Oracle Communications Diameter Signaling Router Software Installation and Configuration Procedure Part 2/2

Release 5.X,6.X

E52510-01

July 2014



Oracle Communications Diameter Signaling Router Software Installation Procedure, Release 5.X/6.X

Copyright © 2012,2013, 2014 Oracle and/or its affiliates. All rights reserved.

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish, or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

If this is software or related documentation that is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. Government, the following notice is applicable:

U.S. GOVERNMENT END USERS: Oracle programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, delivered to U.S. Government end users are "commercial computer software" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, use, duplication, disclosure, modification, and adaptation of the programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, shall be subject to license terms and license restrictions applicable to the programs. No other rights are granted to the U.S. Government.

This software or hardware is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use this software or hardware in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy, and other measures to ensure its safe use. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software or hardware in dangerous applications.

Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

Intel and Intel Xeon are trademarks or registered trademarks of Intel Corporation. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. AMD, Opteron, the AMD logo, and the AMD Opteron logo are trademarks or registered trademarks of Advanced Micro Devices. UNIX is a registered trademark of The Open Group.

This software or hardware and documentation may provide access to or information on content, products, and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services.

MOS (<u>https://support.oracle.com</u>) is your initial point of contact for all product support and training needs. A representative at Customer Access Support (CAS) can assist you with MOS registration.

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

See more information on MOS in the Appendix section.

Note: This document represents the 2^{nd} part of the DSR 5.X/6.X Installation Process. Prior to executing this document, make sure that the 1^{st} 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

TABLE OF CONTENTS

1.0 INTRODUCTION	7
1.1 Purpose and Scope	7
1.2 References	7
1.2.1 External	7
1.2.2 Internal (Tekelec)	/ 0
1.4 Terminology	D Q
	0
2.0 GENERAL DESCRIPTION	0
3.0 INSTALL OVERVIEW	1
3.1 Required Materials1	1
3.2 Installation Overview1	1
3.2.1 Installation Strategy1	1
3.2.2 SNMP Configuration	5
3.2.3 Installation Procedures	о 7
	1
4.0 SOFTWARE INSTALLATION PROCEDURE	8
4.1 Configure RMS TVOE Hosts	8
4.2 Configure Blade TVOE Hosts	9
4.3 Create Virtual Machines for Applications4	6
4.4 Install Application Software on Servers5	5
4.5 Application Configuration6	1
4.6 Signaling Network Configuration102	2
4.7 Post-Install Activities	2
APPENDIX A. SAMPLE NETWORK ELEMENT AND HARDWARE PROFILES	3
APPENDIX B. CONFIGURING FOR EAGLE XG TVOEILO ACCESS	6
APPENDIX C. TVOE ILO ACCESS12	8
APPENDIX D. TVOE ILO GUI ACCESS	1
APPENDIX E. CHANGING TVOE ILO ADDRESS	3
APPENDIX F. PM&C/NOAMP/SOAM CONSOLE ILO ACCESS	5
APPENDIX G. ACCESSING THE SUN NETRA RMS CONSOLE USING ORACLE ILOM 13	7
APPENDIX H. ACCESSING THE NOAMP GUI USING SSH TUNNELING WITH PUTTY14	1
APPENDIX I. ACCESSING THE NOAMP GUI USING SSH TUNNELING WITH OPENSSH FOR WINDOWS	4
APPENDIX J. MANUAL TIMEZONE SETTING PROCEDURE	5
APPENDIX K. CONFIGURING A DSR SERVER FOR 2-TIER OAM14	6
APPENDIX L. DISABLING ACCESS TO A DSR NODE14	7

APPENDIX M. LIST OF FREQUENTLY USED TIME ZONES	148
APPENDIX N. APPLICATION NETBACKUP CLIENT INSTALLATION PROCEDURES 1) NETBACKUP CLIENT INSTALL USING PLATCFG 2) NETBACKUP CLIENT INSTALL/UPGRADE WITH NBAUTOINSTALL	. 151 151 158
APPENDIX O. CUSTOMER SIGN OFF	160 160
APPENDIX P. MY ORACLE SUPPORT (MOS)	161

List of Figures

Figure 1.	Example of an instruction that indicates the server to which it applies	.8
Figure 2.	Initial Application Installation Path – Example shown	10
Figure 3 -	DSR Installation - High Level Sequence	13
Figure 4:	DSR Single Site Installation Procedure Map	14

List of Tables

Table 1. Acronyms	
Table 2. Installation Overview	
Table 3. List of Selected Time Zone Values	148

List of Procedures

Procedure 1. Continue TVOE Configuration on First RMS Server	18
Procedure 2. Configure TVOE on Additional RMS Server(s)	28
Procedure 3. Configure TVOE on Server Blades	39
Procedure 4. Load Application and TPD ISO onto PM&C Server	46
Procedure 5. Create NOAMP Guest VMs	49
Procedure 6. Create SOAMP Guest VMs	52
Procedure 7. IPM Blades and VMs	55
Procedure 8. Install the Application Software on Blades	58
Procedure 9. Configure the First NOAMP NE and Server	61
Procedure 10. Configure the NOAMP Server Group	65
Procedure 11. Configure the Second NOAMP Server	68
Procedure 12. Complete Configuring the NOAMP Server Group	70
Procedure 13. Install NetBackup Client (Optional)	72
Procedure 14. NO Configuration for DR Site (Optional)	72
Procedure 15. NO Pairing for DSR NO DR Site (Optional)	78
Procedure 16. Configure the SOAM NE	81
Procedure 17. Configure the SOAM Servers	81
Procedure 18. Configure the SOAM Server Group	85
Procedure 19. Post NOAMP & SOAM Setup Operations	87
Procedure 20. Configure the MP Blade Servers	90
Procedure 21. Configure Places and Assign MP Servers to Places (PDRA Installations ONLY)	96
Procedure 22. Configure the MP Server Group(s) and Profiles	97
Procedure 23. Configure the Signaling Networks	102
Procedure 24. Configure the Signaling Devices	104
Procedure 25. Configure DSCP Values for Outgoing Traffic (Optional)	110
Procedure 26. Configure the Signaling Network Routes	113
Procedure 27. Add VIP for Signaling Networks (Active/Standby Configurations ONLY)	116
Procedure 28. Configure SNMP Trap Receiver(s) (OPTIONAL)	117
Procedure 29:PDRA Resource Domain Configuration (PDRA Only)	119
Procedure 30. Activate Optional Features	122
Procedure 31. Configure ComAgent Connections	122

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 41 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.



