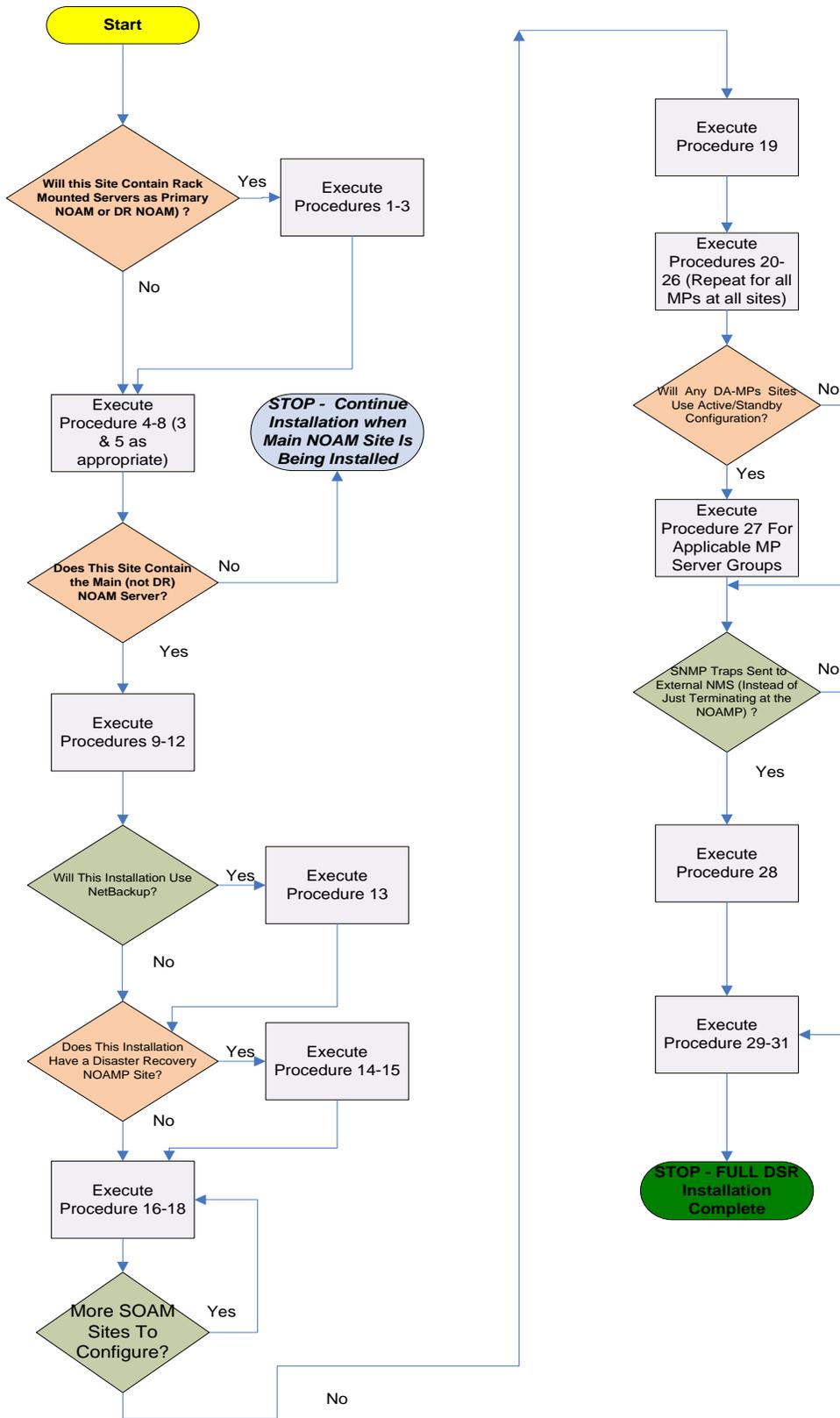


Figure 4: DSR Single Site Installation Procedure Map

### 3.2.2 SNMP Configuration

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

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

- DSR Application Servers (NOAMP, SOAM, MPs of all types)
- DSR Auxillary Components (OA, Switches, TVOE hosts, PMAC)

DSR application servers can be configured to:

1. Send all their SNMP traps to the NOAMP via merging from their local SOAM. All traps will terminate at the NOAMP and be viewable from the NOAMP GUI (entire network) and the SOAM GUI (site specific). Traps are displayed on the GUI both as alarms and logged in trap history. **This is the default configuration option and no changes are required for this to take effect.**
2. Send all their SNMP traps to an external Network Management Station (NMS). The traps will be seen at the SOAM AND/OR NOAM as alarms **AND** they will be viewable at the configured NMS(s) as traps.

Application server SNMP configuration is done from the NOAMP GUI, near the end of DSR installation. See the procedure list for details.

DSR auxillary components must have their SNMP trap destinations set explicitly. Trap destinations can be the NOAMP VIP, the SOAMP VIP, or an external (customer) NMS. The *recommended* configuration is as follows:

The following components:

- **PMAC (TVOE)**
- **PMAC (App)**
- **OAs**
- **All Switch types (4948, 3020, 6120.6125G)**
- **TVOE for DSR Servers**

Should have their SNMP trap destinations set to:

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

### 3.2.3 Installation Procedures

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

**Table 2. Installation Overview**

Procedure	Phase	Elapsed Time (Minutes)	
		This Step	Cum.
<b>Procedure 1</b>	Continue TVOE Configuration on First RMS Server	15	15
<b>Procedure 2</b>	Configure TVOE on Additional RMS Server(s)	20	35
<b>Procedure 3</b>	Configure TVOE on Server Blades	20	55

Table 2. Installation Overview

Procedure	Phase	Elapsed Time (Minutes)	
		This Step	Cum.
<b>Procedure 4</b>	Load Application and TPD ISO onto PM&C Server	5	60
<b>Procedure 5</b>	Create NOAMP Guest VMs	5	65
<b>Procedure 6</b>	Create SOAMP Guest VMs	5	70
<b>Procedure 7</b>	IPM blades	20	90
<b>Procedure 8</b>	Install the application software on the blades	20	110
<b>Procedure 9</b>	Configure the First NO Server	25	135
<b>Procedure 10</b>	Configure the NO Server Group	15	150
<b>Procedure 11</b>	Configure the Second NO Server	15	165
<b>Procedure 12</b>	Complete Configuring the NOAMP Server Group	10	175
<b>Procedure 13</b>	Install NetBackup Client on NOAMP Servers (Optional)	10	185
<b>Procedure 14</b>	NO Configuration for DR Site (Optional)	10	195
<b>Procedure 15</b>	NO Pairing for DSR NO DR Site (Optional)	10	205
<b>Procedure 16</b>	Configure the SOAM NE	15	220
<b>Procedure 17</b>	Configure the SOAM Servers	10	230
<b>Procedure 18</b>	Configure the SOAM Server Group	10	240
<b>Procedure 19</b>	Post NOAM&SOAM Setup Operations	5	245
<b>Procedure 20</b>	Configure the MP Blade Servers	10	255
<b>Procedure 21</b>	Configure Places and Assign MP Servers to Places (PDRA Only)	10	265
<b>Procedure 22</b>	Configure the MP Server Groups	10	275
<b>Procedure 23</b>	Configure the Signaling Network	30	305
<b>Procedure 24</b>	Configure the Signaling Devices	10	315
<b>Procedure 25 (Optional)</b>	Configure DSCP Values for Outgoing Traffic	10	325
<b>Procedure 26</b>	Configure the Signaling Network Routes	15	340
<b>Procedure 27</b>	Add VIP for Signaling Networks	5	345
<b>Procedure 28 (Optional)</b>	Configure SNMP for Traps Receivers	5	350
<b>Procedure 29</b>	PDRA Resource Domain Configuration (PDRA Only)	15	365
<b>Procedure 30 (Optional)</b>	Activate Optional Features	15	380
<b>Procedure 31 (Optional)</b>	Configure ComAgent Connections	15	395

### 3.3 Optional Features

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

Feature	Document
<b>IP Front End (IPFE)</b>	<i>IPFE Installation and Configuration</i> , WI006931, latest version, Mahoney
<b>Charging Proxy Application (CPA) Session Binding Repository (SBR)</b>	<i>CPA Activation Feature Work Instruction</i> , WI006780, latest version, Moore <i>CPA User Guide</i> , 910-6635-001, Rev A (4.1)
<b>Policy DRA (PDRA)</b>	<i>Policy DRA Activation</i> , WI006835, Latest Revision, Tekelec 2012
<b>Diameter Mediation</b>	<i>DSR Meta Administration Feature Activation</i> , WI006761, latest version, Fisher
<b>Full Address Based Resolution (FABR)</b>	<i>DSR FABR Feature Activation</i> , WI006771, latest version, Karmarkar <i>FABR User Guide</i> , 910-6634-001, Rev A (4.1.0) <i>FABR User Guide</i> , 910-6634-001, Rev B (4.1.5)
<b>Range Based Address Resolution (RBAR)</b>	<i>DSR RBAR Feature Activation</i> , WI006763, latest version, Fisher <i>RBAR User Guide</i> , 910-6633-001, Rev A
<b>MAP-Diameter Interworking (MAP-IWF)</b>	<i>MAP-Diameter IWF Feature Activation</i> , WI006965, latest version

## 4.0 SOFTWARE INSTALLATION PROCEDURE

As mentioned earlier, the hardware installation and network cabling should be done before executing the procedures in this document. It is assumed that at this point, the user has access to:

- ILO consoles of all server blades at all sites
- ssh access to the PMAC servers at all sites
- GUI access to PMAC servers at all sites
- A configuration station with a web browser , ssh client, and scp client.

**NOTE:** Prior to executing the procedures below, please review the DSR release notes, and be aware of any workaround that should be executed.

### 4.1 Configure RMS TVOE Hosts

#### Procedure 1. Continue TVOE Configuration on First RMS Server

S T E P #	<p>This procedure will extend the TVOE networking configuration on the First RMS server in preparation for the installation of the NOAMP VM on that RMS.</p> <p><b>NOTE: If a NOAMP VM will NOT be co-located with the PMAC VM on the First RMS (for instance, this server will only run PMAC, but there are 2 additional RMS which will not), then skip this procedure and continue with the next procedure.</b></p> <p><b>Prerequisite:</b> TVOE and PMAC (virtualized) have been installed on the First RMS Server as described in [11] / [12]</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.</p>
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**Procedure 1. Continue TVOE Configuration on First RMS Server**

1 <input type="checkbox"/>	<p>Determine Bridge names and interfaces for XMI and IMI, and Netbackup (if used) networks.</p>	<p>Determine the bridge names and physical bridge interfaces to be used on the TVOE server for the NOAMP <b>XMI</b> and <b>IMI</b> networks. Based on the site survey, you will need to determine if you are using vlan tagging or not, what bonds will be used, and also the actual Ethernet interfaces that will make up those bonds.</p> <p>If the netbackup bridge and interface were not previously configured on this server when PMAC was installed, determine those values as well.</p> <p>Fill in the appropriate values in the table below:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #cccccc;"> <th style="width: 25%;">NOAM&amp;P Guest Interface Name</th> <th style="width: 25%;">TVOE Bridge Name</th> <th style="width: 50%;">TVOE Bridge Interface</th> </tr> </thead> <tbody> <tr> <td style="text-align: center; vertical-align: middle;">xmi</td> <td style="text-align: center; vertical-align: middle;">xmi</td> <td> <p><b>Interface Bond</b> (e.g- bond0, bond1, etc)</p> <p style="text-align: center;">_____</p> <p>&lt;TVOE_XMI_Bridge_Interface_Bond&gt;</p> <p><b>Interface Name</b> (e.g. - bond0.3, bond1, bond0.100):</p> <p style="text-align: center;">_____</p> <p>&lt;TVOE_XMI_Bridge_Interface&gt;</p> </td> </tr> <tr> <td style="text-align: center; vertical-align: middle;">imi</td> <td style="text-align: center; vertical-align: middle;">imi</td> <td> <p><b>Interface Bond:</b>(e.g. - bond0, bond1, etc)</p> <p style="text-align: center;">_____</p> <p>&lt;TVOE_IMI_Bridge_Interface_Bond&gt;</p> <p><b>Interface Name:</b> (e.g. - bond0.4, bond1, bond0.100)</p> <p style="text-align: center;">_____</p> <p>&lt;TVOE_IMI_Bridge_Interface&gt;</p> </td> </tr> <tr> <td style="text-align: center; vertical-align: middle;">netbackup</td> <td style="text-align: center; vertical-align: middle;">netbackup</td> <td> <p><b>Interface Name</b> (e.g. - eth11, eth04, eth03, etc)</p> <p style="text-align: center;">_____</p> <p>&lt;TVOE_NetBackup_Bridge_Interface&gt;</p> </td> </tr> </tbody> </table>	NOAM&P Guest Interface Name	TVOE Bridge Name	TVOE Bridge Interface	xmi	xmi	<p><b>Interface Bond</b> (e.g- bond0, bond1, etc)</p> <p style="text-align: center;">_____</p> <p>&lt;TVOE_XMI_Bridge_Interface_Bond&gt;</p> <p><b>Interface Name</b> (e.g. - bond0.3, bond1, bond0.100):</p> <p style="text-align: center;">_____</p> <p>&lt;TVOE_XMI_Bridge_Interface&gt;</p>	imi	imi	<p><b>Interface Bond:</b>(e.g. - bond0, bond1, etc)</p> <p style="text-align: center;">_____</p> <p>&lt;TVOE_IMI_Bridge_Interface_Bond&gt;</p> <p><b>Interface Name:</b> (e.g. - bond0.4, bond1, bond0.100)</p> <p style="text-align: center;">_____</p> <p>&lt;TVOE_IMI_Bridge_Interface&gt;</p>	netbackup	netbackup	<p><b>Interface Name</b> (e.g. - eth11, eth04, eth03, etc)</p> <p style="text-align: center;">_____</p> <p>&lt;TVOE_NetBackup_Bridge_Interface&gt;</p>
NOAM&P Guest Interface Name	TVOE Bridge Name	TVOE Bridge Interface												
xmi	xmi	<p><b>Interface Bond</b> (e.g- bond0, bond1, etc)</p> <p style="text-align: center;">_____</p> <p>&lt;TVOE_XMI_Bridge_Interface_Bond&gt;</p> <p><b>Interface Name</b> (e.g. - bond0.3, bond1, bond0.100):</p> <p style="text-align: center;">_____</p> <p>&lt;TVOE_XMI_Bridge_Interface&gt;</p>												
imi	imi	<p><b>Interface Bond:</b>(e.g. - bond0, bond1, etc)</p> <p style="text-align: center;">_____</p> <p>&lt;TVOE_IMI_Bridge_Interface_Bond&gt;</p> <p><b>Interface Name:</b> (e.g. - bond0.4, bond1, bond0.100)</p> <p style="text-align: center;">_____</p> <p>&lt;TVOE_IMI_Bridge_Interface&gt;</p>												
netbackup	netbackup	<p><b>Interface Name</b> (e.g. - eth11, eth04, eth03, etc)</p> <p style="text-align: center;">_____</p> <p>&lt;TVOE_NetBackup_Bridge_Interface&gt;</p>												

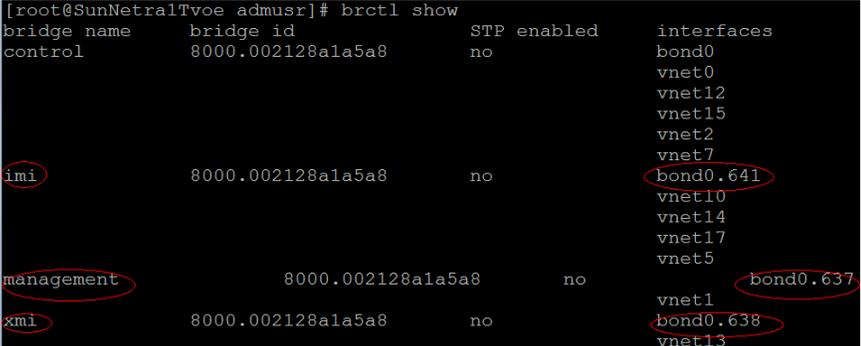
## Procedure 1. Continue TVOE Configuration on First RMS Server

2 <input type="checkbox"/>	<b>First RMS Server:</b> Login and Become SuperUser	<p>Log in to the TVOE prompt of the first RMS server as the <b>admusr</b> user (the one running the PMAC). Use either the iLO facility, or the TVOE's IP address on the management network.</p> <p>Become the super user by using the command:</p> <pre>\$ sudo su</pre> <p>You should see the prompt change to the hash mark:</p> <pre>#</pre>
3 <input type="checkbox"/>	<b>First RMS Server:</b> Configure XMI Bridge Interface Bond	<p>Verify the xmi bridge interface bond by running the following command:</p> <p><b>Note:</b> The output below is for illustrative purposes only. The example output below shows the control bridge configured.</p> <pre># netAdm query --device=&lt;TVOE_XMI_Bridge_Bond&gt;</pre> <pre>Protocol: none On Boot:  yes Persistent:  yes Bonded Mode:  active-backup Enslaving:  eth01 eth02</pre> <p>If the bond has already been configured you will see output similar to what you see above. If this is so, <b>skip to the next step</b>. Otherwise, continue with this step.</p> <p>Create bonding interface and associate subordinate interfaces with bond:</p> <pre># netAdm add --device=&lt;TVOE_XMI_Bridge_Bond&gt; --onboot=yes --type=Bonding --mode=active-backup --miimon=100 Interface &lt;TVOE_XMI_Bridge_Bond&gt; added</pre> <pre># netAdm set --device=&lt;TVOE_XMI_Bridge_Bond_Ethernet1&gt; -- type=Ethernet --master=&lt;TVOE_XMI_Bridge_Bond&gt; --slave=yes --onboot=yes Interface &lt;TVOE_XMI_Bridge_Bond_Ethernet1&gt; updated</pre> <pre># netAdm set --device=&lt;TVOE_XMI_Bridge_Bond_Ethernet2&gt; -- type=Ethernet --master=&lt;TVOE_XMI_Bridge_Bond&gt; --slave=yes --onboot=yes Interface &lt;TVOE_XMI_Bridge_Bond_Ethernet2&gt; updated</pre> <pre># syscheckAdm net ipbond --set --var=DEVICES -- val=&lt;TVOE_XMI_Bridge_Bond&gt;,[bondX,bondX+1, ... ,bondN]</pre> <p><b>Note:</b> All other existing bonds should be included in the 'val=' statement. E.g.if TVOE_XMI_Bridge_Bond = bond1, val=bond0,bond1</p> <pre># syscheckAdm net ipbond -enable</pre>

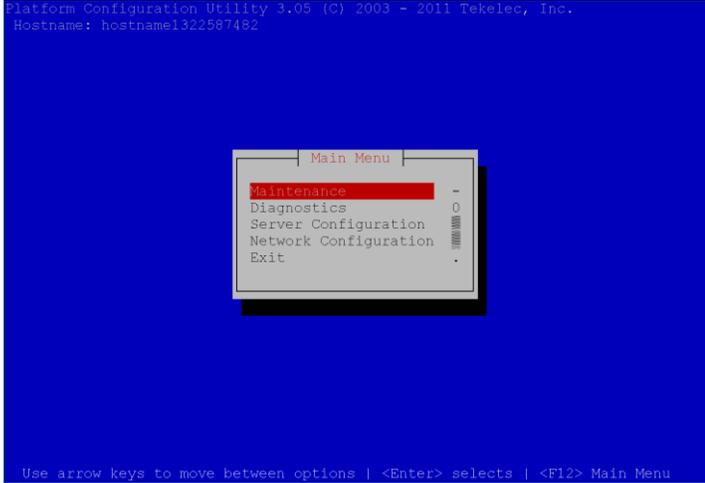
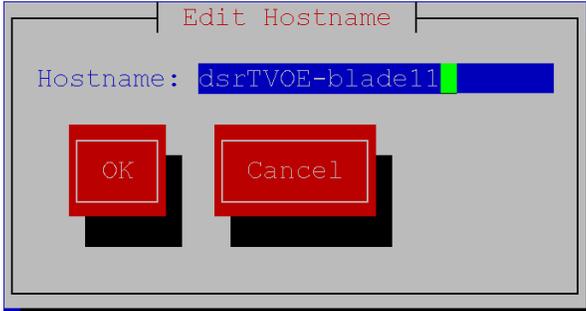
## Procedure 1. Continue TVOE Configuration on First RMS Server

4 <input type="checkbox"/>	<b>First RMS Server:</b> Create XMI Bridge Interface, If needed. (Only for VLAN tagging interfaces)	If you are using VLAN tagging for the XMI bridge interface, then you must create the VLAN interface first. Execute the following command:  <pre># netAdm add --device=&lt;TVOE_XMI_Bridge_Interface&gt; --onboot=yes Interface &lt;TVOE_XMI_Bridge_Interface&gt; created.</pre>
5 <input type="checkbox"/>	<b>First RMS Server:</b> Create XMI Bridge	Now , create the XMI bridge:  <pre># netAdm add --type=Bridge --name=xmi--onboot=yes --bridgeInterfaces=&lt;TVOE_XMI_Bridge_Interface&gt;</pre> Interface <TVOE_XMI_Bridge_Interface> updated. Bridge xmi created.
6 <input type="checkbox"/>	<b>First RMS Server:</b> Configure IMI Bridge Interface Bond	Verify the imi bridge interface bond by running the following command:  <b>Note:</b> The output below is for illustrative purposes only. The example output below shows the control bridge configured.  <pre># netAdm query --device=&lt;TVOE_IMI_Bridge_Bond&gt;</pre> Protocol: none On Boot: yes Persistent: yes Bonded Mode: active-backup Enslaving: eth01 eth02  If the bond has already been configured you will see output similar to what you see above. If this is so, <b>skip to the next step</b> . Otherwise, continue with this step.  Create bonding interface and associate subordinate interfaces with bond:  <pre># netAdm add --device=&lt;TVOE_IMI_Bridge_Bond&gt; --onboot=yes --type=Bonding --mode=active-backup --miimon=100 Interface &lt;TVOE_IMI_Bridge_Bond&gt; added</pre> <pre># netAdm set --device=&lt;TVOE_IMI_Bridge_Bond_Ethernet1&gt; -- type=Ethernet --master=&lt;TVOE_IMI_Bridge_Bond&gt; --slave=yes --onboot=yes Interface &lt;TVOE_IMI_Bridge_Bond_Ethernet1&gt; updated</pre> <pre># netAdm set --device=&lt;TVOE_IMI_Bridge_Bond_Ethernet2&gt; -- type=Ethernet --master=&lt;TVOE_IMI_Bridge_Bond&gt; --slave=yes --onboot=yes Interface &lt;TVOE_IMI_Bridge_Bond_Ethernet2&gt; updated</pre> Execute the following 2 commands ONLY IF <TVOE_XMI_Bridge_Bond> is <b>different</b> from <TVOE_IMI_Bridge_Bond>  <pre># syscheckAdm net ipbond --set --var=DEVICES -- val=&lt;TVOE_XMI_Bridge_Bond&gt;,&lt;TVOE_IMI_Bridge_Bond&gt;,[other bonds...]</pre> <pre># syscheckAdm net ipbond -enable</pre>

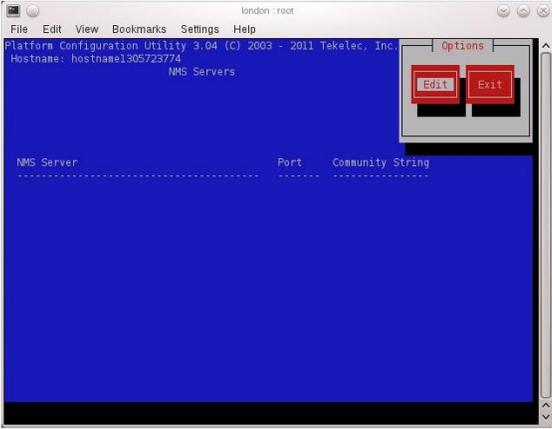
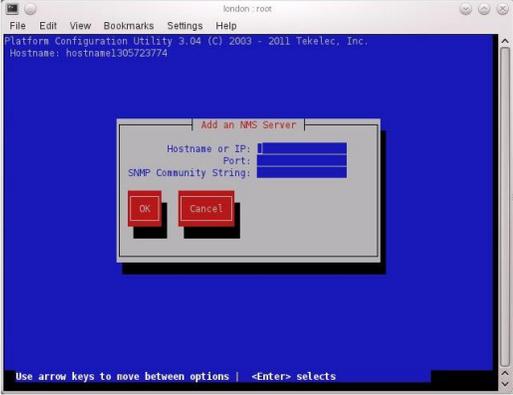
**Procedure 1. Continue TVOE Configuration on First RMS Server**

<p>7 <input type="checkbox"/></p>	<p><b>First RMS Server:</b> Create IMI Bridge Interface, If needed. (Only for VLAN tagging interfaces)</p>	<p>If you are using VLAN tagging for the IMI bridge interface, then you must create the VLAN interface first. Execute the following command:</p> <pre># netAdm add --device=&lt;TVOE_IMI_Bridge_Interface&gt; --onboot=yes Interface &lt;TVOE_IMI_Bridge_Interface&gt; created.</pre>
<p>8 <input type="checkbox"/></p>	<p><b>First RMS Server:</b> Create IMI Bridge</p>	<p>Now , create the XMI bridge:</p> <pre># netAdm add --type=Bridge --name=imi--onboot=yes --bridgeInterfaces=&lt;TVOE_IMI_Bridge_Interface&gt;</pre> <p>Interface &lt;TVOE_IMI_Bridge_Interface&gt; updated. Bridge imi created.</p>
<p>9 <input type="checkbox"/></p>	<p><b>First RMS Server:</b> Verify bridge creation status</p>	<p>Verify that the XMI and IMI bridges have been created successfully (Example output for illustrative purposes only):</p> <pre># brctl show</pre>  <pre>[root@SunNetralTvoe admusr]# brctl show bridge name      bridge id        STP enabled      interfaces control          8000.002128a1a5a8  no               bond0                   8000.002128a1a5a8  no               vnet0                   8000.002128a1a5a8  no               vnet12                   8000.002128a1a5a8  no               vnet15                   8000.002128a1a5a8  no               vnet2                   8000.002128a1a5a8  no               vnet7 imi              8000.002128a1a5a8  no               bond0.641                   8000.002128a1a5a8  no               vnet10                   8000.002128a1a5a8  no               vnet14                   8000.002128a1a5a8  no               vnet17 management      8000.002128a1a5a8  no               vnet5                   8000.002128a1a5a8  no               vnet1 xmi              8000.002128a1a5a8  no               bond0.638                   8000.002128a1a5a8  no               vnet13</pre> <ul style="list-style-type: none"> <li>• Verify that "imi" and "xmi" are listed under the bridge name column.</li> <li>• Verify that &lt;TVOE_XMI_Bridge_Interface&gt; is listed under the interfaces column for xmi.</li> <li>• Verify that &lt;TVOE_IMI_Bridge_Interface&gt; is listed under the interfaces column for imi.</li> <li>• Verify that the &lt;TVOE_Mgmt_Bridge_Interface&gt; is listed under the interface column for &lt;TVOE_Mgmt_Bridge&gt; (NOTE: For this server, &lt;TVOE_Mgmt_Bridge&gt; was created in part #1 of the install procedure -- documents [11] or [12] depending on your DSR version.)</li> </ul>

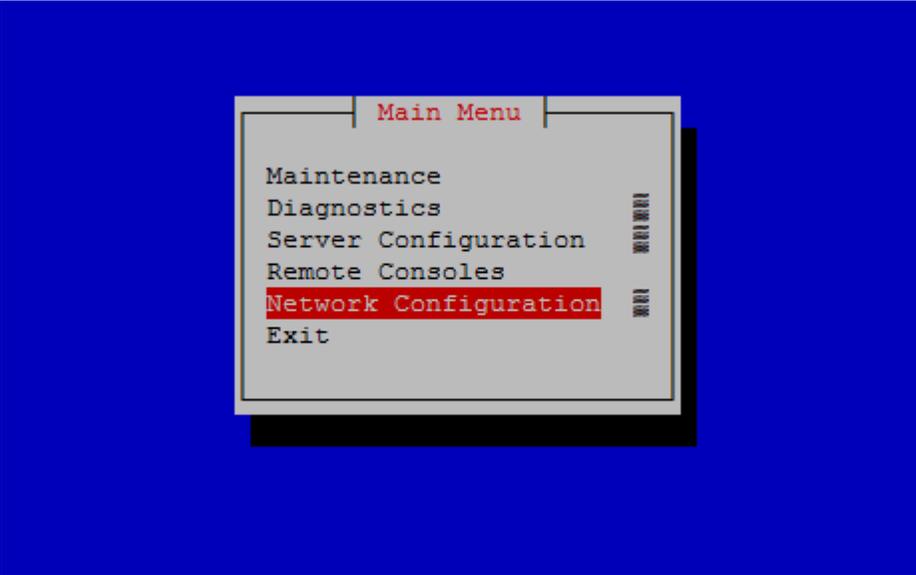
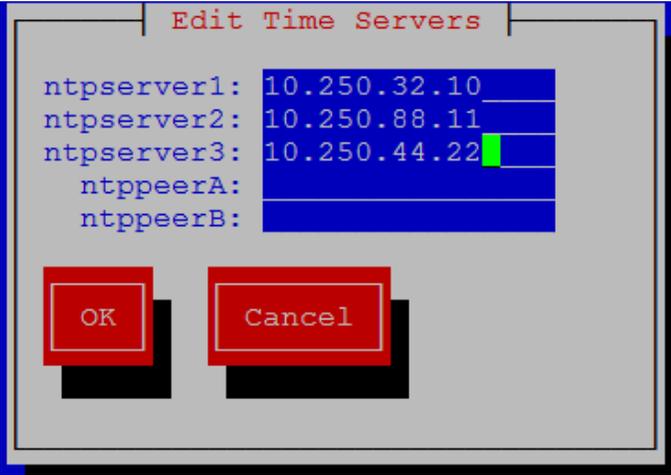
**Procedure 1. Continue TVOE Configuration on First RMS Server**

<p>10</p> <p><input type="checkbox"/></p>	<p><b>RMS Server iLO:</b> Set Hostname</p>	<p><b>NOTE:</b> If hostname for the RMS server is already set, then you can skip this step.</p> <p># su - platcfg</p>  <p>Platform Configuration Utility 3.05 (C) 2003 - 2011 Tekelec, Inc. Hostname: hostname1322587482</p> <p>Main Menu</p> <ul style="list-style-type: none"> <li>Maintenance</li> <li>Diagnostics</li> <li>Server Configuration</li> <li>Network Configuration</li> <li>Exit</li> </ul> <p>Use arrow keys to move between options   &lt;Enter&gt; selects   &lt;F12&gt; Main Menu</p> <p>Navigate to <b>Sever Configuration-&gt;Hostname-&gt; Edit</b> and enter a new hostname for your server.</p>  <p>Edit Hostname</p> <p>Hostname: dsrTVOE-blade11</p> <p>OK Cancel</p> <p>Press <b>OK</b> and select and continue to press Exit until you are at the platcfg main menu again.</p> <p>NOTE: Although the new hostname has been properly configured and committed at this point, it will not appear on your command prompt unless you log out and log back in again</p>
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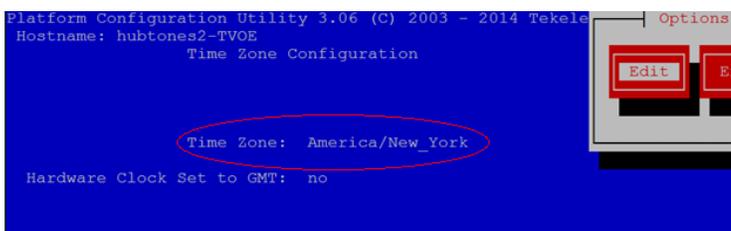
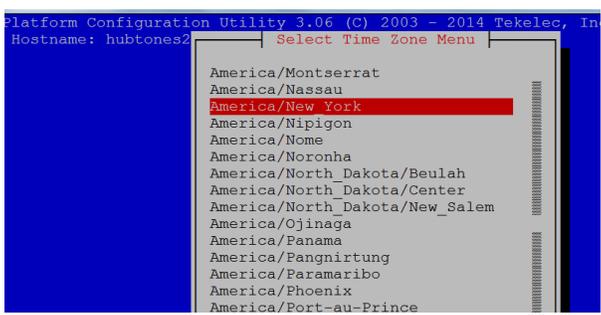
## Procedure 1. Continue TVOE Configuration on First RMS Server

<p>11</p> <p><input type="checkbox"/></p>	<p><b>RMS Server iLO: Configure SNMP</b></p>	<p>From the platcfg main menu, navigate to <b>Network Configuration -&gt; SNMP Configuration -&gt; NMS Configuration</b></p>  <p>Press <b>Edit</b>. Choose <b>Add a New NMS Server</b></p>  <p>Enter the following NMS servers, pressing <b>OK</b> after each one and then selecting the <b>Add NMS</b> option again :</p> <ol style="list-style-type: none"> <li>1. Enter the Hostname/IP of the Customer NMS Server, for port enter 162, and for Community String enter the community string provided in the customer NAPD Document.</li> <li>2. Enter the IP of the NOAM VIP, for port enter 162, and for Community String enter the community string provided in the customer NAPD Document</li> </ol> <p>Press <b>Exit</b>. Select Yes when prompted to restart the Alarm Routing Service.</p> <p>Once Done, press <b>Exit</b> to quit to the platcfg main menu.</p>
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**Procedure 1. Continue TVOE Configuration on First RMS Server**

<p>12</p> <p><input type="checkbox"/> Configure NTP</p>	<p><b>RMS Server iLO:</b></p> <p>Navigate to <b>Network Configuration</b></p>  <p>Navigate to <b>Configuration-&gt;NTP</b> Click <b>Edit</b></p>  <ul style="list-style-type: none"> <li>• ntpserver1: Enter customer provided NTP server #1 IP address.</li> <li>• ntpserver2: Enter customer provided NTP server #2 IP address.</li> <li>• ntpserver3: Enter customer provided NTP server #3 IP address.</li> </ul> <p>Press <b>OK</b> Press <b>Exit</b> to return to the platcfg menu.</p>
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**Procedure 1. Continue TVOE Configuration on First RMS Server**

<p>13</p> <p><input type="checkbox"/> RMS Server iLO: Configure Time Zone</p>	<pre># su - platcfg</pre> <p>Navigate to <b>Server Configuration-&gt;Time Zone</b></p>   <p>If the timezone displayed matches the timezone you desire, then you can continue to hit <b>Exit</b> until you are out of the platcfg program. If you want a different timezone, then proceed with this instruction.</p> <p>Click <b>Edit</b></p>  <p>Select the desired time zone from the list and press <b>Enter</b></p> <p>Select <b>NO</b> for the question, "Set hardware clock to GMT?"</p> <p>Continue pressing <b>Exit</b> until you are out of the platcfg program.</p>
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**Procedure 1. Continue TVOE Configuration on First RMS Server**

<p>14 <input type="checkbox"/></p>	<p><b>First RMS Server:</b> Create Netbackup bridge (Optional)</p>	<p>Perform the following command if you will have a dedicated Netbackup interface within your NOAMP guests (and if the Netbackup bridge was NOT configured when setting up the PMAC earlier)</p> <pre># netAdm add --type=Bridge --name=&lt;TVOE_NetBackup_Bridge&gt; --onboot=yes --MTU=&lt;NetBackup_MTU_size&gt; --bridgeInterfaces=&lt;TVOE_NetBackup_Bridge_Interface&gt;</pre>
<p>15 <input type="checkbox"/></p>	<p><b>First RMS Server and Customer provided Backup Server:</b> Backup TVOE files</p>	<p>This step backs up the TVOE files to a customer provided backup server.</p> <p><b><u>If NetBackup is being used, then this step should be skipped. Select 'Exit' to exit out of platcfg.</u></b></p> <p><u>If Netback</u> isn't used, execute the following:</p> <ol style="list-style-type: none"> <li>Select the following menu options sequentially: <b>Maintenance &gt; Backup and Restore &gt; Backup Platform (CD/DVD).</b> The 'Backup TekServer Menu' page will now be shown.</li> <li>Build the backup ISO image by selecting: <b>Build ISO file only</b></li> </ol> <p>Note: Creating the ISO image may happen so quickly that this screen may only appear for an instant.</p> <p>After the ISO is created, platcfg will return to the Backup TekServer Menu. The ISO has now been created and is located in the /var/TKLC/bkp/ directory. An example filename of a backup file that was created is: "hostname1307466752-plat-app-201104171705.iso"</p> <ol style="list-style-type: none"> <li>Exit out of platcfg by selecting '<b>Exit</b>'.</li> <li>Login to the customer server and copy backup image to the customer server where it can be safely stored. If the customer system is a Linux system, please execute the following command to copy the backup image to the customer system.</li> </ol> <pre># scp tvoexfer@&lt;TVOE IP Address&gt;:backup/* /path/to/destination/</pre> <ol style="list-style-type: none"> <li>When prompted, enter the tvoexfer user password and press <b>Enter</b>.</li> </ol> <p>An example of the output looks like:</p> <pre># scp tvoexfer@&lt;TVOE IP Address&gt;: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>If the Customer System is a Windows system please refer to reference [4] <i>Platform 6.x Configuration Procedure Reference</i>, Appendix A Using WinSCP to copy the backup image to the customer system.</p> <p>The TVOE backup file has now been successfully placed on the Customer System.</p>

**Procedure 2. Configure TVOE on Additional RMS Server(s)**

<b>S T E P #</b>	<p>This procedure will configure TVOE networking on RMS Servers <i>other</i> than the first one which has already been installed and is running PMAC.</p> <p>NOTE: You will repeat this procedure for each additional RMS you wish to configure TVOE for.</p> <p><b>Prerequisite:</b> RMS Server has been IPM'ed with TVOE OS as described in [11]</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.</p>
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**Procedure 2. Configure TVOE on Additional RMS Server(s)**

1 <input type="checkbox"/>	<p>Determine Bridge names and interfaces for XMI and IMI, and Netbackup (if used) networks.</p>	<p>Determine the bridge names and physical bridge interfaces to be used on the TVOE server for the <b>Management</b>, <b>XMI</b> and <b>IMI</b> networks. Based on the site survey, you will need to determine if you are using vlan tagging or not, what bonds will be used, and also the actual Ethernet interfaces that will make up those bonds.</p> <p>Fill in the appropriate values in the table below:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #cccccc;"> <th style="width: 15%;">NOAM&amp;P Guest Interface Name</th> <th style="width: 20%;">TVOE Bridge Name</th> <th style="width: 65%;">TVOE Bridge Interface</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">xmi</td> <td style="text-align: center;">xmi</td> <td> <p><b>Interface Bond:</b> (e.g. - bond0, bond1, etc)  <span style="background-color: yellow; display: inline-block; width: 100px; height: 1em; margin-bottom: 5px;"></span>                      &lt;TVOE_XMI_Bridge_Interface_Bond&gt;</p> <p><b>Interface Name</b> (e.g. - bond0.3, bond1, bond0.100):  <span style="background-color: yellow; display: inline-block; width: 100px; height: 1em; margin-bottom: 5px;"></span>                      &lt;TVOE_XMI_Bridge_Interface&gt;</p> </td> </tr> <tr> <td style="text-align: center;">imi</td> <td style="text-align: center;">imi</td> <td> <p><b>Interface Bond:</b> (e.g. - bond0, bond1, etc)  <span style="background-color: yellow; display: inline-block; width: 100px; height: 1em; margin-bottom: 5px;"></span>                      &lt;TVOE_IMI_Bridge_Interface_Bond&gt;</p> <p><b>Interface Name</b> (e.g. - bond0.4, bond1, bond0.100):  <span style="background-color: yellow; display: inline-block; width: 100px; height: 1em; margin-bottom: 5px;"></span>                      &lt;TVOE_IMI_Bridge_Interface&gt;</p> </td> </tr> <tr> <td style="text-align: center;">netbackup</td> <td style="text-align: center;">netbackup</td> <td> <p><b>Interface Name</b> (e.g. - eth11, eth04, eth03, etc)  <span style="background-color: yellow; display: inline-block; width: 100px; height: 1em; margin-bottom: 5px;"></span>                      &lt;TVOE_NetBackup_Bridge_Interface&gt;</p> </td> </tr> <tr> <td style="text-align: center;">management</td> <td style="text-align: center;">management</td> <td> <p><b>Interface Name</b> (e.g. bond0.2, bond0.37, etc)  <span style="background-color: yellow; display: inline-block; width: 100px; height: 1em; margin-bottom: 5px;"></span>                      &lt;TVOE_Management_Bridge_Interface&gt;</p> </td> </tr> </tbody> </table>	NOAM&P Guest Interface Name	TVOE Bridge Name	TVOE Bridge Interface	xmi	xmi	<p><b>Interface Bond:</b> (e.g. - bond0, bond1, etc)  <span style="background-color: yellow; display: inline-block; width: 100px; height: 1em; margin-bottom: 5px;"></span>                      &lt;TVOE_XMI_Bridge_Interface_Bond&gt;</p> <p><b>Interface Name</b> (e.g. - bond0.3, bond1, bond0.100):  <span style="background-color: yellow; display: inline-block; width: 100px; height: 1em; margin-bottom: 5px;"></span>                      &lt;TVOE_XMI_Bridge_Interface&gt;</p>	imi	imi	<p><b>Interface Bond:</b> (e.g. - bond0, bond1, etc)  <span style="background-color: yellow; display: inline-block; width: 100px; height: 1em; margin-bottom: 5px;"></span>                      &lt;TVOE_IMI_Bridge_Interface_Bond&gt;</p> <p><b>Interface Name</b> (e.g. - bond0.4, bond1, bond0.100):  <span style="background-color: yellow; display: inline-block; width: 100px; height: 1em; margin-bottom: 5px;"></span>                      &lt;TVOE_IMI_Bridge_Interface&gt;</p>	netbackup	netbackup	<p><b>Interface Name</b> (e.g. - eth11, eth04, eth03, etc)  <span style="background-color: yellow; display: inline-block; width: 100px; height: 1em; margin-bottom: 5px;"></span>                      &lt;TVOE_NetBackup_Bridge_Interface&gt;</p>	management	management	<p><b>Interface Name</b> (e.g. bond0.2, bond0.37, etc)  <span style="background-color: yellow; display: inline-block; width: 100px; height: 1em; margin-bottom: 5px;"></span>                      &lt;TVOE_Management_Bridge_Interface&gt;</p>
NOAM&P Guest Interface Name	TVOE Bridge Name	TVOE Bridge Interface															
xmi	xmi	<p><b>Interface Bond:</b> (e.g. - bond0, bond1, etc)  <span style="background-color: yellow; display: inline-block; width: 100px; height: 1em; margin-bottom: 5px;"></span>                      &lt;TVOE_XMI_Bridge_Interface_Bond&gt;</p> <p><b>Interface Name</b> (e.g. - bond0.3, bond1, bond0.100):  <span style="background-color: yellow; display: inline-block; width: 100px; height: 1em; margin-bottom: 5px;"></span>                      &lt;TVOE_XMI_Bridge_Interface&gt;</p>															
imi	imi	<p><b>Interface Bond:</b> (e.g. - bond0, bond1, etc)  <span style="background-color: yellow; display: inline-block; width: 100px; height: 1em; margin-bottom: 5px;"></span>                      &lt;TVOE_IMI_Bridge_Interface_Bond&gt;</p> <p><b>Interface Name</b> (e.g. - bond0.4, bond1, bond0.100):  <span style="background-color: yellow; display: inline-block; width: 100px; height: 1em; margin-bottom: 5px;"></span>                      &lt;TVOE_IMI_Bridge_Interface&gt;</p>															
netbackup	netbackup	<p><b>Interface Name</b> (e.g. - eth11, eth04, eth03, etc)  <span style="background-color: yellow; display: inline-block; width: 100px; height: 1em; margin-bottom: 5px;"></span>                      &lt;TVOE_NetBackup_Bridge_Interface&gt;</p>															
management	management	<p><b>Interface Name</b> (e.g. bond0.2, bond0.37, etc)  <span style="background-color: yellow; display: inline-block; width: 100px; height: 1em; margin-bottom: 5px;"></span>                      &lt;TVOE_Management_Bridge_Interface&gt;</p>															

**Procedure 2. Configure TVOE on Additional RMS Server(s)**

2 <input type="checkbox"/>	<b>RMS Server iLO:</b> Login as <b>admusr</b>	Log in to the TVOE prompt of the RMS Server as <b>admusr</b> using the iLO facility.  Become the super user by using the command:  <code>\$ sudo su</code>  You should see the prompt change to the hash mark:  #
3 <input type="checkbox"/>	<b>RMS Server iLO:</b> Modify control bridge if using tagged control interface (Optional)	<b>If you are using VLAN tagging for your control interface, you must reconfigure the default control bridge configuration. Otherwise, skip this step and proceed to the next step.</b>  <code># netAdm set --type=Bridge --name=control --delBridgeInt=bond0</code> Bridge control updated.  <code># netAdm add --device=bond0.&lt;control_VLAN_ID&gt;</code> <code>--onboot=yes</code> Interface bond0.X added  <code># netAdm set --type=Bridge --name=control --addBridgeInt=bond0.&lt;control_VLAN_ID&gt;</code> Bridge control updated.