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

Management Server	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.
PM&C Application	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 overal 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 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 serever 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 2nd 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	Elapse Time (Minut	ed es)
		This Step	Cum.
Procedure 1	Continue TVOE Configuration on First RMS Server	15	15
Procedure 2	Configure TVOE on Additional RMS Server(s)	20	35
Procedure 3	Configure TVOE on Server Blades	20	55

Table 2. Installation Overview

Procedure	Phase	Elapsed Time		
		(Minutes)		
Procedure 4	Procedure 4 Load Application and TPD ISO onto PM&C Server			
Procedure 5	Create NOAMP Guest VMs	5	65	
Procedure 6	Create SOAMP Guest VMs	5	70	
Procedure 7	IPM hlades	20	70	
Procedure 8	Install the application software on the blades	20	110	
Procedure 9	Configure the First NO Server	25	125	
Procedure 10	Configure the NO Server Group	15	155	
Procedure 11	Configure the Second NO Server	15	165	
Procedure 12	Complete Configuring the NOAMP Server Group	10	105	
Procedure 13	Install NetBackup Client on NOAMP Servers (Optional)	10	185	
Procedure 14	NO Configuration for DR Site (Optional)	10	195	
Procedure 15	NO Pairing for DSR NO DR Site (Optional)	10	205	
Procedure 16	Configure the SOAM NE	15	205	
Procedure 17	Configure the SOAM Servers	10	230	
Procedure 18	Configure the SOAM Server Group	10	240	
Procedure 19	Post NOAM&SOAM Setup Opertaions	5	245	
Procedure 20	Configure the MP Blade Servers	10	255	
Procedure 21	Configure Places and Assign MP Servers to Places (PDRA Only)	10	265	
Procedure 22	Configure the MP Server Groups	10	275	
Procedure 23 Configure the Signaling Network		30	305	
Procedure 24 Configure the Signaling Devices		10	315	
Procedure 25 (Optional)	Procedure 25 (Optional) Configure DSCP Values for Outgoing Traffic		325	
Procedure 26 Configure the Signaling Network Routes		15	340	
Procedure 27 Add VIP for Signaling Networks		5	345	
Procedure 28 (Optional) Configure SNMP for Traps Receivers		5	350	
Procedure 29	PDRA Resource Domain Configuration (PDRA Only)	15	365	
Procedure 30 (Optional) Activate Optional Features		15	380	
Procedure 31 (Optional)	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
IP Front End (IPFE)	<i>IPFE Installation and Configuration</i> , WI006931, latest version, Mahoney
Charging Proxy Application (CPA) Session Binding Repository (SBR)	CPA Activation Feature Work Instruction, WI006780, latest version, Moore CPA User Guide, 910-6635-001,Rev A (4.1)
Policy DRA (PDRA)	Policy DRA Activation, WI006835, Latest Revision, Tekelec 2012
Diameter Mediation	DSR Meta Administration Feature Activation, WI006761, latest version, Fisher
Full Address Based Resolution (FABR)	DSR FABR Feature Activation, WI006771, latest version, Karmarkar FABR User Guide, 910-6634-001,Rev A (4.1.0) FABR User Guide, 910-6634-001,Rev B (4.1.5)
Range Based Address Resolution (RBAR)	DSR RBAR Feature Activation, WI006763, latest version, Fisher RBAR User Guide, 910-6633-001,Rev A
MAP-Diameter Interworking (MAP-IWF)	<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

-					
S	This procedure will extend the TVOE networking configuration on the First RMS server in				
Т	preparation for the installation of the NOAMP VM on that RMS.				
Ε					
Р	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.				
	Prerequisite : TVOE and PMAC (virtualized) have been installed on the First RMS Server as				
	described in [11] / [12]				
	Check off (v) 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	Determine Bridge names and interfaces for XMI and IMI, and Netbackup (if used) networks.	Determine the server for the 1 need to determ also the actual If the netbacku when PMAC w Fill in the appro-	Determine the bridge names and physical bridge interfaces to be used on the TVOE erver for the NOAMP XMI and IMI 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 ilso the actual Ethernet interfaces that will make up those bonds. If the netbackup bridge and interface were not previously configured on this server when PMAC was installed, determine those values as well. Fill in the appropriate values in the table below:		
		NOAM&P Guest Interface Name	TVOE Bridge Name	TVOE Bridge Interface	
		xmi	xmi	Interface Bond (e.g- bond0, bond1, etc) <pre></pre> <pre><tvoe_xmi_bridge_interface_bond> Interface Name (e.g bond0.3, bond1, bond0.100): </tvoe_xmi_bridge_interface_bond></pre> <pre><tvoe_xmi_bridge_interface></tvoe_xmi_bridge_interface></pre>	
		imi	imi	Interface Bond: (e.g bond0, bond1, etc) <pre> </pre> <pre> <pre> <pre> <pre> <pre> <pre> <pre> <pre> <pre> <pre> <pre> <pre> <pre> <pre> <pre> <pre> <pre> <pre> <pre> <pre> <pre> <pre> <!--</td--></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre>	
		netbackup	netbackup	: Interface Name (e.g eth11, eth04, eth03, etc) <tvoe_netbackup_bridge_interface></tvoe_netbackup_bridge_interface>	

2	First RMS Server: Login and Become SuperUser	Log in to the TVOE prompt of the first RMS server as the admusr user (the one running the PMAC). Use either the iLO facility, or the TVOE's IP address on the management network.
		Become the super user by using the command:
		\$ sudo su
		You should see the prompt change to the hash mark:
		#
3	First RMS Server: Configure XMI	Verify the xmi bridge interface bond by running the following command:
	Bridge Interface Bond	Note: The output below is for illustrative purposes only. The example output below shows the control bridge configured.
		<pre># netAdm querydevice=<tvoe_xmi_bridge_bond></tvoe_xmi_bridge_bond></pre>
		Protocol: none
		On Boot: yes Persistent: ves
		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, skip to the next step . Otherwise, continue with this step.
		Create bonding interface and associate subordinate interfaces with bond:
		<pre># netAdm adddevice=<tvoe_xmi_bridge_bond>onboot=yestype=Bondingmode=active-backupmiimon=100 Interface <tvoe_xmi_bridge_bond> added</tvoe_xmi_bridge_bond></tvoe_xmi_bridge_bond></pre>
		<pre># netAdm setdevice=<tvoe_xmi_bridge_bond_ethernet1> type=Ethernet</tvoe_xmi_bridge_bond_ethernet1></pre>
		master= <tvoe_xmi_bridge_bond>slave=yesonboot=yes Interface <tvoe_xmi_bridge_bond_ethernet1> updated</tvoe_xmi_bridge_bond_ethernet1></tvoe_xmi_bridge_bond>
		<pre># netAdm setdevice=<tvoe_xmi_bridge_bond_ethernet2> type=Ethernetmaster=<twoe_xmi_bridge_bond>slave=vessephest=ves</twoe_xmi_bridge_bond></tvoe_xmi_bridge_bond_ethernet2></pre>
		Interface <tvoe_xmi_bridge_bond_ethernet2> updated</tvoe_xmi_bridge_bond_ethernet2>
		<pre># syscheckAdm net ipbondsetvar=DEVICES val=<tvoe_xmi_bridge_bond>,[bondX,bondX+1, ,bondN]</tvoe_xmi_bridge_bond></pre>
		Note: All other existing bonds should be included in the 'val=' statement. E.g.if TVOE_XMI_Bridge_Bond = bond1, val=bond0,bond1
		# syscheckAdm net ipbond -enable

4	First RMS Server:	S Server: If you are using VLAN tagging for the XMI bridge interface, then you must creat	
	Create XMI Bridge	the VLAN interface first. Execute the following command:	
	Interface, If needed.		
	(Only for VLAN	# netAdm adddevice= <tvoe_xmi_bridge_interface>onboot=yes</tvoe_xmi_bridge_interface>	
	tagging interfaces)	Interface <100E_XMI_Bridge_Interface> created.	
5	First RMS Server:	Now , create the XMI bridge:	
	Create XMI Bridge		
		# netAdm addtype=Bridgename=xm1onDoot=yes	
		bildgeinterlates=(IVOL_MI_bildge_interlates	
		Interface <tvoe bridge="" interface="" xmi=""> updated.</tvoe>	
		Bridge xmi created.	
6	First RMS Server:	Verify the imi bridge interface bond by running the following command:	
	Configure IMI Dridge Interface	Notes The output helow is for illustrative numerous only. The example output helow	
	Bond	shows the control bridge configured	
	Dona	shows the control of age configured.	
		<pre># netAdm querydevice=<tvoe bond="" bridge="" imi=""></tvoe></pre>	
		Protocol: none	
		On Boot: yes	
		Persistent: yes	
		Bonded Mode: active-backup	
		Enslaving: ethul ethu2	
		If the bond has already been configured you will see output similar to what you see	
		above. If this is so, skip to the next step . Otherwise, continue with this step.	
		Create bonding interface and associate subordinate interfaces with bond:	
		<pre># netAdm adddevice=<tvoe bond="" bridge="" imi=""></tvoe></pre>	
		onboot=yestype=Bondingmode=active-backupmiimon=100	
		Interface <tvoe_imi_bridge_bond> added</tvoe_imi_bridge_bond>	
		# netAdm setdevice= <tvoe bond="" bridge="" ethernet1="" imi=""></tvoe>	
		type=Ethernet	
		master= <tvoe_imi_bridge_bond>slave=yesonboot=yes</tvoe_imi_bridge_bond>	
		Interface <tvoe_imi_bridge_bond_ethernet1> updated</tvoe_imi_bridge_bond_ethernet1>	
		<pre># netAdm setdevice=<tvoe bond="" bridge="" ethernet2="" imi=""></tvoe></pre>	
		type=Ethernet	
		master= <tvoe_imi_bridge_bond>slave=yesonboot=yes</tvoe_imi_bridge_bond>	
		Interface <tvoe_imi_bridge_bond_ethernet2> updated</tvoe_imi_bridge_bond_ethernet2>	
		Execute the following 2 commands ONLY IE TVOE XML Bridge Bonds is	
		different from <tvoe bond="" bridge="" imi=""></tvoe>	
		<pre># syscheckAdm net ipbondsetvar=DEVICES</pre>	
		<pre>val=<tvoe_xmi_bridge_bond>, <tvoe_imi_bridge_bond>,[other bonds]</tvoe_imi_bridge_bond></tvoe_xmi_bridge_bond></pre>	
		# syscheckAdm net ipbond -enable	
I			

7	First RMS Server: Create IMI Bridge Interface. If needed.	If you are using VLAN tagging for the IMI bridge interface, then you must create the VLAN interface first. Execute the following command:	
	(Only for VLAN tagging interfaces)	<pre># netAdm adddevice=<tvoe_imi_bridge_interface>onboot=yes Interface <tvoe_imi_bridge_interface> created.</tvoe_imi_bridge_interface></tvoe_imi_bridge_interface></pre>	
8	First RMS Server: Create IMI Bridge	Now , create the XMI bridge:	
		<pre># netAdm addtype=Bridgename=imionboot=yesbridgeInterfaces=<tvoe_imi_bridge_interface></tvoe_imi_bridge_interface></pre>	
		<pre>Interface <tvoe_imi_bridge_interface> updated. Bridge imi created.</tvoe_imi_bridge_interface></pre>	
9	First RMS Server: Verify bridge creation status	Verify that the XMI and IMI bridges have been created successfully (Example output for illustrative purposes only):	
		# brctl show	
		<pre>[root@SunNetralTvoe admusr]# brctl show bridge name bridge id STP enabled interfaces control 8000.002128a1a5a8 no bond0 vnet0 vnet12 vnet15 vnet2 met7</pre>	
		imi 8000.002128a1a5a8 no bond0.641 vnet10 vnet14 vnet17 vnet5	
		management 8000.002128a1a5a8 no bond0.637	
		xmi 8000.002128a1a5a8 no bond0.638 vnet13	
		 Verify that "imi" and "xmi" are listed under the bridge name column. Verify that <tvoe_xmi_bridge_interface> is listed under the interfaces column for xmi.</tvoe_xmi_bridge_interface> Verify that <tvoe_imi_bridge_interface> is listed under the interfaces column for imi.</tvoe_imi_bridge_interface> Verify that the <tvoe_mgmt_bridge_interface> is listed under the interface column for <tvoe_mgmt_bridge> (NOTE: For this server, <tvoe_mgmt_bridge> was created in part #1 of the install procedure documents [11] or [12] depending on your DSR version.)</tvoe_mgmt_bridge></tvoe_mgmt_bridge></tvoe_mgmt_bridge_interface> 	

10	RMS Server iLO: Set Hostname	NOTE: If hostname for the RMS server is already set, then you can skip this
		step. # su - platcfg
		Platform Configuration Utility 3.05 (C) 2003 - 2011 Tekelec, Inc. Hostname: hostname1322587482
		Main Menu Diagnostics Server Configuration Network Configuration Exit
		Use arrow keys to move between options <enter> selects <f12> Main Menu Navigate to Sever Configuration->Hostname-> Edit and enter a new bostname for your server</f12></enter>
		Edit Hostname
		OK Cancel
		Press \boldsymbol{OK} and select and continue to press Exit until you are at the platcfg main menu again.
		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 1. Continue TVOE Configuration on First RMS Server

11	RMS Server iLO: Configure SNMP	From the platcfg main menu, navigate to Network Configuration -> SNMP Configuration -> NMS Configuration
		Image: Index: root Image:
		Press Edit. Choose Add a New NMS Server
		File Edit View Bookmarks Settings Help Platform Configuration Utility 3:04 (C) 2003 - 2011 Tekelec, Inc. Hostname: hostnamela05/23774 Hostname: or IP: Pri: Pri: File Edit View Bookmarks Settings Help Use arrow keys to nove between options <enter> selects</enter>
		Enter the following NMS servers, pressing OK after each one and then selecting the Add NMS option again:
		 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. 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
		Press Exit . Select Yes when prompted to restart the Alarm Routing Service.
		Once Done, press Exit to quit to the platcfg main menu.