**Procedure 2. Configure TVOE on Additional RMS Server(s)**

4 <input type="checkbox"/>	<b>RMS Server iLO:</b> Configure XMI Bridge Interface Bond	<p>Verify the xmi bridge interface bond by running the following command:</p> <p><b>Note:</b> The output below is for illustrative purposes only. The example output below shows the control bridge configured.</p> <pre># netAdm query --device=&lt;TVOE_XMI_Bridge_Bond&gt;</pre> <pre>Protocol: none On Boot: yes Persistent: yes Bonded Mode: active-backup Enslaving: eth01 eth02</pre> <p>If the bond has already been configured you will see output similar to what you see above. If this is so, <b>skip to the next step</b>. Otherwise, continue with this step.</p> <p>Create bonding interface and associate subordinate interfaces with bond:</p> <pre># netAdm add --device=&lt;TVOE_XMI_Bridge_Bond&gt; --onboot=yes --type=Bonding --mode=active-backup --miimon=100 Interface &lt;TVOE_XMI_Bridge_Bond&gt; added</pre> <pre># netAdm set --device=&lt;TVOE_XMI_Bridge_Bond_Ethernet1&gt; -- type=Ethernet --master=&lt;TVOE_XMI_Bridge_Bond&gt; --slave=yes --onboot=yes Interface &lt;TVOE_XMI_Bridge_Bond_Ethernet1&gt; updated</pre> <pre># netAdm set --device=&lt;TVOE_XMI_Bridge_Bond_Ethernet2&gt; -- type=Ethernet --master=&lt;TVOE_XMI_Bridge_Bond&gt; --slave=yes --onboot=yes Interface &lt;TVOE_XMI_Bridge_Bond_Ethernet2&gt; updated</pre>
5 <input type="checkbox"/>	<b>RMS Server iLO:</b> Create XMI Bridge Interface, If needed. (Only for VLAN tagging interfaces)	<p>If you are using VLAN tagging for the XMI bridge interface, then you must create the VLAN interface first. Execute the following command:</p> <pre># netAdm add --device=&lt;TVOE_XMI_Bridge_Interface&gt; --onboot=yes Interface &lt;TVOE_XMI_Bridge_Interface&gt; created.</pre>
6 <input type="checkbox"/>	<b>RMS Server iLO:</b> Create XMI Bridge	<p>Now , create the XMI bridge:</p> <pre># netAdm add --type=Bridge --name=xmi--onboot=yes --bridgeInterfaces=&lt;TVOE_XMI_Bridge_Interface&gt;</pre> <pre>Interface &lt;TVOE_XMI_Bridge_Interface&gt; updated. Bridge xmi created.</pre>

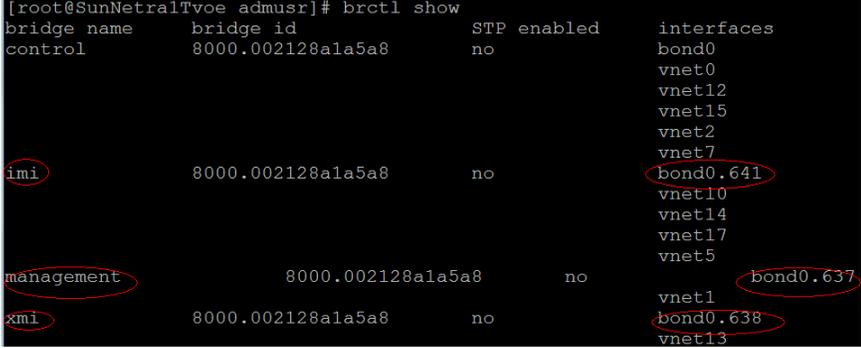
**Procedure 2. Configure TVOE on Additional RMS Server(s)**

7 <input type="checkbox"/>	<b>RMS Server iLO:</b> Configure IMI Bridge Interface Bond	<p>Verify the imi bridge interface bond by running the following command:</p> <p><b>Note:</b> The output below is for illustrative purposes only. The example output below shows the control bridge configured.</p> <pre># netAdm query --device=&lt;TVOE_IMI_Bridge_Bond&gt;</pre> <pre>Protocol:  dhcp On Boot:   yes Persistent: yes Bonded Mode: active-backup Enslaving: eth01 eth02</pre> <p>If the bond has already been configured you will see output similar to what you see above. If this is so, <b>skip to the next step</b>. Otherwise, continue with this step.</p> <p>Create bonding interface and associate subordinate interfaces with bond:</p> <pre># netAdm add --device=&lt;TVOE_IMI_Bridge_Bond&gt; --onboot=yes --type=Bonding --mode=active-backup --miimon=100 Interface &lt;TVOE_IMI_Bridge_Bond&gt; added</pre> <pre># netAdm set --device=&lt;TVOE_IMI_Bridge_Bond_Ethernet1&gt; -- type=Ethernet --master=&lt;TVOE_IMI_Bridge_Bond&gt; --slave=yes --onboot=yes Interface &lt;TVOE_IMI_Bridge_Bond_Ethernet1&gt; updated</pre> <pre># netAdm set --device=&lt;TVOE_IMI_Bridge_Bond_Ethernet2&gt; -- type=Ethernet --master=&lt;TVOE_IMI_Bridge_Bond&gt; --slave=yes --onboot=yes Interface &lt;TVOE_IMI_Bridge_Bond_Ethernet2&gt; updated</pre>
8 <input type="checkbox"/>	<b>RMS Server iLO:</b> Create IMI Bridge Interface, If needed. (Only for VLAN tagging interfaces)	<p>If you are using VLAN tagging for the IMI bridge interface, then you must create the VLAN interface first. Execute the following command:</p> <pre># netAdm add --device=&lt;TVOE_IMI_Bridge_Interface&gt; --onboot=yes Interface &lt;TVOE_IMI_Bridge_Interface&gt; created.</pre>
7 <input type="checkbox"/>	<b>RMS Server iLO:</b> Create IMI Bridge	<pre># netAdm add --type=Bridge --name=imi--onboot=yes --bridgeInterfaces=&lt;TVOE_IMI_Bridge_Interface&gt;</pre> <pre>Interface &lt;TVOE_IMI_Bridge_Interface&gt; updated. Bridge imi created.</pre>

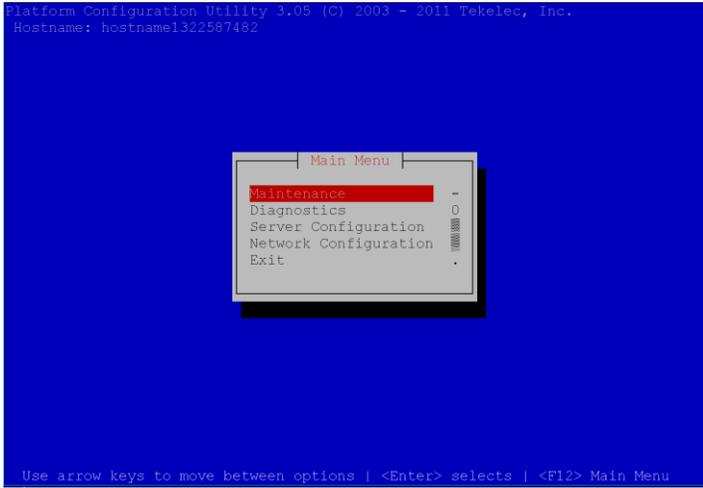
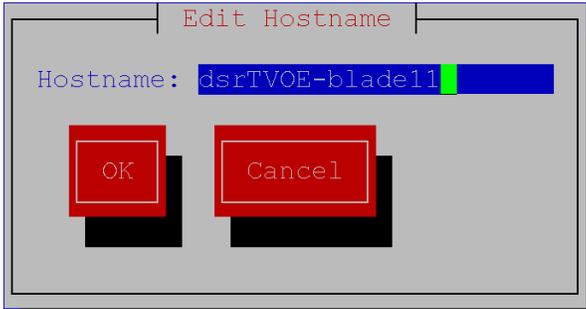
**Procedure 2. Configure TVOE on Additional RMS Server(s)**

8 □	<b>RMS server iLO:</b> Create management bridge and assign TVOE Management IP and default route	<p><b>Note:</b> The output below is for illustrative purposes only. The site information for this system will determine the network interfaces, (network devices, bonds, and bond enslaved devices), to configure.</p> <p>If &lt;TVOE_Management_Bridge_Interface&gt; or the bond it is based on (if using tagged interface) has not yet been created, then execute the next 3 commands. Otherwise, skip to the “EXAMPLE...” section:</p> <pre># netAdm add --device=&lt;TVOE_Management_Bridge_Interface_Bond&gt; --onboot=yes --type=Bonding --mode=active-backup --miimon=100 Interface &lt;TVOE_Management_Bridge_Interface&gt; added  # netAdm set --device=&lt;mgmt_ethernet_interface1&gt; --type=Ethernet --master=&lt;TVOE_Management_Bridge_Interface_Bond&gt; --slave=yes -- onboot=yes Interface &lt;mgmt_ethernet_interface1&gt; updated  # netAdm set --device=&lt;mgmt_ethernet_interface2&gt; --type=Ethernet --master=&lt;TVOE_Management_Bridge_Interface_Bond&gt; --slave=yes --onboot=yes Interface &lt;mgmt_ethernet_interface2&gt; updated</pre> <p><b>EXAMPLE 1:</b> Create Management bridge using untagged interfaces (&lt;TVOE_Management_Bridge&gt;).</p> <pre># netAdm add --type=Bridge --name=management --bootproto=none --onboot=yes --address=&lt;TVOE_RMSX_Mgmt_IP_Address&gt; -- netmask=&lt;TVOE_RMS_Mgmt_Netmask&gt; --bridgeInterfaces=&lt;TVOE_Management_Bridge_Interface&gt;</pre> <p><b>EXAMPLE 2:</b> Create Management bridge using tagged interfaces</p> <pre># netAdm add --device=&lt;TVOE_Management_Bridge_Interface&gt; # netAdm add --type=Bridge --name=management --address=&lt;TVOE_RMSX_Mgmt_IP_Address &gt; -- netmask=&lt;TVOE_RMS_Mgmt_Netmask&gt; --onboot=yes --bridgeInterfaces=&lt;TVOE_Management_Bridge_Interface&gt;</pre> <p>Create default route (execute regardless of which example is chosen):</p> <pre># netAdm add --route=default --gateway=&lt;mgmt_gateway_address&gt; -- device=management</pre> <p>Route to management created.</p>
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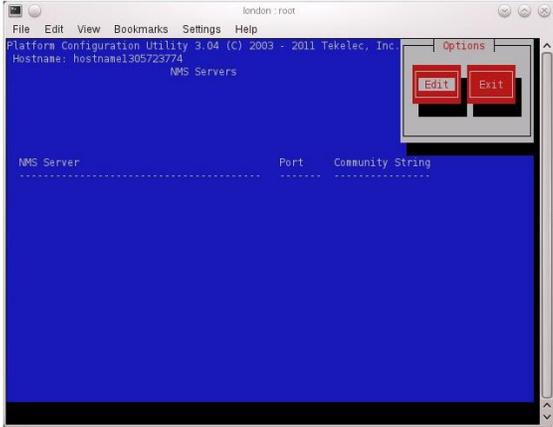
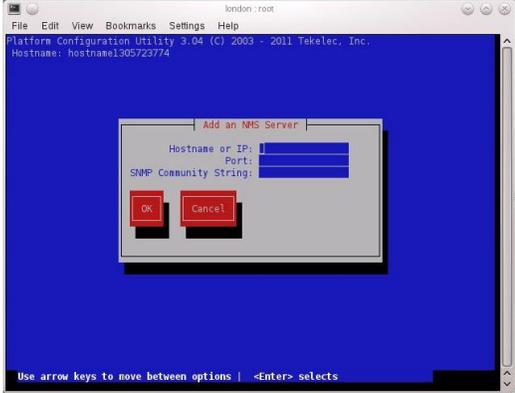
**Procedure 2. Configure TVOE on Additional RMS Server(s)**

<p>9</p> <p><input type="checkbox"/></p>	<p><b>RMS Server iLO:</b> Verify bridge creation status</p>	<p>Verify that the XMI, IMI, and Management bridges have been created successfully (Example output for illustrative purposes only):</p> <pre># brctl show</pre>  <pre>[root@SunNetraITvoe admusr]# brctl show bridge name      bridge id      STP enabled    interfaces control          8000.002128a1a5a8  no            bond0  vnet0  vnet12  vnet15  vnet2  vnet7 imi              8000.002128a1a5a8  no            bond0.641  vnet10  vnet14  vnet17  vnet5 management      8000.002128a1a5a8  no            bond0.637  vnet1 xmi              8000.002128a1a5a8  no            bond0.638  vnet13</pre> <ul style="list-style-type: none"> <li>• Verify that "imi" and "xmi" are listed under the bridge name column.</li> <li>• Verify that &lt;TVOE_XMI_Bridge_Interface&gt; is listed under the interfaces column for xmi.</li> <li>• Verify that &lt;TVOE_IMI_Bridge_Interface&gt; is listed under the interfaces column for imi.</li> <li>• Verify that the &lt;TVOE_Mgmt_Bridge_Interface&gt; is listed under the interface column for &lt;TVOE_Mgmt_Bridge_Name&gt;</li> </ul>
<p>10</p> <p><input type="checkbox"/></p>	<p><b>RMS Server iLO:</b> Create Netbackup bridge (Optional)</p>	<p><b>Perform the following command if you will have a dedicated Netbackup interface within your NOAMP guests (and if the Netbackup bridge was NOT configured when setting up the PMAC earlier)</b></p> <pre># netAdm add --type=Bridge --name=&lt;TVOE_NetBackup_Bridge&gt; --onboot=yes --MTU=&lt;NetBackup_MTU_size&gt; --bridgeInterfaces=&lt;TVOE_NetBackup_Bridge_Interface&gt;</pre>

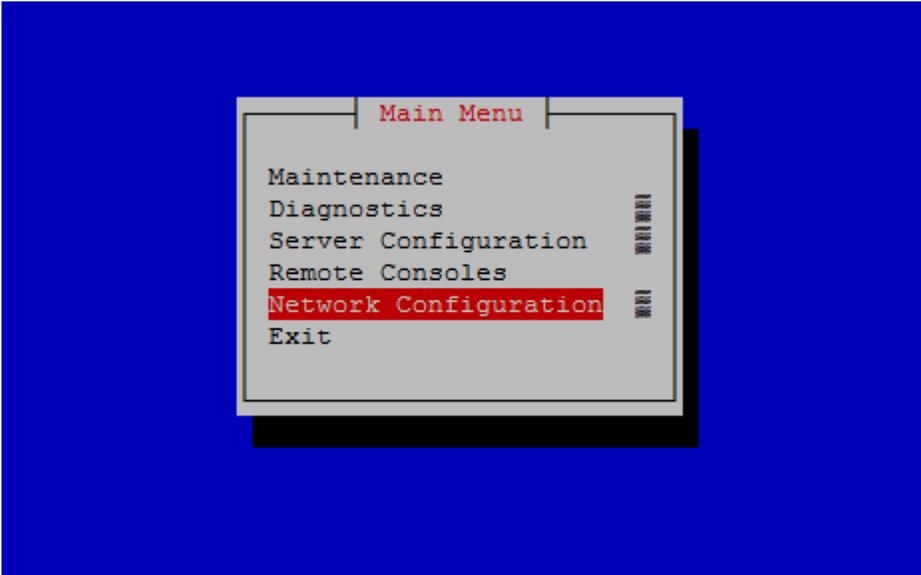
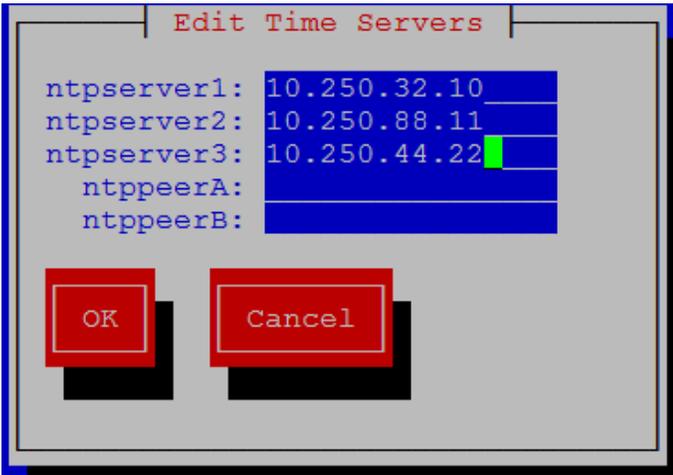
**Procedure 2. Configure TVOE on Additional RMS Server(s)**

<p>11</p> <p><input type="checkbox"/></p>	<p><b>RMS Server iLO:</b> Set Hostname</p>	<pre># su - platcfg</pre>  <p>Navigate to <b>Sever Configuration-&gt;Hostname-&gt; Edit</b> and enter a new hostname for your server.</p>  <p>Press <b>OK</b> and select and continue to press <b>Exit</b> until you are at the platcfg main menu again.</p> <p>Continue To Press <b>Exit</b> until you are back at the platcfg main menu</p> <p><b>NOTE:</b> Although the new hostname has been properly configured and committed at this point, it will not appear on your command prompt unless you log out and log back in again</p>
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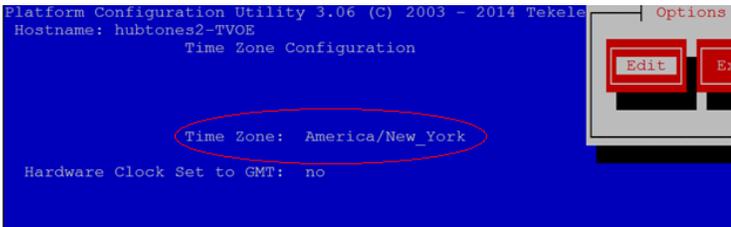
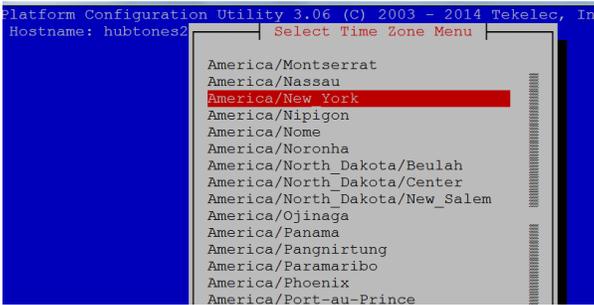
**Procedure 2. Configure TVOE on Additional RMS Server(s)**

<p>12</p> <p><input type="checkbox"/></p>	<p><b>RMS Server iLO: Configure SNMP</b></p>	<p>From the platcfg main menu, navigate to <b>Network Configuration -&gt; SNMP Configuration -&gt; NMS Configuration</b></p>  <p>Press <b>Edit</b>. Choose <b>Add a New NMS Server</b></p>  <p>Enter the following NMS servers, pressing <b>OK</b> after each one and then selecting the <b>Add NMS</b> option again:</p> <ol style="list-style-type: none"> <li>1. Enter the Hostname/IP of the Customer NMS Server, for port enter 162, and for Community String enter the community string provided in the customer NAPD Document.</li> <li>2. Enter the IP of the NOAM VIP, for port enter 162, and for Community String enter the community string provided in the customer NAPD Document</li> </ol> <p>Press <b>Exit</b>. Select Yes when prompted to restart the Alarm Routing Service.</p> <p>Once Done, press <b>Exit</b> to quit to the platcfg main menu.</p>
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**Procedure 2. Configure TVOE on Additional RMS Server(s)**

<p>13 <input type="checkbox"/></p>	<p><b>RMS Server iLO:</b> Configure NTP</p>	<p>Navigate to Network Configuration</p>  <p>Navigate to <b>Configuration-&gt;NTP</b></p> <p>Click <b>Edit</b></p>  <ul style="list-style-type: none"> <li>• ntpserver1: Enter customer provided NTP server #1 IP address.</li> <li>• ntpserver2: Enter customer provided NTP server #2 IP address.</li> <li>• ntpserver3: Enter customer provided NTP server #3 IP address.</li> </ul> <p>Press <b>OK</b></p> <p>Continue to press Exit until you are out of the platcfg menu.</p>
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**Procedure 2. Configure TVOE on Additional RMS Server(s)**

<p>14</p> <p>☐</p>	<p><b>RMS Server iLO:</b></p> <p>Configure Time Zone</p>	<pre># su - platcfg</pre> <p>Navigate to <b>Server Configuration-&gt;Time Zone</b></p>   <p>If the timezone displayed matches the timezone you desire, then you can continue to hit <b>Exit</b> until you are out of the platcfg program. If you want a different timezone, then proceed with this instruction.</p> <p>Click <b>Edit</b></p>  <p>Select the desired time zone from the list and press <b>Enter</b></p> <p>Select <b>NO</b> for the question, "Set hardware clock to GMT?"</p> <p>Continue pressing <b>Exit</b> until you are out of the platcfg program.</p>
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## 4.2 Configure Blade TVOE Hosts

### Procedure 3. Configure TVOE on Server Blades

<b>S T E P #</b>	<p>This procedure will configure TVOE on the server blades that will host DSR NOAMP VMs. It details the configuration for a single server blade and should be repeated for every TVOE blade that was IPM-ed for this installed.</p> <p><b>NOTE:</b> TVOE should only be installed on Blade servers that will run either as DSR SOAMs or DSR NOAMPs. They should NOT be installed on Blade servers intended to run as DSR MPs.</p> <p><b>Prerequisite:</b> TVOE OS has been installed on the target server blades as per instructions in [11].</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.</p>	
1 <input type="checkbox"/>	<b>PMAC Server:</b> Exchange SSH keys between PMAC and TVOE server	<p>Use the PMAC GUI to determine the Control Network IP address of TVOE server. From the PMAC GUI, navigate to Main Menu → Software → Software Inventory.</p> <p>Note the IP address TVOE server.</p> <p>From a terminal window connection on the PMAC, login as the admusr user.</p> <p>Exchange SSH keys between the PMAC and the TVOE server using the keyexchange utility, using the Control network IP address for the TVOE blade server. When prompted for the password, enter the password for the TVOE server.</p> <pre>\$ keyexchange admusr@&lt;TVOE blade Control Net IP addr&gt;</pre>
2 <input type="checkbox"/>	<b>TVOE Server:</b> Login and Copy Configuration Scripts from PMAC	<p>Login as <b>admusr</b> on the TVOE server using the ILO facility.</p> <p>Become the super user by using the command:</p> <pre>\$ sudo su</pre> <p>You should see the prompt change to the hash mark:</p> <pre>#</pre> <p>Execute the following commands:</p> <pre># scp admusr@&lt;Management_Server_Control_IP_addr&gt;:/usr/TKLC/smac/etc/TVOE* /root/</pre> <pre># chmod 777 /root/TVOE*</pre> <p>(If no TVOE configuration scripts are found here, then please re-execute section 4.2.2, Step #10 of [11]/[12].)</p>

## Procedure 3. Configure TVOE on Server Blades

<p>3</p> <p><input type="checkbox"/></p>	<p><b>TVOE Server: Run Configuration Script Based on Server Blade NIC Configuration</b></p>	<p>Next, you will execute <b>ONLY ONE</b> of the following commands. Read carefully to determine which command you should run.</p> <p>If your TVOE server blade <b>DOES</b> have mezzanine cards <b>AND</b> you will be running OAM/XMI traffic on a separate physical network, execute the following command:</p> <pre># /root/TVOEcfg.sh --xmivlan=&lt;XMI_VLAN_ID&gt; --imivlan=&lt;IMI_VLAN_ID&gt; mezz</pre> <p>If your TVOE server blade <b>DOES NOT</b> have mezzanine cards <b>AND/OR</b> you will <b>NOT</b> be running OAM/XMI traffic over a separate physical network, execute the following command :</p> <pre># /root/TVOEcfg.sh --xmivlan=&lt;XMI_VLAN_ID&gt; --imivlan=&lt;IMI_VLAN_ID&gt;</pre> <p><b>In both cases:</b> <i>XMI_VLAN_ID</i> is the VLAN ID for the XMI network in this installation, and <i>IMI_VLAN_ID</i> is the VLAN ID for the IMI network in this installation. For deployments with aggregation switches, the IMI and XMI VLAN IDs will be the values of the “INTERNAL-IMI” and “INTERNAL-XMI” vlan ids, respectively. For layer-2 only deployments, the IMI and XMI vlan ids will be obtained from the customer.</p> <p>Upon executing the proper version of the TVOEcfg.sh script, you should see an output similar to the following (example shows output without the “mezz” parameter):</p> <pre>Using onboard NICs ... Interface bond0.3 added Interface bond0.4 added Setting up the bridge and unsetting network info Interface bond0.3 was updated. Bridge xmi added! Setting up the bridge and unsetting network info Interface bond0.4 was updated. Bridge imi added!</pre> <p>The prompt will return.</p> <p><b>NOTE:</b>If for any reason, you ran the wrong version of the TVOEcfg.sh command, you can execute: <code>/root/TVOEclean.sh</code> to reset the networking configuration so you can repeat this step.</p>
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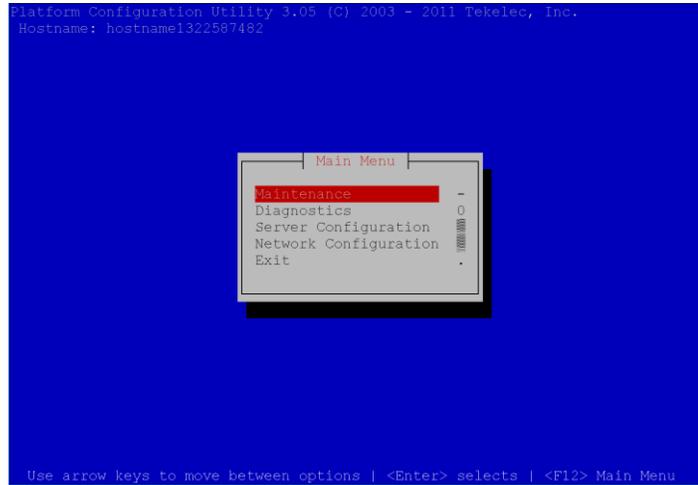
## Procedure 3. Configure TVOE on Server Blades

4 <input type="checkbox"/>	<b>TVOE Server:</b> Configure XMI IP and Default Route	<p><b>Configure IP address on the XMI network.:</b></p> <pre># netAdm set --type=Bridge --name=xmi --address=&lt;TVOE_XMI_IP_ADDRESS&gt; --netmask=&lt;XMI_NETMASK&gt;</pre> <p>Interface xmi was updated.</p> <p><b>Restart network services:</b></p> <pre># service network restart</pre> <p>[wait for the prompt to return]</p> <p><b>Set the default route:</b></p> <pre># netAdm add --route=default --device=xmi --gateway=&lt;XMI_NETWORK_GATEWAY&gt;</pre> <p>Route to xmi added.</p> <p><b>If this installation does not require NetBackup to use a dedicated ethernet interface, then skip the next step and proceed to step 6.</b></p>
5 <input type="checkbox"/>	<b>(Optional)</b> <b>TVOE Server:</b> Configure NetBackup Dedicated Interface and Bridge	<p>In these examples, &lt;interface&gt; should be replaced with the actual ethernet interface that will be used as the dedicated NetBackup port. For instance, “eth01”, or “eth22”.</p> <p><b>Unbond Ethernet Interface:</b></p> <pre># netAdm set --device=&lt;interface&gt; --slave=no --onboot=yes</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=&lt;interface&gt; --MTU=&lt;NetBackup_MTU_size&gt;</pre> <p><b>Create NetBackup VM Bridge Interface:</b></p> <pre># netAdm add --type=Bridge --name=netbackup -- bridgeInterfaces=&lt;interface&gt; --onboot=yes</pre>

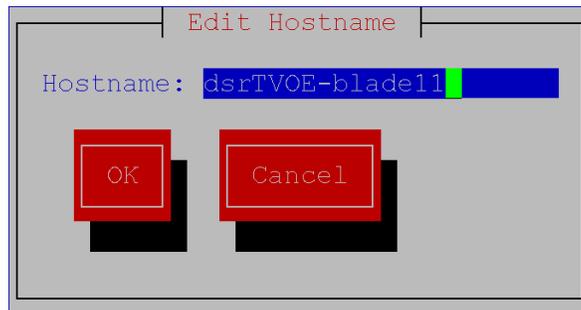
## Procedure 3. Configure TVOE on Server Blades

6  TVOE Server: Set Hostname

```
# su - platcfg
```



Navigate to **Server Configuration->Hostname-> Edit** and enter a new hostname for your server.



Press **OK** and select and continue to press **Exit** until you are at the platcfg main menu again.

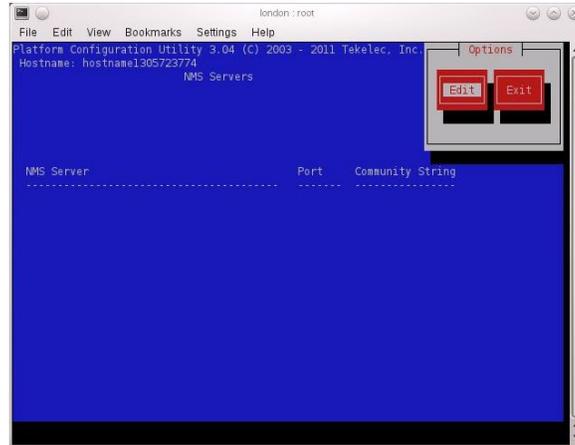
Continue To Press **Exit** until you are back at the platcfg main menu

**NOTE:** Although the new hostname has been properly configured and committed at this point, it will not appear on your command prompt unless you log out and log back in again

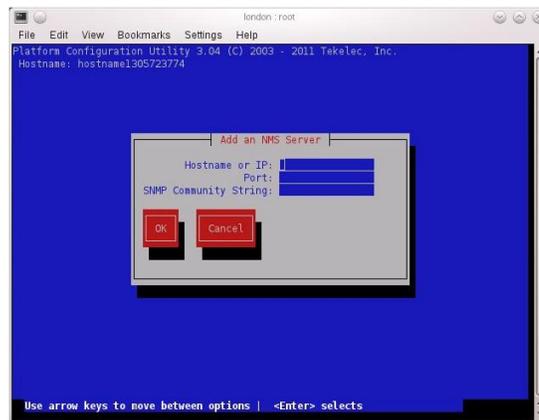
## Procedure 3. Configure TVOE on Server Blades

7  **TVOE server:**  
Configure SNMP

From the platcfg main menu, navigate to **Network Configuration -> SNMP Configuration -> NMS Configuration**



Press **Edit**.  
Choose **Add a New NMS Server**

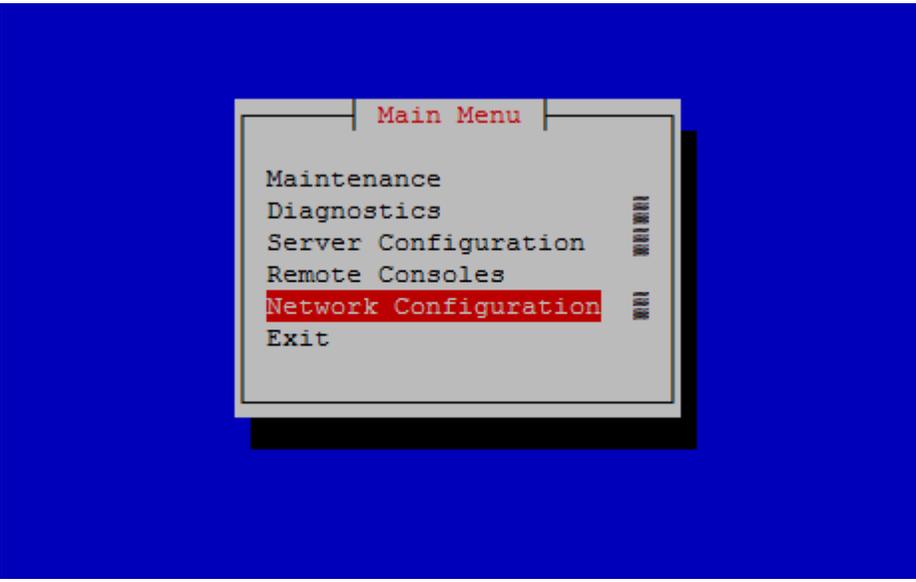
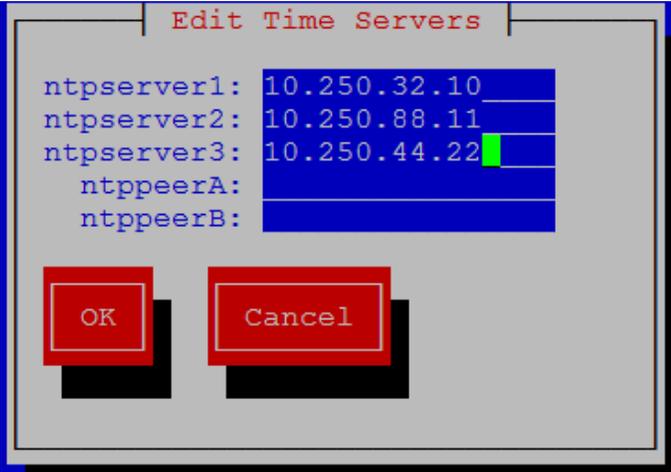


Enter the following NMS servers, pressing **OK** after each one and then selecting the **Add NMS** option again:

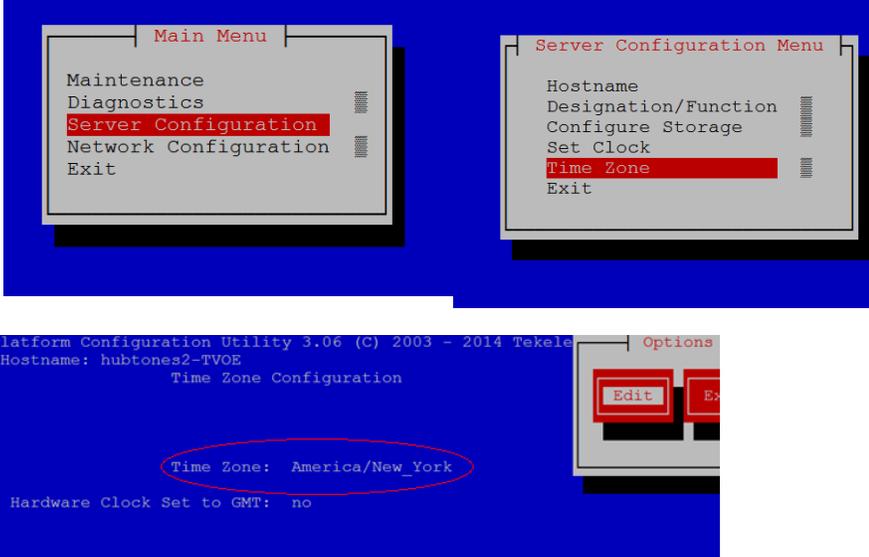
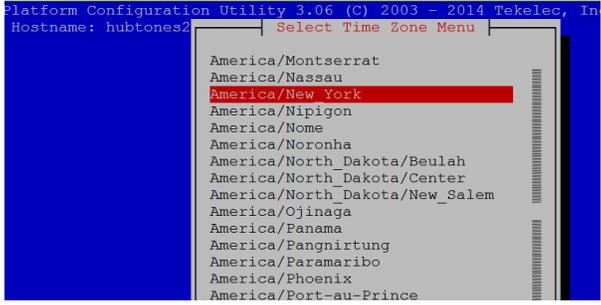
1. Enter the Hostname/IP of the Customer NMS Server, for port enter 162, and for Community String enter the community string provided in the customer NAPD Document.
2. Enter the IP of the SOAM VIP, for port enter 162, and for Community String enter the community string provided in the customer NAPD Document

Press **Exit**.  
Select **Yes** when prompted to restart the Alarm Routing Service.  
Once Done, press **Exit** to quit to the platcfg main menu.

**Procedure 3. Configure TVOE on Server Blades**

<p>8 <input type="checkbox"/></p>	<p><b>TVOE server:</b> Configure NTP</p>	<p>Navigate to Network Configuration</p>  <p>Navigate to <b>Configuration-&gt;NTP</b></p> <p>Click <b>Edit</b></p>  <ul style="list-style-type: none"> <li>• ntpserver1: Enter customer provided NTP server #1 IP address.</li> <li>• ntpserver2: Enter customer provided NTP server #2 IP address.</li> <li>• ntpserver3: Enter customer provided NTP server #3 IP address.</li> </ul> <p>Press <b>OK</b></p> <p>Continue to press Exit until you are out of the platcfg menu.</p>
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**Procedure 3. Configure TVOE on Server Blades**

<p>9</p> <p><input type="checkbox"/> RMS Server iLO: Configure Time Zone</p>	<p># su - platcfg</p> <p>Navigate to <b>Server Configuration-&gt;Time Zone</b></p>	 <p>If the timezone displayed matches the timezone you desire, then you can continue to hit <b>Exit</b> until you are out of the platcfg program. If you want a different timezone, then proceed with this instruction.</p> <p>Click <b>Edit</b></p>  <p>Select the desired time zone from the list and press <b>Enter</b></p> <p>Select <b>NO</b> for the question, "Set hardware clock to GMT?"</p> <p>Continue pressing <b>Exit</b> until you are out of the platcfg program.</p>
<p>10</p> <p><input type="checkbox"/> TVOE server: Repeate Procedure for other TVOE blades.</p>	<p><b>Configuration of this TVOE server blade is complete. Repeat this procedure from the beginning for other TVOE hosts that need to be configured.</b></p>	

### 4.3 Create Virtual Machines for Applications

#### Procedure 4. Load Application and TPD ISO onto PM&C Server

<b>S T E P #</b>	This procedure will load the DSR Application ISO into the PM&C Server  <b>Needed material:</b> - Application Media  Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.  IF THIS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.	
1  <input type="checkbox"/>	<b>TVOE Host:</b> Load Application ISO	Add the Application ISO image to the PM&C, this can be done in one of three ways: <ol style="list-style-type: none"> <li>1. Insert the Application CD required by the application into the removable media drive.</li> <li>2. Attach the USB device containing the ISO image to a USB port.</li> <li>3. Copy the Application iso file to the PM&amp;C server into the “/var/TKLC/smac/image/isoimages/home/smacftpusr/” directory as pmacftpusr user:                       cd into the directory where your ISO image is located on the <b>TVOE Host</b> (not on the PM&amp;C server)                       Using sftp, connect to the PM&amp;C server   <pre># sftp pmacftpusr@&lt;pmac_management_network_ip&gt; # put &lt;image&gt;.iso</pre>                     After the image transfer is 100% complete, close the connection   <pre># quit</pre> </li> </ol>
2  <input type="checkbox"/>	<b>PM&amp;C GUI:</b> Login	Open web browser and enter: <a href="http://&lt;pmac_management_network_ip&gt;">http://&lt;pmac_management_network_ip&gt;</a> Login as pmacadmin user.

**Procedure 4. Load Application and TPD ISO onto PM&C Server**

<p>3</p> <p><b>PM&amp;C GUI:</b></p> <p><input type="checkbox"/> Attach the software Image to the PM&amp;C Guest</p>	<p>If in Step 1 the ISO image was transferred directly to the PM&amp;C guest via sftp, skip the rest of this step and continue with step 4. If the image is on a CD or USB device, continue with this step.</p> <p>In the PM&amp;C GUI, navigate to <b>Main Menu &gt; VM Managemenet..</b> In the "<b>VM Entities</b>" list, select the PM&amp;C guest. On the resulting "<b>View VM Guest</b>" page, select the "<b>Media</b>" tab.</p> <p>Under the <b>Media</b> tab, find the ISO image in the "<b>Available Media</b>" list, and click its "<b>Attach</b>" button. After a pause, the image will appear in the "<b>Attached Media</b>" list.</p>
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### View VM Guest

Name: vm-pmacdev6 Current Power State: **Running**

Host: fe80::461e:a1ff:fe06:484 Change to... On ▾

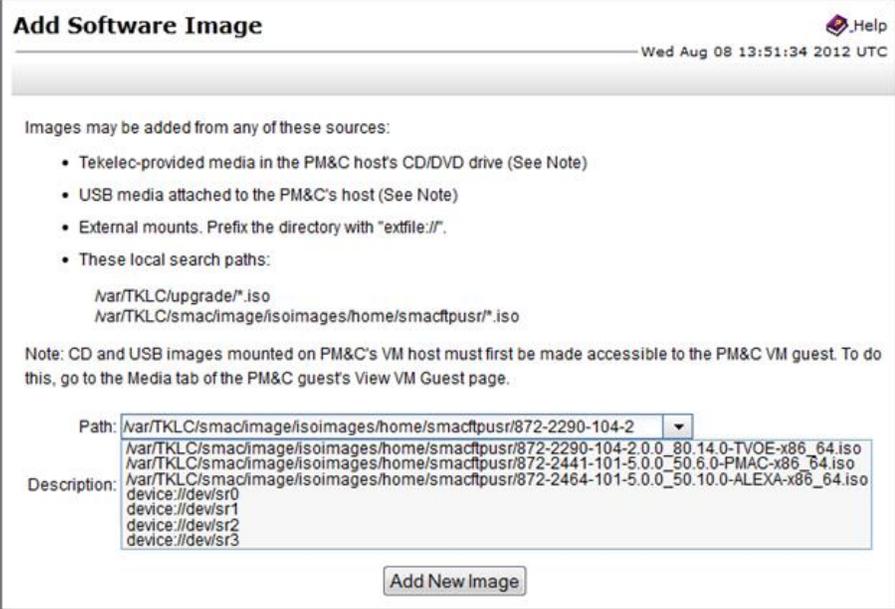
#### Attached Media

Attached	Image Path
<input type="button" value="Detach"/>	/var/TKLC/voe/mapping-isos/vm-pmacdev6.iso
<input type="button" value="Detach"/>	/media/sdb1/000-0000-000-6.0.0_80.16.0-CentOS-6.2-x86_64.iso

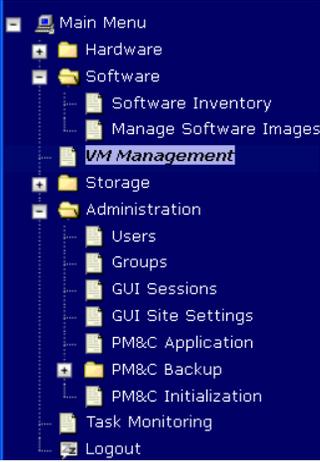
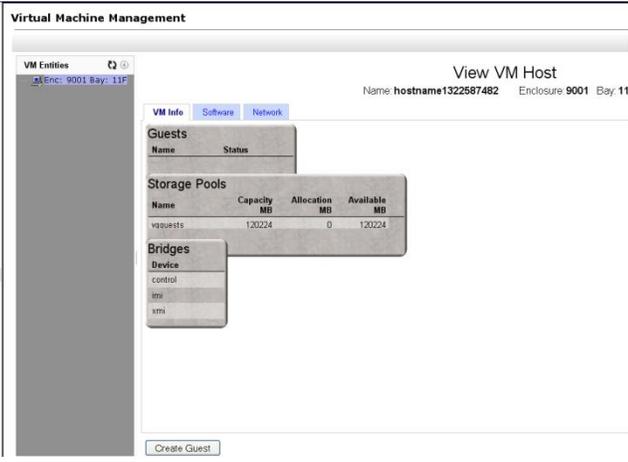
#### Available Media

Attach	Label	Image Path
<input type="button" value="Attach"/>	tklc_000-0000-000_Rev_A_80.16	/media/sdb1/000-0000-000-6.0.0_80.16.0-CentOS-6.2-x86_64.iso
<input type="button" value="Attach"/>	tklc_000-0000-000_Rev_A_80.17	/var/TKLC/upgrade/TPD.install-6.0.0_80.17.0-CentOS6.2-x86_64.iso

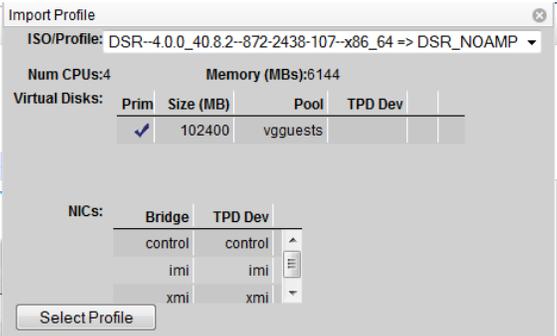
**Procedure 4. Load Application and TPD ISO onto PM&C Server**

<p>4</p> <p><input type="checkbox"/></p>	<p><b>PM&amp;C GUI:</b> Add Application image</p>	<p>Navigate to <a href="#">Main Menu</a> -&gt; <a href="#">Software</a> -&gt; <a href="#">Manage Software Images</a></p> <p>Press <a href="#">Add Image</a> button. Use the drop down to select the image.</p>  <p>If the image was supplied on a CD or a USB drive, it will appear as a virtual device ("device://..."). These devices are assigned in numerical order as CD and USB images become available on the Management Server. The first virtual device is reserved for internal use by TVOE and PM&amp;C; therefore, the iso image of interest is normally present on the second device, "device://dev/sr1". If one or more CD or USB-based images were already present on the Management Server before you started this procedure, choose a correspondingly higher device number.</p> <p>If in Step 1 the image was transferred to PM&amp;C via sftp it will appear in the list as a local file "/var/TKLC/...".</p>  <p>Select the appropriate path and Press <a href="#">Add New Image</a> button.</p> <p>You may check the progress using the <a href="#">Task Monitoring</a> link. Observe the green bar indicating success.</p> <p>Once the green bar is displayed, remove the TVOE 2.0 Media from the optical drive of the management server.</p>
<p>5</p> <p><input type="checkbox"/></p>	<p><b>PM&amp;C GUI:</b> Load TPD ISO</p>	<p>If the TPD ISO hasn't been loaded onto the pmac already, repeat steps 1 through 4 to load it using the TPD media or ISO.</p>

**Procedure 5. Create NOAMP Guest VMs**

<p><b>STEP #</b></p>	<p>This procedure will provide the steps needed to create a DSR NOAMP virtual machine (referred to as a “guest”) on a TVOE server blade or TVOE RMS. It must be repeated for every NOAMP server you wish to install.</p> <p><b>Prerequisite:</b> TVOE has been installed and configured on the target blade server or RMS</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.</p>	
<p>1 <input type="checkbox"/></p>	<p><b>PM&amp;C GUI:</b> Login</p>	<p>Open web browser and enter: <a href="http://&lt;pmac_management_network_ip&gt;">http://&lt;pmac_management_network_ip&gt;</a> Login as pmacadmin user.</p>
<p>2 <input type="checkbox"/></p>	<p><b>PM&amp;C GUI:</b> Navigate to VM Management of the Target Server Blade</p>	<p>Navigate to <b>Main Menu</b> -&gt; <b>VM Management</b></p>  <p>Select the TVOE server blade or rack mounted server from the “VM Entities” listing on the left side of the screen. The selected server’s guest machine configuration will then be displayed in the remaining area of the window.</p>  <p>Click <b>Create Guest</b></p>

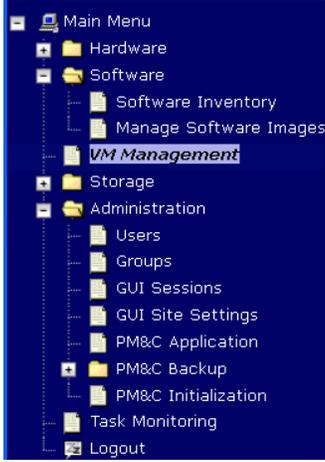
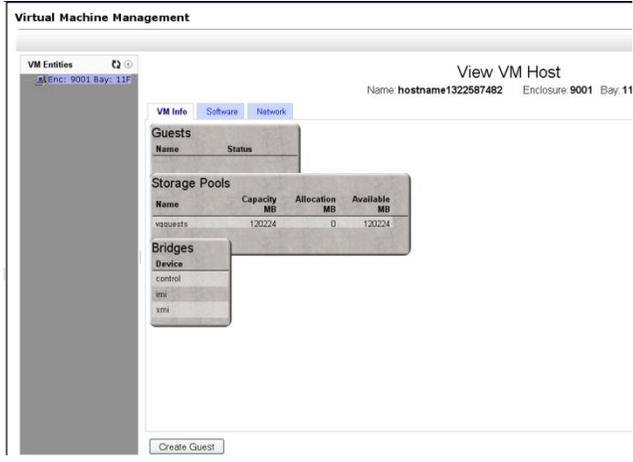
**Procedure 5. Create NOAMP Guest VMs**

3	<p><b>PM&amp;C GUI:</b> Configure VM Guest Parameters</p>	<p>Press <b>Import Profile</b></p>  <p>From the “ISO/Profile” drop-down box, select the entry that matches depending on the hardware that your NOAMP VM TVOE server is running on and your preference for NetBackup interfaces:</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr style="background-color: #cccccc;"> <th>NOAM VM TVOE Hardware Type(s)</th> <th>Dedicated Netbackup Interface?</th> <th>Choose Profile (&lt;Application ISO NAME&gt;)-&gt;</th> </tr> </thead> <tbody> <tr> <td>HP DL360 RMS , HP BL460 Gen 6 Blade</td> <td>No</td> <td><b>DSR_NOAMP</b></td> </tr> <tr> <td>HP DL360 RMS , HP BL460 Gen 6 Blade</td> <td>Yes</td> <td><b>DSR_NOAMP_NBD</b></td> </tr> <tr> <td>HP DL380 Gen 8 RMS, HP BL460 Gen 8 Blade, Sun Netra RMS</td> <td>No</td> <td><b>DSR_NOAMP_LARGE</b></td> </tr> <tr> <td>HP DL380 Gen 8 RMS, HP BL460 Gen 8 Blade, Sun Netra RMS</td> <td>Yes</td> <td><b>DSR_NOAMP_LARGE_NBD</b></td> </tr> </tbody> </table> <p>(NOTE: Application_ISO_NAME is the name of the DSR Application ISO to be installed on this NOAMP)</p> <p>Press <b>Select Profile</b>.</p> <p>Values from the profile should now populate the VM configuration screen. Disk Size, Number of CPUs, Memory, and NICs: should all change from their default values to the profile values</p> <p>You can edit the name, if you wish. For instance: “DSRNOAMP-A,” or “DSRNOAMP-B”. <b>(This will not become the ultimate hostname. It is just an internal tag for the VM host manager.)</b></p> <p>Press <b>Create</b></p>	NOAM VM TVOE Hardware Type(s)	Dedicated Netbackup Interface?	Choose Profile (<Application ISO NAME>)->	HP DL360 RMS , HP BL460 Gen 6 Blade	No	<b>DSR_NOAMP</b>	HP DL360 RMS , HP BL460 Gen 6 Blade	Yes	<b>DSR_NOAMP_NBD</b>	HP DL380 Gen 8 RMS, HP BL460 Gen 8 Blade, Sun Netra RMS	No	<b>DSR_NOAMP_LARGE</b>	HP DL380 Gen 8 RMS, HP BL460 Gen 8 Blade, Sun Netra RMS	Yes	<b>DSR_NOAMP_LARGE_NBD</b>
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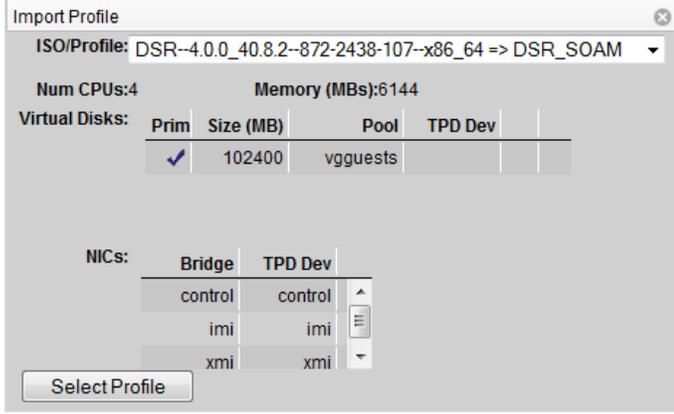
**Procedure 5. Create NOAMP Guest VMs**

<p>4</p> <p><input type="checkbox"/></p>	<p><b>PM&amp;C GUI:</b> Wait for Guest Creation to Complete</p>	<p>Navigate to <b>Main Menu &gt; Task Monitoring</b> to monitor the progress of the guest creation task.. A separate task will appear for each guest creation that you have launched.</p> <p>Wait or referesh the screen until you see that the guest creation task has completed successfully.</p> <table border="1"> <thead> <tr> <th>ID</th> <th>Task</th> <th>Target</th> <th>Status</th> <th>Running Time</th> <th>Start Time</th> <th>Progress</th> </tr> </thead> <tbody> <tr> <td>1739</td> <td>VirtAction: Create</td> <td>Enc:9001 Bay:11E Guest: DSR_NOAMP</td> <td>Guest creation completed (DSR_NOAMP)</td> <td>0:00:04</td> <td>2011-11-29 20:36:11</td> <td>100%</td> </tr> </tbody> </table>	ID	Task	Target	Status	Running Time	Start Time	Progress	1739	VirtAction: Create	Enc:9001 Bay:11E Guest: DSR_NOAMP	Guest creation completed (DSR_NOAMP)	0:00:04	2011-11-29 20:36:11	100%
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<p>5</p> <p><input type="checkbox"/></p>	<p><b>PM&amp;C GUI:</b> Verify Guest Machine is Running</p>	<p>Navigate to <b>Main Menu -&gt; VM Management</b></p> <p>Select the TVOE server blade on which the guest machine was just created.</p> <p>Look at the list of guests present on the blade and verify that you see a guest that mataches the name you configured and that its status is “Running”.</p> <div style="border: 1px solid gray; padding: 5px; margin: 10px auto; width: fit-content;"> <p><b>Guests</b></p> <table border="1"> <thead> <tr> <th>Name</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td>DSR_NOAMP</td> <td>Running</td> </tr> </tbody> </table> </div> <p><b>VM Creation for this guest is complete. Repeat from Step 2 for any remaining NOAMP VMs (for instance, the standby NOAMP) that must be created.</b></p>	Name	Status	DSR_NOAMP	Running										
Name	Status															
DSR_NOAMP	Running															

**Procedure 6. Create SOAMP Guest VMs**

<p><b>S T E P #</b></p>	<p>This procedure will provide the steps needed to create a DSR SOAMP virtual machine (referred to as a “guest”) on a TVOE server blade. It must be repeated for every SOAMP server you wish to install.</p> <p><b>Prerequisite:</b> TVOE has been installed and configured on the target blade server</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.</p>	
<p>1 <input type="checkbox"/></p>	<p><b>PM&amp;C GUI: Login</b></p>	<p>Open web browser and enter: <a href="http://&lt;pmac_management_network_ip&gt;">http://&lt;pmac_management_network_ip&gt;</a> Login as pmacadmin user.</p>
<p>2 <input type="checkbox"/></p>	<p><b>PM&amp;C GUI:</b> Navigate to VM Management of the Target Server Blade</p>	<p>Navigate to <a href="#">Main Menu</a> -&gt; <a href="#">VM Management</a></p>  <p>Select the TVOE server blade from the “VM Entities” listing on the left side of the screen. This blade’s guest machine configuration will then be displayed in the remaining area of the window.</p>  <p>Click <a href="#">Create Guest</a></p>

Procedure 6. Create SOAMP Guest VMs

3	<p><b>PM&amp;C GUI:</b> Configure VM Guest Parameters</p>	<p>Press <b>Import Profile</b></p> <div style="text-align: center; margin-bottom: 10px;"> <input type="button" value="Import Profile"/> </div>  <p>From the “ISO/Profile” drop-down box, select the entry that matches depending on the hardware that your SOAM VM TVOE server is running on and your preference for NetBackup interfaces:</p> <table border="1" style="width: 100%; border-collapse: collapse; margin: 10px 0;"> <thead> <tr> <th style="text-align: center;">SOAM VM TVOE Hardware Type(s)</th> <th style="text-align: center;">Dedicated Netbackup Interface?</th> <th style="text-align: center;">Choose Profile (&lt;Application ISO NAME&gt;)&gt;➔</th> </tr> </thead> <tbody> <tr> <td>HP BL460 Gen 8 Blade, HP BL460 Gen 6 Blade</td> <td style="text-align: center;">No</td> <td style="text-align: center;"><b>DSR_SOAM</b></td> </tr> <tr> <td>HP BL460 Gen 8 Blade, HP BL460 Gen 6 Blade</td> <td style="text-align: center;">Yes</td> <td style="text-align: center;"><b>DSR_SOAM_NBD</b></td> </tr> </tbody> </table> <p>(NOTE: Application_ISO_NAME is the name of the DSR Application ISO to be installed on this NOAMP)</p> <p>Press <b>Select Profile</b>.</p> <p>Values from the profile should now populate the VM configuration screen. Disk Size, Number of CPUs, Memory, and NICs: should all change from their default values to the profile values.</p> <p>You can edit the name, if you wish. For instance: “DSR_SOAM_A,” or DSR_SOAM_B”. <b>(This will not become the ultimate hostname. It is just an internal tag for the VM host manager.)</b></p> <p>Press <b>Create</b></p> <div style="text-align: center; margin-top: 10px;"> <input type="button" value="Create"/> </div>	SOAM VM TVOE Hardware Type(s)	Dedicated Netbackup Interface?	Choose Profile (<Application ISO NAME>)>➔	HP BL460 Gen 8 Blade, HP BL460 Gen 6 Blade	No	<b>DSR_SOAM</b>	HP BL460 Gen 8 Blade, HP BL460 Gen 6 Blade	Yes	<b>DSR_SOAM_NBD</b>
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**Procedure 6. Create SOAMP Guest VMs**

<p>4</p> <p><input type="checkbox"/></p>	<p><b>PM&amp;C GUI:</b> Wait for Guest Creation to Complete</p>	<p>Navigate to <b>Main Menu &gt; Task Monitoring</b> to monitor the progress of the guest creation task.. A separate task will appear for each guest creation that you have launched.</p> <p>Wait or referesh the screen until you see that the guest creation task has completed successfully.</p> <table border="1"> <thead> <tr> <th>ID</th> <th>Task</th> <th>Target</th> <th>Status</th> <th>Running Time</th> <th>Start Time</th> <th>Progress</th> </tr> </thead> <tbody> <tr> <td>1739</td> <td>VirtAction: Create</td> <td>Enc:9001 Bay:11F Guest: DSR_NOAMP</td> <td>Guest creation completed (DSR_NOAMP)</td> <td>0:00:04</td> <td>2011-11-29 20:36:11</td> <td>100%</td> </tr> </tbody> </table>	ID	Task	Target	Status	Running Time	Start Time	Progress	1739	VirtAction: Create	Enc:9001 Bay:11F Guest: DSR_NOAMP	Guest creation completed (DSR_NOAMP)	0:00:04	2011-11-29 20:36:11	100%
ID	Task	Target	Status	Running Time	Start Time	Progress										
1739	VirtAction: Create	Enc:9001 Bay:11F Guest: DSR_NOAMP	Guest creation completed (DSR_NOAMP)	0:00:04	2011-11-29 20:36:11	100%										
<p>5</p> <p><input type="checkbox"/></p>	<p><b>PM&amp;C GUI:</b> Verify Guest Machine is Running</p>	<p>Navigate to <b>Main Menu -&gt; VM Management</b></p> <p>Select the TVOE server blade on which the guest machine was just created.</p> <p>Look at the list of guests present on the blade and verify that you see a guest that matches the name you configured and that its status is “Running”.</p> <div style="border: 1px solid gray; padding: 5px; margin: 10px auto; width: fit-content;"> <p><b>Guests</b></p> <table border="1"> <thead> <tr> <th>Name</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td>DSR_NOAMP</td> <td>Running</td> </tr> </tbody> </table> </div> <p><b>VM Creation for this guest is complete. Repeat from Step 2 for any remaining SOAMP VMs (for instance, the standby SOAMP) that must be created.</b></p>	Name	Status	DSR_NOAMP	Running										
Name	Status															
DSR_NOAMP	Running															

## 4.4 Install Application Software on Servers

### Procedure 7. IPM Blades and VMs

<b>S T E P #</b>	<p>This procedure will provide the steps to install TPD on Blade servers and Blade server guest VMs</p> <p><b>Prerequisite:</b> Enclosures containing the blade servers targeted for IPM that have been configured.</p> <p><b>Prerequisite:</b> TVOE has been installed and configured on Blade servers that will host DSR NOAMP VMs.</p> <p><b>Prerequisite:</b> DSR NOAMP and SOAM Guest VMs have been created successfully.</p> <p><b>Needed material:</b></p> <ul style="list-style-type: none"> <li>- TPD Media (64-bits)</li> </ul> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.</p>	
1 <input type="checkbox"/>	<p><b>TVOE Host:</b> Load Application ISO</p>	<p>Add the TPD ISO image to the PM&amp;C, this can be done in one of three ways:</p> <ol style="list-style-type: none"> <li>1. Insert the TPD CD required by the application into the removable media drive.</li> <li>2. Attach the USB device containing the ISO image to a USB port.</li> <li>3. Copy the TPD iso file to the management server into the “/var/TKLC/smac/image/isoimages/home/smacftpusr/” directory as pmacftpusr user:</li> </ol> <p>cd into the directory where your ISO image is located on the <b>TVOE Host</b> (not on the PM&amp;C server)</p> <p>Using sftp, connect to the PM&amp;C management server</p> <pre># sftp pmacftpusr@&lt;pmac_management_network_ip&gt; # put &lt;image&gt;.iso</pre> <p>After the image transfer is 100% complete, close the connection</p> <pre># quit</pre>
2 <input type="checkbox"/>	<p><b>PM&amp;C GUI:</b> Login</p>	<p>Open web browser and enter: <a href="http://&lt;pmac_management_network_ip&gt;">http://&lt;pmac_management_network_ip&gt;</a> Login as pmacadmin user.</p>

**Procedure 7. IPM Blades and VMs**

<p>3</p> <p><input type="checkbox"/> <b>PM&amp;C GUI:</b></p> <p>Attach the software Image to the PM&amp;C Guest</p>	<p>If in Step 1 the ISO image was transferred directly to the PM&amp;C guest via sftp, skip the rest of this step and continue with step 4. If the image is on a CD or USB device, continue with this step.</p> <p>In the PM&amp;C GUI, navigate to <b>Main Menu &gt; VM Managment..</b> In the "<b>VM Entities</b>" list, select the PM&amp;C guest. On the resulting "<b>View VM Guest</b>" page, select the "<b>Media</b>" tab.</p> <p>Under the <b>Media</b> tab, find the ISO image in the "<b>Available Media</b>" list, and click its "<b>Attach</b>" button. After a pause, the image will appear in the "<b>Attached Media</b>" list.</p>
--	--

### View VM Guest

Name: vm-pmacdev6 Current Power State: **Running**

Host: fe80::461e:a1ff:fe06:484 Change to... On ▾

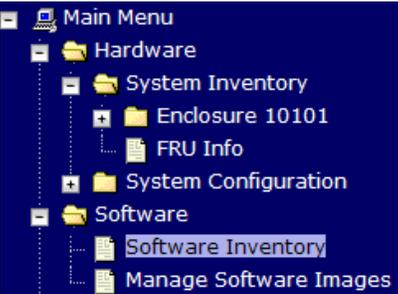
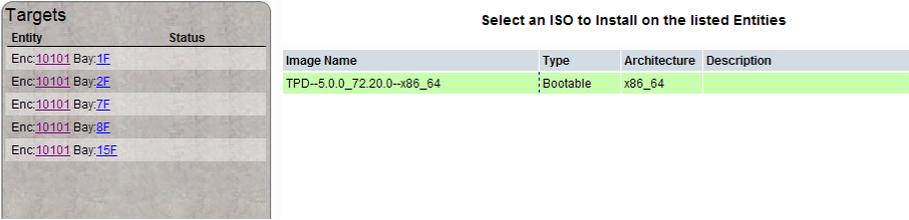
#### Attached Media

Attached	Image Path
<input type="button" value="Detach"/>	/var/TKLC/voe/mapping-isos/vm-pmacdev6.iso
<input type="button" value="Detach"/>	/media/sdb1/000-0000-000-6.0.0_80.16.0-CentOS-6.2-x86_64.iso

#### Available Media

Attach	Label	Image Path
<input type="button" value="Attach"/>	tklc_000-0000-000_Rev_A_80.16	/media/sdb1/000-0000-000-6.0.0_80.16.0-CentOS-6.2-x86_64.iso
<input type="button" value="Attach"/>	tklc_000-0000-000_Rev_A_80.17	/var/TKLC/upgrade/TPD.install-6.0.0_80.17.0-CentOS6.2-x86_64.iso

Procedure 7. IPM Blades and VMs

<p>4</p> <p><input type="checkbox"/></p>	<p><b>PM&amp;C GUI:</b> Select Servers for OS install</p>	<p>Navigate to <b>Software</b> -&gt; <b>Software Inventory</b>.</p>  <p>Select the servers you want to IPM. If you want to install the same OS image to more than one server, you may select multiple servers by clicking multiple rows individually. Selected rows will be highlighted in green.</p> <p>Note: VM's will have the text "Guest: &lt;VM_GUEST_NAME&gt;" underneath the physical blade or RMS that hosts them.</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>Design</th> <th>Function</th> </tr> </thead> <tbody> <tr><td>Enc:10101 Bay:1E</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>Enc:10101 Bay:2E</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>Enc:10101 Bay:7E</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>Enc:10101 Bay:8E</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>Enc:10101 Bay:13E</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>Enc:10101 Bay:15E</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td>192.168.1.1</td><td>pmac-mrsync-1</td><td>TPD (i686)</td><td>5.0.0-72.20.0</td><td>PMAC</td><td>4.0.0_40.11.0</td><td>1A</td><td>PMAC</td></tr> </tbody> </table> <p>Click on <b>Install OS</b></p> 	Ident	IP Address	Hostname	Plat Name	Plat Version	App Name	App Version	Design	Function	Enc:10101 Bay:1E									Enc:10101 Bay:2E									Enc:10101 Bay:7E									Enc:10101 Bay:8E									Enc:10101 Bay:13E									Enc:10101 Bay:15E										192.168.1.1	pmac-mrsync-1	TPD (i686)	5.0.0-72.20.0	PMAC	4.0.0_40.11.0	1A	PMAC
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<p>5</p> <p><input type="checkbox"/></p>	<p><b>PM&amp;C GUI:</b> Initiate OS Install</p>	<p>The left side of this screen shows the servers to be affected by this OS installation. From the list of available bootable images on the right side of the screen, select one OS image to install to all of the selected servers.</p>  <p>Click on <b>Start Install</b>, a confirmation window will pop up, click on <b>Ok</b> to proceed with the install.</p> 																																																																								

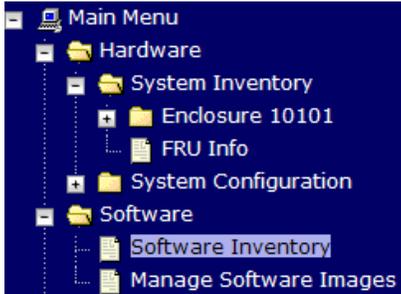
**Procedure 7. IPM Blades and VMs**

6 <input type="checkbox"/>	<b>PM&amp;C GUI:</b> Monitor OS Install	<p>Navigate to <b>Main Menu &gt; Task Monitoring</b> to monitor the progress of the OS Installation background task. A separate task will appear for each blade affected.</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> 14</td> <td>Install OS</td> <td>Enc:10101 Bay:15F</td> <td>Boot install image</td> <td>0:00:01</td> <td>2011-09-20 11:12:02</td> <td>50%</td> </tr> <tr> <td> 13</td> <td>Install OS</td> <td>Enc:10101 Bay:8E</td> <td>Boot install image</td> <td>0:00:01</td> <td>2011-09-20 11:12:02</td> <td>50%</td> </tr> <tr> <td> 12</td> <td>Install OS</td> <td>Enc:10101 Bay:7E</td> <td>Boot install image</td> <td>0:00:01</td> <td>2011-09-20 11:12:02</td> <td>50%</td> </tr> <tr> <td> 11</td> <td>Install OS</td> <td>Enc:10101 Bay:2E</td> <td>Boot install image</td> <td>0:00:01</td> <td>2011-09-20 11:12:02</td> <td>50%</td> </tr> <tr> <td> 10</td> <td>Install OS</td> <td>Enc:10101 Bay:1E</td> <td>Boot install image</td> <td>0:00:02</td> <td>2011-09-20 11:12:01</td> <td>50%</td> </tr> <tr> <td> 9</td> <td>Add Image</td> <td></td> <td>Done: TPD.install-5.0.0_72.20.0-CentOS5.6.x86_64</td> <td>0:00:09</td> <td>2011-09-20 11:01:50</td> <td>100%</td> </tr> </tbody> </table> <p>When the installation is complete, the task will change to green and the Progress bar will indicate "100%".</p>	ID	Task	Target	Status	Running Time	Start Time	Progress	14	Install OS	Enc:10101 Bay:15F	Boot install image	0:00:01	2011-09-20 11:12:02	50%	13	Install OS	Enc:10101 Bay:8E	Boot install image	0:00:01	2011-09-20 11:12:02	50%	12	Install OS	Enc:10101 Bay:7E	Boot install image	0:00:01	2011-09-20 11:12:02	50%	11	Install OS	Enc:10101 Bay:2E	Boot install image	0:00:01	2011-09-20 11:12:02	50%	10	Install OS	Enc:10101 Bay:1E	Boot install image	0:00:02	2011-09-20 11:12:01	50%	9	Add Image		Done: TPD.install-5.0.0_72.20.0-CentOS5.6.x86_64	0:00:09	2011-09-20 11:01:50	100%
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**Procedure 8. Install the Application Software on Blades**

S T E P #	<p>This procedure will provide the steps to install Diameter Signaling Router 4.0 on the Blade servers.</p> <p><b>Prerequisite:</b> <i>Procedure 7. IPM Blades</i> has been completed.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.</p>	
1 <input type="checkbox"/>	<b>PM&amp;C GUI:</b> Login	<p>Open web browser and enter: <a href="http://&lt;pmac_management_network_ip&gt;">http://&lt;pmac_management_network_ip&gt;</a> Login as pmacadmin user.</p>

**Procedure 8. Install the Application Software on Blades**

2  <input type="checkbox"/>	<b>PM&amp;C GUI:</b> Select Servers for Application install	<p>Navigate to <a href="#">Software</a> -&gt; <a href="#">Software Inventory</a>.</p>  <p>Select the servers on which the application is to be installed. If you want to install the same application image to more than one server, you may select multiple servers by clicking multiple rows individually. Selected rows will be highlighted in green.</p> <p>Note: VM's will have the text "Guest: &lt;VM_GUEST_NAME&gt;" underneath the physical blade that hosts them.</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: left;"> <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>Design</th> <th>Fur</th> </tr> </thead> <tbody> <tr> <td>Enc:10101 Bay:1F</td> <td>192.168.1.247</td> <td>hostname1316543479</td> <td>TPD (x86_64)</td> <td>5.0.0-72.20.0</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Enc:10101 Bay:2F</td> <td>192.168.1.248</td> <td>hostname1316543574</td> <td>TPD (x86_64)</td> <td>5.0.0-72.20.0</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Enc:10101 Bay:7F</td> <td>192.168.1.250</td> <td>hostname1316543105</td> <td>TPD (x86_64)</td> <td>5.0.0-72.20.0</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Enc:10101 Bay:8F</td> <td>192.168.1.249</td> <td>hostname1316543051</td> <td>TPD (x86_64)</td> <td>5.0.0-72.20.0</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Enc:10101 Bay:13F</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Enc:10101 Bay:15F</td> <td>192.168.1.251</td> <td>hostname1316543058</td> <td>TPD (x86_64)</td> <td>5.0.0-72.20.0</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>192.168.1.1</td> <td>pmac-mrsvnc-1</td> <td>TPD (i686)</td> <td>5.0.0-72.20.0</td> <td>PMAC</td> <td>4.0.0_40.11.0</td> <td>1A</td> <td>PM</td> </tr> </tbody> </table> <p>Click on <a href="#">Upgrade</a></p> <div style="display: flex; justify-content: center; gap: 10px;"> <input type="button" value="Install OS"/> <input type="button" value="Upgrade"/> <input type="button" value="Refresh"/> </div>	Ident	IP Address	Hostname	Plat Name	Plat Version	App Name	App Version	Design	Fur	Enc:10101 Bay:1F	192.168.1.247	hostname1316543479	TPD (x86_64)	5.0.0-72.20.0					Enc:10101 Bay:2F	192.168.1.248	hostname1316543574	TPD (x86_64)	5.0.0-72.20.0					Enc:10101 Bay:7F	192.168.1.250	hostname1316543105	TPD (x86_64)	5.0.0-72.20.0					Enc:10101 Bay:8F	192.168.1.249	hostname1316543051	TPD (x86_64)	5.0.0-72.20.0					Enc:10101 Bay:13F									Enc:10101 Bay:15F	192.168.1.251	hostname1316543058	TPD (x86_64)	5.0.0-72.20.0						192.168.1.1	pmac-mrsvnc-1	TPD (i686)	5.0.0-72.20.0	PMAC	4.0.0_40.11.0	1A	PM
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3  <input type="checkbox"/>	<b>PM&amp;C GUI:</b> Initiate Application Install	<p>The left side of this screen shows the servers to be affected by this OS installation. From the list of available bootable images on the right side of the screen, select one OS image to install to all of the selected servers.</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;">  </div> <div style="width: 50%;"> <p style="text-align: center;">Select an ISO to Upgrade on the listed Entities</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: left;"> <thead> <tr> <th>Image Name</th> <th>Type</th> <th>Architecture</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>TPD--5.0.0_72.20.0--x86_64</td> <td>Bootable</td> <td>x86_64</td> <td></td> </tr> <tr> <td>DSR--3.0.0_30.8.0--872-2329-101--x86_64</td> <td>Upgrade</td> <td>x86_64</td> <td></td> </tr> </tbody> </table> </div> </div> <p>Click on <a href="#">Start Upgrade</a>, a confirmation window will pop up, click on <a href="#">Ok</a> to proceed with the install.</p> <div style="text-align: center; margin-top: 10px;"> <input type="button" value="Start Upgrade"/> </div>	Image Name	Type	Architecture	Description	TPD--5.0.0_72.20.0--x86_64	Bootable	x86_64		DSR--3.0.0_30.8.0--872-2329-101--x86_64	Upgrade	x86_64																																																													
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**Procedure 8. Install the Application Software on Blades**

<p>4</p> <p><input type="checkbox"/></p>	<p><b>PM&amp;C GUI:</b> Monitor the installation status</p>	<p>Navigate to <b>Main Menu &gt; Task Monitoring</b> to monitor the progress of the Application Installation. task. A separate task will appear for each blade affected.</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>25</td> <td>Upgrade</td> <td>Enc:10101 Bay:15F</td> <td>Task ID assigned</td> <td>0:00:00</td> <td>2011-09-20 14:36:08</td> <td>40%</td> </tr> <tr> <td>24</td> <td>Upgrade</td> <td>Enc:10101 Bay:8F</td> <td>Task ID assigned</td> <td>0:00:00</td> <td>2011-09-20 14:36:08</td> <td>40%</td> </tr> <tr> <td>23</td> <td>Upgrade</td> <td>Enc:10101 Bay:7F</td> <td>Task ID assigned</td> <td>0:00:01</td> <td>2011-09-20 14:36:07</td> <td>40%</td> </tr> <tr> <td>22</td> <td>Upgrade</td> <td>Enc:10101 Bay:2F</td> <td>Task ID assigned</td> <td>0:00:00</td> <td>2011-09-20 14:36:07</td> <td>40%</td> </tr> <tr> <td>21</td> <td>Upgrade</td> <td>Enc:10101 Bay:1F</td> <td>Task ID assigned</td> <td>0:00:00</td> <td>2011-09-20 14:36:07</td> <td>40%</td> </tr> <tr> <td>20</td> <td>Add Image</td> <td></td> <td>Done: 872-2329-101-3.0.0_30.8.0-DSR-x86_64</td> <td>0:00:06</td> <td>2011-09-20 14:24:41</td> <td>100%</td> </tr> </tbody> </table> <p>When the installation is complete, the task will change to green and the Progress bar will indicate "100%".</p>	ID	Task	Target	Status	Running Time	Start Time	Progress	25	Upgrade	Enc:10101 Bay:15F	Task ID assigned	0:00:00	2011-09-20 14:36:08	40%	24	Upgrade	Enc:10101 Bay:8F	Task ID assigned	0:00:00	2011-09-20 14:36:08	40%	23	Upgrade	Enc:10101 Bay:7F	Task ID assigned	0:00:01	2011-09-20 14:36:07	40%	22	Upgrade	Enc:10101 Bay:2F	Task ID assigned	0:00:00	2011-09-20 14:36:07	40%	21	Upgrade	Enc:10101 Bay:1F	Task ID assigned	0:00:00	2011-09-20 14:36:07	40%	20	Add Image		Done: 872-2329-101-3.0.0_30.8.0-DSR-x86_64	0:00:06	2011-09-20 14:24:41	100%
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21	Upgrade	Enc:10101 Bay:1F	Task ID assigned	0:00:00	2011-09-20 14:36:07	40%																																													
20	Add Image		Done: 872-2329-101-3.0.0_30.8.0-DSR-x86_64	0:00:06	2011-09-20 14:24:41	100%																																													
<p>5</p> <p><input type="checkbox"/></p>	<p><b>PM&amp;C GUI:</b> Accept Upgrade</p>	<p>Navigate to <b>Software &gt; Software Inventory</b> to accept the software installation. Select all the servers on which the application has been installed in the previous steps and click on “<b>Accept Upgrade</b>” as shown below.</p> <p>Note that on some RMS and Blade servers, the GUI may not provide the option to accept/reject upgrade. So first verify in task monitoring that the upgrade is not in progress, then manually accept or reject the upgrade by ssh'ing into the server and execute:</p> <ol style="list-style-type: none"> <li>To accept: <code>/var/TKLC/backout/accept</code></li> <li>To reject: <code>/var/TKLC/backout/reject</code></li> </ol> <div> <p><b>Software Inventory</b> <span style="float: right;">Help</span></p> <p style="text-align: right;">Fri Aug 10 17:45:15 2012 UTC</p> <p>Filter <input type="text"/></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>Fun</th> </tr> </thead> <tbody> <tr> <td>Enc:50202 Bay:1E</td> <td>192.168.1.4</td> <td>RDU02-NO</td> <td>TPD (x86_64)</td> <td>6.0.0-80.16.0</td> <td>DSR</td> <td>4.0.0-0.40333</td> <td></td> <td></td> </tr> <tr> <td>Enc:50202 Bay:2E</td> <td>192.168.1.167</td> <td>RDU02-MP</td> <td>TPD (x86_64)</td> <td>6.0.0-80.16.0</td> <td>DSR</td> <td>Pending Acc/Rej</td> <td></td> <td></td> </tr> </tbody> </table> <p style="text-align: center;"> <input type="button" value="Install OS"/> <input type="button" value="Upgrade"/> <input type="button" value="Accept Upgrade"/> <input type="button" value="Reject Upgrade"/> <input type="button" value="Refresh"/> </p> </div> <p>Note that once the upgrade has been accepted, the App version will change from “Pending Acc/Rej” to the version number of the application.</p>	Ident	IP Address	Hostname	Plat Name	Plat Version	App Name	App Version	Desig	Fun	Enc:50202 Bay:1E	192.168.1.4	RDU02-NO	TPD (x86_64)	6.0.0-80.16.0	DSR	4.0.0-0.40333			Enc:50202 Bay:2E	192.168.1.167	RDU02-MP	TPD (x86_64)	6.0.0-80.16.0	DSR	Pending Acc/Rej																								
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## 4.5 Application Configuration

### Procedure 9. Configure the First NOAMP NE and Server

<b>S T E P</b>	<p>This procedure will provide the steps to configure the First NOAMP blade server.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.</p>	
1 <input type="checkbox"/>	<b>Save the NOAMP Network Data to an XML file</b>	<p>Using a text editor, create a NOAMP Network Element file that describes the networking of the target install environment of your first NOAMP server.</p> <p>Select an appropriate file name and save the file to a known location on your computer.</p> <p>A suggested filename format is “Appname_NName_NetworkElement.XML”, so for example an DSR2 NOAMP network element XML file would have a filename “DSR2_NOAMP_NetworkElement.xml”.</p> <p>Alternatively, you can update the sample DSR 5.X/6.X Network Element file be found on the management server at:</p> <pre>/usr/TKLC/smac/etc/SAMPLE-NetworkElement.xml</pre> <p>A sample XML file can also be found in Appendix A. Note that the following limitations apply when specifying a Network Element name: “A 1-32-character string. Valid characters are alphanumeric and underscore. Must contain at least one alpha and must not start with a digit”.</p>
2 <input type="checkbox"/>	<b>Exchange SSH keys between PMAC and first NOAMP server</b>	<p>Use the PMAC GUI to determine the Control Network IP address of the blade server that is to be the first NOAMP server. From the PMAC GUI, navigate to <b>Main Menu → Software → Software Inventory</b>.</p> <p>Note the IP address for the first NOAMP server.</p> <p>Login to the PMAC terminal as the <i>admusr</i> .</p> <p>From a terminal window connection on the PMAC as the <i>admusr</i> user, exchange SSH keys for <i>admusr</i> between the PMAC and the 1<sup>st</sup> NOAMP blade server using the keyexchange utility, using the Control network IP address for the NOAMP blade server. When prompted for the password, enter the password for the <i>admusr</i> user of the NOAMP server.</p> <pre>§ keyexchange admusr@&lt;NOAMP blade Control Net IP addr&gt;</pre>
3 <input type="checkbox"/>	<b>Connect a Web Browser to the NOAMP GUI</b>	<p>Plug a laptop ethernet cable onto an unused, unconfigured port on the 4948 switch (if available in your installation) or use SSH Tunneling through the PMAC to connect the laptop to the NOAMP server blade. <b>If you are using tunneling, then you can skip the rest of this step and instead complete the instructions in 4.7Appendix G. (for using Putty) or 4.7Appendix I (for using OpenSSH). Openssh is recommended if you are using a Windows 7 PC.</b></p> <p>From the PMAC, enable the switch port that the laptop is plugged into.</p> <p>Enable that laptop Ethernet port to acquire a DHCP address and then access the NOAMP-“A” GUI via its control IP address.</p>
4 <input type="checkbox"/>	<b>NOAMP GUI: Login</b>	<p>Login to the NOAMP GUI as the guiadmin user.</p>

**Procedure 9. Configure the First NOAMP NE and Server**

<p>5</p> <p><input type="checkbox"/></p>	<p><b>Create the NOAMP Network Element using the XML File</b></p>	<p>Navigate to <b>Main Menu-&gt;Configuration-&gt;Network Elements</b></p> <p>Select the “Browse” button, and enter the pathname of the NOAMP network XML file.</p> <p>Select the “Upload File” button to upload the XML file and configure the NOAMP Network Element.</p> <p>Once the data has been uploaded, you should see a folder appear with the name of your network element. Click on this folder and you will get a drop-down which describes the individual networks that are now configured:</p> <table border="1"> <thead> <tr> <th colspan="5">Network Element</th> </tr> <tr> <td colspan="5">NO_9006005</td> </tr> <tr> <th>Network Name</th> <th>Network Address</th> <th>Netmask</th> <th>VLAN ID</th> <th>Gateway IP Address</th> </tr> </thead> <tbody> <tr> <td>INTERNALXMI</td> <td>10.240.10.32</td> <td>255.255.255.224</td> <td>3</td> <td>10.240.10.35</td> </tr> <tr> <td>INTERNALIMI</td> <td>10.240.10.0</td> <td>255.255.255.224</td> <td>4</td> <td>10.240.10.3</td> </tr> </tbody> </table>	Network Element					NO_9006005					Network Name	Network Address	Netmask	VLAN ID	Gateway IP Address	INTERNALXMI	10.240.10.32	255.255.255.224	3	10.240.10.35	INTERNALIMI	10.240.10.0	255.255.255.224	4	10.240.10.3																							
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<p>6</p> <p><input type="checkbox"/></p>	<p><b>Map Services to Networks</b></p>	<p>Navigate to <b>Main Menu → Configuration → Services.</b></p> <p>Select the “Edit” button and set the Services as shown in the table below:</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>&lt;IMI Network&gt;</td> <td>&lt;XMI Network&gt;</td> </tr> <tr> <td>Replication</td> <td>&lt;IMI Network&gt;</td> <td>&lt;XMI Network&gt;</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>&lt;IMI Network&gt;</td> <td>Unspecified</td> </tr> <tr> <td>ComAgent</td> <td>&lt;IMI Network&gt;</td> <td>Unspecified</td> </tr> </tbody> </table> <p>For example, if your IMI network is named "IMI" and your XMI network is named "XMI", then your services should config should look like the following:</p> <table border="1"> <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>Unspecified</td> <td>Unspecified</td> </tr> <tr> <td>HA_MP_Secondary</td> <td>Unspecified</td> <td>Unspecified</td> </tr> <tr> <td>Replication_MP</td> <td>IMI</td> <td>Unspecified</td> </tr> <tr> <td>ComAgent</td> <td>IMI</td> <td>Unspecified</td> </tr> </tbody> </table> <p>Select the “Ok” button to apply the Service-to-Network selections.</p>	Name	Intra-NE Network	Inter-NE Network	OAM	<IMI Network>	<XMI Network>	Replication	<IMI Network>	<XMI Network>	Signaling	Unspecified	Unspecified	HA_Secondary	Unspecified	Unspecified	HA_MP_Secondary	Unspecified	Unspecified	Replication_MP	<IMI Network>	Unspecified	ComAgent	<IMI Network>	Unspecified	Name	Intra-NE Network	Inter-NE Network	OAM	IMI	XMI	Replication	IMI	XMI	Signaling	Unspecified	Unspecified	HA_Secondary	Unspecified	Unspecified	HA_MP_Secondary	Unspecified	Unspecified	Replication_MP	IMI	Unspecified	ComAgent	IMI	Unspecified
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**Procedure 9. Configure the First NOAMP NE and Server**

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

## Procedure 9. Configure the First NOAMP NE and Server

9 <input type="checkbox"/>	<b>Copy Configuration File to 1<sup>st</sup> NOAMP Server</b>	<p>Obtain a terminal window to the 1<sup>st</sup> NOAMP server, logging in as the <b>admusr</b> user. (see 4.7Appendix F for instructions on how to access the NOAMP from iLO)</p> <p>Become the super user by using the command:</p> <pre>\$ sudo su</pre> <p>You should see the prompt change to the hash mark:</p> <pre>#</pre> <p>Copy the configuration file created in the previous step from the /var/TKLC/db/filemgmt directory on the 1<sup>st</sup> NOAMP to the /var/tmp directory. The configuration file will have a filename like TKLCConfigData.&lt;hostname&gt;.sh. The following is an example:</p> <pre># cp /var/TKLC/db/filemgmt/TKLCConfigData.blade01.sh /var/tmp/TKLCConfigData.sh</pre>
10 <input type="checkbox"/>	<b>Wait for Configuration to Complete</b>	<p>The automatic configuration daemon will look for the file named “TKLCConfigData.sh” in the /var/tmp directory, implement the configuration in the file, and then prompt the user to reboot the server.</p> <p>Wait to be prompted to reboot the server, but <b>DO NOT</b> reboot the server, it will be rebooted later on in this procedure.</p> <p><b>NOTE:</b> Ignore the warning about removing the USB key, since no USB key is present. .</p>
11 <input type="checkbox"/>	<b>Configure Time Zone</b>	<p>From the command line prompt, execute <i>set_ini_tz.pl</i>. This will set the system time zone. The following command example uses the America/New_York time zone. Replace as appropriate with the time zone you have selected for this installation. For UTC, use “Etc/UTC”, for a full list of valid timezones, see 4.7Appendix L.</p> <pre># /usr/TKLC/appworks/bin/set_ini_tz.pl "Etc/UTC" &gt;/dev/null 2&gt;&amp;1</pre>
12 <input type="checkbox"/>	<b>Reboot the Server</b>	<pre># init 6</pre>