Procedure 1. Continue TVOE Configuration on First RMS Server



Procedure 1. Continue TVOE Configuration on First RMS Server

14	First RMS Server: Create Netbackup	Perform the following command if you will have a dedicated Netbackup interface within your NOAMP guests (and if the Netbackup bridge was NOT configured
	bridge (Optional)	when setting up the PMAC earlier)
		<pre># netAdm addtype=Bridgename=<tvoe_netbackup_bridge></tvoe_netbackup_bridge></pre>
		onboot=yesMTU= <netbackup_mtu_size> bridgeInterfaces=<tvoe_netbackup_bridge_interface></tvoe_netbackup_bridge_interface></netbackup_mtu_size>
15	First RMS Server	This step backs up the TVOE files to a customer provided backup server.
	and Customer provided Backup	If NetBackup is being used, then this step should be skipped. Select 'Exit' to
	Server: Backup TVOE files	exit out of platcfg.
		If Netback isn't used, execute the following:
		1. Select the following menu options sequentially:
		Maintenance ➤ Backup and Restore ➤ Backup Platform (CD/DVD). The 'Backup TekServer Menu' page will now be shown.
		 Build the backup ISO image by selecting: Build ISO file only
		Note: Creating the ISO image may happen so quickly that this screen may only appear for an instant.
		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"
		3. Exit out of platcfg by selecting 'Exit'.
		4. 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.
		<pre># scp tvoexfer@<tvoe address="" ip="">:backup/* /path/to/destination/</tvoe></pre>
		5. When prompted, enter the tvoexfer user password and press Enter .
		An example of the output looks like: # scp tvoexfer@ <tvoe address="" ip="">:backup/* /path/to/destination/ tvoexfer@10.24.34.73's password: hostname1301859532-plat-app-301104171705.iso 100% 134MB 26.9MB/s 00:05</tvoe>
		If the Customer System is a Windows system please refer to reference [4] <i>Platform</i> 6.x Configuration Procedure Reference, Appendix A Using WinSCP to copy the backup image to the customer system.
		The TVOE backup file has now been successfully placed on the Customer System.

S	This procedure will configure TVOE networking on RMS Servers other than the first one which has		
Т	already been installed and is running PMAC.		
Ε			
P	NOTE: You will repeat this procedure for each additional RMS you wish to configure TVOE for.		
#			
	Prerequisite : RMS Server has been IPM'ed with TVOE OS as described in [11]		
	•		
	Check off (ψ) each step as it is completed. Boxes have been provided for this purpose under each step number.		
	IF THIS PROCEDURE FAILS, CONTACT TERELECTECHNICAL SERVICES AND ASK FOR ASSISTANCE.		

1	Determine Bridge names and	Determine the server for the N	bridge names and physi Janagement , XMI an	cal bridge interfaces to be used on the TVOE d IMI networks. Based on the site survey, you
	interfaces for XMI and IMI, and Natheolym (if yead)	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.		
	n`etworks.	Fill in the appro	opriate values in the tab	le below:
		NOAM&P Guest Interface Name	TVOE Bridge Name	TVOE Bridge Interface
				Interface Bond: (e.g bond0, bond1, etc)
		umi	væi	<tvoe_xmi_bridge_interface_bond></tvoe_xmi_bridge_interface_bond>
		xm	XIIII	Interface Name (e.g bond0.3, bond1, bond0.100):
				<pre><tvoe_xmi_bridge_interface></tvoe_xmi_bridge_interface></pre>
				Interface Bond: (e.g bond0, bond1, etc)
				<pre><tvoe_imi_bridge_interface_bond></tvoe_imi_bridge_interface_bond></pre>
		imi	imi	Interface Name (e.g bond0.4, bond1, bond0.100):
				<pre><tvoe_imi_bridge_interface></tvoe_imi_bridge_interface></pre>
		netbackup	netbackup	: Interface Name (e.g eth11, eth04, eth03, etc)
				<tvoe_netbackup_bridge_interface></tvoe_netbackup_bridge_interface>
		management	management	etc)
				<tvoe_management_bridge_interface></tvoe_management_bridge_interface>

Procedure 2. Co	onfigure TVOE or	Additional RMS	Server(s)
-----------------	------------------	----------------	-----------

2 RMS Server iLO: Log in to the TVOE prompt of the RMS Server as admusr □ Login as admusr Become the super user by using the command: \$ sudo su You should see the prompt change to the hash mark:		Log in to the TVOE prompt of the RMS Server as admusr using the iLO facility. Become the super user by using the command: \$ sudo su You should see the prompt change to the hash mark:
		#
3	RMS Server iLO: Modify control bridge if using tagged control interface (Optional)	<pre>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. # netAdm settype=Bridgename=controldelBridgeInt=bond0 Bridge control updated. # netAdm adddevice=bond0.<control_vlan_id>onboot=yes Interface bond0.X added # netAdm settype=Bridge -name=control addBridgeInt=bond0.<control_vlan_id> Bridge control updated.</control_vlan_id></control_vlan_id></pre>

4 RMS Server iLO: Configure XMI Bridge Interface Bond Verify the xmi bridge interface bond by running the following comman Note: The output below is for illustrative purposes only. The example of shows the control bridge configured. # netAdm querydevice= <tvoe_xmi_bridge_bond> Protocol: none On Boot: yes Persistent: yes Bonded Mode: active-backup</tvoe_xmi_bridge_bond>		<pre>Verify the xmi bridge interface bond by running the following command: Note: The output below is for illustrative purposes only. The example output below shows the control bridge configured. # netAdm querydevice=<tvoe_xmi_bridge_bond> Protocol: none On Boot: yes Persistent: yes Bonded Mode: active-backup</tvoe_xmi_bridge_bond></pre>
		Enslaving: eth01 eth02 If the bond has already been configured you will see output similar to what you see above. If this is so, skip to the next step . Otherwise, continue with this step. Create bonding interface and associate subordinate interfaces with bond:
		<pre># netAdm adddevice=<tvoe_xmi_bridge_bond>onboot=yestype=Bondingmode=active-backupmiimon=100 Interface <tvoe_xmi_bridge_bond> added</tvoe_xmi_bridge_bond></tvoe_xmi_bridge_bond></pre>
		<pre># netAdm setdevice=<tvoe_xmi_bridge_bond_ethernet1> type=Ethernetmaster=<tvoe_xmi_bridge_bond>slave=yesonboot=yes Interface <tvoe_xmi_bridge_bond_ethernet1> updated</tvoe_xmi_bridge_bond_ethernet1></tvoe_xmi_bridge_bond></tvoe_xmi_bridge_bond_ethernet1></pre>
		<pre># netAdm setdevice=<tvoe_xmi_bridge_bond_ethernet2> type=Ethernetmaster=<tvoe_xmi_bridge_bond>slave=yesonboot=yes Interface <tvoe_xmi_bridge_bond_ethernet2> updated</tvoe_xmi_bridge_bond_ethernet2></tvoe_xmi_bridge_bond></tvoe_xmi_bridge_bond_ethernet2></pre>
5	RMS Server iLO: Create XMI Bridge Interface, If needed. (Only for VLAN tagging interfaces)	<pre>If you are using VLAN tagging for the XMI bridge interface, then you must create the VLAN interface first. Execute the following command: # netAdm adddevice=<tvoe_xmi_bridge_interface>onboot=yes Interface <tvoe_xmi_bridge_interface> created.</tvoe_xmi_bridge_interface></tvoe_xmi_bridge_interface></pre>
6	RMS Server iLO: Create XMI Bridge	<pre>Now , create the XMI bridge: # netAdm addtype=Bridgename=xmionboot=yes bridgeInterfaces=<tvoe_xmi_bridge_interface> Interface <tvoe_xmi_bridge_interface> updated. Bridge xmi created.</tvoe_xmi_bridge_interface></tvoe_xmi_bridge_interface></pre>