**Procedure 9. Configure the First NOAMP NE and Server**

<p>13</p> <p><input type="checkbox"/></p>	<p><b>(Optional)</b></p> <p><b>Configure Networking for Dedicated NetBackup Interface</b></p>	<p><b>NOTE: You will only execute this step if your NO is using a dedicated Ethernet interface for NetBackup.</b></p> <p>From a root login session (login as admusr, then become superuser) on the first NO, execute the following commands:</p> <pre># netAdm set --device=netbackup --type=Ethernet -- onboot=yes --address=&lt;NO1 NetBackup_IP&gt; -- netmask=&lt;NetBackup_NetMask&gt;</pre> <pre># netAdm add --route=net --device=netbackup -- address=&lt;NetBackup_Network_ID&gt; -- netmask=&lt;NetBackup_Network_NetMask&gt; -- gateway=&lt;NetBackup_Network_Gateway_IP&gt;</pre>
<p>14</p> <p><input type="checkbox"/></p>	<p><b>1<sup>st</sup> NO Server:</b></p> <p><b>Verify Server Health</b></p>	<p>Execute the following command as super-user on the 1<sup>st</sup> NO server and make sure that no errors are returned:</p> <pre># syscheck Running modules in class hardware... OK Running modules in class disk... OK Running modules in class net... OK Running modules in class system... OK Running modules in class proc... OK LOG LOCATION: /var/TKLC/log/syscheck/fail_log</pre>

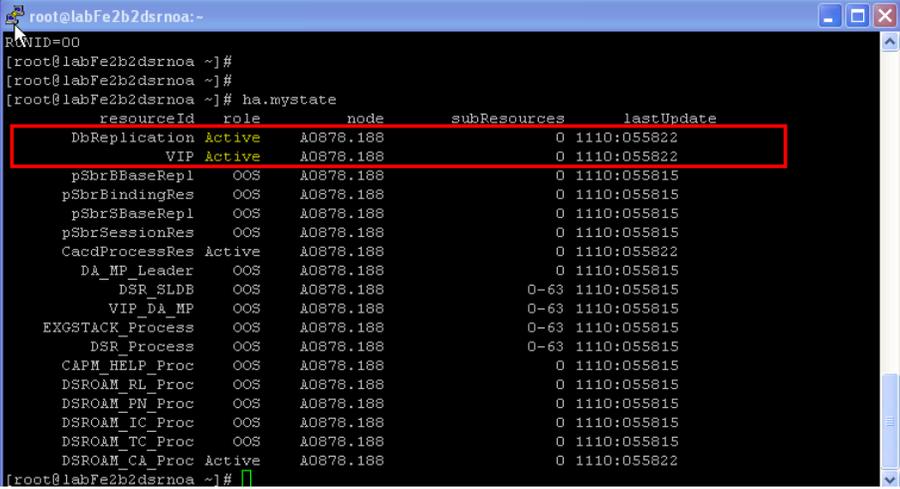
**Procedure 10. Configure the NOAMP Server Group**

<p><b>S</b></p> <p><b>T</b></p> <p><b>E</b></p> <p><b>P</b></p>	<p>This procedure will provide the steps to configure the NOAMP server group.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.</p>	
<p>1</p> <p><input type="checkbox"/></p>	<p><b>NOAMP GUI:</b></p> <p><b>Login</b></p>	<p>Establish a GUI session on the first NOAMP server by using the XMI IP address of the first NOAMP server. Open the web browser and enter a URL of:</p> <pre>http://&lt;first noamp XMI IP address&gt;</pre> <p>Login as the guiadmin user. If prompted by a security warning, select “Continue to this Website” to proceed.</p>

**Procedure 10. Configure the NOAMP Server Group**

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

**Procedure 10. Configure the NOAMP Server Group**

<p>4</p> <p><input type="checkbox"/></p>	<p><b>Verify NOAMP blade server role</b></p>	<p>From terminal window to the iLO of the first NOAMP blade server, execute the <b>ha.mystate</b> command to verify that the “DbReplication” and VIP item under the “resourceId” column has a value of “Active” under the “role” column.</p> <p>You might have to wait a few minutes for it to become in that state.</p> <p>Press Ctrl+C to exit</p> <p>Example:</p>  <pre> root@labFe2b2dsrnoa:~# ha.mystate resourceId  role      node      subResources  lastUpdate ----- DbReplication Active    A0878.188  0 1110:055822 VIP Active    A0878.188  0 1110:055822 pSbrBBaseRepl OOS      A0878.188  0 1110:055815 pSbrBindingRes OOS      A0878.188  0 1110:055815 pSbrSBaseRepl OOS      A0878.188  0 1110:055815 pSbrSessionRes OOS      A0878.188  0 1110:055815 CacdProcessRes Active    A0878.188  0 1110:055822 DA_MP_Leader OOS      A0878.188  0 1110:055815 _DSR_SLDB OOS      A0878.188  0-63 1110:055815 VIP_DA_MP OOS      A0878.188  0-63 1110:055815 EXGSTACK_Process OOS      A0878.188  0-63 1110:055815 _DSR_Process OOS      A0878.188  0-63 1110:055815 CAPM_HELP_Proc OOS      A0878.188  0 1110:055815 DSROAM_RL_Proc OOS      A0878.188  0 1110:055815 DSROAM_PN_Proc OOS      A0878.188  0 1110:055815 DSROAM_IC_Proc OOS      A0878.188  0 1110:055815 DSROAM_TC_Proc OOS      A0878.188  0 1110:055815 DSROAM_CA_Proc Active    A0878.188  0 1110:055822     </pre>
<p>5</p> <p><input type="checkbox"/></p>	<p><b>Restart 1<sup>st</sup> NOAMP blade server</b></p>	<p>From the NOAMP GUI, select the <b>Main menu</b>→<b>Status &amp; Manage</b>→<b>Server</b> menu. Select the first NOAMP server. Select the <b>Restart</b> button. Answer OK to the confirmation popup. Wait for restart to complete.</p>

**Procedure 11. Configure the Second NOAMP Server**

<b>S T E P</b>	<p>This procedure will provide the steps to configure the Second NOAMP server.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.</p>					
1 <input type="checkbox"/>	<p><b>Exchange SSH keys between PMAC and second NOAMP server</b></p>	<p>Use the PMAC GUI to determine the Control Network IP address of the blade server that is to be the second NOAMP server. From the PMAC GUI, navigate to <b>Main Menu → Software→Software Inventory</b>. Note the IP address for the second NOAMP server, usually the second blade in the first enclosure.</p> <p>Login to the PMAC terminal as the <i>admusr</i> .</p> <p>From a terminal window connection on the PMAC as the <i>admusr</i> user, exchange SSH keys for <i>admusr</i> between the PMAC and the 2<sup>nd</sup> NOAMP blade server using the keyexchange utility, using the Control network IP address for the NOAMP blade server. When prompted for the password, enter the password for the <i>admusr</i> user of the NOAMP server.</p> <pre>\$ keyexchange admusr@&lt;2<sup>nd</sup>NOAMP blade Control Net IP addr&gt;</pre> <p>Note: if keyexchange fails, edit “/home/admusr/.ssh/known_hosts” and remove blank lines, and retry the keyexchange commands.</p>				
2 <input type="checkbox"/>	<p><b>NOAMP GUI: Login</b></p>	<p>If not already done, establish a GUI session on the first NOAMP server by using the XMI IP address of the first NOAMP server. Open the web browser and enter a URL of: <a href="http://&lt;first noamp XMI IP address&gt;">http://&lt;first noamp XMI IP address&gt;</a></p> <p>Login as the guiadmin user.</p>				
3 <input type="checkbox"/>	<p><b>Insert the 2<sup>nd</sup> NOAMP server</b></p>	<p>Navigate to <b>Main Menu → Configuration – Servers</b>.</p> <p>Click on <b>Insert</b> to insert the new second NOAMP server into servers table (“B” server).</p> <p>This server role should be the “NETWORK OAM&amp;P”.</p> <p>Select the Network Element Name (should be the same used when configuring the first NOAMP).</p> <p>Choose "DSR TVOE Guest" for the hardware profile.</p> <p>Fill in the server IP addresses for the XMI network. Select "xmi" for the interface. <b>Leave the "VLAN" checkbox unchecked.</b></p> <p>Fill in the server IP addresses for the IMI network. Select "imi" for the interface. <b>Leave the "VLAN" checkbox unchecked.</b></p> <p>Next, add the following NTP servers:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: center;">NTP Server</th> <th style="text-align: center;">Preferred?</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">&lt;NO2-TVOE-XMI/PlatMgmt-IP-Address&gt;</td> <td style="text-align: center;">Yes</td> </tr> </tbody> </table> <p>Select the <b>Ok</b> button when you have completed entering the server data.</p>	NTP Server	Preferred?	<NO2-TVOE-XMI/PlatMgmt-IP-Address>	Yes
NTP Server	Preferred?					
<NO2-TVOE-XMI/PlatMgmt-IP-Address>	Yes					

## Procedure 11. Configure the Second NOAMP Server

4 <input type="checkbox"/>	<b>Export the initial configuration</b>	From the GUI screen, select the second server and then select <b>Export</b> action button to generate the initial configuration data for that server.
5 <input type="checkbox"/>	<b>Copy Configuration File to 2<sup>nd</sup> NOAMP Server</b>	<p>Obtain a terminal session to the 1<sup>st</sup> NOAMP as the <b>admusr</b> user.</p> <p>Use the <code>awpushcfg</code> utility to copy the configuration file created in the previous step from the <code>/var/TKLC/db/filemgmt</code> directory on the 1<sup>st</sup> NOAMP to the 2<sup>nd</sup> NOAMP blade server, using the Control network IP address for the 2<sup>nd</sup> NOAMP blade server. The configuration file will have a filename like <code>TKLCConfigData.&lt;hostname&gt;.sh</code>.</p> <pre>\$ awpushcfg</pre> <p>The <code>awpushcfg</code> utility is interactive, so the user will be</p> <ul style="list-style-type: none"> <li>- prompted for the IP address of the local PMAC server. Use the local control network address from the PMAC.</li> <li>- the blade inventory will be presented,</li> <li>- prompted for the Control network IP address for the target server (In this case, the standby NOAMP server).</li> <li>- prompted for the hostname of the target server</li> <li>- Note: If prompted for a username, please use <b>admusr</b></li> </ul>
6 <input type="checkbox"/>	<b>Set the timezone and Reboot the Server</b>	<p>Obtain a terminal window connection on the 2<sup>nd</sup> NOAMP iLO from the OA. Login as the <b>admusr</b> user.</p> <p>(Use the procedure in 4.7Appendix F).</p> <p>Become the super user by using the command:</p> <pre>\$ sudo su</pre> <p>You should see the prompt change to the hash mark:</p> <pre>#</pre> <p>The automatic configuration daemon will look for the file named “TKLCConfigData.sh” in the <code>/var/tmp</code> directory, implement the configuration in the file, and then prompt the user to reboot the server.</p> <p>Verify <code>awpushcfg</code> was called by checking the following file</p> <pre># cat /var/TKLC/appw/logs/Process/install.log</pre> <p>Set the timezone using the following command. The following command example uses the America/New_York time zone. Replace as appropriate with the time zone you have selected for this installation. For UTC, use “Etc/UTC”, for a full list of valid timezones, see 4.7Appendix L.</p> <pre># /usr/TKLC/appworks/bin/set_ini_tz.pl "Etc/UTC" &gt;/dev/null 2&gt;&amp;1</pre> <p>Now Reboot the Server:</p> <pre># sudo init 6</pre> <p>Wait for the server to reboot</p>

**Procedure 11. Configure the Second NOAMP Server**

<p>7</p> <p><input type="checkbox"/></p>	<p><b>(Optional)</b></p> <p><b>Configure Networking for Dedicated NetBackup Interface</b></p>	<p><b>NOTE: You will only execute this step if your NO is using a dedicated Ethernet interface for NetBackup.</b></p> <p>As the super user on the 2<sup>nd</sup> NO, execute the following commands:</p> <pre># netAdm set --device=netbackup --type=Ethernet -- onboot=yes --address=&lt;NO2_NetBackup_IP&gt; -- netmask=&lt;NetBackup_NetMask&gt;</pre> <pre># netAdm add --route=net --device=netbackup -- address=&lt;NetBackup_Network_ID&gt; -- netmask=&lt;NetBackup_Network_NetMask&gt; -- gateway=&lt;NetBackup_Network_Gateway_IP&gt;</pre>
<p>8</p> <p><input type="checkbox"/></p>	<p><b>2nd NO Server:</b></p> <p><b>Verify Server Health</b></p>	<p>Execute the following command as super-user on the 2<sup>nd</sup> NO server and make sure that no errors are returned:</p> <pre># syscheck Running modules in class hardware... OK Running modules in class disk... OK Running modules in class net... OK Running modules in class system... OK Running modules in class proc... OK LOG LOCATION: /var/TKLC/log/syscheck/fail_log</pre>

**Procedure 12. Complete Configuring the NOAMP Server Group**

<p><b>S</b></p> <p><b>T</b></p> <p><b>E</b></p> <p><b>P</b></p> <p><b>#</b></p>	<p>This procedure will provide the steps to finish configuring th NOAMP Server Group.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.</p>
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**Procedure 12. Complete Configuring the NOAMP Server Group**

<p>1</p> <p><input type="checkbox"/></p>	<p><b>Edit the NOAMP Server Group Data</b></p>	<p>From the GUI session on the first NOAMP server, go to the GUI <b>Main Menu-&gt;Configuration-&gt;Server Groups</b>.</p> <p>Select the NOAMP Server group and click on <b>Edit</b> and add the second NOAMP server to the Server Group by clicking the “Include in SG” checkbox for the second NOAMP server. Click <b>Apply</b>.</p> <table border="1"> <thead> <tr> <th colspan="3">RMSNO_900060102</th> </tr> <tr> <th>Server</th> <th>SG Inclusion</th> <th>Preferred HA Role</th> </tr> </thead> <tbody> <tr> <td>RMSNOA</td> <td><input checked="" type="checkbox"/> Include in SG</td> <td><input type="checkbox"/> Preferred Spare</td> </tr> <tr> <td>RMSNOB</td> <td><input checked="" type="checkbox"/> Include in SG</td> <td><input type="checkbox"/> Preferred Spare</td> </tr> </tbody> </table> <p>Add a NOAMP VIP by click on <b>Add</b>. Fill in the VIP Address and press <b>Ok</b> as shown below</p> <table border="1"> <thead> <tr> <th colspan="2">VIP Address</th> </tr> </thead> <tbody> <tr> <td><input type="text"/></td> <td> <input type="button" value="Add"/> <input type="button" value="Remove"/> </td> </tr> <tr> <td colspan="2"> <input type="button" value="Ok"/> <input type="button" value="Apply"/> <input type="button" value="Cancel"/> </td> </tr> </tbody> </table>	RMSNO_900060102			Server	SG Inclusion	Preferred HA Role	RMSNOA	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare	RMSNOB	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare	VIP Address		<input type="text"/>	<input type="button" value="Add"/> <input type="button" value="Remove"/>	<input type="button" value="Ok"/> <input type="button" value="Apply"/> <input type="button" value="Cancel"/>	
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<input type="button" value="Ok"/> <input type="button" value="Apply"/> <input type="button" value="Cancel"/>																				
<p>2</p> <p><input type="checkbox"/></p>	<p><b>Wait for Replication</b></p>	<p>After replication, which will initially take up to 5 minutes, the HA status should be active (<b>Main menu-&gt;Status &amp; Manage-&gt;HA</b>). Note: This may take up to 5 minutes while the NOAMP servers figure out master/slave relationship.</p> <p>Log out of GUI from the first NOAMP XMI address.</p>																		
<p>3</p> <p><input type="checkbox"/></p>	<p><b>Establish GUI Session on the NOAMP VIP</b></p>	<p>Establish a GUI session on the NOAMP by using the XMI VIP address. Login as user “guiadmin”.</p>																		
<p>4</p> <p><input type="checkbox"/></p>	<p><b>Wait for Remote Database Alarm to Clear</b></p>	<p>Wait for the alarm "Remote Database re-initialization in progress" to be cleared before proceeding. (<b>Main menu-&gt;Alarms &amp; Events-&gt;View Active</b>)</p>																		
<p>5</p> <p><input type="checkbox"/></p>	<p><b>Verify HA Role for 2<sup>nd</sup> NOAMP server</b></p>	<p>In the <b>Main menu-&gt;Status &amp; Manage-&gt;HA</b> menu, verify that the “Max Allowed HA Role” for the 2<sup>nd</sup> NOAMP server is “Active”.</p> <p>If it is <b>not</b>, press the <b>Edit</b> button and in the resulting screen, change the 2<sup>nd</sup> NOAMPs server’s “Max Allowed HA Role” to “Active” using the dropdown box.</p> <table border="1"> <thead> <tr> <th>Hostname</th> <th>Max Allowed HA Role</th> </tr> </thead> <tbody> <tr> <td>HPC6NO</td> <td>Active <input type="button" value="v"/></td> </tr> </tbody> </table> <p>Press <b>OK</b>.</p>	Hostname	Max Allowed HA Role	HPC6NO	Active <input type="button" value="v"/>														
Hostname	Max Allowed HA Role																			
HPC6NO	Active <input type="button" value="v"/>																			

**Procedure 12. Complete Configuring the NOAMP Server Group**

6 <input type="checkbox"/>	<b>Restart 2<sup>nd</sup> NOAMP blade server</b>	In the <b>Main menu-&gt;Status &amp; Manage-&gt;Server</b> menu, select the second NOAMP server. Select the “Restart” button. Answer OK to the confirmation popup. Wait approximately 3-5 minutes before proceeding to allow the system to stabilize indicated by having the “Appl State” as “Enabled”.
7 <input type="checkbox"/>	<b>SDS can now be installed (Optional)</b>	If this deployment contains SDS, SDS can now be installed. Refer to document referenced in [21].

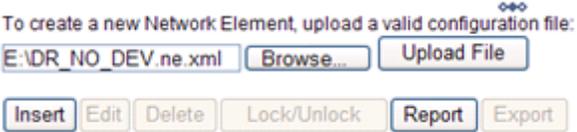
**Procedure 13. Install NetBackup Client (Optional)**

<b>S T E P #</b>	<p>This procedure will download and install NetBackup Client software on the server.</p> <p>Location of the bptest_notify and bpend_notify scripts is required for the execution of this procedure. For Appworks based applications the scripts are located as follows:</p> <p style="text-align: center;">/usr/TKLC/appworks/sbin/bptest_notify /usr/TKLC/appworks/sbin/bpend_notify</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.</p>	
1 <input type="checkbox"/>	<b>Install Netbackup Client Software</b>	If a customer has a way of transferring and installing the netbackup client without the aid of TPD tools (push configuration) then use <i>Appendix L.2 Netbackup Client Install with nbAutoInstall</i> . <b><u>This is not common. If the answer to the previous question is not known</u></b> then use <i>Appendix L.1 Netbackup Client Install with platcfg</i> .
2 <input type="checkbox"/>	<b>Install Netbackup Client Software</b>	Choose the same method used in step 1 to install NetBackup on the 2 <sup>nd</sup> NO.

**Procedure 14. NO Configuration for DR Site (Optional)**

<b>S T E P #</b>	<p>This procedure will provide the steps to configure the First DR NOAMP blade server.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p><b>Prerequisite:</b> Application software already installed.</p> <p><b>Needed material:</b></p> <ul style="list-style-type: none"> <li>- DR Site installed with its PM&amp;C Configured</li> <li>- DSR NO DR Site Network Element File</li> </ul> <p>IF THIS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.</p>	
1 <input type="checkbox"/>	<b>Primary NOAMP VIP GUI : Login</b>	<p>Using a web browser, navigate to the <b>XMI Virtual IP Address (VIP)</b> of the <b>Primary NO Site</b>.</p> <p>Login using the guiadmin user.</p>

**Procedure 14. NO Configuration for DR Site (Optional)**

<p>2</p> <p><input type="checkbox"/></p>	<p><b>Primary NOAMP VIP GUI: Insert Network Element for DR Site</b></p>	<p>Refer to appendix A for a sample network element xml file.</p> <p>Using the GUI menu, Navigate to <b>Configuration -&gt; Network Elements</b> as shown below</p>  <p>The “<b>Network Elements</b>” screen will display, select the “<b>Browse</b>” dialogue button (scroll to bottom left corner of screen).</p> <p>To create a new Network Element, upload a valid configuration file:</p>  <p><b>Insert</b> <b>Edit</b> <b>Delete</b> <b>Lock/Unlock</b> <b>Report</b> <b>Export</b></p> <p>A dialogue will pop up, browse to the location of the DSR DR NO Site Element XML File and click the “<b>Open</b>” button.</p> <p>Then click “<b>Upload File</b>” as shown below</p>  <p>If the values in the .xml file pass validation rules, the user will receive a banner information message showing that the data has been successfully validated and committed to the DB.</p>
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**Procedure 14. NO Configuration for DR Site (Optional)**

3	<p><b>Primary NOAMP VIP GUI: Insert Servers</b></p>	<p>Using the GUI menu, Navigate to <b>Configuration -&gt; Servers</b></p> <p>Click the <b>“Insert”</b> button (bottom left corner of screen). An <b>“Adding a new server”</b> screen will be displayed up as shown below</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p style="text-align: center; margin: 0;"><b>Adding a new server</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Attribute</th> <th style="text-align: left;">Value</th> <th style="text-align: left;">Description</th> </tr> </thead> <tbody> <tr> <td>Host Name</td> <td><input style="width: 80%;" 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 - <input style="width: 20px;" type="button" value="v"/></td> <td>Select the function of the server</td> </tr> <tr> <td>Hardware Profile</td> <td>TVOE Guest <input style="width: 20px;" type="button" value="v"/></td> <td>Hardware profile of the server</td> </tr> <tr> <td>Network Element Name</td> <td>- Unassigned - <input style="width: 20px;" type="button" value="v"/></td> <td>Select the network element</td> </tr> <tr> <td>Location</td> <td><input style="width: 80%;" 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: right; margin: 0;"> <input type="button" value="Ok"/> <input type="button" value="Apply"/> <input type="button" value="Cancel"/> </p> </div> <p>Fill in the following Values:</p> <p><b>Host Name:</b> Name of <b>DSR DR NO Server A</b></p> <p><b>Role:</b> Select the <b>NETWORK OAM&amp;P</b></p> <p><b>System ID:</b> Enter value for &lt;Site System ID&gt;</p> <p><b>Hardware Profile:</b> Select <b>DSR TVOE Guest</b></p> <p><b>Network element Name:</b> Select the network Element Name for the <b>DSR DR Site</b> (the one inserted in step 2 above).</p> <p><b>Location:</b> Fill in the server geographical location (optional).</p> <p>The network interface fields will now become available with selection choices based on the chosen hardware profile and network element</p> <div style="border: 1px solid gray; padding: 5px; margin: 10px 0;"> <p style="margin: 0;"><b>Interfaces:</b></p> <table border="1" 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>INTERNALXMI (10.240.84.128/25)</td> <td><input style="width: 80%;" type="text" value="10.240.84.155"/></td> <td><input style="width: 40px;" type="button" value="v"/> xmi <input type="checkbox"/> VLAN (3)</td> </tr> <tr> <td>INTERNALIMI (10.240.85.0/28)</td> <td><input style="width: 80%;" type="text" value="10.240.85.10"/></td> <td><input style="width: 40px;" type="button" value="v"/> imi <input type="checkbox"/> VLAN (4)</td> </tr> </tbody> </table> <p style="text-align: right; margin: 0;"> <input type="button" value="Ok"/> <input type="button" value="Apply"/> <input type="button" value="Cancel"/> </p> </div> <p>Fill in the server IP addresses for the XMI network. Select "xmi" for the interface. <b>Leave the "VLAN" checkbox unchecked.</b></p> <p>Fill in the server IP addresses for the IMI network. Select "imi" for the interface. <b>Leave the "VLAN" checkbox unchecked.</b></p> <p>Next, add the following NTP servers:</p> <table border="1" style="width: 100%; border-collapse: collapse; margin: 10px 0;"> <thead> <tr> <th style="text-align: center;">NTP Server</th> <th style="text-align: center;">Preferred?</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;"><i>&lt;DR-NOI-TVOE-XMI/Platmgmt-IP-Address&gt;</i></td> <td style="text-align: center;">Yes</td> </tr> </tbody> </table> <p>Select the <b>“Ok”</b> button when you have completed entering the server data.</p>	Attribute	Value	Description	Host Name	<input style="width: 80%;" 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 - <input style="width: 20px;" type="button" value="v"/>	Select the function of the server	Hardware Profile	TVOE Guest <input style="width: 20px;" type="button" value="v"/>	Hardware profile of the server	Network Element Name	- Unassigned - <input style="width: 20px;" type="button" value="v"/>	Select the network element	Location	<input style="width: 80%;" type="text"/>	Location description [Default = ". Range = A 15-character string. Valid value is any text string.]	Network	IP Address	Interface	INTERNALXMI (10.240.84.128/25)	<input style="width: 80%;" type="text" value="10.240.84.155"/>	<input style="width: 40px;" type="button" value="v"/> xmi <input type="checkbox"/> VLAN (3)	INTERNALIMI (10.240.85.0/28)	<input style="width: 80%;" type="text" value="10.240.85.10"/>	<input style="width: 40px;" type="button" value="v"/> imi <input type="checkbox"/> VLAN (4)	NTP Server	Preferred?	<i>&lt;DR-NOI-TVOE-XMI/Platmgmt-IP-Address&gt;</i>	Yes
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NTP Server	Preferred?																																
<i>&lt;DR-NOI-TVOE-XMI/Platmgmt-IP-Address&gt;</i>	Yes																																

## Procedure 14. NO Configuration for DR Site (Optional)

4 <input type="checkbox"/>	<b>Primary NOAMP VIP GUI: Export the Initial Configuration</b>	<p>Navigate to <b>Main Menu -&gt; Configuration -&gt; Servers</b></p> <p>From the GUI screen, select the DR NO server added in the previous step and click the “<b>Export</b>” button to generate the initial configuration data for that server.</p> <p>The user will receive a banner information message as shown below.</p> 
5 <input type="checkbox"/>	<b>Exchange SSH keys between PMAC and first DR-NOAMP server</b>	<p>Use the DR-NOAM site PMAC GUI to determine the Control Network IP address of the blade server that is to be the first DR NOAMP server. From the PMAC GUI, navigate to <b>Main Menu → Software → Software Inventory</b>.</p> <p>Note the IP address for the first DR NOAMP server.</p> <p>Login to the DR NOAM site PMAC terminal as the <i>admusr</i> .</p> <p>From a terminal window connection on the PMAC as the <i>admusr</i> user, exchange SSH keys for <i>admusr</i> between the PMAC and the 1<sup>st</sup> DR NOAMP blade server using the keyexchange utility, using the Control network IP address for the DR-NOAMP blade server. When prompted for the password, enter the password for the <i>admusr</i> user of the DR NOAMP server.</p> <pre>\$ keyexchange admusr@&lt;DR_NOAMP blade Control Net IP addr&gt;</pre>
6 <input type="checkbox"/>	<b>Exchange SSH keys between NOAMP and PMAC at the DR site</b>	<p>From a terminal window connection on the NOAMP VIP as the <i>admusr</i>, exchange SSH keys for <i>admusr</i> between the NOAMP and the DR NO’s PMAC using the keyexchange utility.</p> <p>When prompted for the password, enter the appropriate password for <i>admusr</i> on the PMAC server.</p> <pre>\$ keyexchange admusr@&lt;DR_NO_SITE_PMAC_Management_IP&gt;</pre>

**Procedure 14. NO Configuration for DR Site (Optional)**

<p>7 <input type="checkbox"/></p>	<p><b>Copy Configuration File to 1<sup>st</sup> DR NO Server</b></p>	<p>SSH to the NOAMP VIP as admusr and use the <code>awpushcfg</code> utility to copy the configuration file created in the previous step from the <code>/var/TKLC/db/filemgmt</code> directory on the Primary Active to the first DR NOAMP server, using the Control network IP address for the first DR NOAMP server. The configuration file will have a filename like <code>TKLCConfigData.&lt;hostname&gt;.sh</code>.</p> <pre>\$ awpushcfg</pre> <p>The <code>awpushcfg</code> utility is interactive, so the user will be</p> <ul style="list-style-type: none"> <li>- prompted for the IP address of the PMAC server (make sure you enter the Management IP address of the PM&amp;C on the DR Site),</li> <li>- the blade inventory will be presented,</li> <li>- prompted for the Control network IP address for the target server (in this case, the first DR NOAMP server).</li> <li>- prompted for the hostname of the target server,</li> <li>- Note: If prompted for a username, please use <b>admusr</b></li> </ul>									
<p>8 <input type="checkbox"/></p>	<p><b>DR NO Server A: Verify awpushcfg was successful</b></p>	<ul style="list-style-type: none"> <li>• Access the TVOE machine hosting the <b>DR NO Server A</b> using the <b>iLO Connection</b> and log in as root.</li> <li>• Access the <b>DR NO Server A VM</b> console by running the following commands</li> </ul> <pre># virsh list --all</pre> <table border="1"> <thead> <tr> <th>Id</th> <th>Name</th> <th>State</th> </tr> </thead> <tbody> <tr> <td>6</td> <td>vm-pmac</td> <td>running</td> </tr> <tr> <td>7</td> <td>DSR-NO</td> <td>running</td> </tr> </tbody> </table> <p>The connect to <b>DR NO Server A VM</b> using the following command, and login as root.</p> <pre># virsh console DSR-NO</pre> <pre>Connected to domain vm-DSR-NO Escape character is ^] &lt;Press ENTER key&gt; CentOS release 6.2 (Final) kernel 2.6.32-220.7.1.el6prere16.0.0_80.13.0.x86_64 on an x86_64 DSR-NO login: root Password: Last login: Fri May 25 16:39:04 on ttyS4</pre> <ul style="list-style-type: none"> <li>• Verify <code>awpushcfg</code> was called by checking the following file</li> </ul> <pre># cat /var/TKLC/appw/logs/Process/install.log</pre>	Id	Name	State	6	vm-pmac	running	7	DSR-NO	running
Id	Name	State									
6	vm-pmac	running									
7	DSR-NO	running									

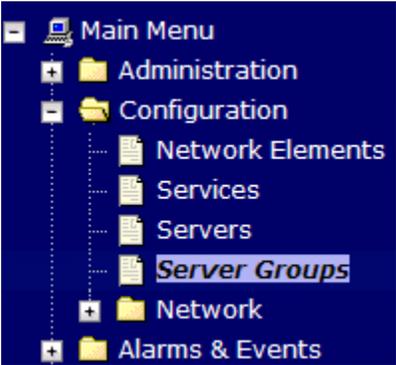
**Procedure 14. NO Configuration for DR Site (Optional)**

9 <input type="checkbox"/>	<b>DR NO Server A VM:</b> Wait for Configuration to Complete	<p>The automatic configuration daemon will look for the file named “TKLCConfigData.sh” in the /var/tmp directory, implement the configuration in the file, and then prompt the user to reboot the server.</p> <p>Wait to be prompted to reboot the server, but <b>DO NOT</b> reboot the server, it will be rebooted later on in this procedure.</p> <p><b>NOTE:</b> Ignore the warning about removing the USB key, since no USB key is present. .</p>
10 <input type="checkbox"/>	<b>DR NO Server A VM:</b> Configure Time Zone	<p>Continuing from the command line prompt, execute <i>set_ini_tz.pl</i>. This will set the system time zone. The following command example uses the America/New_York time zone. Replace as appropriate with the time zone you have selected for this installation. For UTC, use “Etc/UTC”, for a full list of valid timezones, see 4.7Appendix L.</p> <pre># /usr/TKLC/appworks/bin/set_ini_tz.pl "Etc/UTC" &gt;/dev/null 2&gt;&amp;1</pre>
11 <input type="checkbox"/>	<b>DR NO Server A VM:</b> Reboot the VM	<p>Reboot the server using the following command:</p> <pre># init 6</pre> <p>Then wait for the server to reboot (takes between 5 and 10 minutes)</p>
12 <input type="checkbox"/>	<b>DR NO Server A VM:</b> Configure Networking for Dedicated NetBackup Interface (Optional)	<p><b>NOTE: You will only execute this step if your NO is using a dedicated Ethernet interface for NetBackup.</b></p> <p>From a super user session on the first DR NO, execute the following commands:</p> <pre># netAdm set --device=netbackup --type=Ethernet --onboot=yes --address=&lt;NO1_NetBackup_IP&gt; --netmask=&lt;NetBackup_NetMask&gt;  # netAdm add --route=net --device=netbackup --address=&lt;NetBackup_Network_ID&gt; --netmask=&lt;NetBackup_Network_NetMask&gt; --gateway=&lt;NetBackup_Network_Gateway_IP&gt;</pre>

**Procedure 14. NO Configuration for DR Site (Optional)**

<p>13</p> <p><input type="checkbox"/></p>	<p><b>DR NO Server A VM: Verify Server Health</b></p>	<p>Execute the following command as super-user and make sure that no errors are returned:</p> <pre># syscheck Running modules in class hardware... OK Running modules in class disk... OK Running modules in class net... OK Running modules in class system... OK Running modules in class proc... OK LOG LOCATION: /var/TKLC/log/syscheck/fail_log</pre>				
<p>14</p> <p><input type="checkbox"/></p>	<p><b>Repeat for DR NO Server B</b></p>	<p>Repeat Steps 3 through 12 to configure DR NO Server B. When inserting the 2<sup>nd</sup> server, change the NTP server address to the following:</p> <table border="1"> <thead> <tr> <th>NTP Server</th> <th>Preferred?</th> </tr> </thead> <tbody> <tr> <td>&lt;DR-NO2-TVOE-XMI/Platmgmt-IP-Address&gt;</td> <td>Yes</td> </tr> </tbody> </table>	NTP Server	Preferred?	<DR-NO2-TVOE-XMI/Platmgmt-IP-Address>	Yes
NTP Server	Preferred?					
<DR-NO2-TVOE-XMI/Platmgmt-IP-Address>	Yes					

**Procedure 15. NO Pairing for DSR NO DR Site (Optional)**

<p><b>S T E P #</b></p>	<p>This procedure will provide the steps to configure the First DR NOAMP blade server.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p><b>Prerequisite:</b> Procedure 36. NO Installation for DR Site complete</p> <p>IF THIS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.</p>	
<p>1</p> <p><input type="checkbox"/></p>	<p><b>Primary NOAMP VIP GUI: Login</b></p>	<p>Using a web browser, navigate to the <b>XMI Virtual IP Address (VIP)</b> of the <b>Primary NO Site</b>.</p> <p>Login using the guiadmin user.</p>
<p>2</p> <p><input type="checkbox"/></p>	<p><b>Primary NOAMP GUI: Navigate to Server Group</b></p>	<p>Using the GUI menu, Navigate to <b>Configuration -&gt; Server Groups</b> as shown below</p> 

**Procedure 15. NO Pairing for DSR NO DR Site (Optional)**

<p>3 <input type="checkbox"/></p>	<p><b>Primary NOAMP</b> <b>GUI:</b> Insert Server Group</p>	<p>The <b>Server Groups</b> screen will display, click on <b>Insert</b> to add a new Server Group</p> <p>Fill in the following values:</p> <p><u>Server Group Name:</u> Enter Server Group Name of <b>DSR DR NO</b> Site</p> <p><u>Level:</u> Select <b>A</b></p> <p><u>Parent:</u> Select <b>None</b></p> <p><u>Function:</u> Select <b>DSR Active/Standby Pair</b></p> <p><u>WAN Replication Connection Count:</u> <b>Use Default Value</b></p> <p>Then press <b>“Apply”</b>, make sure the validation is successful</p>												
<p>4 <input type="checkbox"/></p>	<p><b>Primary NOAMP</b> <b>GUI:</b> Update Server Group</p>	<p>Select the <b>Server Group</b> that was created in the previous step, and click on <b>“Edit”</b>.</p> <div style="text-align: center;">  </div> <p>The user will be presented with the <b>“Server Groups [Edit]”</b> screen</p> <p>Check the checkbox labeled <b>“Include in SG”</b> for the <b>“A”</b> and <b>“B”</b> DR Servers as shown below and click on <b>“Apply”</b></p> <table border="1"> <thead> <tr> <th colspan="3">deaDR_CSLAB_ATT</th> </tr> <tr> <th>Server</th> <th>SG Inclusion</th> <th>Preferred HA Role</th> </tr> </thead> <tbody> <tr> <td>deaNO- ChaNC-A</td> <td><input checked="" type="checkbox"/> Include in SG</td> <td><input type="checkbox"/> Preferred Spare</td> </tr> <tr> <td>deaNO- ChaNC-B</td> <td><input checked="" type="checkbox"/> Include in SG</td> <td><input type="checkbox"/> Preferred Spare</td> </tr> </tbody> </table>	deaDR_CSLAB_ATT			Server	SG Inclusion	Preferred HA Role	deaNO- ChaNC-A	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare	deaNO- ChaNC-B	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare
deaDR_CSLAB_ATT														
Server	SG Inclusion	Preferred HA Role												
deaNO- ChaNC-A	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare												
deaNO- ChaNC-B	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare												
<p>5 <input type="checkbox"/></p>	<p><b>Primary NOAMP</b> <b>GUI:</b> Add VIP</p>	<p>Click the <b>“Add”</b> dialogue button for the VIP Address and enter an IP Address for the VIP as shown below</p> <div style="border: 1px solid gray; padding: 5px; margin: 10px 0;"> <div style="text-align: right; border-bottom: 1px solid gray; padding-bottom: 5px;"> <span style="float: right;">Add</span> </div> <div style="padding: 5px;"> <input style="width: 100%; border: none;" type="text" value="10.250.55.163"/> <span style="float: right; border: 1px solid gray; padding: 2px;">Remove</span> </div> </div> <p>Then click the <b>“Apply”</b> dialogue button. Verify that the banner information message states <b>“Data committed”</b>.</p> <div style="text-align: center; margin-top: 10px;">  </div>												
<p>6 <input type="checkbox"/></p>	<p><b>Wait for Remote Database Alarm to Clear</b></p>	<p>Wait for the alarm "Remote Database re-initialization in progress" to be cleared before proceeding. (<b>Main menu-&gt;Alarms &amp; Events-&gt;View Active</b>)</p>												
<p>7 <input type="checkbox"/></p>	<p><b>Primary NOAMP</b> <b>GUI:</b> Wait for 5 minutes</p>	<p>Now that the server(s) have been paired within a Server Group they must establish their proper roles for High Availability (HA). It may take several minutes for this process to be completed.</p> <p>Allow a minimum of <b>5 minutes</b> before continuing to the next Step.</p>												

**Procedure 15. NO Pairing for DSR NO DR Site (Optional)**

<p>8</p> <p><input type="checkbox"/></p>	<p><b>Primary NOAMP</b>  <b>GUI:</b> Verify/Change HA Status</p>	<p>Using the GUI main menu, Navigate to <b>Status &amp; Manage -&gt; HA</b></p> <p>Verify that the “<b>Max Allowed HA Role</b>” for <b>DR NO Servers A</b> and <b>B</b> shows “<b>Active</b>”.</p> <p>If the “<b>Max Allowed HA Role</b>” is set to standby for <b>Server A</b> or <b>Server B</b>, then click on “<b>Edit</b>” and set the “<b>Max Allowed HA Role</b>” to be “<b>Active</b>” for both DR Servers then press “<b>OK</b>”.</p> <p>You will be returned to the previous screen, verify that the “<b>Max Allowed HA Role</b>” for <b>DR NO Servers A</b> and <b>B</b> now shows “<b>Active</b>”.</p>														
<p>9</p> <p><input type="checkbox"/></p>	<p><b>Primary NOAMP</b>  <b>GUI:</b> Verify Server Status</p>	<p>Using the GUI main menu, Navigate to <b>Status &amp; Manage -&gt; Server</b></p> <p>The “<b>A</b>” and “<b>B</b>” DR NO servers should now appear in the right panel. Verify that the “<b>DB</b>” status shows “<b>Norm</b>” and the “<b>Proc</b>” status shows “<b>Man</b>” for both servers before proceeding to the next Step.</p> <table border="1"> <thead> <tr> <th>DB</th> <th>HA</th> <th>Proc</th> </tr> </thead> <tbody> <tr> <td>Norm</td> <td>Err</td> <td>Man</td> </tr> <tr> <td>Norm</td> <td>Err</td> <td>Man</td> </tr> </tbody> </table>	DB	HA	Proc	Norm	Err	Man	Norm	Err	Man					
DB	HA	Proc														
Norm	Err	Man														
Norm	Err	Man														
<p>10</p> <p><input type="checkbox"/></p>	<p><b>Primary NOAMP</b>  <b>GUI:</b> Restart Application on DR NO A</p>	<p>Using the mouse, select <b>DR NO Server A</b>. The line entry should now be highlighted in <b>GREEN</b>.</p> <p>Click the “<b>Restart</b>” button from the bottom left corner of the screen.</p> <table border="1"> <tr> <td>Stop</td> <td>Restart</td> <td>Reboot</td> </tr> </table> <p>Click the “<b>OK</b>” button on the confirmation dialogue box.</p> <p>The user should be presented with a confirmation message (in the banner area) for <b>DR NO Server A</b> stating: “<b>Successfully restarted application</b>”.</p>	Stop	Restart	Reboot											
Stop	Restart	Reboot														
<p>11</p> <p><input type="checkbox"/></p>	<p><b>Primary NOAMP</b>  <b>GUI:</b> Verify Application State on DR NO Server A</p>	<p>Using the GUI main menu, Navigate to <b>Status &amp; Manage -&gt; Server</b></p> <p>Verify that the “<b>Appl State</b>” now shows “<b>Enabled</b>” and that the “<b>Alm, Repl, Coll, DB, HA &amp; Proc</b>” status columns all show “<b>Norm</b>” for <b>DR NO Server A</b> before proceeding to the next Step.</p> <table border="1"> <thead> <tr> <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>Enabled</td> <td>Err</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> </tbody> </table> <p><b>NOTE:</b> 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 “<b>Status &amp; Manage → Server</b>” option from the Main menu on the left.</p>	Appl State	Alm	Repl	Coll	DB	HA	Proc	Enabled	Err	Norm	Norm	Norm	Norm	Norm
Appl State	Alm	Repl	Coll	DB	HA	Proc										
Enabled	Err	Norm	Norm	Norm	Norm	Norm										
<p>12</p> <p><input type="checkbox"/></p>	<p><b>Primary NOAMP</b>  <b>GUI:</b> Restart the application on DR NO Server B</p>	<p>Repeat Steps 8 – 10, but this time selecting DR NO Server B instead of A</p>														

**Procedure 16. Configure the SOAM NE**

S T E P #	<p>This procedure will provide the steps to configure the SOAM Network Element</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.</p>	
1 <input type="checkbox"/>	<p><b>Establish GUI Session on the NOAMP VIP</b></p>	<p>If needed, establish a GUI session on the NOAMP by using the OAM VIP address. Login as user “guiadmin”.</p>
2 <input type="checkbox"/>	<p><b>Create the SOAM Network Element using an XML File</b></p>	<p>Make sure to have an SOAM Network Element XML file available on the PC that is running the web browser. The SOAM Network Element XML file is similar to what was created and used in Procedure 9 , but defines the SOAM “Network Element”.</p> <p>Refer to Appendix A for a sample Network Element xml file (and instructions on what NTP server to choose)</p> <p>Navigate to <b>Main Menu-&gt;Configuration-&gt;Network Elements</b></p> <p>Select the “Browse” button, and enter the path and name of the SOAM network XML file.</p> <p>Select the “Upload File” button to upload the XML file and configure the SOAM Network Element.</p>

**Procedure 17. Configure the SOAM Servers**

S T E P #	<p>This procedure will provide the steps to configure the SOAM Servers</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.</p>	
1 <input type="checkbox"/>	<p><b>Exchange SSH keys between SOAM site’s local PMAC and the SOAM server</b></p>	<p>Use the <b>SOAM site’s</b> PMAC GUI to determine the Control Network IP address of the server that is to be the SOAM server. From that site’s PMAC GUI, navigate to <b>Main Menu → Software→Software Inventory</b>. Note the IP address for the SOAM server.</p> <p>Login to the SOAM site’s PMAC terminal as the <i>admusr</i> .</p> <p>From a terminal window connection on the <b>SOAM site’s</b> PMAC as the <i>admusr</i> user, exchange SSH keys for <i>admusr</i> between the PMAC and the SOAM server using the keyexchange utility, using the Control network IP address for the SOAM server. When prompted for the password, enter the password for the <i>admusr</i> user SOAM server.</p> <pre> \$ keyexchange admusr@&lt;SOAM blade Control Net IP addr&gt;                     </pre>

## Procedure 17. Configure the SOAM Servers

2 <input type="checkbox"/>	<b>Exchange SSH keys between NOAMP and PMAC at the SOAM site (If necessary)</b>	<p><b>NOTE: If this SOAM shares the same PMAC as the NOAM, then you can skip this step.</b></p> <p>From a terminal window connection on the <b>NOAMP VIP</b>, as the admusr, exchange SSH keys for admusr between the NOAMP and the PMAC for this SOAM site using the keyexchange utility.</p> <p>When prompted for the password, enter the admusr password for the PMAC server.</p> <pre>\$ keyexchange admusr@&lt;SOAM_SITE_PMAC_Management_IP&gt;</pre> <p><b>Repeat this step for the standby NOAM Server</b></p>
3 <input type="checkbox"/>	<b>Establish GUI Session on the NOAMP VIP</b>	<p>If needed, establish a GUI session on the NOAMP by using the OAM VIP address. Login as user “guiadmin”.</p>

**Procedure 17. Configure the SOAM Servers**

<p>4</p> <p><input type="checkbox"/></p>	<p><b>Insert the SOAM “A” server</b></p>	<p>Navigate to <b>Main Menu-&gt;Configuration-&gt;Servers</b></p> <p>Select the “Insert” button to insert the new SOAM “A” server into servers table.</p> <table border="1"> <thead> <tr> <th>Attribute</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Hostname</td> <td>SOAM-A *</td> <td>Unique name for 20-character string minus sign. Must be alphanumeric.</td> </tr> <tr> <td>Role</td> <td>SYSTEM OAM *</td> <td>Select the function.</td> </tr> <tr> <td>Hardware Profile</td> <td>DSR TVOE Guest</td> <td>Hardware profile.</td> </tr> <tr> <td>Network Element Name</td> <td>HPC6_90006 *</td> <td>Select the network element.</td> </tr> <tr> <td>Location</td> <td></td> <td>Location description string. Valid values are alphanumeric.</td> </tr> </tbody> </table> <p>Fill in the fields as follows:</p> <p><b>Hostname:</b> &lt;Hostname&gt;</p> <p><b>Role:</b> SYSTEM OAM</p> <p><b>System ID:</b> &lt;Site System ID&gt;</p> <p><b>Hardware Profile:</b> DSR TVOE Guest</p> <p><b>Network Element Name:</b> [Choose NE from Drop Down Box]</p> <p>The network interface fields will now become available with selection choices based on the chosen hardware profile and network element</p> <table border="1"> <thead> <tr> <th colspan="3">Interfaces:</th> </tr> <tr> <th>Network</th> <th>IP Address</th> <th>Interface</th> </tr> </thead> <tbody> <tr> <td>INTERNALXMI (10.240.84.128/25)</td> <td>10.240.84.155</td> <td>xmi <input type="checkbox"/> VLAN (3)</td> </tr> <tr> <td>INTERNALIMI (10.240.85.0/26)</td> <td>10.240.85.10</td> <td>imi <input type="checkbox"/> VLAN (4)</td> </tr> </tbody> </table> <p>Ok Apply Cancel</p> <p>Fill in the server IP addresses for the XMI network. Select "xmi" for the interface. <b>Leave the "VLAN" checkbox unchecked.</b></p> <p>Fill in the server IP addresses for the IMI network. Select "imi" for the interface. <b>Leave the "VLAN" checkbox unchecked.</b></p> <p>Next, add the following NTP servers:</p> <table border="1"> <thead> <tr> <th>NTP Server</th> <th>Preferred?</th> </tr> </thead> <tbody> <tr> <td>&lt;SOI-TVOE-XMI-IP-Address&gt;</td> <td>Yes</td> </tr> </tbody> </table> <p>Select the “Ok” button when you have completed entering the server data.</p>	Attribute	Value	Description	Hostname	SOAM-A *	Unique name for 20-character string minus sign. Must be alphanumeric.	Role	SYSTEM OAM *	Select the function.	Hardware Profile	DSR TVOE Guest	Hardware profile.	Network Element Name	HPC6_90006 *	Select the network element.	Location		Location description string. Valid values are alphanumeric.	Interfaces:			Network	IP Address	Interface	INTERNALXMI (10.240.84.128/25)	10.240.84.155	xmi <input type="checkbox"/> VLAN (3)	INTERNALIMI (10.240.85.0/26)	10.240.85.10	imi <input type="checkbox"/> VLAN (4)	NTP Server	Preferred?	<SOI-TVOE-XMI-IP-Address>	Yes
Attribute	Value	Description																																		
Hostname	SOAM-A *	Unique name for 20-character string minus sign. Must be alphanumeric.																																		
Role	SYSTEM OAM *	Select the function.																																		
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Interfaces:																																				
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INTERNALXMI (10.240.84.128/25)	10.240.84.155	xmi <input type="checkbox"/> VLAN (3)																																		
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NTP Server	Preferred?																																			
<SOI-TVOE-XMI-IP-Address>	Yes																																			
<p>5</p> <p><input type="checkbox"/></p>	<p><b>Export the initial configuration</b></p>	<p>From the GUI screen, select the desired server and then select “Export” action button to generate the initial configuration data for that server.</p>																																		

## Procedure 17. Configure the SOAM Servers

6 <input type="checkbox"/>	<b>Copy Configuration File to SOAM "A" server</b>	<p>From a terminal window connection on the Active NOAMP as the <b>admusr</b>, use the <code>awpushcfg</code> utility to copy the configuration file created in the previous step from the <code>/var/TKLC/db/filemgmt</code> directory on the 1<sup>st</sup> NOAMP to the SOAM server, using the Control network IP address for the SOAM server. The configuration file will have a filename like <code>TKLCConfigData.&lt;hostname&gt;.sh</code>.</p> <p>Verify that the server is in the "ProvideSvc" role and the availability is "Available", then proceed with...</p> <pre>\$ awpushcfg</pre> <p>The <code>awpushcfg</code> utility is interactive, so the user will be</p> <ul style="list-style-type: none"> <li>- prompted for the management IP address of the PMAC server at the site where the target blade is located.</li> <li>- prompted for the hostname of the target server,</li> <li>- prompted for the Control network IP address for the target server (in this case, the SOAM server).</li> <li>- (Note: If you are prompted for a username, use <b>admusr</b>)</li> </ul> <p>Use the SOAM IP address from step 1. The configuration success message can also be found in the <code>/var/log/messages</code> file.</p>
7 <input type="checkbox"/>	<b>Wait for the reboot prompt and boot the Configured Server</b>	<p>Obtain a terminal window connection on the SOAM "A" server console as the <b>admusr</b>.</p> <p>Become the super user by using the command:</p> <pre>\$ sudo su</pre> <p>You should see the prompt change to the hash mark:</p> <pre>#</pre> <p>The automatic configuration daemon will look for the file named "TKLCConfigData.sh" in the <code>/var/tmp</code> directory, implement the configuration in the file, and then prompt the user to reboot the server.</p> <p>Wait to be prompted to reboot the server.</p> <p><b>NOTE:</b> Ignore the warning about removing the USB key, since no USB key is present. Use "init 6" in the terminal window to reboot the server as shown below.</p> <p>Verify <code>awpushcfg</code> was called by checking the following file</p> <pre># cat /var/TKLC/appw/logs/Process/install.log</pre> <p>Set the timezone using the following command. The following command example uses the America/New_York time zone. Replace as appropriate with the time zone you have selected for this installation. For UTC, use "Etc/UTC", for a full list of valid timezones, see 4.7Appendix L.</p> <pre># /usr/TKLC/appworks/bin/set_ini_tz.pl "Etc/UTC" &gt;/dev/null 2&gt;&amp;1</pre> <p>Now reboot the server using the following command:</p> <pre># init 6</pre>

**Procedure 17. Configure the SOAM Servers**

<p>8 <input type="checkbox"/></p>	<p><b>SOAM Server: Verify Server Health</b></p>	<p>After the system reboots, login again as admusr and become the superuser.</p> <p>Execute the following command as super-user on the server and make sure that no errors are returned:</p> <pre># syscheck Running modules in class hardware...                                      OK Running modules in class disk...                                      OK Running modules in class net...                                      OK Running modules in class system...                                      OK Running modules in class proc...                                      OK LOG LOCATION: /var/TKLC/log/syscheck/fail_log</pre>				
<p>9 <input type="checkbox"/></p>	<p><b>Insert and Configure the SOAM “B” server</b></p>	<p>Repeat this procedure to insert and configure the SOAM “B” server, with the exception of the NTP server, which should be configured as so:</p> <table border="1"> <thead> <tr> <th>NTP Server</th> <th>Preferred?</th> </tr> </thead> <tbody> <tr> <td>&lt;SO2-TVOE-XMI-IP-Address&gt;</td> <td>Yes</td> </tr> </tbody> </table> <p>Instead of data for the “A” Server, insert the network data for the “B” server, transfer the TKLCConfigData file to the “B” server, and reboot the “B” server when prompted at a terminal window. Make sure to set the timezone as well.</p>	NTP Server	Preferred?	<SO2-TVOE-XMI-IP-Address>	Yes
NTP Server	Preferred?					
<SO2-TVOE-XMI-IP-Address>	Yes					
<p>10 <input type="checkbox"/></p>	<p><b>(OPTIONAL) Insert and Configure the SOAM Spare Server</b></p>	<p>If your site has SOs in Active/Standby/Spare configuration such as PDRA, then repeat this procedure to insert and configure the SOAM spare server for this site.</p> <p>Instead of data for the “A” Server, insert the network data for the spare server, use a preferred NTP server of <b>SO-SPARE-XMI-IP-Address</b>, transfer the TKLCConfigData file to the spare server, and reboot the spare server when prompted at a terminal window. Make sure to set the timezone as well.</p>				
<p>11 <input type="checkbox"/></p>	<p><b>(OPTIONAL) Install Netbackup Client Software on SOAMs</b></p>	<p>If you are using Netbackup at this site, then execute <b>Procedure 13</b> again to install the Netbackup Client on all SOAM servers.</p>				

**Procedure 18. Configure the SOAM Server Group**

<p><b>S T E P #</b></p>	<p>This procedure will provide the steps to configure the SOAM Server Group</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.</p>
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**Procedure 18. Configure the SOAM Server Group**

<p>1</p> <p><input type="checkbox"/></p>	<p><b>Enter SOAM Server Group Data</b></p>	<p>After a approximately 5 minutes for the SOAM “B” server to reboot, from the GUI session on the NOAMP VIP address, go to the GUI Main Menu-&gt;Configuration-&gt;Server Groups, select Insert and add the SOAM Server Group name along with the values for the following fields:</p> <ul style="list-style-type: none"> <li>• Name → [ <b>Enter Server Group Name</b>]</li> <li>• Level → <b>B</b></li> <li>• Parent [ <b>Select the NOAMP Server Group</b>]</li> <li>• Function: <b>DSR (Active/Standby Pair)</b></li> <li>• WAN Replication Connection Count: <b>Use Default Value</b></li> </ul> <p>Select “OK” when all fields are filled.</p>																										
<p>2</p> <p><input type="checkbox"/></p>	<p><b>Edit the SOAM Server Group and add VIP</b></p>	<p>From the GUI <b>Main Menu-&gt;Configuration-&gt;Server Groups</b>, select the new SOAM server group, and then select “Edit”.</p> <table border="1"> <thead> <tr> <th colspan="3">SO_900060102</th> </tr> <tr> <th>Server</th> <th>SG Inclusion</th> <th>Preferred HA Role</th> </tr> </thead> <tbody> <tr> <td>RMSSOA</td> <td><input checked="" type="checkbox"/> Include in SG</td> <td><input type="checkbox"/> Preferred Spare</td> </tr> <tr> <td>RMSSOB</td> <td><input checked="" type="checkbox"/> Include in SG</td> <td><input type="checkbox"/> Preferred Spare</td> </tr> </tbody> </table> <p>Select the SOAM Server group and click on <b>Edit</b></p> <p>Add both SOAM servers to the Server Group by clicking the “Include in SG” checkbox. If you are adding a SOAM spare sever to this server group, then click the “Include in SG” checkbox next to the spare server and also check the “Preferred Spare” checkbox.</p> <table border="1"> <thead> <tr> <th>Server</th> <th>SG Inclusion</th> <th>Preferred HA Role</th> </tr> </thead> <tbody> <tr> <td>HUBTONES-SO1</td> <td><input checked="" type="checkbox"/> Include in SG</td> <td><input checked="" type="checkbox"/> Preferred Spare</td> </tr> </tbody> </table> <p>Click <b>Apply</b>.</p> <p>Add a SOAM VIP by click on <b>Add</b>. Fill in the VIP Address and press <b>Ok</b> as shown below</p> <table border="1"> <thead> <tr> <th colspan="2">VIP Address</th> </tr> </thead> <tbody> <tr> <td><input type="text"/></td> <td><input type="button" value="Add"/></td> </tr> <tr> <td><input type="text"/></td> <td><input type="button" value="Remove"/></td> </tr> <tr> <td colspan="2" style="text-align: right;"> <input type="button" value="Ok"/> <input type="button" value="Apply"/> <input type="button" value="Cancel"/> </td> </tr> </tbody> </table>	SO_900060102			Server	SG Inclusion	Preferred HA Role	RMSSOA	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare	RMSSOB	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare	Server	SG Inclusion	Preferred HA Role	HUBTONES-SO1	<input checked="" type="checkbox"/> Include in SG	<input checked="" type="checkbox"/> Preferred Spare	VIP Address		<input type="text"/>	<input type="button" value="Add"/>	<input type="text"/>	<input type="button" value="Remove"/>	<input type="button" value="Ok"/> <input type="button" value="Apply"/> <input type="button" value="Cancel"/>	
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<input type="button" value="Ok"/> <input type="button" value="Apply"/> <input type="button" value="Cancel"/>																												
<p>3</p> <p><input type="checkbox"/></p>	<p><b>Wait for Replication</b></p>	<p>After replication, which will initially take up to 5 minutes, the server status should be active (Main menu-&gt;Status &amp; Manage-&gt;Replication). Note: This may take up to 5 minutes while the servers figure out master/slave relationship.</p> <p>Look for the alarm "Remote Database re-initialization in progress" to be cleared before proceeding. (Main menu-&gt;Alarms-&gt;View Active)</p>																										

**Procedure 18. Configure the SOAM Server Group**

<p>4 <input type="checkbox"/></p>	<p><b>Verify HA Role for 2<sup>nd</sup> SOAMP server</b></p>	<p>In the <b>Main menu-&gt;Status &amp; Manage-&gt;HA</b> menu, verify that the “Max Allowed HA Role” for the 2<sup>nd</sup> SOAMP server is “Active”.</p> <p>If it is <b>not</b>, press the <b>Edit</b> button and in the resulting screen, change the 2<sup>nd</sup> NOAMPs server’s “Max Allowed HA Role” to “Active” using the dropdown box.</p> <div style="border: 1px solid gray; padding: 5px;"> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border: 1px solid gray; padding: 2px;">Hostname</td> <td style="border: 1px solid gray; padding: 2px;">Max Allowed HA Role</td> </tr> <tr> <td style="border: 1px solid gray; padding: 2px;">HPC6NO</td> <td style="border: 1px solid gray; padding: 2px;">Active ▼</td> </tr> </table> </div> <p>Press <b>OK</b>.</p>	Hostname	Max Allowed HA Role	HPC6NO	Active ▼
Hostname	Max Allowed HA Role					
HPC6NO	Active ▼					
<p>5 <input type="checkbox"/></p>	<p><b>Restart 1<sup>st</sup> SOAM server</b></p>	<p>From the NOAMP GUI, select the Main menu-&gt;Status &amp; Manage-&gt;Server menu. Select the “A” SOAM server. Select the “Restart” button. Answer OK to the confirmation popup. Wait for restart to complete.</p>				
<p>6 <input type="checkbox"/></p>	<p><b>Restart 2<sup>nd</sup> SOAM server</b></p>	<p>Continuing in the Main menu-&gt;Status &amp; Manage-&gt;Server menu, now select the “B” SOAM server. Select the “Restart” button. Answer OK to the confirmation popup.</p>				
<p>7 <input type="checkbox"/></p>	<p><b>Restart Spare SOAM server if Present</b></p>	<p>Continuing in the Main menu-&gt;Status &amp; Manage-&gt;Server menu, now select the Spare SOAM server. Select the “Restart” button. Answer OK to the confirmation popup.</p>				

**Procedure 19. Post NOAMP & SOAM Setup Operations**

<p><b>S T E P #</b></p>	<p>This procedure details other operations that should happen once the NOAMP and all SOAM sites have been configured.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.</p>	
<p>1 <input type="checkbox"/></p>	<p><b>(PDRA Only) Activate PDRA Feature</b></p>	<p>If you are installing PDRA, execute Procedure 4 of [10] to activate PDRA. <b>NOTE: If not all SOAM sites are ready at this point, then you should repeat activation for each *new* SOAM site that comes online.</b></p>

Procedure 19. Post NOAMP & SOAM Setup Operations

2	<p><b>*(PDRA Only), Optional</b></p> <p><b>Define PSBR DB Replication Network</b></p>	<p><b>(*) NOTE: Execute this step only if you are defining a separate, dedicated network for PSBR Replication.</b></p> <p>Navigate to <b>Main Menu -&gt; Configuration -&gt; Network</b></p> <p>Click on <b>Insert</b> in the lower left corner .</p> <p>You will see the following screen, depending on your software version:</p> <p><b>DSR 5.X:</b> Insert Network</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Field</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Network Name</td> <td>XS11</td> <td>The name of this VLAN. [Default = n/a. Range = Alphanumeric string up to 31 chars, starting with a letter.]</td> </tr> <tr> <td>VLAN ID</td> <td>5</td> <td>The VLAN ID to use for this VLAN. [Default = network dependent. Range = 4-4094 (VLAN 1-3 reserved for Management, XML and IMI).]</td> </tr> <tr> <td>Network Address</td> <td>10.240.71.128</td> <td>The network address of this VLAN. [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>255.255.255.192</td> <td>Subnetting to apply to servers within this VLAN. [Default = n/a. Range = Valid Netmask for the network in prefix length (IPv4 or IPv6) or dotted decimal (IPv4) format.]</td> </tr> </tbody> </table> <p style="text-align: right;">[OK] [Apply] [Cancel]</p> <p><b>DSR 6.X</b> Insert Network</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Field</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Network Name</td> <td>XS11</td> <td>The name of this network. [Default = N/A. Range = Alpha</td> </tr> <tr> <td>Network Element</td> <td>- Unassigned -</td> <td>The network element this network is a part of. If not spec</td> </tr> <tr> <td>VLAN ID</td> <td>5</td> <td>The VLAN ID to use for this network. [Default = N/A. Rang</td> </tr> <tr> <td>Network Address</td> <td>10.71.88.0</td> <td>The network address of this network. [Default = N/A. Ran colon hex (IPv6) format.]</td> </tr> <tr> <td>Netmask</td> <td>255.255.255.0</td> <td>Subnetting to apply to servers within this network. [Defau IPv6) or dotted decimal (IPv4) format.]</td> </tr> <tr> <td>Router IP</td> <td>10.71.88.3</td> <td>The IP address of a router on this network. If this is a def route on servers with interfaces on this network. If custome monitored.</td> </tr> <tr> <td>Default Network</td> <td><input type="radio"/> Yes <input checked="" type="radio"/> No</td> <td>A selection indicating whether this is the network with a c</td> </tr> <tr> <td>Routable</td> <td><input checked="" type="radio"/> Yes <input type="radio"/> No</td> <td>Whether or not this network is routable outside its netwo be possibly present in all network elements.</td> </tr> </tbody> </table> <p style="text-align: right;">[Ok] [Apply] [Cancel]</p> <p>Enter the Network Name, VLAN ID, Network Address, Netmask, and Router IP (6.X only) that matches the PSBR DB Replication network</p> <p>(note: Even if the network does not use VLAN Tagging, you should enter the correct VLAN ID here as indicated by the NAPD)</p> <p><b>DSR 6.X only fields:</b></p> <ul style="list-style-type: none"> <li>• <b>IMPORTANT: Leave the Network Element field as Unassigned.</b></li> <li>• Select <b>No</b> for Default Network</li> <li>• Select <b>Yes</b> for Routable.</li> </ul> <p>Press <b>Ok</b>. if you are finished adding signaling networks <b>-OR-</b> Press <b>Apply</b> to save this signaling network and repeat this step to enter additional signaling networks.</p>	Field	Value	Description	Network Name	XS11	The name of this VLAN. [Default = n/a. Range = Alphanumeric string up to 31 chars, starting with a letter.]	VLAN ID	5	The VLAN ID to use for this VLAN. [Default = network dependent. Range = 4-4094 (VLAN 1-3 reserved for Management, XML and IMI).]	Network Address	10.240.71.128	The network address of this VLAN. [Default = n/a. Range = Valid Network Address of the network in dotted decimal (IPv4) or colon hex (IPv6) format.]	Netmask	255.255.255.192	Subnetting to apply to servers within this VLAN. [Default = n/a. Range = Valid Netmask for the network in prefix length (IPv4 or IPv6) or dotted decimal (IPv4) format.]	Field	Value	Description	Network Name	XS11	The name of this network. [Default = N/A. Range = Alpha	Network Element	- Unassigned -	The network element this network is a part of. If not spec	VLAN ID	5	The VLAN ID to use for this network. [Default = N/A. Rang	Network Address	10.71.88.0	The network address of this network. [Default = N/A. Ran colon hex (IPv6) format.]	Netmask	255.255.255.0	Subnetting to apply to servers within this network. [Defau IPv6) or dotted decimal (IPv4) format.]	Router IP	10.71.88.3	The IP address of a router on this network. If this is a def route on servers with interfaces on this network. If custome monitored.	Default Network	<input type="radio"/> Yes <input checked="" type="radio"/> No	A selection indicating whether this is the network with a c	Routable	<input checked="" type="radio"/> Yes <input type="radio"/> No	Whether or not this network is routable outside its netwo be possibly present in all network elements.
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**Procedure 19. Post NOAMP & SOAM Setup Operations**

<p>3</p> <p><input type="checkbox"/></p> <p><b>(PDRA Only)</b> <b>Perform Additional Services to Networks Mapping</b></p>	<p>Log Into Active NO GUI.</p> <p>Navigate to <b>Main Menu</b> → <b>Configuration</b> → <b>Services</b>.</p> <p>Select the “Edit” button and set the Services as shown in the table below:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Name</th> <th style="text-align: center;">Intra-NE Network</th> <th style="text-align: center;">Inter-NE Network</th> </tr> </thead> <tbody> <tr> <td>Replication_MP</td> <td style="text-align: center;">&lt;IMI Network&gt;</td> <td style="text-align: center;">&lt;<i>PSBR DB Replication Network</i>&gt;*</td> </tr> <tr> <td>ComAgent</td> <td style="text-align: center;">&lt;IMI Network&gt;</td> <td style="text-align: center;">&lt;<i>PSBR DB Replication Network</i>&gt;*</td> </tr> </tbody> </table> <p style="color: red;">(*) It is recommended that dual-path HA heartbeats be enabled in support of geo-diverse PSBRs. This requires participating servers to be attached to at least two routable networks.</p> <p>Select the “Ok” button to apply the Service-to-Network selections.</p>	Name	Intra-NE Network	Inter-NE Network	Replication_MP	<IMI Network>	< <i>PSBR DB Replication Network</i> >*	ComAgent	<IMI Network>	< <i>PSBR DB Replication Network</i> >*
Name	Intra-NE Network	Inter-NE Network								
Replication_MP	<IMI Network>	< <i>PSBR DB Replication Network</i> >*								
ComAgent	<IMI Network>	< <i>PSBR DB Replication Network</i> >*								

**Procedure 20. Configure the MP Blade Servers**

<b>S T E P #</b>	<p>This procedure will provide the steps to configure an MP Blade Server</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.</p>	
1 <input type="checkbox"/>	<p><b>Exchange SSH keys between MP site's local PMAC and the MP server</b></p>	<p>Use the MP site's PMAC GUI to determine the Control Network IP address of the blade server that is to be an MP server. From the MP site's PMAC GUI, navigate to <b>Main Menu → Software-→Software Inventory</b>. Note the IP address for an MP server.</p> <p>Login to the MP site's PMAC terminal as the <i>admusr</i> .</p> <p>From a terminal window connection on the MP site's PMAC as the <b>admusr</b>, exchange SSH keys for <i>admusr</i> between the PMAC and the MP blade server using the keyexchange utility, using the Control network IP address for the MP blade server. When prompted for the password, enter the password for the <i>admusr</i> user of the MP server.</p> <pre>\$ keyexchange admusr@&lt;MP blade Control Net IP addr&gt;</pre>
2 <input type="checkbox"/>	<p><b>Establish GUI Session on the NOAMP VIP</b></p>	<p>If needed, establish a GUI session on the NOAMP by using the XMI VIP address. Login as user "guiadmin".</p>

**Procedure 20. Configure the MP Blade Servers**

3	<p><b>Insert the MP server - Part 1</b></p>	<p>Navigate to <b>Main Menu-&gt;Configuration-&gt;Servers</b></p> <p>Select the “Insert” button to insert the new MP server into servers table. Fill out the following values:</p> <p><b>Hostname:</b>            &lt;Hostname of the MP&gt;  <b>Role:</b>                    MP  <b>Network Element:</b> [Choose Network Element]</p> <p><b>Hardware Profile:</b> Select the profile that matches your MP physical hardware and enclosure networking environment.          Note that you must go through the process of identifying the enclosure switches, mezzanine cards and Ethernet interfaces of the network prior and blade(s) used before selecting the profile.</p> <table style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"><i>Profile Name</i></th> <th style="text-align: left;"><i>Blade Size</i></th> <th style="text-align: left;"><i>Multiple Pairs of Enc. Switches?</i></th> <th style="text-align: left;"><i>Bonded Signaling Interfaces?</i></th> </tr> </thead> <tbody> <tr> <td>BL460 HP c-Class Blade</td> <td>Half</td> <td>No</td> <td>Yes</td> </tr> <tr> <td>BL620 HP c-Class Blade</td> <td>Full</td> <td>No</td> <td>Yes</td> </tr> <tr> <td>L2D3 BL460 HP c-Class Blade</td> <td>Half</td> <td>Yes</td> <td>Yes</td> </tr> <tr> <td>L2D3 BL620 HP c-Class Blade</td> <td>Full</td> <td>Yes</td> <td>Yes</td> </tr> <tr> <td>L2D3 BL620 HP c-Class blade (Unbonded Sig)</td> <td>Full</td> <td>Yes</td> <td>No</td> </tr> <tr> <td>DSR TVOE Guest</td> <td>N/A (Virtual)</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table> <p><b>NOTE:</b> If none of the above profiles properly describe your MP server blade, then you will have to create your own in a text editor (See 4.7 Appendix A) and copy it into the <code>/var/TKLC/appworks/profiles/</code> directory of the active NOAMP server, the standby NOAMP server, and both the DR NOAM servers (if applicable). Then come back and repeat this step.</p> <p><b>Location:</b> &lt;enter an optional location description&gt;</p> <p>The interface configuration form will now appear.</p> <div style="border: 1px solid #ccc; padding: 5px; margin: 10px 0;"> <p><b>Interfaces:</b></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>INTERNALXMI (10.240.84.128/25)</td> <td><input type="text" value="10.240.84.177"/></td> <td>bond0 <input checked="" type="checkbox"/> VLAN (3)</td> </tr> <tr> <td>INTERNALIMI (10.240.85.0/26)</td> <td><input type="text" value="10.240.85.16"/></td> <td>bond0 <input checked="" type="checkbox"/> VLAN (4)</td> </tr> </tbody> </table> <p style="text-align: center;"> <input type="button" value="Ok"/> <input type="button" value="Apply"/> <input type="button" value="Cancel"/> </p> </div> <p>For the XMI network, enter the MP's XMI IP address. Select the correct bond or interface. If your XMI network uses VLAN tagging, then select the VLAN checkbox. If your XMI network does <b>NOT</b> use VLAN tagging, then do <b>NOT</b> select the vlan checkbox.</p> <p>For the IMI network, enter the MP's IMI IP address. Select the proper bond or interface, and <b>select the VLAN checkbox.</b></p>	<i>Profile Name</i>	<i>Blade Size</i>	<i>Multiple Pairs of Enc. Switches?</i>	<i>Bonded Signaling Interfaces?</i>	BL460 HP c-Class Blade	Half	No	Yes	BL620 HP c-Class Blade	Full	No	Yes	L2D3 BL460 HP c-Class Blade	Half	Yes	Yes	L2D3 BL620 HP c-Class Blade	Full	Yes	Yes	L2D3 BL620 HP c-Class blade (Unbonded Sig)	Full	Yes	No	DSR TVOE Guest	N/A (Virtual)	N/A	N/A	Network	IP Address	Interface	INTERNALXMI (10.240.84.128/25)	<input type="text" value="10.240.84.177"/>	bond0 <input checked="" type="checkbox"/> VLAN (3)	INTERNALIMI (10.240.85.0/26)	<input type="text" value="10.240.85.16"/>	bond0 <input checked="" type="checkbox"/> VLAN (4)
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Procedure 20. Configure the MP Blade Servers

<p>4 <input type="checkbox"/></p>	<p><b>Insert the MP server - Part 2</b></p>	<p>.</p> <p>Next, add the following NTP servers:</p> <table border="1"> <thead> <tr> <th>NTP Server</th> <th>Preferred?</th> </tr> </thead> <tbody> <tr> <td>&lt;SO1-TVOE-XMI-IP-Address&gt;</td> <td>Yes</td> </tr> <tr> <td>&lt;SO2-TVOE-XMI-IP-Address&gt;</td> <td>No</td> </tr> <tr> <td>&lt;Site-PM&amp;C-TVOE-Server-Mgmt-IP-Address&gt;</td> <td>No</td> </tr> </tbody> </table> <p>Select "OK" when all fields are filled in to finish MP server insertion.</p>	NTP Server	Preferred?	<SO1-TVOE-XMI-IP-Address>	Yes	<SO2-TVOE-XMI-IP-Address>	No	<Site-PM&C-TVOE-Server-Mgmt-IP-Address>	No
NTP Server	Preferred?									
<SO1-TVOE-XMI-IP-Address>	Yes									
<SO2-TVOE-XMI-IP-Address>	No									
<Site-PM&C-TVOE-Server-Mgmt-IP-Address>	No									
<p>5 <input type="checkbox"/></p>	<p><b>Export the initial configuration</b></p>	<p>From the GUI screen, select the server that was just inserted and then select "Export" action button to generate the initial configuration data for that server.</p>								
<p>6 <input type="checkbox"/></p>	<p><b>Log onto the MP iLO</b></p>	<p>Obtain a terminal window connection on the MP server iLO from the OA.</p>								
<p>7 <input type="checkbox"/></p>	<p><b>Copy Configuration File to MP server</b></p>	<p>From a terminal window connection on the active NOAMP as the <b>admusr</b>, use the <code>awpushcfg</code> utility to copy the configuration file created in the previous step from the <code>/var/TKLC/db/filemgmt</code> directory on the active NOAMP to the MP blade server, using the Control network IP address for the MP blade server. The configuration file will have a filename like <code>TKLCConfigData.&lt;hostname&gt;.sh</code>.</p> <pre>\$ awpushcfg</pre> <p>The <code>awpushcfg</code> utility is interactive, so the user will be</p> <ul style="list-style-type: none"> <li>- prompted for the management IP address of the PMAC server at the site where the target blade is located.</li> <li>- the blade inventory will be presented,</li> <li>- prompted for the Control network IP address for the target server (in this case, the MP server).</li> <li>- prompted for the hostname of the target server,</li> <li>- Note: If prompted for a username, please use <b>admusr</b></li> </ul> <p>The automatic configuration daemon will look for the file named "TKLCConfigData.sh" in the <code>/var/tmp</code> directory, implement the configuration in the file, and then prompt the user to reboot the server.</p>								

## Procedure 20. Configure the MP Blade Servers

<p>8</p> <p><input type="checkbox"/></p>	<p><b>Set the Timezone and Reboot the Configured Server</b></p>	<p>From the MP server iLO terminal login as <b>admusr</b>.</p> <p>Become the super user by using the command:</p> <pre>\$ sudo su</pre> <p>You should see the prompt change to the hash mark:</p> <pre>#</pre> <p>Wait for the message to reboot the server.</p> <p>Verify awpushcfg was called by checking the following file</p> <pre># cat /var/TKLC/appw/logs/Process/install.log</pre> <p>Set the timezone using the following command. The following command example uses the America/New_York time zone. Replace as appropriate with the time zone you have selected for this installation. For UTC, use "Etc/UTC", for a full list of valid timezones, see 4.7 Appendix L.</p> <pre># /usr/TKLC/appworks/bin/set_ini_tz.pl "Etc/UTC" &gt;/dev/null 2&gt;&amp;1</pre> <p>Use "init 6" in the terminal window to reboot the server.</p> <pre># init 6</pre> <p>Proceed to the next step once the Server finished rebooting, The server is done rebooting once the login prompt is displayed.</p>
<p>9</p> <p><input type="checkbox"/></p>	<p><b>MP Server: Verify Server Health</b></p>	<p>After the reboot, login as admusr again and become the superuser.</p> <p>Execute the following command as super-user on the server and make sure that no errors are returned:</p> <pre># syscheck Running modules in class hardware...                                 OK Running modules in class disk...                                 OK Running modules in class net...                                 OK Running modules in class system...                                 OK Running modules in class proc...                                 OK LOG LOCATION: /var/TKLC/log/syscheck/fail_log</pre>

## Procedure 20. Configure the MP Blade Servers

<p>10</p> <p><input type="checkbox"/></p>	<p><b>(OPTIONAL)</b>  <b>Delete Auto-Configured Default Route on MP and Replace it with a Network Route via the XMI Network</b></p>	<p><b>***NOTE: THIS STEP IS OPTIONAL AND SHOULD ONLY BE EXECUTED IF YOU PLAN TO CONFIGURE A DEFAULT ROUTE ON YOUR MP THAT USES A SIGNALING (XSI) NETWORK INSTEAD OF THE XMI NETWORK. (Not executing this step will mean that a default route will not be configurable on this MP and you will have to create separate network routes for each signaling network destination.) ***</b></p> <p>Using the iLO facility, <b>log into the MP</b> as the <b>admusr</b> user. (Alternatively, you can log into the site's PMAC then SSH to the MP's control address.)</p> <p>Become the super user by using the command:</p> <pre>\$ sudo su</pre> <p>Determine &lt;XMI_Gateway_IP&gt; from your SO site network element info. Gather &lt;NO_XMI_Network_Address&gt;,&lt;NO_XMI_Network_Netmask&gt; ; &lt;DR_NO_XMI_Network_Addres&gt;,&lt;DR_NO_XMI_Network_Netmask&gt; from your NO and DR NO site network element info. You can either consult the XML files you imported earlier, or go to the NO GUI and view these values from the <i>Main Menu&gt;Configuration&gt;Network Elements</i> screen.</p> <p><b>Note: If your NO XMI network is exactly the same as your MP XMI network, then you should skip this command and only configure the DR NO route.</b></p> <p><b>[MP console] Create network routes to the NO's XMI(OAM) network:</b></p> <pre># netAdm add --route=net --address=&lt;NO_XMI_Network_Address&gt; --netmask=&lt;NO_XMI_Network_Netmask&gt; --gateway=&lt;XMI_Gateway_IP&gt; --device=&lt;MP_XMI_Interface&gt;</pre> <p>Route to &lt;MP_XMI_Interface&gt; added.</p> <p><b>[MP console] Create network routes to the DR NO's XMI(OAM) network:</b></p> <pre># netAdm add --route=net --address=&lt;DR_NO_XMI_Network_Address&gt; --netmask=&lt;DR_NO_XMI_Network_Netmask&gt; --gateway=&lt;XMI_Gateway_IP&gt; --device=&lt;MP_XMI_Interface&gt;</pre> <p>Route to &lt;MP_XMI_Interface&gt; added.</p> <p><b>(Optional) [MP console] If Sending SNMP traps from individual servers, create host routes to customer SNMP trap destinations on the XMI network:</b></p> <pre># netAdm add --route=host --address=&lt;Customer_NMS_IP&gt; --gateway=&lt;XMI_Gateway_IP&gt; --device=&lt;MP_XMI_Interface&gt;</pre> <p>Route to &lt;MP_XMI_Interface&gt; added. (Repeat for any existing cusomter NMS stations)</p> <p>Delete the existing default route:</p> <pre># netAdm delete --route=default --gateway=&lt;MP_XMI_Gateway_IP&gt; --device=&lt;MP_XMI_Interface&gt;</pre> <p>Route to &lt;MP_XMI_Interface&gt; removed.</p>
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**Procedure 20. Configure the MP Blade Servers**

<p>11 <input type="checkbox"/></p>	<p><b>(OPTIONAL, Continued from Previous Step) Delete Auto-Configured Default Route on MP and Replace it with a Network Route via the XMI Network</b></p>	<p><b>[MP Console] Ping active NO XMI IP address to verify connectivity:</b></p> <pre># ping &lt;ACTIVE_NO_XMI_IP_Address&gt;</pre> <pre>PING 10.240.108.6 (10.240.108.6) 56(84) bytes of data. 64 bytes from 10.240.108.6: icmp seq=1 ttl=64 time=0.342 ms 64 bytes from 10.240.108.6: icmp seq=2 ttl=64 time=0.247 ms</pre> <p><b>(Optional) [MP Console] Ping Customer NMS Station(s):</b></p> <pre># ping &lt;Customer_NMS_IP&gt;</pre> <pre>PING 172.4.116.8 (172.4.118.8) 56(84) bytes of data. 64 bytes from 172.4.116.8: icmp_seq=1 ttl=64 time=0.342 ms 64 bytes from 172.4.116.8: icmp_seq=2 ttl=64 time=0.247 ms</pre> <p>If you do not get a response, then verify your network configuration. If you continue to get failures then halt the installation and contact Oracle customer support.</p>
<p>12 <input type="checkbox"/></p>	<p><b>Repeat for remaining MP at all sites</b></p>	<p>Repeat this entire procedure for all remaining MP blades at all sites.</p>

**Procedure 21. Configure Places and Assign MP Servers to Places (PDRA Installations ONLY)**

<p><b>S T E P #</b></p>	<p>This procedure will provide the steps/reference to add “Places” in the PDRA Network. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.</p>																	
<p>1 <input type="checkbox"/></p>	<p><b>(PDRA Only) NOAMP VIP: Configure Places</b></p>	<p>Establish a GUI session on the NOAMP by using the XMI VIP address. Login as user “guiadmin”.</p> <p>Navigate to <b>Main Menu -&gt; Configuration -&gt; Places</b></p> <p>Screen.</p> <div style="border: 1px solid black; padding: 5px;"> <p><b>Main Menu: Configuration -&gt; Places [Insert]</b></p> <p>Info ▾</p> <p><b>Inserting a new Place</b></p> <table border="1"> <thead> <tr> <th>Place</th> <th>Field</th> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td></td> <td>Place Name</td> <td>rtpLabD *</td> <td>Unique identifier used to label a Place. [D</td> </tr> <tr> <td></td> <td>Parent</td> <td>NONE ▾ *</td> <td>The Parent of this Place</td> </tr> <tr> <td></td> <td>Place Type</td> <td>Site ▾ *</td> <td>The Type of this Place</td> </tr> </tbody> </table> <p>Place Name: Choose the site NAME Parent: Choose “NONE” Place Type: Choose “Site”</p> <p><b>Repeat this step for all Places you wish to define.</b></p> </div>	Place	Field	Value	Description		Place Name	rtpLabD *	Unique identifier used to label a Place. [D		Parent	NONE ▾ *	The Parent of this Place		Place Type	Site ▾ *	The Type of this Place
Place	Field	Value	Description															
	Place Name	rtpLabD *	Unique identifier used to label a Place. [D															
	Parent	NONE ▾ *	The Parent of this Place															
	Place Type	Site ▾ *	The Type of this Place															
<p>2 <input type="checkbox"/></p>	<p><b>(PDRA Only) NOAMP VIP: Configure Place Associations</b></p>	<p>Click on <b>Insert</b> in the lower left corner and enter the information to create the place association for mated pairs, click Ok.</p> <div style="border: 1px solid black; padding: 5px;"> <p><b>Place Association</b></p> <table border="1"> <thead> <tr> <th>Field</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>Place Association Name</td> <td>rtpLabMatedPair1 *</td> </tr> <tr> <td>Place Association Type</td> <td>Policy DRA Mated Sites ▾ *</td> </tr> <tr> <td colspan="2"><b>Places</b></td> </tr> <tr> <td>Places</td> <td><input checked="" type="checkbox"/> rtpLabC <input checked="" type="checkbox"/> rtpLabD</td> </tr> </tbody> </table> <p>NOTE: . Place Association Name: <b>.Enter Association Name</b> Place Association Type: <b>. Policy DRA Mated Sites</b> Places: <b>.Click on the list of Places you wish to define under this Place Association.</b></p> <p><b>Repeat this step for all place associations you wish to define.</b></p> </div>	Field	Value	Place Association Name	rtpLabMatedPair1 *	Place Association Type	Policy DRA Mated Sites ▾ *	<b>Places</b>		Places	<input checked="" type="checkbox"/> rtpLabC <input checked="" type="checkbox"/> rtpLabD						
Field	Value																	
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Places	<input checked="" type="checkbox"/> rtpLabC <input checked="" type="checkbox"/> rtpLabD																	

**Procedure 21. Configure Places and Assign MP Servers to Places (PDRA Installations ONLY)**

<p>3 <input type="checkbox"/></p>	<p><b>(PDRA Only)</b> <b>NOAMP VIP:</b></p> <p><b>Assign MP Servers To Places</b></p>	<p>For each place you have defined, choose the set of MP servers that will be assigned to those places.</p> <table border="1"> <thead> <tr> <th colspan="2">Place</th> </tr> <tr> <th>Field</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>Place Name</td> <td>rtplabC *</td> </tr> <tr> <td>Parent</td> <td>NONE *</td> </tr> <tr> <td>Place Type</td> <td>Site *</td> </tr> <tr> <th colspan="2">Servers</th> </tr> <tr> <td>LABCSONE</td> <td><input type="checkbox"/> labCe1b04pdra1</td> </tr> </tbody> </table> <p>Check all the check boxes for PDRA and pSBR servers that will be assigned to this place.</p> <p><b>Repeat this step for all other PDRA or pSBR servers you wish to assign to places.</b></p>	Place		Field	Value	Place Name	rtplabC *	Parent	NONE *	Place Type	Site *	Servers		LABCSONE	<input type="checkbox"/> labCe1b04pdra1
Place																
Field	Value															
Place Name	rtplabC *															
Parent	NONE *															
Place Type	Site *															
Servers																
LABCSONE	<input type="checkbox"/> labCe1b04pdra1															

**Procedure 22. Configure the MP Server Group(s) and Profiles**

<p><b>S</b> <b>T</b> <b>E</b> <b>P</b> <b>#</b></p>	<p>This procedure will provide the steps to configure MP Server Groups</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.</p>
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**Procedure 22. Configure the MP Server Group(s) and Profiles**

<p>1 <input type="checkbox"/></p>	<p><b>Enter MP Server Group Data</b></p>	<p>From the GUI session on the NOAMP VIP address, go to the GUI <b>Main Menu</b>→<b>Configuration</b>→<b>Server Groups</b>, select <b>Insert</b> and fill out the following fields:</p> <p>Server Group Name: <b>[Server Group Name]</b></p> <p>Level: <b>C</b></p> <p>Parent: <b>[Select the SOAMP Server Group That is Parent To this MP]</b></p> <p>Function: <b>Select the Proper Function for this MP Server Group:</b></p> <table border="1"> <thead> <tr> <th>Server Group Function</th> <th>MPs Will Run</th> <th>Redundancy Model</th> </tr> </thead> <tbody> <tr> <td>DSR (multi-active cluster)</td> <td>Diameter Relay and Application Services</td> <td>Multiple MPs active Per SG</td> </tr> <tr> <td>DSR (active-standby pair)</td> <td>Diameter Relay and Application Services</td> <td>1 Active MP and 1 Standby MP / Per SG</td> </tr> <tr> <td>Session Binding Repository</td> <td>Session Binding Repository Function</td> <td>1 Active MP and 1 Standby MP / Per SG</td> </tr> <tr> <td>IP Load Balancer</td> <td>IPFE application</td> <td>1 Active MP Per SG</td> </tr> <tr> <td>Policy SBR</td> <td>Policy Session and/or Policy Binding Function</td> <td>1 Active MP Per SG</td> </tr> <tr> <td>SS7-IWF</td> <td>MAP IWF Application</td> <td>1 Active MP Per SG</td> </tr> </tbody> </table> <p>WAN Replication Connection Count:</p> <ul style="list-style-type: none"> <li>• For non-Policy SBR Server Groups: <b>Use Default Value.</b></li> <li>• For Policy SBR Server Groups: <b>8.</b></li> </ul> <p>Select <b>OK</b> when all fields are filled in.</p>	Server Group Function	MPs Will Run	Redundancy Model	DSR (multi-active cluster)	Diameter Relay and Application Services	Multiple MPs active Per SG	DSR (active-standby pair)	Diameter Relay and Application Services	1 Active MP and 1 Standby MP / Per SG	Session Binding Repository	Session Binding Repository Function	1 Active MP and 1 Standby MP / Per SG	IP Load Balancer	IPFE application	1 Active MP Per SG	Policy SBR	Policy Session and/or Policy Binding Function	1 Active MP Per SG	SS7-IWF	MAP IWF Application	1 Active MP Per SG
Server Group Function	MPs Will Run	Redundancy Model																					
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Policy SBR	Policy Session and/or Policy Binding Function	1 Active MP Per SG																					
SS7-IWF	MAP IWF Application	1 Active MP Per SG																					
<p>2 <input type="checkbox"/></p>	<p><b>Repeat For Additional Server Groups</b></p>	<p><b>Repeat Step 1</b> for any remaining MP server groups you wish to create. For instance,if you are installing <i>IPFE</i>, you will need to create an IP Load Balancer server group. If you are installing the CPA, you will need a Session Binding Repository server group. For PDRA, you will need at least one Policy SBR server group.</p>																					