7	RMS Server iLO: Configure IMI Bridge Interface Bond	<pre>Verify the imi bridge interface bond by running the following command: Note: The output below is for illustrative purposes only. The example output below shows the control bridge configured. # netAdm querydevice=<tvoe_imi_bridge_bond> Protocol: dhcp 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, skip to the next step. Otherwise, continue with this step. Create bonding interface and associate subordinate interfaces with bond: # netAdm adddevice=<tvoe_imi_bridge_bond> onboot=yestype=Bondingmode=active-backupmiimon=100 Interface <tvoe_imi_bridge_bond> added # netAdm setdevice=<tvoe_imi_bridge_bond_ethernet1> type=Ethernet master=<tvoe_imi_bridge_bond_ethernet1> updated # netAdm setdevice=<tvoe_imi_bridge_bond_ethernet2> type=Ethernet master=<tvoe_imi_bridge_bond_ethernet1> updated # netAdm setdevice=<tvoe_imi_bridge_bond_ethernet2> type=Ethernet master=<tvoe_imi_bridge_bond>slave=yesonboot=yes Interface <tvoe_imi_bridge_bond>slave=yesonboot=yes Interface <tvoe_imi_bridge_bond_ethernet2> updated</tvoe_imi_bridge_bond_ethernet2></tvoe_imi_bridge_bond></tvoe_imi_bridge_bond></tvoe_imi_bridge_bond_ethernet2></tvoe_imi_bridge_bond_ethernet1></tvoe_imi_bridge_bond_ethernet2></tvoe_imi_bridge_bond_ethernet1></tvoe_imi_bridge_bond_ethernet1></tvoe_imi_bridge_bond></tvoe_imi_bridge_bond></tvoe_imi_bridge_bond></pre>
8	RMS Server iLO: Create IMI Bridge Interface, If needed. (Only for VLAN tagging interfaces)	If you are using VLAN tagging for the IMI bridge interface, then you must create the VLAN interface first. Execute the following command: # netAdm adddevice= <tvoe_imi_bridge_interface>onboot=yes Interface <tvoe_imi_bridge_interface> created.</tvoe_imi_bridge_interface></tvoe_imi_bridge_interface>
7	RMS Server iLO: Create IMI Bridge	<pre># netAdm addtype=Bridgename=imionboot=yesbridgeInterfaces=<tvoe_imi_bridge_interface> Interface <tvoe_imi_bridge_interface> updated. Bridge imi created.</tvoe_imi_bridge_interface></tvoe_imi_bridge_interface></pre>

8	RMS server iLO:	
	Create management	Note: The output below is for illustrative purposes only. The site information for this
	bridge and assign	system will determine the network interfaces, (network devices, bonds, and bond
	TVOE Management	enslaved devices), to configure.
	IP and default route	
		If $<$ TVOE_Management_Bridge_Interface> 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:
		# netAdm adddevice= <tvoe bond="" bridge="" interface="" management=""></tvoe>
		onboot=yestype=Bondingmode=active-backupmiimon=100
		<pre>Interface <tvoe_management_bridge_interface> added</tvoe_management_bridge_interface></pre>
		# netAdm setdevice= <mgmt_ethernet_interface1>type=Ethernet</mgmt_ethernet_interface1>
		onboot=ves
		Interface <mgmt ethernet="" interface1=""> updated</mgmt>
		<pre># netAdm setdevice=<mgmt_ethernet_interface2>type=Ethernet</mgmt_ethernet_interface2></pre>
		master- <tvoe_management_bridge_interface_bond>slave=yes</tvoe_management_bridge_interface_bond>
		Interface <mgmt ethernet="" interface2=""> updated</mgmt>
		EXAMPLE 1: Create Management bridge using untagged interfaces
		(<tvoe_management_bridge>).</tvoe_management_bridge>
		<pre># netAdm addtype=Bridgename=management</pre>
		bootproto=noneonboot=yes
		netmask= <tvoe_rms_momt_ip_address <="" td=""></tvoe_rms_momt_ip_address>
		bridgeInterfaces= <tvoe bridge="" interface="" management=""></tvoe>
		EXAMPLE 2: Create Management bridge using tagged interfaces
		<pre># netAdm adddevice=<tvoe_management_bridge_interface></tvoe_management_bridge_interface></pre>
		# netAdm addtype=Bridgename=management
		netmask= <tvoe_rmsa_mgmt_ip_address></tvoe_rmsa_mgmt_ip_address>
		bridgeInterfaces= <tvoe_management_bridge_interface></tvoe_management_bridge_interface>
		Cretate default route (execute regardless of which example is chosen):
		<pre># netAdm addroute=defaultgateway=<mgmt_gateway_address> device=management</mgmt_gateway_address></pre>
		Route to management created

9 □	RMS Server iLO: Verify bridge creation status	Verify that the XMI, IMI, and Management bridges have been created successfully (Example output for illustrative purposes only): # brctl show
		<pre>[root@SunNetralTvoe admusr]# brctl show bridge name bridge id STP enabled interfaces control 8000.002128ala5a8 no bond0 vnet0 vnet12 vnet15 vnet2</pre>
		imi 8000.002128a1a5a8 no vnet7 bond0.641 vnet10 vnet14 vnet5
		management 8000.002128ala5a8 no bond0.637.
		xmi 8000.002128a1a5a8 no bond0.638 vnet13
10	PMS Sorvor il Ot	 Verify that "imi" and "xmi" are listed under the bridge name column. Verify that <tvoe_xmi_bridge_interface> is listed under the interfaces column for xmi.</tvoe_xmi_bridge_interface> Verify that <tvoe_imi_bridge_interface> is listed under the interfaces column for imi.</tvoe_imi_bridge_interface> Verify that the <tvoe_mgmt_bridge_interface> is listed under the interface column for <tvoe_mgmt_bridge_name></tvoe_mgmt_bridge_name></tvoe_mgmt_bridge_interface>
	RMS Server iLO: Create Netbackup bridge (Optional)	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)
		<pre># netAdm addtype=Bridgename=<tvoe_netbackup_bridge>onboot=yesMTU=<netbackup_mtu_size>bridgeInterfaces=<tvoe_netbackup_bridge_interface></tvoe_netbackup_bridge_interface></netbackup_mtu_size></tvoe_netbackup_bridge></pre>