**Procedure 22. Configure the MP Server Group(s) and Profiles**

<p>3</p> <p><input type="checkbox"/></p>	<p><b>Edit the MP Server Groups to include MP blades.</b></p>	<p>From the GUI <b>Main Menu-&gt;Configuration-&gt;Server Groups</b>, select a server group that you just created and then select <b>Edit</b>.</p> <p>Select the Network Element that represents the MP server group you wish to edit.</p> <p>Click the “Include in SG” box for every MP server that you wish to include in <i>this</i> server group. Leave other checkboxes blank.</p> <table border="1"> <thead> <tr> <th colspan="3">HPC6_90006</th> </tr> <tr> <th>Server</th> <th>SG Inclusion</th> <th>Preferred HA Role</th> </tr> </thead> <tbody> <tr> <td>MP-1</td> <td><input checked="" type="checkbox"/> Include in SG</td> <td><input type="checkbox"/> Preferred Spare</td> </tr> <tr> <td>MP-2</td> <td><input checked="" type="checkbox"/> Include in SG</td> <td><input type="checkbox"/> Preferred Spare</td> </tr> </tbody> </table> <p>Select <b>Ok</b>.</p> <p><b>Repeat for any remaining MP server groups until all MPs have been assigned to a server group.</b></p>	HPC6_90006			Server	SG Inclusion	Preferred HA Role	MP-1	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare	MP-2	<input checked="" type="checkbox"/> Include in SG	<input type="checkbox"/> Preferred Spare													
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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																									
<p>4</p> <p><input type="checkbox"/></p>	<p><b>Wait for Replication to complete on all MP blades</b></p>	<p>Browse to <b>Main menu-&gt;Status&amp;Manage-&gt;Server</b>.</p> <p>Identify all the MP servers in the <i>Server Hostname</i> column . Now, wait for the corresponding <i>DB</i> and <i>Reporting Status</i> columns of those MPs to say “Norm”. This may take up to 5 or 10 minutes.</p> <table border="1"> <thead> <tr> <th>Server Hostname</th> <th>Appl State</th> <th>Alm</th> <th>DB</th> <th>Reporting Status</th> </tr> </thead> <tbody> <tr> <td>HPC6-NO</td> <td>Enabled</td> <td>Norm</td> <td>Norm</td> <td>Norm</td> </tr> <tr> <td>HPC6-SO</td> <td>Enabled</td> <td>Warn</td> <td>Norm</td> <td>Norm</td> </tr> <tr> <td>HPC6-MP2</td> <td>Enabled</td> <td>Warn</td> <td>Norm</td> <td>Norm</td> </tr> <tr> <td>HPC6-MP1</td> <td>Enabled</td> <td>Warn</td> <td>Norm</td> <td>Norm</td> </tr> </tbody> </table>	Server Hostname	Appl State	Alm	DB	Reporting Status	HPC6-NO	Enabled	Norm	Norm	Norm	HPC6-SO	Enabled	Warn	Norm	Norm	HPC6-MP2	Enabled	Warn	Norm	Norm	HPC6-MP1	Enabled	Warn	Norm	Norm
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HPC6-MP1	Enabled	Warn	Norm	Norm																							
<p>5</p> <p><input type="checkbox"/></p>	<p><b>Wait for Remote Database Alarm to Clear</b></p>	<p>Wait for the alarm "10200: Remote Database re-initialization in progress" to be cleared. (<b>Main menu-&gt;Alarms &amp; Events-&gt;Active Alarms</b>)</p> <p>This should happen shortly after you have verified the “Norm” DB status in the previous step.</p>																									

**Procedure 22. Configure the MP Server Group(s) and Profiles**

6	<p><b>Assign Profiles to DA-MPs from SOAM GUI.</b></p>	<p>Log onto the GUI of the active SOAM server.</p> <p>From the SO GUI, select <b>MainMenu-&gt;Diameter-&gt;Configuration-&gt;DA-MPs-&gt;Profiles Assignments</b></p> <p>Refer to the <b>DA-MP</b> section. (If the site has both DSR and MAP-IWF server groups, you will see both a DA-MP section and an SS7-MP section)</p> <p><b>Main Menu: Diameter -&gt; Configuration -&gt; DA-MPs -&gt; Profile Assignments</b></p> <div style="border: 1px solid gray; padding: 5px; margin: 10px 0;"> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">DA-MP</th> <th style="text-align: left;">MP Profile</th> <th style="text-align: left;">current value</th> </tr> </thead> <tbody> <tr> <td>MP-2</td> <td>G6:Relay ▾ *</td> <td>The current MP Profile is G6:Relay. G6 DA-MP half height blade running the relay application</td> </tr> <tr> <td>MP-1</td> <td>G6:Relay ▾ *</td> <td>The current MP Profile is G6:Relay. G6 DA-MP half height blade running the relay application</td> </tr> </tbody> </table> <p style="text-align: right; margin-top: 5px;"> <input type="button" value="Assign"/> <input type="button" value="Cancel"/> </p> </div> <p>For each MP, select the proper profile assignment based on the MP's hardware type and the function it will serve:</p> <table border="1" style="width: 100%; border-collapse: collapse; margin: 10px 0;"> <thead> <tr style="background-color: #cccccc;"> <th style="text-align: center;">Profile Name</th> <th style="text-align: center;">Description</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;"><b>G6:Relay</b></td> <td>G6 DA-MP half height blade running relay application</td> </tr> <tr> <td style="text-align: center;"><b>G6:Database</b></td> <td>G6 DA-MP half height blade running a database application (e.g. - FABR, RBAR)</td> </tr> <tr> <td style="text-align: center;"><b>G6:Session</b></td> <td>G6 DA-MP half height blade running a session application (e.g. - CPA, PDRA)</td> </tr> <tr> <td style="text-align: center;"><b>G8:Relay</b></td> <td>G8 DA-MP half height blade running the relay application</td> </tr> <tr> <td style="text-align: center;"><b>G8:Database</b></td> <td>G8 DA-MP half height blade running a database application (e.g. FABR, RBAR)</td> </tr> <tr> <td style="text-align: center;"><b>G8:Session</b></td> <td>G8 DA-MP half height blade running a session application (e.g. CPA, PDRA)</td> </tr> <tr> <td style="text-align: center;"><b>G7:Relay</b></td> <td>G7 DA-MP Full height blade running the relay application</td> </tr> <tr> <td style="text-align: center;"><b>G7:Database</b></td> <td>G7 DA-MP Full height blade running a database application (e.g. FABR, RBAR)</td> </tr> <tr> <td style="text-align: center;"><b>G7:Session</b></td> <td>G7 DA-MP Full height blade running a session application (e.g. CPA, PDRA)</td> </tr> </tbody> </table> <p>Note: If the DA-MPs at this site are configured for Active/Standby then there will be a single selection box visible that assigns profiles for all MPs.</p> <p>When finished, press the <b>Assign</b> button</p>	DA-MP	MP Profile	current value	MP-2	G6:Relay ▾ *	The current MP Profile is G6:Relay. G6 DA-MP half height blade running the relay application	MP-1	G6:Relay ▾ *	The current MP Profile is G6:Relay. G6 DA-MP half height blade running the relay application	Profile Name	Description	<b>G6:Relay</b>	G6 DA-MP half height blade running relay application	<b>G6:Database</b>	G6 DA-MP half height blade running a database application (e.g. - FABR, RBAR)	<b>G6:Session</b>	G6 DA-MP half height blade running a session application (e.g. - CPA, PDRA)	<b>G8:Relay</b>	G8 DA-MP half height blade running the relay application	<b>G8:Database</b>	G8 DA-MP half height blade running a database application (e.g. FABR, RBAR)	<b>G8:Session</b>	G8 DA-MP half height blade running a session application (e.g. CPA, PDRA)	<b>G7:Relay</b>	G7 DA-MP Full height blade running the relay application	<b>G7:Database</b>	G7 DA-MP Full height blade running a database application (e.g. FABR, RBAR)	<b>G7:Session</b>	G7 DA-MP Full height blade running a session application (e.g. CPA, PDRA)
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**Procedure 22. Configure the MP Server Group(s) and Profiles**

<p>7</p> <p><input type="checkbox"/></p>	<p><b>Assign Profiles to SS7-MPs from SOAM GUI.</b></p>	<p>Log onto the GUI of the active SOAM server.</p> <p>From the SO GUI, select <b>MainMenu-&gt;Diameter-&gt;Configuration-&gt;DA-MPs-&gt;Profiles Assignments</b></p> <p>Refer to the <b>SS7-MP</b> section. (If the site has both DSR and MAP-IWF server groups, you will see both a DA-MP section and an SS7-MP section)</p> <table border="1"> <thead> <tr> <th>SS7-MP</th> <th>MP Profile</th> <th>current value</th> </tr> </thead> <tbody> <tr> <td>SS7MP</td> <td>G8:MD-IWF</td> <td>This MP has not been assigned an MP Profile.</td> </tr> </tbody> </table> <p style="text-align: right;"> <input type="button" value="Assign"/> <input type="button" value="Cancel"/> </p> <p>For each SS7 MP, select the proper profile assignment based on the SS7 MP's hardware type and the function it will serve:</p> <table border="1"> <thead> <tr> <th>Profile Name</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>G8:MD-IWF</td> <td>HP BL460 Gen8 Running MAP-IWF functions</td> </tr> </tbody> </table> <p>When finished, press the <b>Assign</b> button</p>	SS7-MP	MP Profile	current value	SS7MP	G8:MD-IWF	This MP has not been assigned an MP Profile.	Profile Name	Description	G8:MD-IWF	HP BL460 Gen8 Running MAP-IWF functions
SS7-MP	MP Profile	current value										
SS7MP	G8:MD-IWF	This MP has not been assigned an MP Profile.										
Profile Name	Description											
G8:MD-IWF	HP BL460 Gen8 Running MAP-IWF functions											
<p>8</p> <p><input type="checkbox"/></p>	<p><b>Update DpiOption table from the active SOAM</b></p>	<p>Log on to the active SOAM console as admusr via the XMI address or iLO.</p> <p>Execute the following command (advise cut and paste to prevent errors):</p> <pre>\$ sudo iset -fvalue="50" DpiOption where "name='MpEngIngressMpsPercentile'"</pre> <p>=== <b>changed 1 records</b> ===</p>										
<p>9</p> <p><input type="checkbox"/></p>	<p><b>Restart MP blade servers</b></p>	<p>From the NOAMP GUI, select the <b>Main menu-&gt;Status &amp; Manage-&gt;Server menu</b></p> <p><i>For each MP server:</i></p> <ul style="list-style-type: none"> <li>• Select the MP server.</li> <li>• Select the <b>Restart</b> button.</li> <li>• Answer <b>OK</b> to the confirmation popup. Wait for the message which tells you that the restart was successful.</li> </ul> <p><b>PDRA INSTALLATIONS:</b> You may continue to see alarms related to ComAgent until you complete PDRA installation by finishing <b>Procedure 29</b>.</p>										

## 4.6 Signaling Network Configuration

### Procedure 23. Configure the Signaling Networks

<b>S T E P</b>	<p>This procedure will provide the steps to configure the Signaling Networks.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.</p> <p>NOTE: SCREENSHOTS DISPLAYED ARE FOR EXAMPLE PURPOSES ONLY. ACTUAL DATA IN YOUR INSTALLATION MAY VARY</p>	
1 <input type="checkbox"/>	<p><b>Establish GUI Session on the NOAMP VIP</b></p>	<p>Establish a GUI session on the NOAMP by using the XMI VIP address. Login as user “guiadmin”.</p>
2 <input type="checkbox"/>	<p><b>NOAMP VIP:</b> Navigate to Signaling Network Configuration Screen</p>	<p>Navigate to <b>Main Menu -&gt; Configuration -&gt; Network</b></p> <p>Click on <b>Insert</b> in the lower left corner.</p>

Procedure 23. Configure the Signaling Networks

3	<p><b>NOAMP VIP: Add Signaling Networks</b></p>	<p>You will see the following screen, depending on your software version:</p> <p><b>DSR 5.X:</b>                  Insert Network</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <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 VLAN. [Default = n/a. Range = Alphanumeric string up to 31 chars, starting with a letter.]</td> </tr> <tr> <td>VLAN ID</td> <td>5</td> <td>The VLAN ID to use for this VLAN. [Default = network dependent. Range = 4-4094 (VLAN 1-3 reserved for Management, XMI and IMO).]</td> </tr> <tr> <td>Network Address</td> <td>10.240.71.128</td> <td>The network address of this VLAN. [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>255.255.255.192</td> <td>Subnetting to apply to servers within this VLAN. [Default = n/a. Range = Valid Netmask for the network in prefix length (IPv4 or IPv6) or dotted decimal (IPv4) 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><b>DSR 6.X:</b>                  Insert Network</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <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 = Alpha</td> </tr> <tr> <td>Network Element</td> <td>- Unassigned -</td> <td>The network element this network is a part of. If not spec</td> </tr> <tr> <td>VLAN ID</td> <td>5</td> <td>The VLAN ID to use for this network. [Default = N/A. Rang</td> </tr> <tr> <td>Network Address</td> <td>10.71.88.0</td> <td>The network address of this network. [Default = N/A. Ran</td> </tr> <tr> <td>Netmask</td> <td>255.255.255.0</td> <td>Subnetting to apply to servers within this network. [Defau</td> </tr> <tr> <td>Router IP</td> <td>10.71.88.3</td> <td>The IP address of a router on this network. If this is a def</td> </tr> <tr> <td>Default Network</td> <td><input type="radio"/> Yes <input checked="" type="radio"/> No</td> <td>A selection indicating whether this is the network with a c</td> </tr> <tr> <td>Routable</td> <td><input checked="" type="radio"/> Yes <input type="radio"/> No</td> <td>Whether or not this network is routable outside its netwo</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>Enter the Network Name, VLAN ID, Network Address, Netmask, and Router IP (6.X only) that matches the Signaling network</p> <p>(note: Even if the network does not use VLAN Tagging, you should enter the correct VLAN ID here as indicated by the NAPD)</p> <p><b>DSR 6.X only files:</b></p> <ul style="list-style-type: none"> <li>• <b>IMPORTANT:</b> Leave the Network Element field as <b>Unassigned</b>.</li> <li>• Select <b>No</b> for Default Network</li> <li>• Select <b>Yes</b> for Routable.</li> </ul> <p>Press <b>Ok</b> if you are finished adding signaling networks <b>-OR-</b>                  Press <b>Apply</b> to save this signaling network and repeat this step to enter additional signaling networks.</p>	Field	Value	Description	Network Name	XSI1	The name of this VLAN. [Default = n/a. Range = Alphanumeric string up to 31 chars, starting with a letter.]	VLAN ID	5	The VLAN ID to use for this VLAN. [Default = network dependent. Range = 4-4094 (VLAN 1-3 reserved for Management, XMI and IMO).]	Network Address	10.240.71.128	The network address of this VLAN. [Default = n/a. Range = Valid Network Address of the network in dotted decimal (IPv4) or colon hex (IPv6) format.]	Netmask	255.255.255.192	Subnetting to apply to servers within this VLAN. [Default = n/a. Range = Valid Netmask for the network in prefix length (IPv4 or IPv6) or dotted decimal (IPv4) format.]	Field	Value	Description	Network Name	XSI1	The name of this network. [Default = N/A. Range = Alpha	Network Element	- Unassigned -	The network element this network is a part of. If not spec	VLAN ID	5	The VLAN ID to use for this network. [Default = N/A. Rang	Network Address	10.71.88.0	The network address of this network. [Default = N/A. Ran	Netmask	255.255.255.0	Subnetting to apply to servers within this network. [Defau	Router IP	10.71.88.3	The IP address of a router on this network. If this is a def	Default Network	<input type="radio"/> Yes <input checked="" type="radio"/> No	A selection indicating whether this is the network with a c	Routable	<input checked="" type="radio"/> Yes <input type="radio"/> No	Whether or not this network is routable outside its netwo
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**Procedure 24. Configure the Signaling Devices**

STEP

This procedure will provide the steps to configure the Signaling Devices.

Note: The site specific HW configuration will affect which steps need to be executed

Questions:	How many pairs of switches are in the enclosure?	Will the MP use a bonded interface?
Possible Execution Scenarios:	Single	N/A
	Multiple	Yes
	Multiple	No

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

IF THIS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.

---

1

**NOAMP VIP:**  
Make Signaling Devices Configurable (Unbonded, non-VLAN signaling interfaces only)

**NOTE:** You will only execute this step if you are using unbonded, non-VLAN tagged ethernet interfaces for signaling traffic.

**NOTE:** If this MP will be an IPFE server, then ensure *ipfeNetUpdate.sh* from [13] has been executed before proceeding with this step.

Login as root to the NOAMP VIP console.

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

You should see several tabs each representing a blade in the system. Click on the tab representing the first MP Blade.

You should see a list of network devices installed on the MP.

Select all ethernet devices that will be used as unbonded signaling interfaces *and* have “Discovered” as their Configuration Status. Next, press the **Take Ownership** button.

eth22		ethtoolOpts = --set-ring eth22 rx 4078; --offload eth22 gro off gso off onboot = no		Discovered
eth11	Ethernet	onboot = yes bootProto = none ethtoolOpts = --set-ring eth11 rx 4078; --offload eth11 gro on gso on	10.250.86.23 (IPv4IntXSI1) fe80::ae16:2dff:fe7f:d0d8 (f64)	Deployed
bond0	Bonding	bondInterfaces = eth01, eth02 bondOpts = mode=active-backup mllmon=100 updelay=200 downdelay=200 bootProto = dhcp onboot = yes persistent_dhclient = yes	192.168.1.19 (Z4) fe80::d99d:67ff:fe62:dab0 (f64)	Discovered
bond0.4	Vlan	baseDevice = ["bond0"] bootProto = none onboot = yes	169.254.3.14 (INTERNALM0) fe80::d99d:67ff:fe62:dab0 (f64)	Deployed
eth12	Ethernet	onboot = yes bootProto = none ethtoolOpts = --set-ring eth12 rx 4078; --offload eth12	10.250.86.39 (IPv4IntXSI2)	Deployed

Insert Edit Delete Report ReportAll Take Ownership ...

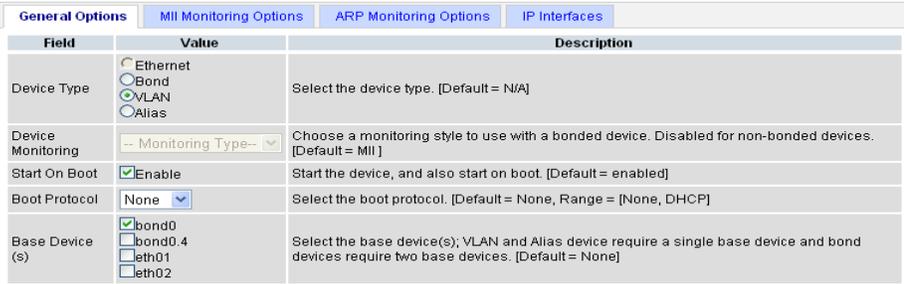
After a brief moment, the selected devices should now show a Configuration Status of “Configured”.

eth22		ethtoolOpts = --set-ring eth22 rx 4078; --offload eth22 gro off gso off onboot = no		Configured
-------	--	---	--	------------

**Procedure 24. Configure the Signaling Devices**

2	<p><b>NOAMP VIP:</b> Configure the Signaling Interfaces of the first MP</p>	<p>Navigate to <b>Main Menu -&gt; Configuration -&gt; Network -&gt; Devices</b></p> <p>You should see several tabs each representing a blade in the system. Click on the tab representing the first MP Blade.</p> <p>Main Menu: Configuration -&gt; Network -&gt; Devices</p>  <p>Refer to the following table to determine which steps to execute next based on the number of enclosure switch pairs and whether Bonded Interfaces are used</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="text-align: center;">Nb of Enclosure Switch Pairs</th> <th style="text-align: center;">Bonded Interface</th> <th style="text-align: center;">Steps to Execute</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">N/A</td> <td style="text-align: center;">3 and 6</td> </tr> <tr> <td style="text-align: center;">2 or 3</td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">4 and 6</td> </tr> <tr> <td style="text-align: center;">2 or 3</td> <td style="text-align: center;">No</td> <td style="text-align: center;">5 and 6</td> </tr> </tbody> </table>	Nb of Enclosure Switch Pairs	Bonded Interface	Steps to Execute	1	N/A	3 and 6	2 or 3	Yes	4 and 6	2 or 3	No	5 and 6
Nb of Enclosure Switch Pairs	Bonded Interface	Steps to Execute												
1	N/A	3 and 6												
2 or 3	Yes	4 and 6												
2 or 3	No	5 and 6												

**Procedure 24. Configure the Signaling Devices**

3	<p><b>NOAMP VIP:</b> Configure the Signaling Interfaces of the MP (1 pair of enclosure switches)</p>	<p>Click on <b>Insert</b>. The following screen should be displayed. Verify that the blade name on the top corresponds to the MP.</p> <p>Insert Device on <b>blade09</b></p>  <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Field</th> <th style="text-align: left;">Value</th> <th style="text-align: left;">Description</th> </tr> </thead> <tbody> <tr> <td>Device Type</td> <td> <input type="radio"/> Ethernet  <input type="radio"/> Bond  <input checked="" type="radio"/> VLAN  <input type="radio"/> Alias                 </td> <td>Select the device type. [Default = N/A]</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]</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 checked="" type="checkbox"/> bond0  <input type="checkbox"/> bond0.4  <input type="checkbox"/> eth01  <input type="checkbox"/> eth02                 </td> <td>Select the base device(s); VLAN and Alias device require a single base device and bond devices require two base devices. [Default = None]</td> </tr> </tbody> </table> <p>For Device Type, select VLAN.</p> <p>For Start on Boot, verify that the checkbox is selected.</p> <p>For Boot Protocol, verify that it is set to None</p> <p>For Base Device, select bond0.</p> <p>Now Click on the <b>IP Interfaces</b> tab as shown below.</p> <p><b>Insert Device on blade09</b></p>  <p>Now Click on <b>Add Row</b>, the following will be displayed</p>  <p>Select the first Signaling Network from the drop down menu.</p> <p>If configuring an IPv4, then enter the IPv4 address.</p> <p>If configuring an IPv6 address and IPv6 auto-configuration is enabled on your signaling network, and the MPs are in active/standby configuration, then there's no need to enter an IP address, it will be assigned automatically.</p> <p>If configuring an IPv6 address and IPv6 auto-configured is disabled, or the MPs are in multi-active mode:</p> <ul style="list-style-type: none"> <li>• If an IPv4 already exists, click on “Add Row” and enter the IPv6 address.</li> <li>• If an IPv4 doesn't exist, simply enter the IPv6 address.</li> </ul> <p>Click on <b>Ok</b> at the bottom of the screen.</p>  <p>To add additional Signaling Interfaces, click on Insert again and repeat this step, otherwise continue with the next step.</p> <p>Skip the next 2 steps and continue to step 6</p>	Field	Value	Description	Device Type	<input type="radio"/> Ethernet <input type="radio"/> Bond <input checked="" type="radio"/> VLAN <input type="radio"/> Alias	Select the device type. [Default = N/A]	Device Monitoring	-- Monitoring Type--	Choose a monitoring style to use with a bonded device. Disabled for non-bonded devices. [Default = MII]	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 checked="" type="checkbox"/> bond0 <input type="checkbox"/> bond0.4 <input type="checkbox"/> eth01 <input type="checkbox"/> eth02	Select the base device(s); VLAN and Alias device require a single base device and bond devices require two base devices. [Default = None]
Field	Value	Description																		
Device Type	<input type="radio"/> Ethernet <input type="radio"/> Bond <input checked="" type="radio"/> VLAN <input type="radio"/> Alias	Select the device type. [Default = N/A]																		
Device Monitoring	-- Monitoring Type--	Choose a monitoring style to use with a bonded device. Disabled for non-bonded devices. [Default = MII]																		
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 checked="" type="checkbox"/> bond0 <input type="checkbox"/> bond0.4 <input type="checkbox"/> eth01 <input type="checkbox"/> eth02	Select the base device(s); VLAN and Alias device require a single base device and bond devices require two base devices. [Default = None]																		

**Procedure 24. Configure the Signaling Devices**

4



**NOAMP VIP:**  
Configure the Signaling Interfaces of the MP (multiple pairs of enclosure switches with bonded interfaces)

Click on **Insert**. The following screen should be displayed. Verify that the blade name on the top corresponds to the MP.

General Options			MII Monitoring Options			ARP Monitoring Options			IP Interfaces		
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	MII	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"/> bond0 <input type="checkbox"/> bond0.4 <input type="checkbox"/> eth01 <input type="checkbox"/> eth02 <input type="checkbox"/> eth03 <input type="checkbox"/> eth04 <input checked="" type="checkbox"/> eth21 <input checked="" type="checkbox"/> eth22 <input type="checkbox"/> eth23 <input type="checkbox"/> eth24	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.]									

For Device Type, select Bonding.

For Device Monitoring, select MII.

For Start on Boot, verify that the checkbox is selected.

For Boot Protocol, verify that it is set to None

For Base Device, select the ports that correspond to the signaling enclosure switches. (e.g. if the signaling switches are in Slots 3 and 4, you would select eth11 and eth12)

Click on **Ok** at the bottom of the screen.



Next click **Insert** again. The same screen as above will appear, select the following:

For Device Type, select VLAN.

For Start on Boot, verify that the checkbox is selected.

For Boot Protocol, verify that it is set to None

For Base Device, select bond1.

Now Click on the **IP Interfaces** tab as shown below.

**Insert Device on blade09**

General Options		MII Monitoring Options		ARP Monitoring Options		IP Interfaces	
IP Address List:						Add Row	

Now Click on **Add Row**, the following will be displayed

IP Address List	Add Row
<input type="text"/>	XSI1 <input type="button" value="Remove"/>

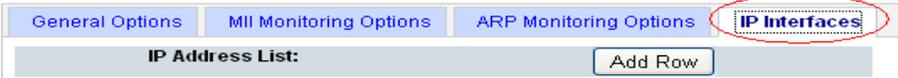
Select the first Signaling Network from the drop down menu.

Enter the IP address that corresponds to the IPv4 or IPv6 interface.

**Procedure 24. Configure the Signaling Devices**

		<p>Click on <b>Ok</b> at the bottom of the screen.</p>  <p>To add additional Signaling Interfaces, click on Insert again and repeat this step, otherwise continue with the next step.</p> <p>Skip the next step and continue to step 5</p>																																																							
<p>5</p> <p><input type="checkbox"/></p>	<p><b>NOAMP VIP:</b> Configure the Signaling Interfaces of the MP (multiple pairs of enclosure switches without bonded interfaces)</p>	<p>Select the appropriate ethernet interface and click on <b>Edit</b>.</p> <table border="1"> <tr> <td>eth04</td> <td>Ethernet</td> <td>onboot = no bootProto = none monitorType = none</td> <td></td> </tr> <tr style="background-color: #90EE90;"> <td>eth21</td> <td>Ethernet</td> <td>onboot = no bootProto = none monitorType = none</td> <td></td> </tr> <tr> <td>eth22</td> <td>Ethernet</td> <td>onboot = no bootProto = none monitorType = none</td> <td></td> </tr> <tr> <td>eth23</td> <td>Ethernet</td> <td>onboot = no bootProto = none monitorType = none</td> <td></td> </tr> <tr> <td>eth24</td> <td>Ethernet</td> <td>onboot = no bootProto = none monitorType = none</td> <td></td> </tr> </table> <p><input type="button" value="Insert"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/> <input type="button" value="Report"/></p> <p>The following screen should be displayed. Verify that the blade name on the top corresponds to the MP.</p> <p><b>Edit Ethernet device eth21 on dsrMP-A</b></p> <table border="1"> <thead> <tr> <th colspan="2">General Options</th> <th>MII Monitoring Options</th> <th>ARP Monitoring Options</th> <th>IP Interfaces</th> </tr> <tr> <th>Field</th> <th>Value</th> <th colspan="3">Desc</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 colspan="3">Select the device type. It cannot be changed after device Alias.]</td> </tr> <tr> <td>Device Monitoring</td> <td>-- Monitoring Type--</td> <td colspan="3">Choose a monitoring style to use with a bonded device Options = MII, ARP.]</td> </tr> <tr> <td>Start On Boot</td> <td><input checked="" type="checkbox"/> Enable</td> <td colspan="3">Start the device, and also start on boot. [Default = enable]</td> </tr> <tr> <td>Boot Protocol</td> <td>None</td> <td colspan="3">Select the boot protocol. [Default = None, Range = [None, ...]]</td> </tr> <tr> <td>Base Device (s)</td> <td> <input type="checkbox"/> bond0  <input type="checkbox"/> bond0.4  <input type="checkbox"/> eth01  <input type="checkbox"/> eth02  <input type="checkbox"/> eth03  <input type="checkbox"/> eth04  <input type="checkbox"/> eth21  <input type="checkbox"/> eth22  <input type="checkbox"/> eth23  <input type="checkbox"/> eth24                 </td> <td colspan="3">The base device(s) for Bonding, Alias and Vlan device Bonding devices require 2 selections. It cannot be changed available base devices per device type.]</td> </tr> </tbody> </table>	eth04	Ethernet	onboot = no bootProto = none monitorType = none		eth21	Ethernet	onboot = no bootProto = none monitorType = none		eth22	Ethernet	onboot = no bootProto = none monitorType = none		eth23	Ethernet	onboot = no bootProto = none monitorType = none		eth24	Ethernet	onboot = no bootProto = none monitorType = none		General Options		MII Monitoring Options	ARP Monitoring Options	IP Interfaces	Field	Value	Desc			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 Alias.]			Device Monitoring	-- Monitoring Type--	Choose a monitoring style to use with a bonded device Options = MII, ARP.]			Start On Boot	<input checked="" type="checkbox"/> Enable	Start the device, and also start on boot. [Default = enable]			Boot Protocol	None	Select the boot protocol. [Default = None, Range = [None, ...]]			Base Device (s)	<input type="checkbox"/> bond0 <input type="checkbox"/> bond0.4 <input type="checkbox"/> eth01 <input type="checkbox"/> eth02 <input type="checkbox"/> eth03 <input type="checkbox"/> eth04 <input type="checkbox"/> eth21 <input type="checkbox"/> eth22 <input type="checkbox"/> eth23 <input type="checkbox"/> eth24	The base device(s) for Bonding, Alias and Vlan device Bonding devices require 2 selections. It cannot be changed available base devices per device type.]		
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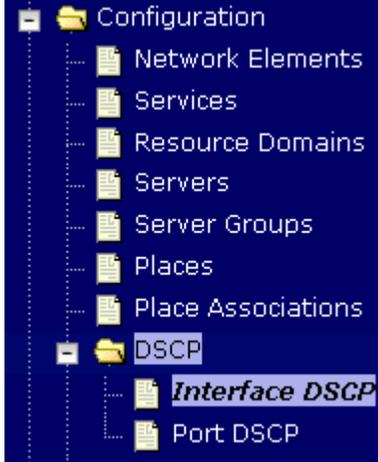
**Procedure 24. Configure the Signaling Devices**

		<p>For “Start on Boot”, verify that the checkbox is selected.</p> <p>For “Boot Protocol”, verify that “None” is selected</p> <p>Now Click on the <b>IP Interfaces</b> tab as shown below.</p> <p><b>Insert Device on blade09</b></p>  <p>Now Click on <b>Add Row</b>, the following will be displayed</p>  <p>Select the first Signaling Network from the drop down menu.</p> <p>Enter the IP address that corresponds to the IPv4 or IPv6 interface.</p> <p>Click on Ok at the bottom of the screen.</p>  <p>Now repeat this step to configure the second signaling interface (eth22).</p> <p>Skip the next step and continue to step 6</p>
<p>6</p> <p><input type="checkbox"/></p>	<p><b>NOAMP VIP:</b> Configure the Interfaces of the other MPs.</p>	<p><b>Repeat this procedure to configure the signaling devices of all other MPs.</b></p>

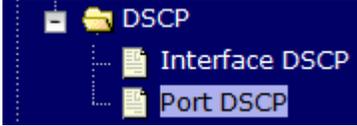
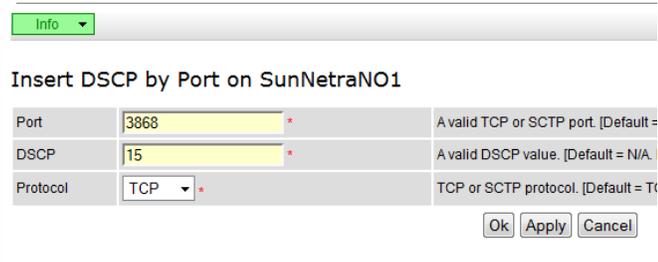
**Procedure 25. Configure DSCP Values for Outgoing Traffic (Optional)**

<p><b>S T E P</b></p>	<p>This procedure will provide the steps to configure the DSCP values for outgoing packets on servers. DSCP values can be applied to an outbound interface as a whole, or to all outbound traffic using a specific TCP or SCTP source port. This step is optional and should only be executed if has been decided that your network will utilize packet DSCP markings for Quality-of-Service purposes.</p> <p><b>IF YOUR ENCLOSURE SWITCHES ALREADY HAVE DSCP CONFIGURATION FOR THE SIGNALING VLANs, THEN THE SWITCH CONFIGURATION WILL OVERRIDE THE SETTINGS IN THIS PROCEDURE.</b></p> <p>It is strongly recommended, however, that you configure DSCP here at the application level where you have the most knowledge about outgoing traffic patterns and qualities.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.</p>	
<p>1</p> <p><input type="checkbox"/></p>	<p><b>Establish GUI Session on the NOAMP VIP</b></p>	<p>Establish a GUI session on the NOAMP by using the XMI VIP address. Login as user "guiadmin".</p>

**Procedure 25. Configure DSCP Values for Outgoing Traffic (Optional)**

<p>2</p> <p><input type="checkbox"/></p> <p><b>NOAMP VIP:</b> Option 1: Configure Interface DSCP</p>	<p><b>Note: The values displayed in the screenshots are for demonstration purposes only. The exact DSCP values for your site will vary.</b></p> <p>Navigate to <b>Main Menu -&gt; Configuration -&gt; DSCP -&gt; Interface DSCP</b></p>  <p>Select the server you wish to configure from the list of servers on the 2<sup>nd</sup> line. (You can view all servers with "Entire Network" selected; or limit yourself to a particular server group by clicking on that server group name's tab).</p> <p>Click <b>Insert</b></p> <p>Main Menu: Configuration -&gt; DSCP -&gt; Interface DSCP</p>  <p>Select the network interface from the drop down box, then enter the DSCP value you wish to have applied to packets leaving this interface.</p> <p>Main Menu: [Insertdscpbyintf]</p>  <p>Click <b>OK</b> if there are no more interfaces on this server to configure, or <b>Apply</b> to finish this interface and continue on with more interfaces by selecting them from the drop down and entering their DSCP values.</p>
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**Procedure 25. Configure DSCP Values for Outgoing Traffic (Optional)**

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

**Procedure 26. Configure the Signaling Network Routes**

<p><b>S T E P</b></p>	<p>This procedure will provide the steps to configure Signaling Network Routes on MP-type servers (DA-MP, IPFE, SS7-MP, etc)</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.</p>	
<p>1 <input type="checkbox"/></p>	<p><b>Establish GUI Session on the NOAMP VIP</b></p>	<p>Establish a GUI session on the NOAMP by using the XMI VIP address. Login as user “guiadmin”.</p>
<p>2 <input type="checkbox"/></p>	<p><b>NOAMP VIP:</b> Navigate to Routes Configuration Screen</p>	<p>Navigate to <b>Main Menu -&gt; Configuration -&gt; Network -&gt; Routes</b></p> <p>Select the first MP Server you see listed on the first row of tabs as shown, then click the “<b>Entire Server Group</b>” link. Initially, no routes should be displayed.</p> 
<p>3 <input type="checkbox"/></p>	<p><b>NOAMP VIP: Add Route</b></p>	<p>Click on <b>Insert</b> at the bottom of the screen to add additional routes.</p> 

**Procedure 26. Configure the Signaling Network Routes**

4	<p><b>NOAMP VIP: (Optional)</b> Add Default Route for MPs Going Through Signaling Network Gateway</p>	<p><b>***OPTIONAL - Only execute this step if you performed Procedure 20, Step #10 -- which removed the XMI gateway default route on MPs ***</b></p> <p>If your MP servers no longer have a default route, then you can now insert a default route here which uses one of the signaling network gateways.</p> <table border="1" style="width: 100%; border-collapse: collapse; margin: 10px 0;"> <thead> <tr> <th style="text-align: left;">Field</th> <th style="text-align: left;">Value</th> <th style="text-align: left;">Description</th> </tr> </thead> <tbody> <tr> <td>Route Type</td> <td> <input checked="" type="radio"/> Net  <input type="radio"/> Default  <input type="radio"/> Host                 </td> <td>Select a route type.</td> </tr> <tr> <td>Device</td> <td>bond0.5</td> <td>Enter the network device name through which traffic is being routed. This must be an existing device on the server.</td> </tr> <tr> <td>Destination</td> <td>10.250.52.0</td> <td>A valid netmask for the destination network or host. Must be in dotted quad format</td> </tr> <tr> <td>Netmask</td> <td>255.255.255.0</td> <td>A valid netmask for the destination network or host. Must be in dotted quad format</td> </tr> <tr> <td>Gateway IP</td> <td>10.240.70.99</td> <td>A valid IP address of the gateway. Must be in dotted quad format</td> </tr> </tbody> </table> <p style="text-align: right; margin-right: 50px;"> <input type="button" value="Ok"/> <input type="button" value="Apply"/> <input type="button" value="Cancel"/> </p> <p>For Route Type Select Default,                  for Device select the signaling device that is directly attached to the network where the XSI default gateway resides.                  For Gateway IP enter the XSI gateway you wish to use for default signaling network access.                  Press <b>Ok</b>.</p>	Field	Value	Description	Route Type	<input checked="" type="radio"/> Net <input type="radio"/> Default <input type="radio"/> Host	Select a route type.	Device	bond0.5	Enter the network device name through which traffic is being routed. This must be an existing device on the server.	Destination	10.250.52.0	A valid netmask for the destination network or host. Must be in dotted quad format	Netmask	255.255.255.0	A valid netmask for the destination network or host. Must be in dotted quad format	Gateway IP	10.240.70.99	A valid IP address of the gateway. Must be in dotted quad format
Field	Value	Description																		
Route Type	<input checked="" type="radio"/> Net <input type="radio"/> Default <input type="radio"/> Host	Select a route type.																		
Device	bond0.5	Enter the network device name through which traffic is being routed. This must be an existing device on the server.																		
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Gateway IP	10.240.70.99	A valid IP address of the gateway. Must be in dotted quad format																		

**Procedure 26. Configure the Signaling Network Routes**

5	<p><b>NOAMP VIP: Add Network Routes for Diameter Peers</b></p>	<p>Use this step to add IP and/or IPv6 routes to diameter peer destination networks. The goal here is to ensure that diameter traffic uses the gateway(s) on the signaling networks.</p> <div style="border: 1px solid #ccc; padding: 5px; margin: 10px 0;"> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Field</th> <th style="text-align: left;">Value</th> <th style="text-align: left;">Description</th> </tr> </thead> <tbody> <tr> <td>Route Type</td> <td> <input checked="" type="radio"/> Net  <input type="radio"/> Default  <input type="radio"/> Host                 </td> <td>Select a route type.</td> </tr> <tr> <td>Device</td> <td>bond0.5</td> <td>* Enter the network device name through which traffic is being routed. This must be an existing device on the server.</td> </tr> <tr> <td>Destination</td> <td>10.250.46.0</td> <td>A valid netmask for the destination network or host. Must be in dotted quad format</td> </tr> <tr> <td>Netmask</td> <td>255.255.255.0</td> <td>A valid netmask for the destination network or host. Must be in dotted quad format</td> </tr> <tr> <td>Gateway IP</td> <td>10.240.70.99</td> <td>* A valid IP address of the gateway. Must be in dotted quad format</td> </tr> </tbody> </table> <p style="text-align: right; margin-top: 5px;"> <input type="button" value="Ok"/> <input type="button" value="Apply"/> <input type="button" value="Cancel"/> </p> </div> <p>For Route Type Select Net,                      for Device select the appropriate signaling interface that will be used to connect to that network,                      For Destination enter the Network ID of Network to which the peer node is connected to.                      For Netmask enter the corresponding Netmask.                      For Gateway IP enter the Int-XSI switch VIP of the chosen Network for L3 deployments (either of int-XSI-1 or of int-XSI2). or the IP of the customer gateway for L2 deployments.</p> <p>If you have more routes to enter, Press <b>Apply</b> to save the current route entry and repeat this step to enter more routes</p> <p>If you are finished entering routes, Press <b>OK</b> to save the latest route and leave this screen.</p> <p><b>If aggregation switches are used, routes should be configured on the aggregation switches so that the destination networks configured in this step are reachable. This can be done by running the following netconfig commands from the site's local PMAC (examples shown -- actual values will vary) :</b></p> <pre style="background-color: #f0f0f0; padding: 5px; margin: 10px 0;"> <b>Add Routes (IPv4 &amp; IPv6) :</b> \$ sudo netConfig --device=switch1A addRoute network=10.10.10.0 mask=255.255.255.0 nexthop=10.250.76.81  \$ sudo netConfig --device=switch1A addRoute network6=2001::/64 nexthop=fd0f::1  <b>Delete Routes (IPv4 &amp; IPv6) :</b> \$ sudo netConfig --device=switch1A deleteRoute network=10.10.10.0 mask=255.255.255.0 nexthop=10.250.76.81  \$ sudo netConfig --device=switch1A deleteRoute network6=2001::/64 nexthop=fd0f::1                     </pre> <p>After the routes are added via netconfig, a netconfig backup should be taken so that the new routes are retained in the backup.</p>	Field	Value	Description	Route Type	<input checked="" type="radio"/> Net <input type="radio"/> Default <input type="radio"/> Host	Select a route type.	Device	bond0.5	* Enter the network device name through which traffic is being routed. This must be an existing device on the server.	Destination	10.250.46.0	A valid netmask for the destination network or host. Must be in dotted quad format	Netmask	255.255.255.0	A valid netmask for the destination network or host. Must be in dotted quad format	Gateway IP	10.240.70.99	* A valid IP address of the gateway. Must be in dotted quad format
Field	Value	Description																		
Route Type	<input checked="" type="radio"/> Net <input type="radio"/> Default <input type="radio"/> Host	Select a route type.																		
Device	bond0.5	* Enter the network device name through which traffic is being routed. This must be an existing device on the server.																		
Destination	10.250.46.0	A valid netmask for the destination network or host. Must be in dotted quad format																		
Netmask	255.255.255.0	A valid netmask for the destination network or host. Must be in dotted quad format																		
Gateway IP	10.240.70.99	* A valid IP address of the gateway. Must be in dotted quad format																		

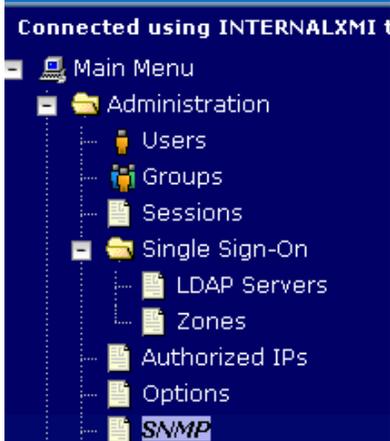
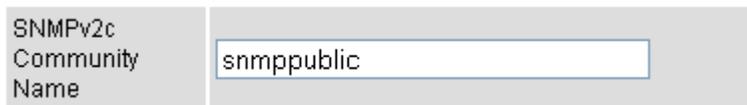
**Procedure 26. Configure the Signaling Network Routes**

6 <input type="checkbox"/>	Repeat steps 2-5 for all other MP server groups.	The routes entered in this procedure should now be configured on *all* MPs in the server group for the first MP you selected. If you have additional MP server groups, repeat from 2, but this time, select an MP from the next MP server group. Continue until you have covered all MP server groups.
-------------------------------	--	--

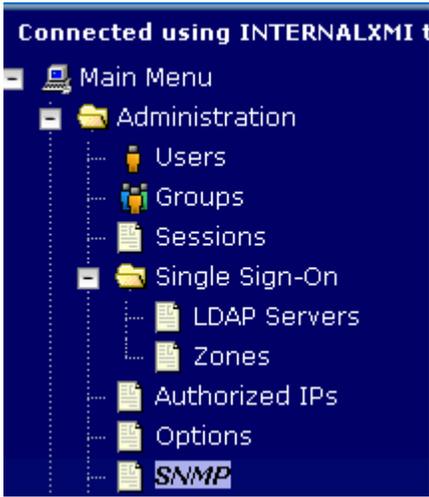
**Procedure 27. Add VIP for Signaling Networks (Active/Standby Configurations ONLY)**

<b>S T E P #</b>	This procedure will provide the steps to configure the VIPs for the signaling networks on the MPs. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.							
1 <input type="checkbox"/>	<b>Edit the MP Server Group and add VIPs (ONLY FOR 1+1)</b>	<p style="color: red; font-weight: bold;">IF YOUR MPs ARE IN A DSR MULTI-ACTIVE CLUSTER SERVER GROUP CONFIGURATION (N+0), THEN SKIP THIS STEP</p> <p>From the GUI Main Menu-&gt;Configuration-&gt;Server Groups, select the MP server group, and then select <b>Edit</b>.</p> <p>Click on <b>Add</b> to add the VIP for XSI1                      Enter the VIP of int-XSI-1 and click on <b>Apply</b>.                      Click on <b>Add</b> again to add the VIP for XSI2                      Enter the VIP of int-XSI-2 and click on <b>Apply</b>.                      If more Signaling networks exists, add their corresponding VIP addresses .                      Finally Click on <b>Ok</b>.</p> <div style="border: 1px solid #ccc; padding: 5px; background-color: #f2f2f2; margin-top: 10px;"> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center; border-bottom: 1px solid #ccc;">VIP Address</td> <td style="text-align: right; border-bottom: 1px solid #ccc;"><input type="button" value="Add"/></td> </tr> <tr> <td style="border-bottom: 1px solid #ccc;"><input style="width: 80%;" type="text"/></td> <td style="text-align: right; border-bottom: 1px solid #ccc;"><input type="button" value="Remove"/></td> </tr> <tr> <td colspan="2" style="text-align: right; padding-top: 5px;"> <input type="button" value="Ok"/> <input type="button" value="Apply"/> <input type="button" value="Cancel"/> </td> </tr> </table> </div>	VIP Address	<input type="button" value="Add"/>	<input style="width: 80%;" type="text"/>	<input type="button" value="Remove"/>	<input type="button" value="Ok"/> <input type="button" value="Apply"/> <input type="button" value="Cancel"/>	
VIP Address	<input type="button" value="Add"/>							
<input style="width: 80%;" type="text"/>	<input type="button" value="Remove"/>							
<input type="button" value="Ok"/> <input type="button" value="Apply"/> <input type="button" value="Cancel"/>								

**Procedure 28. Configure SNMP Trap Receiver(s) (OPTIONAL)**

<p><b>S T E P #</b></p>	<p>This procedure will provide the steps to configure forwarding of SNMP Traps from each individual server.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.</p>				
<p>1 <input type="checkbox"/></p>	<p><b>NOAMP VIP:</b> Configure System-Wide SNMP Trap Receiver(s)</p> <p>Using a web browser, log onto the NOAMP VIP and navigate to <b>Main Menu -&gt; Administration -&gt; SNMP</b>, as shown below</p>  <p>Verify that “Traps Enabled” is checked:</p>  <p>Fill in the IP address or hostname of the Network Management Station (NMS) you wish to forward traps to. This IP should be reachable from the the NOAMP’s “XMI” network.</p> <p>Continue to fill in additional secondary, tertiary, etc.. manager IPs in the corresponding slots if desired.</p> <table border="1"> <thead> <tr> <th>Variable</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>Manager 1</td> <td>10.10.55.88</td> </tr> </tbody> </table> <p>Enter the SNMP community name:</p>  <p>Leave all other fields at their default values.</p> <p>Press <b>OK</b></p>	Variable	Value	Manager 1	10.10.55.88
Variable	Value				
Manager 1	10.10.55.88				

**Procedure 28. Configure SNMP Trap Receiver(s) (OPTIONAL)**

2	<p><b>NOAMP VIP:</b> Enable Traps from Individual Servers (OPTIONAL)</p>	<p><b>NOTE:</b> By default snmp traps from MPs are aggregated and then displayed at the active NOAMP. If instead, you wish for every server to send its own traps directly to the NMS, then execute this procedure.</p> <p>This procedure requires that all servers, including MPs, have an XMI interface on which the customer SNMP Target server (NMS) is reachable.</p> <p>-----</p> <p>Using a web browser, log onto the NOAMP VIP and navigate to <b>Main Menu</b> -&gt; <b>Administration</b> -&gt; <b>SNMP</b>, as shown below</p>  <p>Make sure the checkbox next to “Enabled” is checked, if not, check it as shown below</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <tr> <td style="width: 30%;"></td> <td style="width: 30%;"></td> <td style="width: 40%; text-align: right;">[Default: enabled.]</td> </tr> <tr> <td>Traps from Individual Servers</td> <td style="text-align: center;"><input checked="" type="checkbox"/> Enabled</td> <td>Enable or disable SNMP traps from sent from individual servers, other OAM&amp;P server. [Default: disabled]</td> </tr> <tr> <td></td> <td></td> <td>Configured Community Name (SI</td> </tr> </table> <p>Then click on <b>Apply</b> and verify that the data is committed.</p>			[Default: enabled.]	Traps from Individual Servers	<input checked="" type="checkbox"/> Enabled	Enable or disable SNMP traps from sent from individual servers, other OAM&P server. [Default: disabled]			Configured Community Name (SI
		[Default: enabled.]									
Traps from Individual Servers	<input checked="" type="checkbox"/> Enabled	Enable or disable SNMP traps from sent from individual servers, other OAM&P server. [Default: disabled]									
		Configured Community Name (SI									

**Procedure 29:PDRA Resource Domain Configuration (PDRA Only)**

<p><b>S T E P #</b></p>	<p>This procedure configures the Resource Domain. <b>It should be executed for PDRA Installations ONLY.</b></p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>SHOULD THIS PROCEDURE FAIL, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR <b>EAGLE XG TAC.</b></p> <p><b>ASSUMPTION: POLICY DRA FEATURE IS ALREADY ACTIVATED USING WI006835.</b></p>																				
<p><b>1</b></p>	<p>Establish GUI Session on the NOAMP VIP</p>	<p>Establish a GUI session on the NOAMP by using the XMI VIP address. Login as user “guiadmin”.</p>																			
<p><b>2</b></p>	<p><b>NOAMP VIP:</b> Navigate to Resource Domain Screen</p>	<p>Navigate to <b>Main Menu -&gt; Configuration -&gt; Resource Domains</b> Screen.</p>																			
<p><b>4</b></p>	<p><b>NOAMP VIP:</b> Add Binding Resource Domain</p>	<p>Click on <b>Insert</b> in the lower left corner.</p> <p>You will see a screen similar to:</p> <div style="border: 1px solid gray; padding: 5px;"> <p><b>Main Menu: Configuration -&gt; Resource Domains [Insert]</b> <span style="float: right;">Help</span></p> <p style="text-align: right;">Tue Jul 03 12:03:54 2012 UTC</p> <p>Info ▾</p> <p><b>Inserting a new Resource Domain</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 20%;">Resource Domain</th> <th style="width: 40%;">Field</th> <th style="width: 40%;">Value</th> <th style="width: 20%;">Description</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Resource Domain</td> <td>Resource Domain Name</td> <td>pSbrBindingRes *</td> <td>Unique identifier used to label a Resource Domain. [Default = n/a. Range = A 1-32-character string. Valid characters are alphanumeric and underscore.]</td> </tr> <tr> <td>Resource Domain Profile</td> <td>Policy Binding ▾ *</td> <td>The Profile of this Resource Domain</td> </tr> <tr> <td colspan="4"><b>Server Groups</b></td> </tr> <tr> <td>Server Groups</td> <td colspan="2"> <input type="checkbox"/> NOServerGroup  <input checked="" type="checkbox"/> Site1BindingPsbrMpSg  <input type="checkbox"/> Site1DsrMp1Sg  <input type="checkbox"/> Site1DsrMp2Sg  <input type="checkbox"/> Site1SessionPsbrMpSg  <input type="checkbox"/> Site1SoServerGroup                 </td> <td>Server Groups associated with this Resource Domain</td> </tr> </tbody> </table> <p style="text-align: center;">Ok Apply Cancel</p> </div> <p>Enter the Binding Resource Domain Name, select “Policy Binding” as the Resource Domain Profile and select the Server Groups associated with the Resource Domain and Press <b>Ok</b>.</p>	Resource Domain	Field	Value	Description	Resource Domain	Resource Domain Name	pSbrBindingRes *	Unique identifier used to label a Resource Domain. [Default = n/a. Range = A 1-32-character string. Valid characters are alphanumeric and underscore.]	Resource Domain Profile	Policy Binding ▾ *	The Profile of this Resource Domain	<b>Server Groups</b>				Server Groups	<input type="checkbox"/> NOServerGroup <input checked="" type="checkbox"/> Site1BindingPsbrMpSg <input type="checkbox"/> Site1DsrMp1Sg <input type="checkbox"/> Site1DsrMp2Sg <input type="checkbox"/> Site1SessionPsbrMpSg <input type="checkbox"/> Site1SoServerGroup		Server Groups associated with this Resource Domain
Resource Domain	Field	Value	Description																		
Resource Domain	Resource Domain Name	pSbrBindingRes *	Unique identifier used to label a Resource Domain. [Default = n/a. Range = A 1-32-character string. Valid characters are alphanumeric and underscore.]																		
	Resource Domain Profile	Policy Binding ▾ *	The Profile of this Resource Domain																		
<b>Server Groups</b>																					
Server Groups	<input type="checkbox"/> NOServerGroup <input checked="" type="checkbox"/> Site1BindingPsbrMpSg <input type="checkbox"/> Site1DsrMp1Sg <input type="checkbox"/> Site1DsrMp2Sg <input type="checkbox"/> Site1SessionPsbrMpSg <input type="checkbox"/> Site1SoServerGroup		Server Groups associated with this Resource Domain																		

**5** NOAMP VIP: Add Policy DRA Resource Domain

Click on **Insert** in the lower left corner.

You will see a screen similar to:

Main Menu: Configuration -> Resource Domains [Insert] Tue Sep 04 05:45

Info

Inserting a new Resource Domain

Resource Domain		
Field	Value	Description
Resource Domain Name	PolicyDRARD *	Unique identifier used to label a Resource Domain. [Default = n/a. Range = A 1-32-character string. Valid characters are alphanumeric and underscore.]
Resource Domain Profile	Policy DRA	The Profile of this Resource Domain
Server Groups		
Server Groups	<input type="checkbox"/> BindingPsbri1MpSg <input type="checkbox"/> pfe1ServerGroup <input type="checkbox"/> LabCSOAMSG2 <input type="checkbox"/> LabDSRMSG <input type="checkbox"/> LabDSOAMSG <input type="checkbox"/> NOAMP_SG <input checked="" type="checkbox"/> PDRA_SG <input type="checkbox"/> SOAM_SG <input type="checkbox"/> SessionPsbri1MpSg	Server Groups associated with this Resource Domain

OK Apply Cancel

Enter the Resource Domain Name, select "Policy DRA" as the Resource Domain Profile and select the Server Groups associated with the Resource Domain and Press **Ok**.

NOTE:

**For Mated Pair DSR, create only one PDRA Resource Domain and add the DA-MP Server Groups from both sites into this PDRA Resource Domain.**

**For non-mated pair DSRs and standalone DSR: Create a PDRA Resource Domain per Site.**

**6** NOAMP VIP: Add Session Resource Domain

Click on **Insert** in the lower left corner.

You will see a screen similar to:

Main Menu: Configuration -> Resource Domains [Insert] Help  
Tue Jul 03 12:03:54 2012 UTC

Info

Inserting a new Resource Domain

Resource Domain		
Field	Value	Description
Resource Domain Name	pSbrSessionRes *	Unique identifier used to label a Resource Domain. [Default = n/a. Range = A 1-32-character string. Valid characters are alphanumeric and underscore.]
Resource Domain Profile	Policy Session *	The Profile of this Resource Domain
Server Groups		
Server Groups	<input type="checkbox"/> NOServerGroup <input type="checkbox"/> Site1BindingPsbri1MpSg <input type="checkbox"/> Site1DsrMp1Sg <input type="checkbox"/> Site1DsrMp2Sg <input checked="" type="checkbox"/> Site1SessionPsbri1MpSg <input type="checkbox"/> Site1SoServerGroup	Server Groups associated with this Resource Domain

OK Apply Cancel

Enter the Session Resource Domain Name, select "Policy Session" as the Resource Domain Profile and select the Server Groups associated with the Resource Domain and Press **Ok**.

7 <input type="checkbox"/>	<b>NOAMP VIP:</b> Add other Session Resource Domains.	Repeat Step 6 for all other Session Resource Domains that are to be added.
8 <input type="checkbox"/>	<b>NOAMP VIP:</b> Restart PDRA MP servers	From the NOAMP GUI, select the <b>Main menu-&gt;Status &amp; Manage-&gt;Server menu</b>  <i>For each PDRA MP server:</i> <ul style="list-style-type: none"><li>• Select the MP server.</li><li>• Select the <b>Restart</b> button.</li><li>• Answer <b>OK</b> to the confirmation popup. Wait for the message which tells you that the restart was successful.</li></ul>

## 4.7 Post-Install Activities

### Procedure 30. Activate Optional Features

<p><b>S T E P #</b></p>	<p>This procedure will provide instruction on how to install DSR optional components once regular installation is complete.</p> <p><b>Prerequisite:</b> All previous DSR installation steps have been completed.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.</p>	
<p>1</p> <p><input type="checkbox"/></p>	<p><b>Refer to Activation Guides for Optional Features</b></p>	<p>Refer to 3.3 <b>Optional Features</b> for a list of feature activation documents whose procedures are to be executed at this moment.</p>

### Procedure 31. Configure ComAgent Connections

<p><b>S T E P #</b></p>	<p>This procedure will provide instruction on how to configure ComAgent connections on DSR for use in the FABR application.</p> <p><b>Prerequisite:</b> FABR application is activated.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.</p>	
<p>1</p> <p><input type="checkbox"/></p>	<p><b>Configure ComAgent</b></p>	<p>Refer to [5] for the steps required to configure ComAgent</p>

## Appendix A. SAMPLE NETWORK ELEMENT AND HARDWARE PROFILES

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

It is expected that the maintainer/creator of this file has networking knowledge of this product and the customer site at which it is being installed. This network element XML file is used for DSR deployments using Cisco 4948 switches and HP c-Class blade servers. The following is an example of a Network Element XML file.

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

### Example Network Element XML file:

```
<?xml version="1.0"?>
<networkelement>
  <name>NE</name>
  <networks>
    <network>
      <name>INTERNALXMI</name>
      <vlanId>3</vlanId>
      <ip>10.2.0.0</ip>
      <mask>255.255.255.0</mask>
      <gateway>10.2.0.1</gateway>
      <isDefault>>true</isDefault>
    </network>
    <network>
      <name>INTERNALIMI</name>
      <vlanId>4</vlanId>
      <ip>10.3.0.0</ip>
      <mask>255.255.255.0</mask>
      <gateway>10.3.0.1</gateway>
      <isDefault>>false</isDefault>
    </network>
  </networks>
</networkelement>
```

The server hardware information is needed to configure the Ethernet interfaces on the servers. This server hardware profile data XML file is used for Appworks deployments using HP c-Class blade servers and HP c-Class rack-mount servers. It is supplied to the NOAMP server so that the information can be pulled in by Appworks and presented to the user in the GUI during server configuration. The following is an example of a Server Hardware Profile XML file.

**Example Server Hardware Profile XML file – HP c-Class blade:**

```

<profile>
  <serverType>HP c-Class Blade</serverType>
  <available>
    <device>bond0</device>
  </available>
  <devices>
    <device>
      <name>bond0</name>
      <type>BONDING</type>
      <createBond>>true</createBond>
      <slaves>
        <slave>eth01</slave>
        <slave>eth02</slave>
      </slaves>
      <option>
        <monitoring>mii</monitoring>
        <primary>eth03</primary>
        <interval>100</interval>
        <upstream_delay>200</upstream_delay>
        <downstream_delay>200</downstream_delay>
      </option>
    </device>
  </devices>
</profile>

```

**Example Server Hardware Profile XML file – HP c-Class rack-mount server:**

```

<profile>
  <serverType>HP Rack Mount</serverType>
  <available>
    <device>bond0</device>
    <device>bond1</device>
  </available>
  <devices>
    <device>
      <name>bond0</name>
      <type>BONDING</type>
      <createBond>>true</createBond>
      <slaves>
        <slave>eth01</slave>
        <slave>eth03</slave>
      </slaves>
      <option>
        <monitoring>mii</monitoring>
        <primary>eth01</primary>
        <interval>100</interval>
        <upstream_delay>200</upstream_delay>
        <downstream_delay>200</downstream_delay>
      </option>
    </device>
    <device>
      <name>bond1</name>
      <type>BONDING</type>
      <createBond>>true</createBond>
      <slaves>
        <slave>eth11</slave>
        <slave>eth12</slave>
      </slaves>
    </device>
  </devices>
</profile>

```

```

    </slaves>
    <option>
      <monitoring>mii</monitoring>
      <primary>eth1</primary>
      <interval>100</interval>
      <upstream_delay>200</upstream_delay>
      <downstream_delay>200</downstream_delay>
    </option>
  </device>
</devices>
</profile>

```

**Example Server Hardware Profile XML file – Virtual Guest on TVOE:**

```

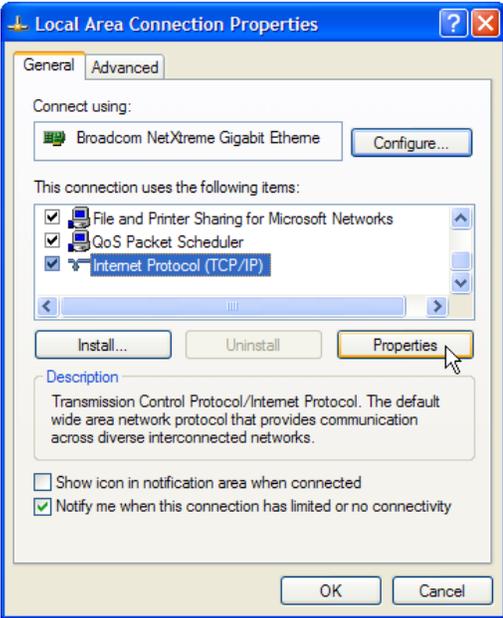
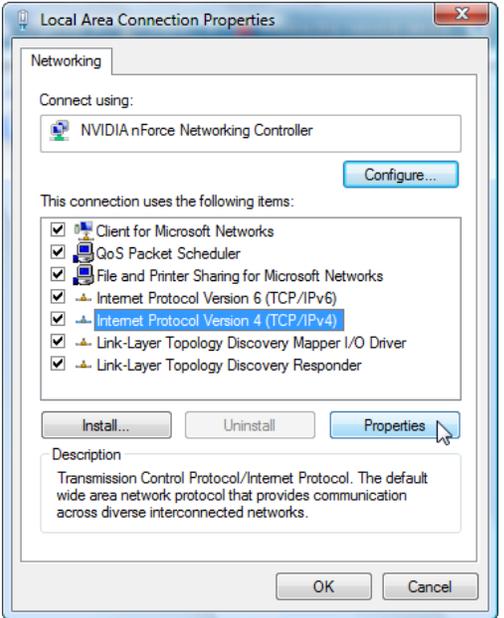
<profile>
  <serverType>TVOE Guest</serverType>
  <available>
    <device>eth0</device>
    <device>eth1</device>
    <device>eth2</device>
    <device>eth3</device>
    <device>eth4</device>
  </available>
  <devices>
    <device>
      <name>eth0</name>
      <type>ETHERNET</type>
    </device>
    <device>
      <name>eth1</name>
      <type>ETHERNET</type>
    </device>
    <device>
      <name>eth2</name>
      <type>ETHERNET</type>
    </device>
    <device>
      <name>eth3</name>
      <type>ETHERNET</type>
    </device>
    <device>
      <name>eth4</name>
      <type>ETHERNET</type>
    </device>
  </devices>
</profile>

```

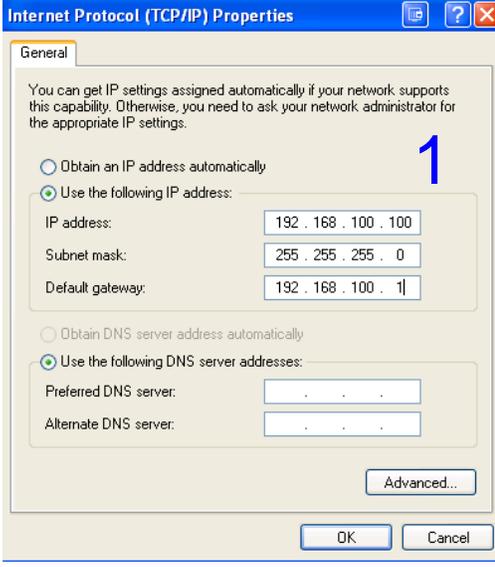
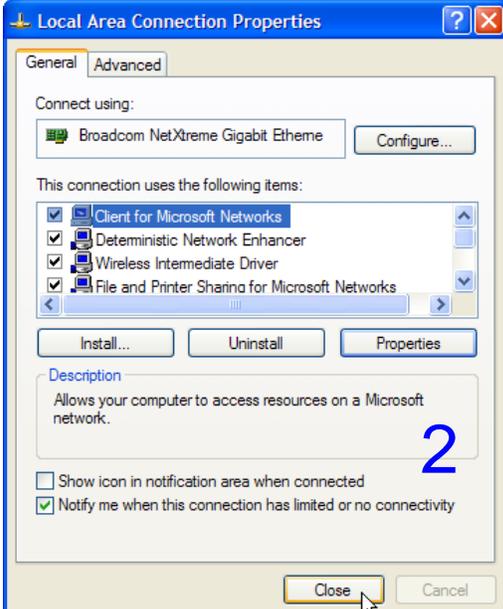
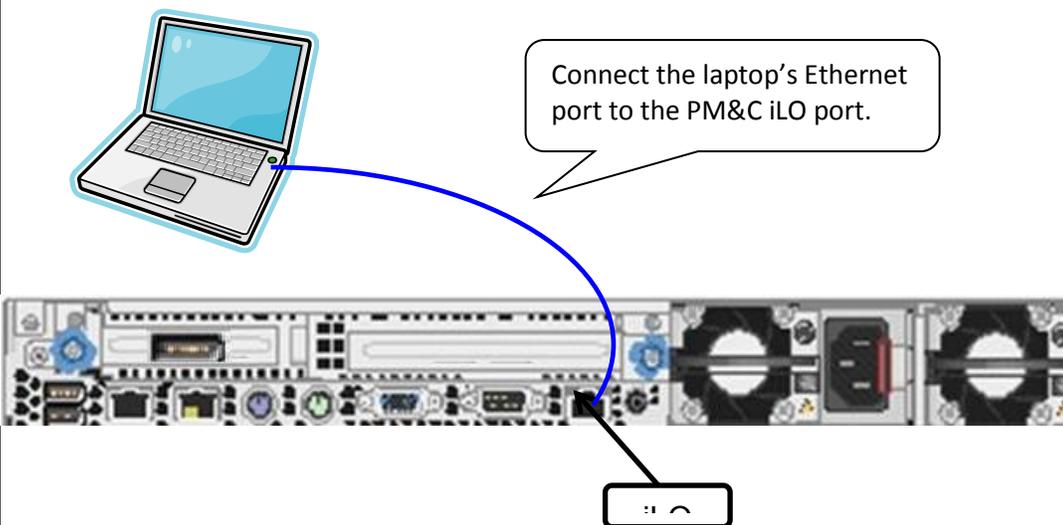
## Appendix B. CONFIGURING FOR EAGLE XG TVOEiLO ACCESS

This procedure contains the steps to connect a laptop to the TVOEiLO via a directly cabled Ethernet connection. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.

### Procedure B.1 Connecting to the EAGLE XG TVOE iLO

Step	Procedure	Result	
		Windows XP	Windows Vista
<p>1.</p> <div style="border: 1px solid black; width: 20px; height: 20px; margin-bottom: 5px;"></div> <p>Access the laptop network interface card's TCP/IP "Properties" screen.</p> <p><b>NOTE:</b> For this step follow the instruction specific to the laptop's OS (XP or Vista).</p>		<ul style="list-style-type: none"> <li>• Go to Control Panel</li> <li>• Double-click on Network Connections</li> <li>• Right-click the wired Ethernet Interface icon and select "Properties"</li> <li>• Select "Internet Protocol (TCP/IP)" and select "Properties"</li> </ul> 	<ul style="list-style-type: none"> <li>• Go to Control Panel.</li> <li>• Double-click on Network and Sharing Center</li> <li>• Select Manage Network Connections (left menu)</li> <li>• Right-click the wired Ethernet Interface icon and select "Properties"</li> <li>• Select "Internet Protocol Version 4 (TCP/IPv4)"</li> </ul> 

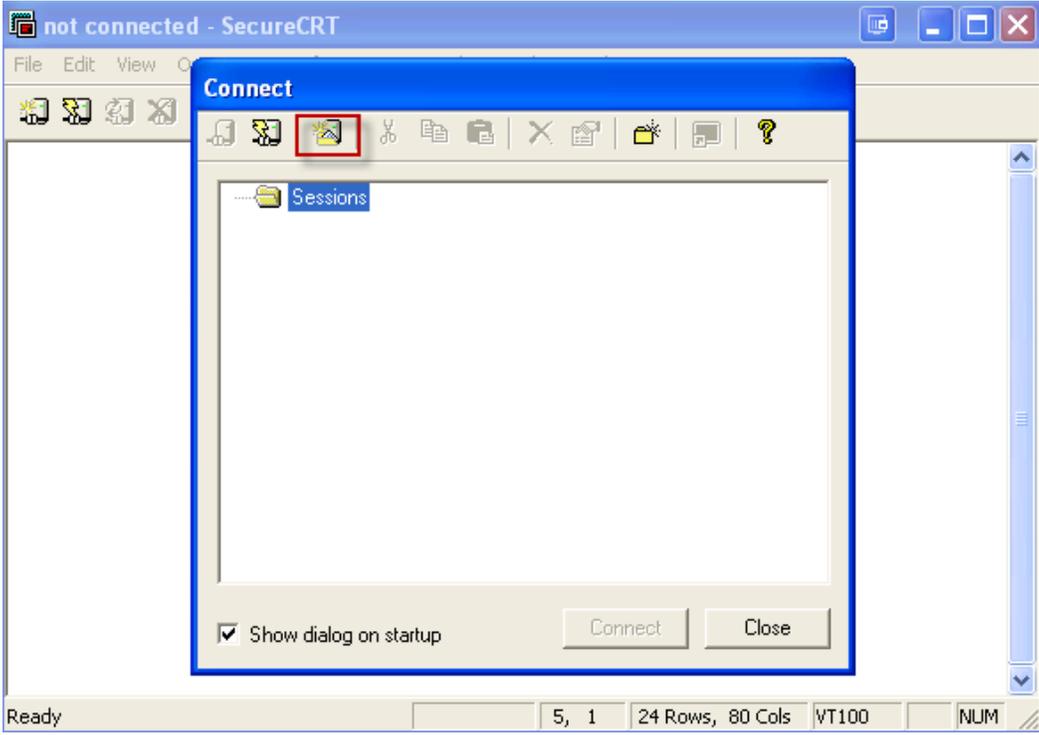
**Procedure B.1 Connecting to the EAGLE XG TVOE iLO**

<p><b>2.</b></p>	<p>1) Click “<b>use the following IP address</b>”, set the <b>IP address</b> to “192.168.100.10”, the <b>Subnet mask</b> to “255.255.255.0” and th <b>Default gateway</b> to “192.168.100.1”, click “<b>OK</b>”.</p> <p>2) Click “<b>Close</b>” from the network interface card’s main “<b>Properties</b>” screen.</p>		
<p><b>3.</b></p>	<p>Connect the laptop’s Ethernet port directly to the TVOE iLO port using a standard Cat-5 cross-over cable.</p>		
<p><b>THIS PROCEDURE HAS BEEN COMPLETED</b></p>			

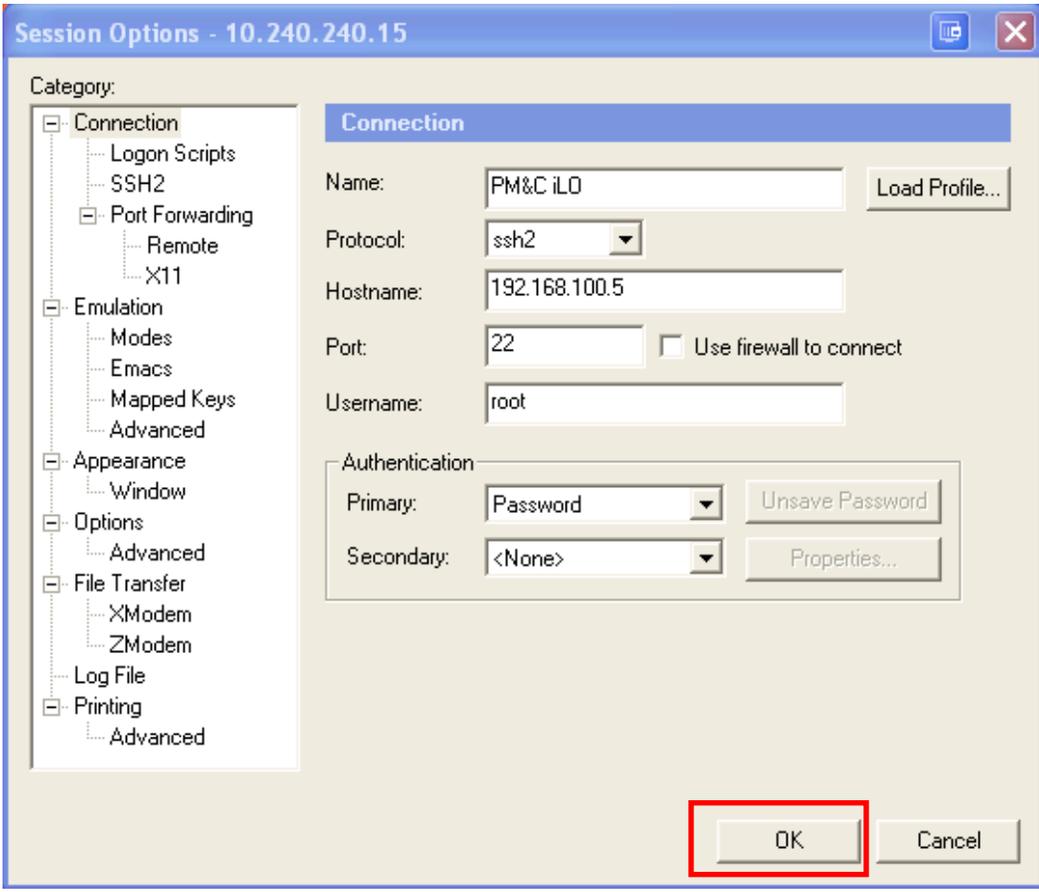
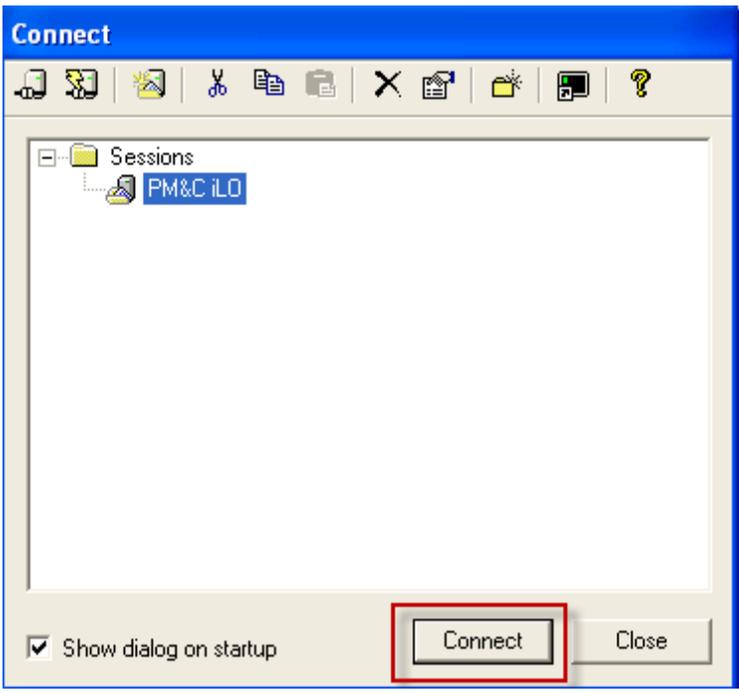
### Appendix C. TVOE ILO ACCESS

This procedure contains the steps to access the TVOE iLO. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.

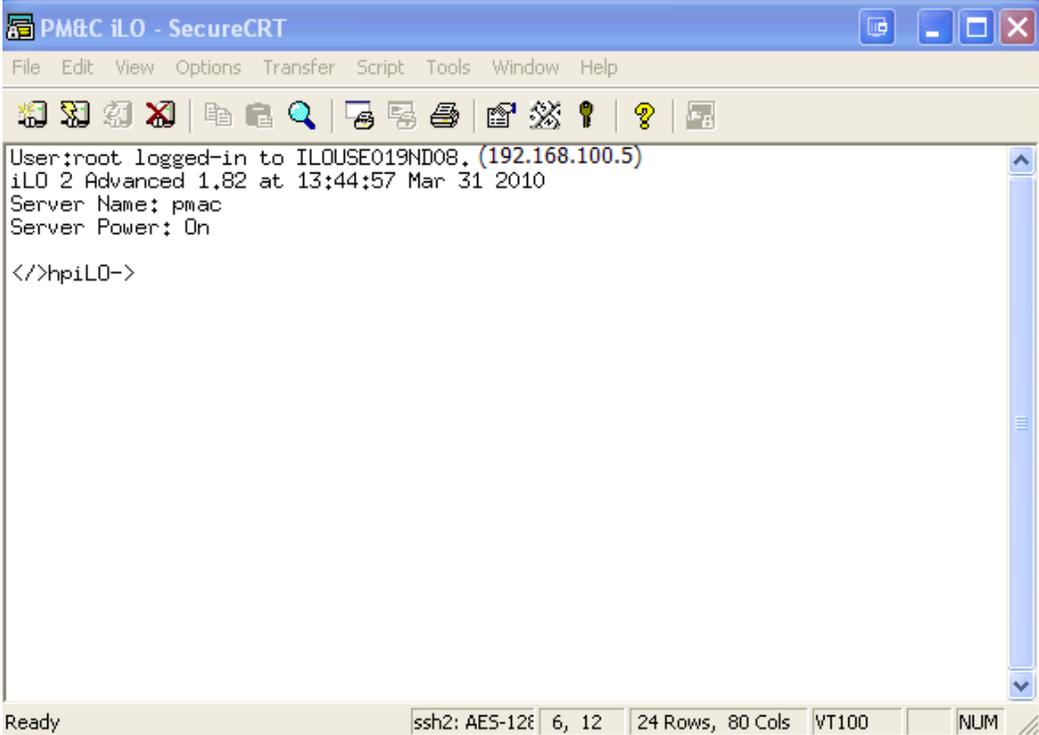
#### Procedure C.1 Accessing the TVOE iLO

Step	Procedure	Result
<p>1.</p> <input type="checkbox"/>	<p>Launch a terminal emulator, e.g. Putty, Secure CRT.</p> <p>Navigate to <b>File=&gt; Connect</b></p> <p>Click on the <b>"New Session"</b> icon.</p> <p>Note: This example demonstrates Secure CRT.</p>	 <p>The screenshot shows the SecureCRT application window titled 'not connected - SecureCRT'. A 'Connect' dialog box is open in the foreground. The dialog box has a blue title bar and a toolbar with several icons. The 'New Session' icon, which depicts a computer monitor with a plus sign, is highlighted with a red rectangular box. Below the toolbar is a list box labeled 'Sessions'. At the bottom of the dialog box, there is a checked checkbox labeled 'Show dialog on startup', and two buttons labeled 'Connect' and 'Close'. The background window shows a menu bar with 'File', 'Edit', and 'View', and a status bar at the bottom with 'Ready', '5, 1', '24 Rows, 80 Cols', 'VT100', and 'NUM'.</p>

**Procedure C.1 Accessing the TVOE iLO**

<p><b>2.</b></p> <p><input type="checkbox"/></p> <p>Enter <b>TVOE iLO</b> for 'Name' and <b>192.168.100.5</b>(m anufacturing default) or customer IP set during installation for 'Hostname'. Enter <b>root</b> for Username.</p> <p>Click <b>OK</b></p> <p><b>NOTE 1</b> See <b>Appendix B</b> to configure your system network to access the <b>EAGLE XG</b>.</p>	
<p><b>3.</b></p> <p><input type="checkbox"/></p> <p>Navigate <b>FILE =&gt; Connect</b> to open the Connect window.</p> <p>Highlight the session you created and click <b>Connect</b>.</p>	

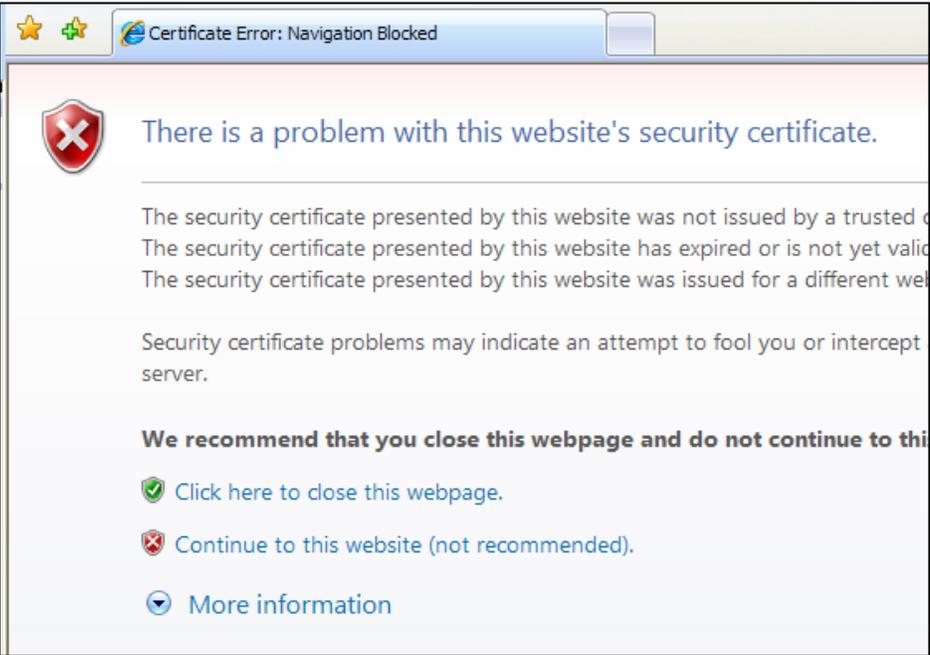
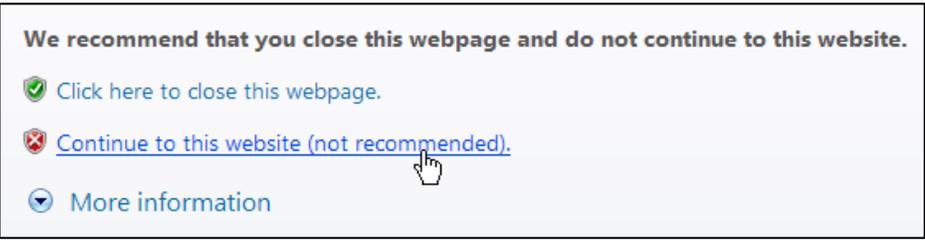
**Procedure C.1 Accessing the TVOE iLO**

<p>4.</p> <p><input type="checkbox"/></p>	<p>Login to the TVOE iLO using the appropriate password.</p>	
<p>5.</p> <p><input type="checkbox"/></p>	<p>The TVOE iLO is displayed.</p>	
<p><b>THIS PROCEDURE HAS BEEN COMPLETED</b></p>		

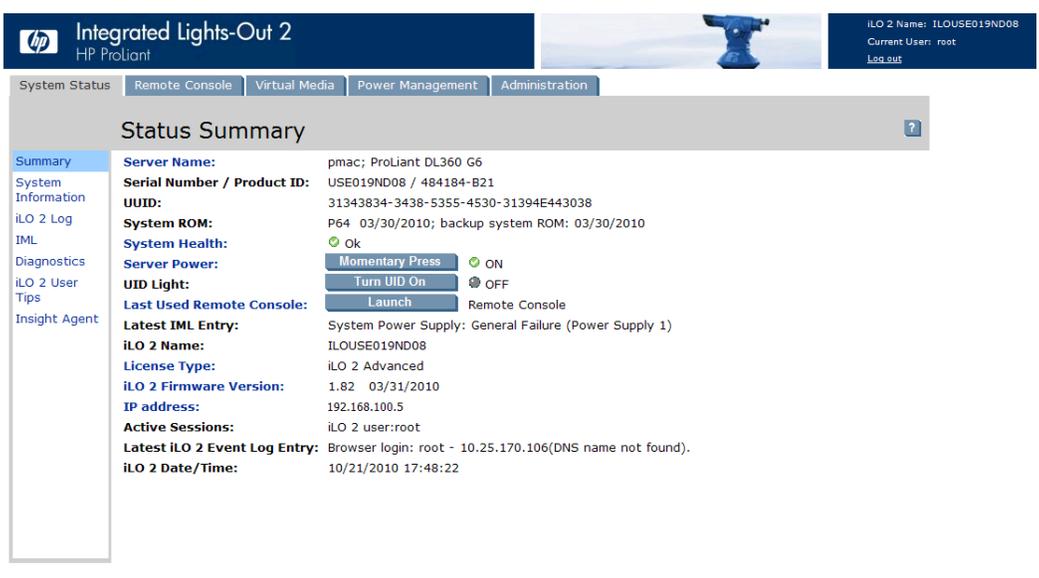
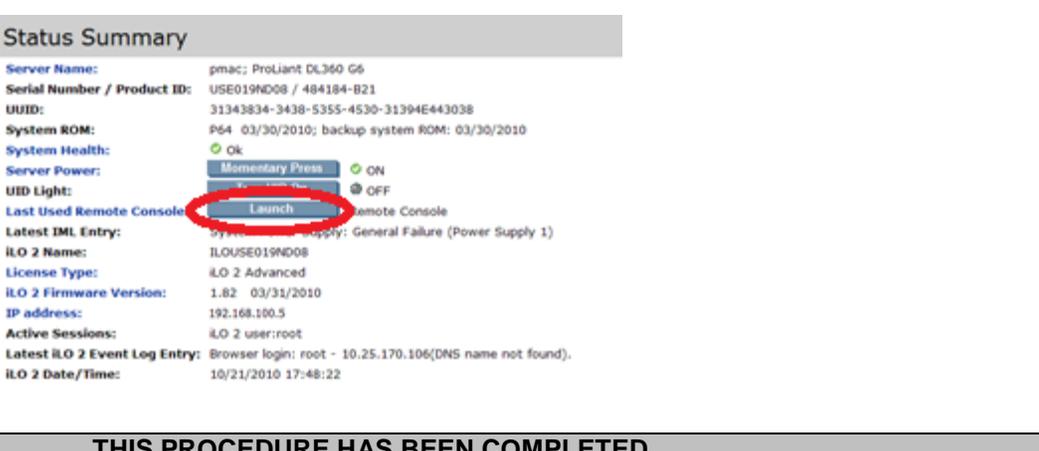
## Appendix D. TVOE ILO GUI ACCESS

This procedure contains the steps to access the TVOE iLO GUI. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.