11	BMS Server il O:	
11	Sat Hostnama	# sy $-$ platofg
	Set Hostilanie	
	RMS Server iLO: Set Hostname	<pre># su - platcfg Platform Configuration Utility 3.05 (C) 2003 - 2011 Tekelec, Inc. Hostname: hostname1322587482</pre>
		Navigate to Sever Configuration->Hostname-> Edit and enter a new
		hostname for your server.
		Edit Hostname Hostname: dsrTVOE-blade11
		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 platefg 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 2. Configure TVOE on Additional RMS Server(s)

12	RMS Server iLO:	From the platcfg main menu, navigate to Network Configuration -> SNMP
	Configure SNMP	Configuration -> NMS Configuration
		🔟 😡 kondon : root 😪 🐼 🐼
		File Edit View Bookmarks Settings Help Platform Configuration Utility 3.04 (C) 2003 - 2011 Tekelec, Inc. Options
		Hostname: hostname1305/23/74 NMS Servers
		NMS Server Port Community String
		Press Edit
		Choose Add a New NMS Server
		🔳 😡 kondon : root 🛛 🕹 🐼
		File Edit View Bookmarks Settings Help Platform Configuration Utility 3.04 (C) 2003 - 2011 Tekelec, Inc. Hostinae: Nostranel:SOS/223774
		Add an NMS Server
		Hostname or LP: Port: SNMP Community String:
		Use arrow keys to move between options <enter> selects</enter>
		Enter the following NMS servers, pressing OK after each one and then selecting the
		Add NMS option again :
		1 Enter the Hostname/ID 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 NOAM VIP, for port enter 162, and for Community String enter the community string provided in the customer NAPD Document
		Press Exit.
		Select Tes when prompted to restart the Atarin Kouting Service.
		Once Done, press Exit to quit to the platcfg main menu.
12	PMS Server H O.	Navigate to Network Configuration
----	-----------------	---
	Configure NTP	
		Main Menu
		Maintenance
		Server Configuration
		Remote Consoles
		Network Configuration
		EXIC
		Navigate to Configuration->NTP
		Click Edit
		Edit Time Servers
		ntpserver2: 10.250.88.11
		ntpserver3: 10.250.44.22
		ntppeerA:
		ntppeerB:
		OK Cancel
		ntpserver1: Enter customer provided NTP server #1 IP address
		 ntpserver2: Enter customer provided NTP server #2 IP address.
		• ntpserver3: Enter customer provided NTP server #3 IP address.
		Press OK
		Continue to press Exit until you are out of the platcfg menu.

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

14	RMS Server iLO:		
	# su - platcfg		
	Zone	Navigate to Server Configuration->Time Zone	
		Main Menu Server Configuration Menu Maintenance Hostname Diagnostics Designation/Function Server Configuration Set Clock Network Configuration Set Clock Fime Zone Exit	
		Platform Configuration Utility 3.06 (C) 2003 - 2014 Tekele options Hostname: hubtones2-TWOE Time Zone Configuration Time Zone: America/New_York Hardware Clock Set to GMT: no If the timezone displayed matches the timezone you desire, then you can continue to hit Exit until you are out of the platcfg program. If you want a different timezone, then proceed with this instruction. Click Edit	
		<pre>2latform Configuration Utility 3.06 (C) 2003 - 2014 Tekelec, In Hostname: hubtones2 Select Time Zone Menu America/Notserrat America/Nassau America/Nore America/Nore America/North_Dakota/Beulah America/North_Dakota/Beulah America/North_Dakota/New_Salem America/North_Dakota/New_Salem America/Pangnitung America/Pangnitung America/Pangnitung America/Port-au-Prince</pre>	
		Select the desired time zone from the list and press Enter	
		Select NO for the question, "Set hardware clock to GMT?"	
		Continue pressing Exit until you are out of the platcfg program.	

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

4.2 **Configure Blade TVOE Hosts**

S T 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. NOTE: 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. Prerequisite: TVOE OS has been installed on the target server blades as per instructions in [11]. Check off (1) 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	PMAC Server: Exchange SSH keys between PMAC and TVOE server	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. Note the IP address TVOE server. From a terminal window connection on the PMAC, login as the admusr user. 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. \$ keyexchange admusr@ <tvoe addr="" blade="" control="" ip="" net=""></tvoe>	
2	TVOE Server: Login and Copy Configuration Scripts from PMAC	Login as admusr on the TVOE server using the ILO facility. Become the super user by using the command: \$ sudo su You should see the prompt change to the hash mark: # Execute the following commands: # scp admusr@ <management_server control_ip_<br="">addr>:/usr/TKLC/smac/etc/TVOE* /root/ # chmod 777 /root/TVOE* (If no TVOE configuration scripts are found here, then please re-execute section 4.2.2, Step #10 of [11]/[12].)</management_server>	

3	TVOE Server: Run Configuration Script	Next, you will execute ONLY ONE of the following commands. Read carefully to determine which command you should run.
	Based on Server	
Blade NIC If Configuration ru fo		If your TVOE server blade DOES have mezzanine cards AND you will be running OAM/XMI traffic on a separate physical network, execute the following command:
		<pre># /root/TVOEcfg.shxmivlan=<xmi_vlan_id> imivlan=<imi_vlan_id> mezz</imi_vlan_id></xmi_vlan_id></pre>
		If your TVOE server blade DOES NOT have mezzanine cards AND/OR you will NOT be running OAM/XMI traffic over a separate physical network, execute the following command :
		<pre># /root/TVOEcfg.shxmivlan=<xmi_vlan_id> imivlan=<imi_vlan_id></imi_vlan_id></xmi_vlan_id></pre>
		In both cases : <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.
		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):
		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!
		The prompt will return.
		NOTE: If for any reason, you ran the wrong version of the TVOEcfg.sh command, you can execute: /root/TVOEclean.sh to reset the networking configuration so you can repeat this step.