### Procedure D.1 Accessing the TVOE iLO GUI

Step	Procedure	Result
<p>1.</p> <input type="checkbox"/>	<p>Launch Internet Explorer and “Go To” 192.168.100.5 (manufacturing default) or customer IP set during installation.</p>	
<p>2.</p> <input type="checkbox"/>	<p>Internet Explorer may 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>	

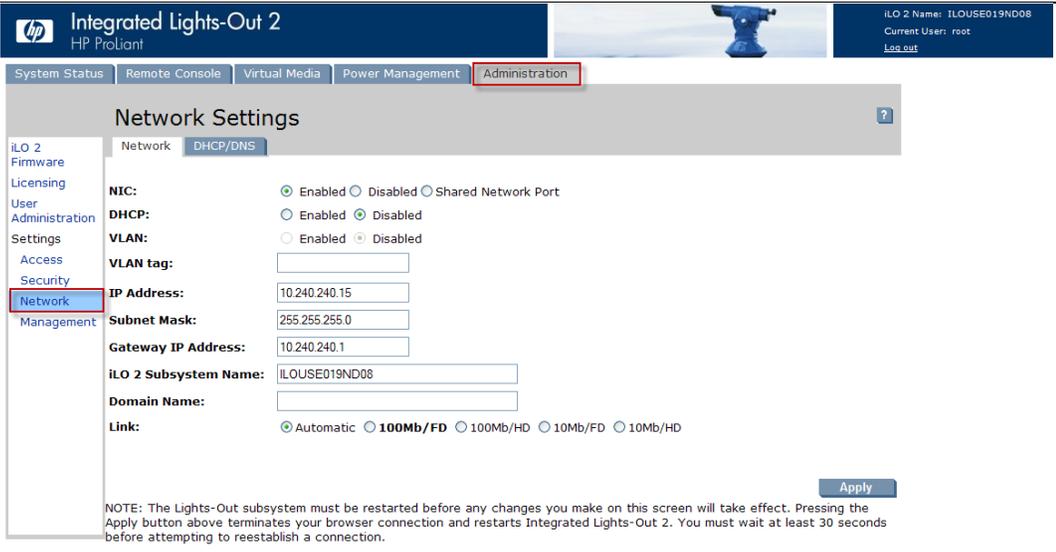
Procedure D.1 Accessing the TVOE iLO GUI

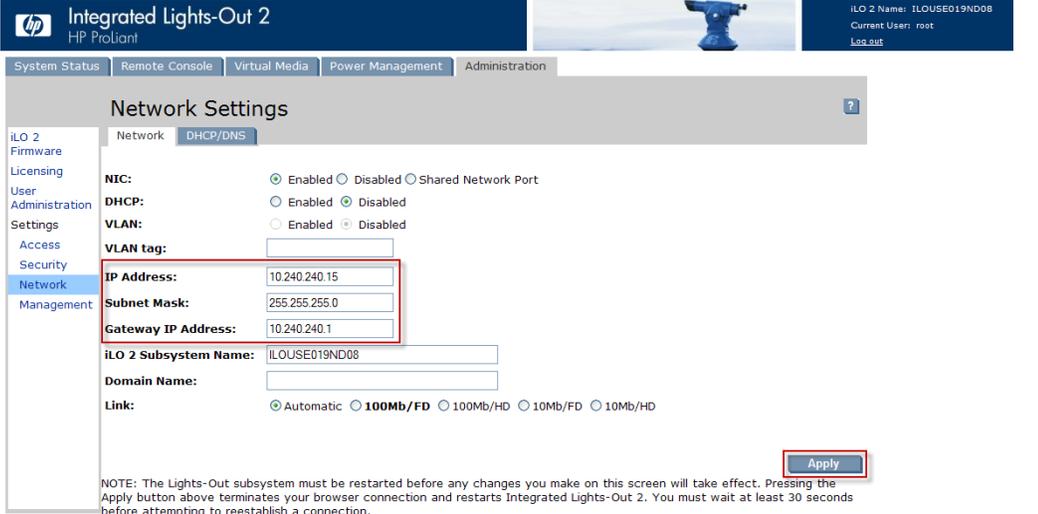
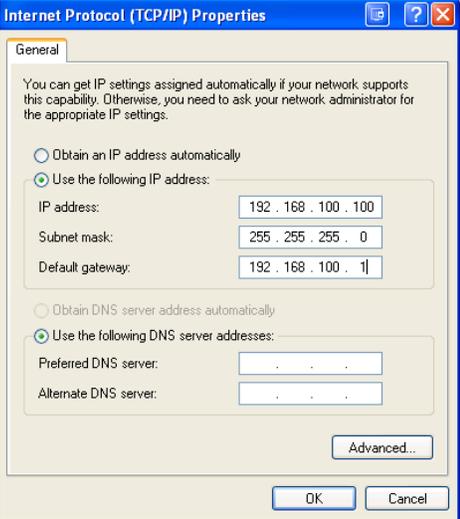
<p>4.</p> <p><input type="checkbox"/></p>	<p>Log in as user "root".</p>	
<p>5.</p> <p><input type="checkbox"/></p>	<p>The TVOE iLO Home page is displayed.</p>	
<p>6.</p> <p><input type="checkbox"/></p>	<p>Click on Launch to start the pmac iLO CLI</p>	
<p><b>THIS PROCEDURE HAS BEEN COMPLETED</b></p>		

## Appendix E. CHANGING TVOE ILO ADDRESS

This procedure will set the IP address of the TVOE iLO to the customers network so that it can be accessed by Tekelec support.

### Procedure E.1 Accessing the TVOE iLO GUI

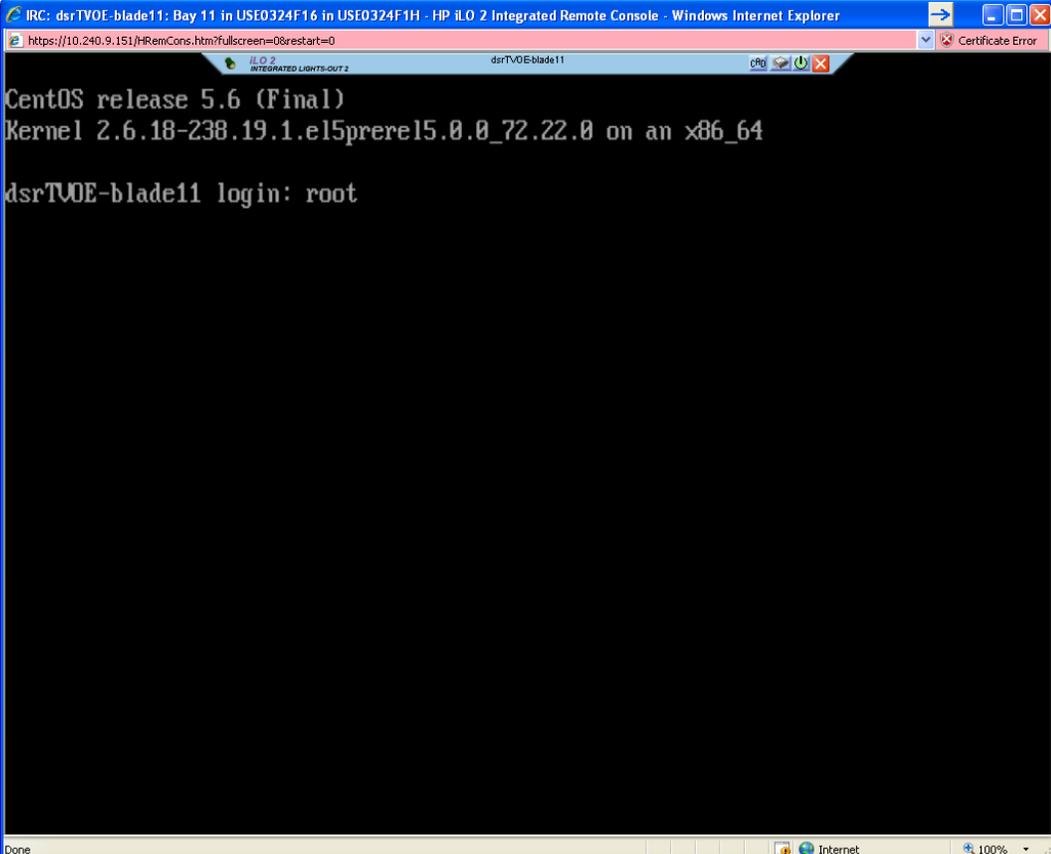
Step	Instruction	Result
<p>1.</p> <div style="border: 1px solid black; width: 20px; height: 20px; margin-left: 10px;"></div>	<p>Connect to the TVOE iLO GUI using the instructions in <b>Appendix D</b></p>	
<p>2.</p> <div style="border: 1px solid black; width: 20px; height: 20px; margin-left: 10px;"></div>	<p>Click the <b>“Administration”</b> tab. Under <b>“Settings”</b> in the left column click on <b>“Network”</b>.</p>	

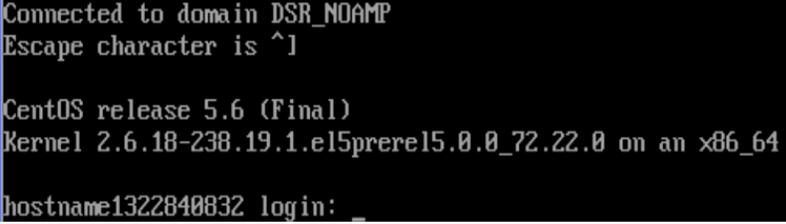
Step	Instruction	Result
<p>3.</p> <p><input type="checkbox"/></p>	<p>Change the <b>IP Address, Subnet Mask and Gateway IP Address</b> to the values supplied in the IP Site Survey for the TVOE iLO.</p> <p>Hit <b>Apply</b>.</p> <p>NOTE: You will lose access after you hit the Apply button.</p>	
<p>4.</p> <p><input type="checkbox"/></p>	<p>Using the instructions found in <b>Appendix B</b>, reset the PC's network connection replacing the <b>Subnet Mask and Gateway</b> with those just used for the TVOE iLO. Use an appropriate <b>IP address</b> for this subnet. Call Customer Support if needed.</p>	
<p>5.</p> <p><input type="checkbox"/></p>	<p>Connect to the TVOE iLO GUI using the instructions in <b>Appendix D</b></p> <p>Note: Use the IP address entered in Step 3 and not the 192.168.100.5.</p>	

**THIS PROCEDURE HAS BEEN COMPLETED**

### Appendix F. PM&C/NOAMP/SOAMP CONSOLE ILO ACCESS

This procedure describes how to log into the PM&C/NOAMP/SOAMP console from ILO.

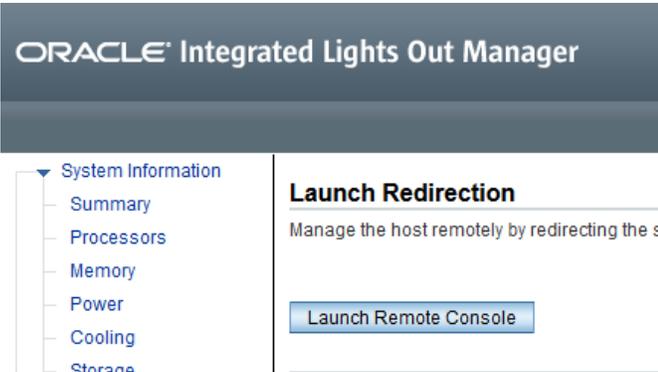
Step	Instruction	Result
<p>1.</p> <input type="checkbox"/>	<p>Log In as <b>root</b> on the TVOE server hosting the NOAMP using either ILO or SSH to the TVOE server's XMI address</p>	
<p>2.</p> <input type="checkbox"/>	<p>Find the NOAMP's current VM number</p>	<p>On the TVOE host, execute:.</p> <pre>#virsh list</pre> <p>This will produce a listing of currently running virtual machines.</p> <pre>[root@dsrTVOE-blade11 ~]# virsh list  Id Name                               State -----   4 DSR_NOAMP                          running  [root@dsrTVOE-blade11 ~]# _</pre> <p>Find the VM name for your DSR NOAMP and note it's ID number in the first column.</p> <p><b>NOTE:</b> If the VM state is not listed as "running" or you do not find a VM you configured for your NOAMP at all, then halt this procedure and contact Tekelec Customer Support.</p>

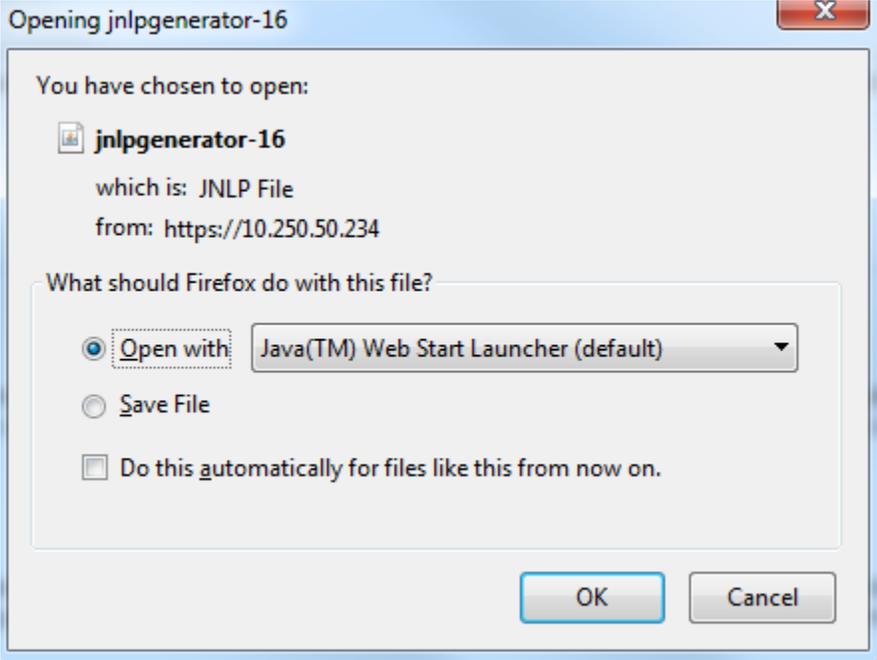
Step	Instruction	Result
<b>3.</b> <input type="checkbox"/>	Connect to console of the VM using the VM number obtained in Step 2.	<p>On the TVOE host, execute:</p> <pre>#virsh console &lt;DSRNOAMP-VMID&gt;</pre> <p>Where <b>DSRNOAMP-VMID</b> is the VM ID you obtained in Step 2:</p>  <pre>Connected to domain DSR_NOAMP Escape character is ^] CentOS release 5.6 (Final) Kernel 2.6.18-238.19.1.el5prere15.0.0_72.22.0 on an x86_64 hostname1322840832 login: _</pre> <p>You are now connected to the DSR NOAMPs console.</p> <p>If you wish to return to the TVOE host, you can exit the session by pressing <b>CTRL + ]</b></p>

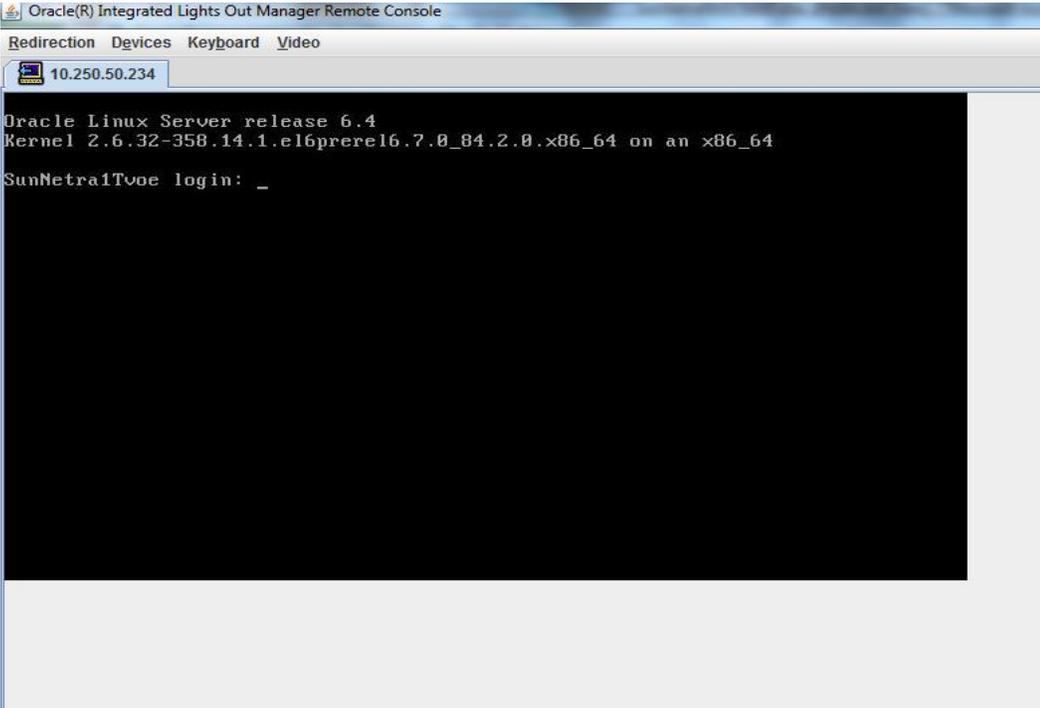
## Appendix G. ACCESSING THE SUN NETRA RMS CONSOLE USING ORACLE ILOM

This procedure explains how to reach the console of a Sun Netra rack mounted server using the Oracle Lights Out Manager (ILOM)

Step	Instruction	Result
<p>1.</p> <input type="checkbox"/>	<p>Log In to the ILOM web interface using your proper credentials.</p>	<p>Open your web browser to the ILOM web address.</p>  <p>Use the credentials you've been provided to log into the system. If this is a new system, then the default Oracle ILOM username/password may be used.</p>

Step	Instruction	Result
<p><b>2.</b></p> <div style="border: 1px solid black; width: 20px; height: 20px; margin-left: 5px;"></div>	<p>Start Redirection</p>	<p>Navigate to <b>Remote Control-&gt;Redirection.</b></p>  <p>Press <b>Launch Remote Console</b></p> 

Step	Instruction	Result
<p>3.</p> <input type="checkbox"/>	<p>Accept Java Application Download .</p>	<p>You will be prompted to download and run a small Java application. Press <b>OK</b> to accept and run the download.</p> 

Step	Instruction	Result
<p>4.</p> <input type="checkbox"/>	<p>Log into RMS console and proceed</p>	<p>You will now be presented with an RMS console window. Log in and proceed.</p>  <p>The screenshot shows a browser window titled "Oracle(R) Integrated Lights Out Manager Remote Console". The address bar shows "10.250.50.234". The main content area displays a terminal window with the following text: "Oracle Linux Server release 6.4", "Kernel 2.6.32-358.14.1.el6prere16.7.0_84.2.0.x86_64 on an x86_64", and "SunNetra1T00e login: _".</p> <p style="text-align: center;"><b>*****END OF PROCEDURE*****</b></p>

Appendix H. **ACCESSING THE NOAMP GUI USING SSH TUNNELING WITH PUTTY**

<p>S T E P</p>	<p><b>NOTE:</b> This procedure assumes that the NOAMP server you wish to create a tunnel to has been IPM'ed with the DSR application ISO</p> <p><b>NOTE:</b> This procedure assumes that you have exchanged SSH keys between the PMAC and the first NOAMP server.</p> <p><b>NOTE:</b> This procedure assumes that you have obtained the control network IP address for the first NOAMP server. You can get this from the PMAC GUI's <i>Software Inventory</i> screen.</p> <p>That variable will be referred to as <i>NOAMP-Control-IP</i> in these instructions.</p> <p><b>NOTE:</b> It is recommended that you only use this procedure if you are using Windows XP. There are known issues with putty and Windows 7 that may cause unpredictable results when viewing GUI screens through SSH tunnels.</p>	
<p>1 <input type="checkbox"/></p>	<p><b>Logon to PMAC Server using PuTTY</b></p>	<p>Launch the PuTTY application from your station and open a session to the PMAC's management address, logging in as "root".</p>

2

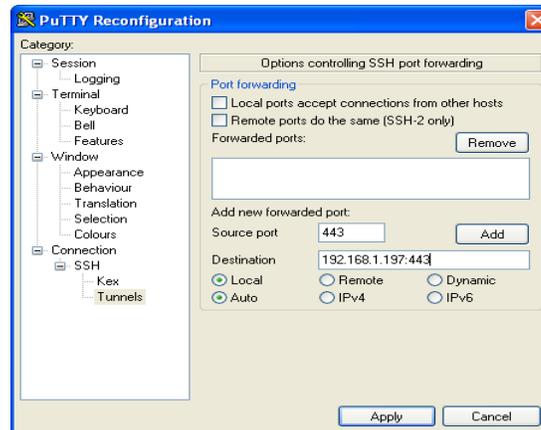
## Create SSH Tunnel through the PMAC in PuTTY



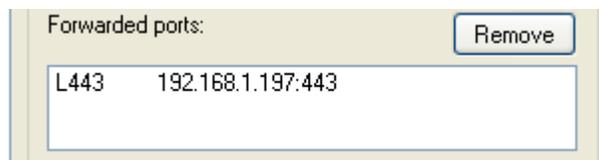
Click the icon in the upper left hand corner of the PuTTY window to bring down the main menu.

Select **Change Settings**

Select **Connections -> SSH -> Tunnels**



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



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

5. Click **Apply**

3 <input type="checkbox"/>	<b>Use Local Web Browser to Connect to GUI</b>	<p>Using your web browser, navigate to the URL: <a href="https://localhost/">https://localhost/</a></p>  <p>You should arrive at the login screen for the NOAMP GUI. Note that if using windows 7 and a blank screen is displayed, enable “Comptability Mode” in IE, or use a different browser (Firefox or Chrome)</p> <p style="text-align: center;"><b>This procedure is now complete</b></p>
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Appendix I. **ACCESSING THE NOAMP GUI USING SSH TUNNELING WITH OPENSSSH FOR WINDOWS**

S T E P	<p><b>NOTE:</b> This procedure assumes that the NOAMP server you wish to create a tunnel to has been IPM'ed with the DSR application ISO</p> <p><b>NOTE:</b> This procedure assumes that you have exchanged SSH keys between the PMAC and the first NOAMP server.</p> <p><b>NOTE:</b> This procedure assumes that you have obtained the control network IP address for the first NOAMP server. You can get this from the PMAC GUI's <i>Software Inventory</i> screen. That variable will be referred to as <i>NOAMP-Control-IP</i> in these instructions.</p> <p><b>NOTE:</b> <b>This is the recommended tunneling method if you are using Windows 7.</b></p>	
1 <input type="checkbox"/>	<p><b>If Needed, Download and Install <i>openssh</i> for Windows</b></p>	<ul style="list-style-type: none"> <li>• Download <i>openssh</i> for Windows from <a href="#">here</a>.</li> <li>• Extract the installer from the ZIP file, then run the installer.</li> </ul> <p><i>openssh</i> is now installed on your PC.</p>
2 <input type="checkbox"/>	<p><b>Create SSH Tunnel Through the PMAC</b></p>	<ul style="list-style-type: none"> <li>• Open up a Command Prompt shell</li> <li>• Within the command shell, enter the following to create the SSH tunnel to the 1st NO, through the PMAC:</li> </ul> <pre>&gt; ssh -L 443:&lt;1st_NO_Control_IP_Address&gt;:443 root@&lt;PMAC_Management_IP_Address&gt;</pre> <p>(Answer “yes” if it asks if you want to continue connecting)</p>  <p>The tunnel to the first NOAMP is now established.</p>
3 <input type="checkbox"/>	<p><b>Use Local Web Browser to Connect to GUI</b></p>	<p>Using your web browser, navigate to the URL: <a href="https://localhost/">https://localhost/</a></p>  <p>You should arrive at the login screen for the NOAMP GUI.</p> <p style="text-align: center;"><b>This procedure is now complete</b></p>

Appendix J. **MANUAL TIMEZONE SETTING PROCEDURE****Procedure 1 Timezone Setting**

<b>S T E P</b>	<p><b>NOTE:</b> This procedure assumes that the first NO-AMP server has been initially configured and rebooted.</p> <p><b>NOTE:</b> This procedure assumes that one system-wide time zone has been selected.</p>	
1 <input type="checkbox"/>	<b>Access Active NOAMP Console</b>	Login as “root” to the Active NO-AMP console.
2 <input type="checkbox"/>	<b>Active NOAMP Console:</b> Execute time zone configuration script and verify successful result	<p>From the command line prompt, execute <i>set_ini_tz.pl</i>. This will set the system time zone. The following command example uses the America/New_York time zone. Replace as appropriate with the time zone you have selected for this installation. See Appendix L for a list of valid time zones.</p> <pre># /usr/TKLC/appworks/bin/set_ini_tz.pl "America/New_York" &gt;/dev/null 2&gt;&amp;1</pre>
3 <input type="checkbox"/>	<b>Verify Success of Time Zone Script</b>	<pre># echo \$?</pre> <p><b>If this returns anything other than “0”, then halt this procedure and contact Tekelec Customer Support.</b></p>

## Appendix K. CONFIGURING A DSR SERVER FOR 2-TIER OAM

<b>S T E P #</b>	<p>This procedure configures a single server to operate in 2-tier OAM mode</p> <p style="text-align: center;"><b>***WARNING: 2-TIER CONFIGURATION IS NOT SUPPORTED BY DSR 6.X***</b></p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>Should this procedure fail, contact the Tekelec Customer Care Center and ask for assistance.</p>	
<b>1</b> <input type="checkbox"/>	IPM the server with the proper TPD image.	<p>Execute <b>Procedure 4 (“IPM Blades and VMs”)</b> of 909-2278-001 for the server. Use the TPD image that corresponds to the DSR release you are using.</p> <p>When done, only the TPD image will be installed on the server.</p>
<b>2</b> <input type="checkbox"/>	Login to server using iLO or the control IP address as root and check for existence of 2-tier flag.	<ol style="list-style-type: none"> <li>1. Login as root to the server using either <ul style="list-style-type: none"> <li>○ iLO facility</li> <li>○ -OR- SSH to the server control IP address . You can get this IP from the PMAC’ GUI’s “Software Inventory” screen. You will then need to log into the PMAC as root and ssh into this IP address.</li> </ul> </li> <li>2. Execute the following command on the server: <pre style="background-color: #e0e0e0; padding: 2px;"><b>touch /usr/TKLC/DsrDataAsourced</b></pre> <p>(if the command is successful, there will be no output)</p> </li> </ol>
<b>3</b> <input type="checkbox"/>	Proceed with normal install starting with the Applicaion ISO IPM.	The server is now configured for 2-tier OAM. Proceed with installing the Application ISO ( <b>Procedure 5</b> of 909-2278-001) and further tasks.

Appendix L. **DISABLING ACCESS TO A DSR NODE**

<b>S T E P #</b>	<p>This procedure disables access of a specific IP to the DSR node at the aggregation switch level in case of DoS-resulting activities</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>Should this procedure fail, contact the Oracle Customer Care Center and ask for assistance.</p>	
<b>1</b> <input type="checkbox"/>	Log onto the PMAC	<p>Log in to the PMAC as the <b>admusr</b> user .</p> <p>Become the super user by using the command:</p> <pre>\$ sudo su</pre> <p>You should see the prompt change to the hash mark:</p> <pre>#</pre>
<b>2</b> <input type="checkbox"/>	Configure the first switch	<p>Log onto the first aggregation switch using your credentials, once logged in, go into enable mode using the following command:</p> <pre>Switch&gt; enable Switch#</pre> <p>Once in enable mode, enter configuration mode and block the offending IP</p> <pre>Switch# config t (config)# access-list 99 deny host &lt;IP Address of offending host&gt;</pre> <p>Exit out of config mode mby pressing Ctrl + Z</p> <pre>(config)# Ctrl + Z</pre> <p>Now write the configuration to memor and exit the the switch configuration</p> <pre>Switch# copy run start Switch# exit</pre>
<b>3</b> <input type="checkbox"/>	Configure the 2 <sup>nd</sup> switch	Repeat step 2 for the 2 <sup>nd</sup> switch.

## Appendix M. 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 PMAC server console and view the text file: [/usr/share/zoneinfo/zone.tab](#)

**Table 3. List of Selected Time Zone Values**

<b>Time Zone Value</b>	<b>Description</b>	<b>Universal Time Code (UTC) Offset</b>
<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

<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 N. APPLICATION NETBACKUP CLIENT INSTALLATION PROCEDURES

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

Please note that at the writing of this document, the supported versions of Netbackup in DSR are 7.1 and 7.5.

### 1) NETBACKUP CLIENT INSTALL 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.

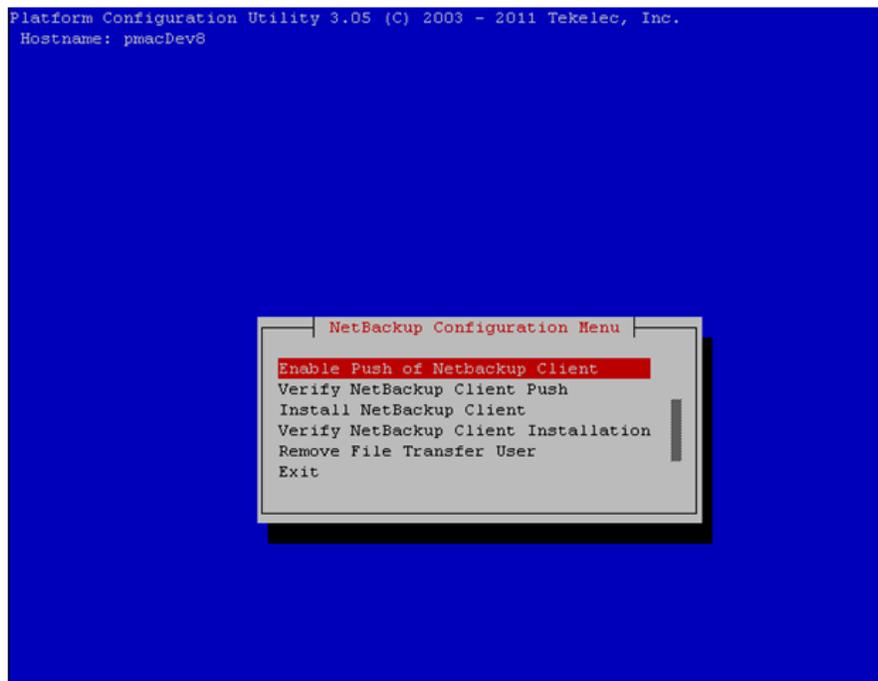
#### 1. Application server iLO: Login and launch the integrated remote console

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

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

```
$ sudo su - platcfg
```

- Navigate to **NetBackup Configuration**

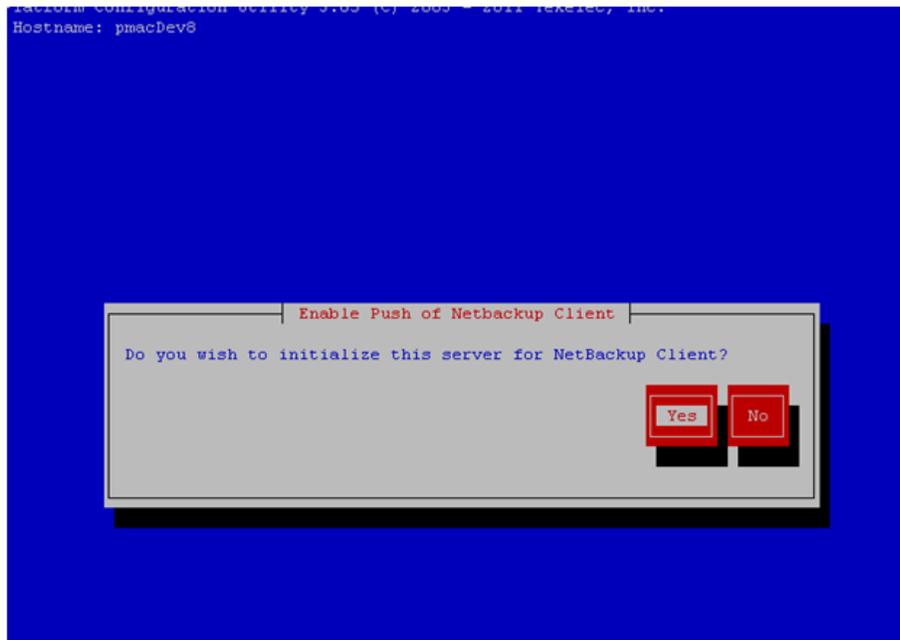


```
Platform Configuration Utility 3.05 (C) 2003 - 2011 Tekelec, Inc.
Hostname: pmacDev8

NetBackup Configuration Menu
Enable Push of Netbackup Client
Verify NetBackup Client Push
Install NetBackup Client
Verify NetBackup Client Installation
Remove File Transfer User
Exit
```

#### 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 application netbackup 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
```

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

```
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.
```

```
#
```

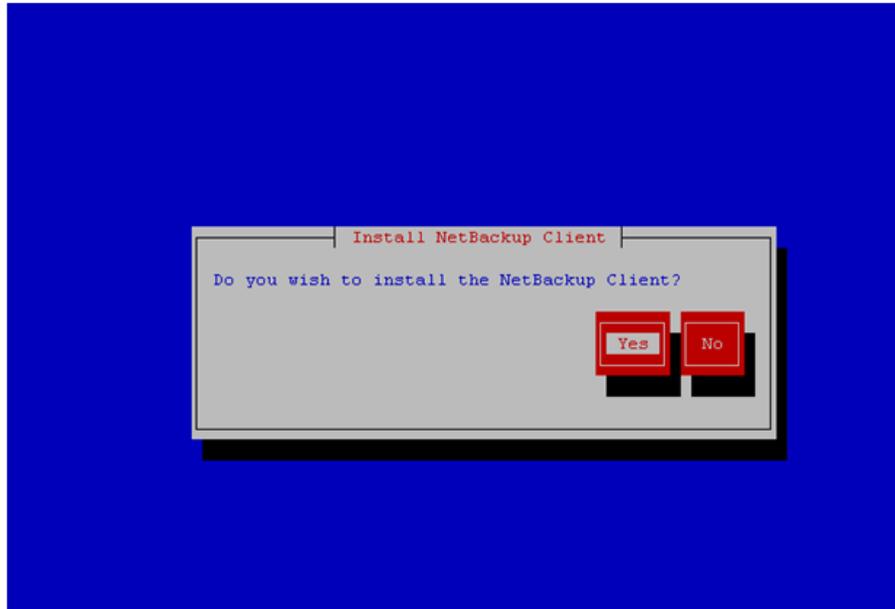
**Note:** Although the command executed above instructs you to execute the client\_config command, **DO NOT** execute that command, as it shall be executed by platcfg in the next step.

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

- Log into application server as *admusr*.
- Execute the command:  
`$ sudo chmod 555 ${NETBACKUP_BIN}\client_config`

Where **NETBACKUP\_BIN** is the temporary directory where the netbackup client install programs were copied in step 5. The directory should look similar to the following: */tmp/bp.XXXX/*

- 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.

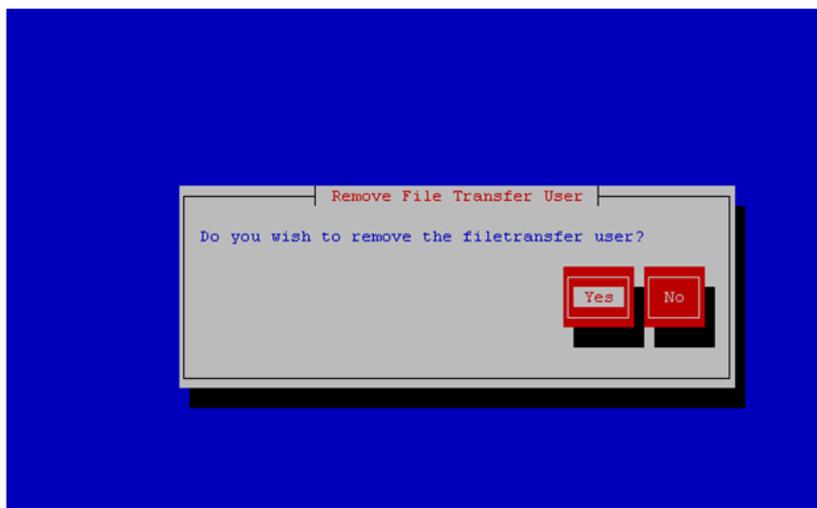
- Navigate to **NetBackup Configuration > Verify NetBackup Client Installation.**



- 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)

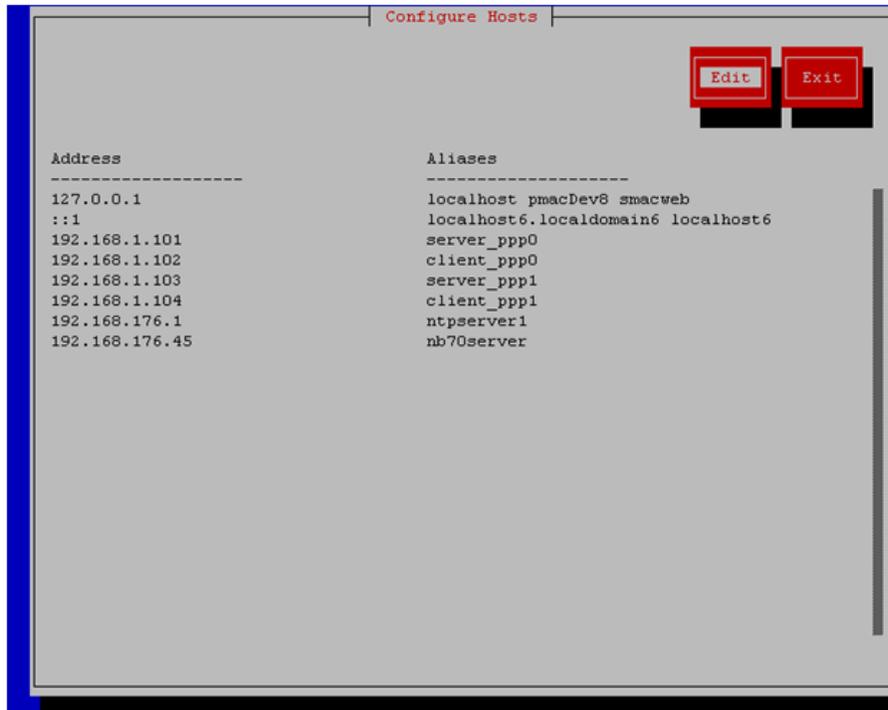
**10. Application server iLO:** Use platform configuration utility (platcfg) to modify hosts file with NetBackup server alias.

**Note:** After the successful transfer and installation of the NetBackup client software the NetBackup servers hostname can be found in the NetBackup "/usr/openv/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.

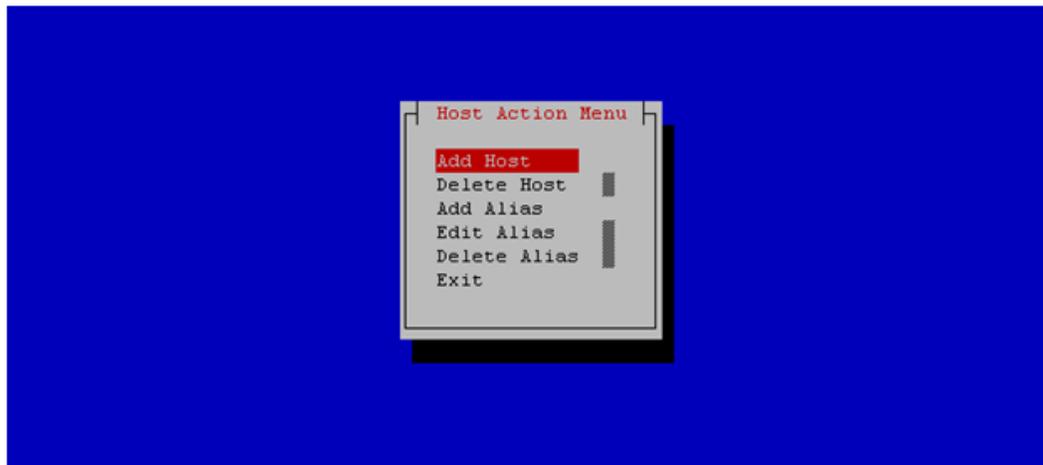
- List NetBackup servers hostname:  

```
# cat /usr/openv/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/appworks/sbin

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

## 2) NETBACKUP CLIENT INSTALL/UPGRADE WITH NBAUTOINSTALL

**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 *Netbackup Client 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

- 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 = 10.240.10.185
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 O. **CUSTOMER SIGN OFF**

**Sign-Off Record**

**\*\*\* Please review this entire document. \*\*\***

This is to certify that all steps required for the upgrade successfully completed without failure.

Sign your name, showing approval of this procedure, and fax this page and the **above completed matrix** to Tekelec, FAX # 919-460-3669.

**Customer: Company Name:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Site: Location:** \_\_\_\_\_

**Customer:(Print)** \_\_\_\_\_ **Phone:** \_\_\_\_\_

**Fax:** \_\_\_\_\_

**Start Date:** \_\_\_\_\_

**Completion Date:** \_\_\_\_\_

This procedure has been approved by the undersigned. Any deviations from this procedure must be approved by both Oracle and the customer representative. A copy of this page should be given to the customer for their records. The SWOPS supervisor will also maintain a signed copy of this completion for future reference.

**Tekelec Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Customer Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

## Appendix P. ACCESSING ORACLE CGBU'S CUSTOMER SUPPORT SITE

The Oracle CGBU Customer Care Center is the initial point of contact for all product support needs. A Representative takes the call or email, creates a Consulting Services Request (CSR) and directs the requests to the Oracle CGBU Technical Assistance Center (TAC). Each CSR includes an individual tracking number. Together with TAC Engineers, the representative will resolve the request.

The Customer Care Center is available 24 hours a day, 7 days a week, 365 days a year, and is linked to TAC Engineers around the globe.

Oracle CGBU TAC Engineers are available to provide solutions to technical questions and issues 7 days a week, 24 hours a day. After a CSR is issued, the TAC Engineer determines the classification of the trouble. If a critical problem exists, emergency procedures are initiated. If the problem is not critical, normal support procedures apply. A primary Technical Engineer is assigned to work on the CSR and provide a solution to the problem. The CSR is closed when the problem is resolved.

Oracle CGBU Technical Assistance Centers are located around the globe in the following locations:

### Oracle CGBU – Global

Email (All Regions): [support@Oracle CGBU.com](mailto:support@Oracle CGBU.com)

#### • USA and Canada

Phone:

1-888-FOR-TKLC or 1-888-367-8552 (toll-free, within continental USA and Canada)

1-919-460-2150 (outside continental USA and Canada)

TAC Regional Support Office Hours:

8:00 a.m. through 5:00 p.m. (GMT minus 5 hours), Monday through Friday, excluding holidays

#### • Caribbean and Latin America (CALA)

Phone:

+1-919-460-2150

TAC Regional Support Office Hours (except Brazil):

10:00 a.m. through 7:00 p.m. (GMT minus 6 hours), Monday through Friday, excluding holidays

#### • Argentina

Phone:

0-800-555-5246 (toll-free)

#### • Brazil

Phone: 0-800-891-4341 (toll-free)

TAC Regional Support Office Hours:

8:00 a.m. through 5:48 p.m. (GMT minus 3 hours), Monday through Friday, excluding holidays

#### • Chile

Phone:

1230-020-555-5468

#### • Colombia

Phone:

01-800-912-0537

#### • Dominican Republic

Phone:

1-888-367-8552

#### • México

Phone:

001-888-367-8552

#### • Perú

Phone:

0800-53-087

#### • Puerto Rico

Phone:

1-888-367-8552 (1-888-FOR-TKLC)

- **Venezuela**

Phone:  
0800-176-6497

- **Europe, Middle East, and Africa**

Regional Office Hours:  
8:30 a.m. through 5:00 p.m. (GMT), Monday through Friday, excluding holidays

- **Signaling**

Phone:  
+44 1784 467 804 (within UK)

- **Software Solutions**

Phone:  
+33 3 89 33 54 00Asia

- **India**

Phone:  
+91-124-465-5098 or +1-919-460-2150  
TAC Regional Support Office Hours:  
10:00 a.m. through 7:00 p.m. (GMT plus 5 1/2 hours), Monday through Saturday, excluding holidays.

- **Singapore**

Phone:  
+65 6796 2288  
TAC Regional Support Office Hours:  
9:00 a.m. through 6:00 p.m. (GMT plus 8 hours), Monday through Friday, excluding holidays