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

4	TVOE Server: Configure XMI IP and Default Route	Configure IP address on the XMI network.: <pre># netAdm settype=Bridgename=xmiaddress=<tvoe_xmi_ip_address>netmask=<xmi_netmask> Interface xmi was updated. Restart network services: # service network restart [wait for the prompt to return] Set the default route: # netAdm addroute=defaultdevice=xmigateway=<xmi_network_gateway> Route to xmi added.</xmi_network_gateway></xmi_netmask></tvoe_xmi_ip_address></pre>
		If this installation does not require NetBackup to use a dedicated ethernet interface, then skip the next step and proceed to step 6.
5	(Optional) TVOE Server: Configure NetBackup Dedicated Interface and Bridge	In these examples, <interface> should be replaced with the actual ethernet interface that will be used as the dedicated NetBackup port. For instance, "eth01", or "eth22". Unbond Ethernet Interface: # netAdm setdevice=<interface>slave=no onboot=yes [OPTIONAL] If this installation is using jumbo frames, set the ethernet interface MTU to the desired jumbo frame size: # netAdm setdevice=<interface> MTU=<netbackup_mtu_size> Create NetBackup VM Bridge Interface: # netAdm addtype=Bridgename=netbackup bridgeInterfaces=<interface>onboot=yes</interface></netbackup_mtu_size></interface></interface></interface>

6	TVOE Server: Set	
	Hostname	# su - platcfg
		Platform Configuration Utility 3.05 (C) 2003 - 2011 Tekelec, Inc. Hostname: hostname1322587482 Main Menu Main Menu Jiagnostics
		Use arrow keys to move between options <enter> selects <f12> Main Menu Navigate to Sever Configuration->Hostname-> Edit and enter a new hostname for your server</f12></enter>
		hostname for your server.
		Edit Hostname Hostname: dsrTVOE-blade11
		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

7	TVOE server	From the plateformain menu navigate to Network Configuration \rightarrow SNMP
\square	Configure SNMP	Configuration -> NMS Configuration
		Image: Second
		Platform Configuration Utility 3.04 (C) 2003 - 2011 Tekelec, Inc. Cptions Container hostname1306723774
		NMS Server Port Community String
		· · · · · · · · · · · · · · · · · · ·
		Press Edit.
		Choose Add a New NMS Server
		Erndon : root 🛛 🖓 🖓 🛞
		File Edit View Bookmarks Settings Help Platform Configuration Utility 3.04 (C) 2003 - 2011 Tekelec, Inc.
		Add an NMS Server
		Hostname or IP: I Port: SMMP Community String:
		OK Cancel
		Use arrow keys to move between options <enter> selects</enter>
		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 SOAWLVIP, for port enter 162, and for Community String enter the community string provided in the customer NAPD
		Document
		Dross Exit
		Select Yes when prompted to restart the Alarm Routing Service.
		Once Done, press Exit to quit to the platcfg main menu.

8	TVOE server: Configure NTP	Navigate to Network Configuration
	Configure 1411	
		Main Menu Maintenance Diagnostics Server Configuration Remote Consoles Network Configuration Exit
		Navigate to Configuration->NTP
		Click Edit
		 Edit Time Servers ntpserver1: 10.250.32.10 ntpserver2: 10.250.88.11 ntpserver3: 10.250.44.22 ntppeerA: ntppeerB: OK Cancel entpserver1: Enter customer provided NTP server #1 IP address. ntpserver2: Enter customer provided NTP server #2 IP address.
1		• ntpserver3: Enter customer provided NTP server #3 IP address.
		Press OK
		Continue to press Exit until you are out of the platcfg menu.

9	RMS Server iLO:		
	Configure Time	# su - platcfg	
	Zone	Navigate to Server Configuration->Time Zone	
		Main Menu Maintenance Diagnostics Server Configuration Network Configuration Exit Set Clock Fime Zone Exit	
		Platform Configuration Utility 3.06 (C) 2003 - 2014 Tekele Hostname: hubtones2-TVOE Time Zone Configuration (Time Zone: America/New_York) Hardware Clock Set to GMT: no	
		If the timezone displayed matches the timezone you desire, then you can continue to hit Exit until you are out of the platcfg program. If you want a different timezone, then proceed with this instruction. Click Edit	
		<pre>2latform Configuration Utility 3.06 (C) 2003 - 2014 Tekelec, In Hostname: hubtones2 Select Time Zone Menu America/Montserrat America/Nassau America/New York America/Noronha America/Noronha America/North_Dakota/Beulah America/North_Dakota/New_Salem America/North_Dakota/New_Salem America/Pangnirtung America/Pangnirtung America/Pangnirtung America/Panenix America/Port-au-Prince</pre>	
		Select the desired time zone from the list and press Enter	
		Select NO for the question, "Set hardware clock to GMT?"	
		Continue pressing Exit until you are out of the platcfg program.	
10	TVOE server: Repeate Procedure for other TVOE blades.	Configuration of this TVOE server blade is complete. Repeat this procedure from the beginning for other TVOE hosts that need to be configured.	

4.3 **Create Virtual Machines for Applications**

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

S	This procedure will load the DSR Application ISO into the PM&C Server			
T E P #	Needed material: - Application Media Check off (1) 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	TVOE Host: Load	Add the Application ISO image to the PM&C, this can be done in one of three ways:		
	Application ISO	1. Insert the Application CD required by the application into the removable media drive.		
		2. Attach the USB device containing the ISO image to a USB port.		
		 Copy the Application iso file to the PM&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 <u>TVOE Host</u> (not on the PM&C server)		
		Using sftp, connect to the PM&C server		
		<pre># sftp pmacftpusr@<pmac_management_network_ip> # put <image/>.iso</pmac_management_network_ip></pre>		
		After the image transfer is 100% complete, close the connection # quit		
2	PM&C GUI: Login	Open web browser and enter: http:// <pmac_management_network_ip> Login as pmacadmin user.</pmac_management_network_ip>		

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

 3 PM&C GUI: Attach the softward Image to the PM& Guest 	 If in Step 1 the ISO image was transferred directly to the PM&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. In the PM&C GUI, nevigate to Main Menu ➤ VM Managmenet In the "VM Entities" list, select the PM&C guest. On the resulting "View VM Guest" page, select the "Media" tab. Under the Media tab, find the ISO image in the "Available Media" list, and click its
	"Attach" button. After a pause, the image will appear in the "Attached Media" list. View VM Guest Name: vm-pmacdev6 Host: fe80::461e:a1ff:fe06:484 VM Info Software Network Media
	Attached Media Attached Image Path Detach /var/TKLC/tvoe/mapping-isos/vm-pmacdev6.iso Detach /media/sdb1/000-0000-6.0.0_80.16.0-CentOS-6.2-x86_64.iso
	Available Media Attach Label Image Path Attach tklc_000-0000_Rev_A_80.16 /media/sdb1/000-0000-60.0_80.16.0-CentOS- 6.2-x86_64.iso Attach tklc_000-0000_Rev_A_80.16 /media/sdb1/000-0000-60.0_80.16.0-CentOS- 6.2-x86_64.iso Attach tklc_000-0000_Rev_A_80.17 /var/TKLC/upgrade/TPD.install-6.0.0_80.17.0- CentOS6.2-x86_64.iso Edit Delete Install OS Clone Guest Upgrade Accept Upgrade Reject Upgrade

4	PM&C GUI:	Navigate to Main Menu -> Software -> Manage Software Images						
	Add Application	Navigue to Marin Menu > bortware > Manage bortware images						
	image	Press Add Image button. Use the drop down to select the image.						
		Image Name Type Architecture Description						
		There are no images in repository						
		Add Image Edit Image Delete Image						
		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&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. If in Step 1 the image was transferred to PM&C via sftp it will appear in the list as a local file "/var/TKLC/".						
		Add Software Image						
		Web Aby 08 15:01:54 2012 010						
		Images may be added from any of these sources:						
		Tekelec-provided media in the PM&C host's CD/DVD drive (See Note)						
		USB media attached to the PM&C's host (See Note)						
		External mounts. Prefix the directory with "extfile://".						
		These local search paths:						
		/var/TKLC/upgrade/*.iso /var/TKLC/smac/image/isoimages/home/smacftpusr/*.iso						
		Note: CD and USB images mounted on PM&C's VM host must first be made accessible to the PM&C VM guest. To do this, go to the Media tab of the PM&C guest's View VM Guest page.						
		Path: Nar/TKLC/smac/image/isoimages/home/smacftpusr/872-2290-104-2 Nar/TKLC/smac/image/isoimages/home/smacftpusr/872-2290-104-2 0.0 80.14.0-TVOE-x86_64.iso Nar/TKLC/smac/image/isoimages/home/smacftpusr/872-2441-101-5.0.0_50.6.0-PMAC-x86_64.iso Nar/TKLC/smac/image/isoimages/home/smacftpusr/872-2464-101-5.0.0_50.10.0-ALEXA-x86_64.iso device://devisr0 device://devisr1 device://devisr2 device://devisr3						
		Add New Image						
		Select the appropriate path and Press Add New Image button.						
		You may check the progress using the Task Monitoring link. Observe the green bar indicating success.						
		Once the green bar is displayed, remove the TVOE 2.0 Media from the optical drive of the management server.						
5	PM&C GUI: Load TPD ISO	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.						

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

Procedure 5. Create NOAMP Guest VMs

STEP #	This procedure v (refered to as a " NOAMP server Prerequisite: TV Check off (√) each step IF THIS PROCEDURE I PM&C GUI:	will provide the steps needed to create a DSR NOAMP virtual machine guest") on a TVOE server blade or TVOE RMS. It must be repeated for every you wish to install. "OE has been installed and configured on the target blade server or RMS as it is completed. Boxes have been provided for this purpose under each step number. FAILS, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE. Open web browser and enter: http:// <pmac_management_netowrk_ip></pmac_management_netowrk_ip>
	Login	Login as pmacadmin user.
	PM&C GUI: Navigate to VM Management of the Target Server Blade	Navigate to Main Menu > VM Management Main Menu Software Inventory Manage Software Inventory Manages Software Inventory Manage Software Inventory Manages Software Inventory Software Inventory Management Software Inventory Manages Software Inventory Manages Software Inventory Management Software Inventory Management Software Inventory Management Mark Addition Inventory Management PMAC Initialization PMAC Initialization PMAC Initialization Task Monitoring Elogout 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. View VM Host View VM Host Select Mathine Menagement View VM Host Select Server Software Inventory Secone 901 Borth Select Create Guest Create Guest

3	PM&C GUI:	Press Import Profile						
	Configure VM							
	Guest	Import Profile						
	Parameters	Num CPUer (107x86_64 => DSR_NOAM	5 •				
		Virtual Disks: Prim Size (MB) Poo	ol TPD Dev					
		✓ 102400 vgguest	ts					
		NICs: Bridge TPD Dev control control imi imi xmi xmi * Select Profile						
		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:						
		NOAM VM TVOE Hardware Type(s)	Dedicated Netbackup Interface?	Choose Profile (<application ISO NAME>)→</application 				
		HP DL360 RMS , HP						
		BL460 Gen 6 Blade	No	DSR_NOAMP				
		HP DL360 RMS , HP						
		BL460 Gen 6 Blade	Yes	DSR_NOAMP_NBD				
		HP DL380 Gen 8 RMS, HP BL460 Gen 8 Blade, Sun Netra RMS	No	DSR_NOAMP_LARGE				
		HP DL380 Gen 8 RMS, HP BL460 Gen 8 Blade, Sun Netra RMS	Yes	DSR_NOAMP_LARGE_NBD				
		(NOTE: Application_ISO_NAME is the name of the DSR Application ISO to be installed on this NOAMP)						
		Press Select Profile.						
		Values from the profile should now populate the VM configuration screen Disk Size, Number of CPUs, Memory, and NICs: should all change fom their default values to the profile values						
		You can edit the name, if you DSRNOAMP-B". (This will internal tag for the VM host	wish. For instance not become the u t manager.)	e: "DSRNOAMP-A," or Itimate hostname. It is just an				
		Press Create						

Procedure 5. Create NOAMP Guest VMs

4	PM&C GUI: Wait for Guest Creation to Complete	Navigate to Main Menu > Task Monitoring to monitor the progress of the guest creation task A separate task will appear for each guest creation that you have launched. Wait or referesh the screen until you see that the guest creation task has completed successfully.							
		ID Task	Target	Status	Running Time	Start Time	Progress		
		1739 VirtAction: Create	Enc: <u>9001</u> Bay: <u>11F</u> Guest: <u>DSR_NOAMP</u>	Guest creation completed (DSR_NOAMP)	0:00:04	2011-11-29 20:36:11	100%		
5	PM&C GUI: Verify Guest Machine is	Navigate to Main	Menu -> VM erver blade on w	Management	e was just	created			
	Additional is Running Select the TVOE server blade on which the guest machine was just created. Look at the list of guests present on the blade and verify that you see a guest mataches the name you configured and that its status is "Running".								
			Guest	s)				
		Name Status							
		DSR_NOAMP Running							
		VM Creation for NOAMP VMs (fo	this guest is con r instance, the s	plete. Repeat from tandby NOAMP) the	 Step 2 for at must be	any rema created.	aining		

Procedure 5. Create NOAMP Guest VMs

Procedure 6. Create SOAMP Guest VMs

S T E P	This procedure will provide the steps needed to create a DSR SOAMP virtual machine (refered to as a "guest") on a TVOE server blade. It must be repeated for every SOAMP server you wish to install.							
#	Prerequisite: TVOE	s been installed and configured on the target blade server						
	Check off (√) each step as it is IF THIS PROCEDURE FAILS	s completed. Boxes have been provided for this purpose under each step number. 6, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.						
1	PM&C GUI: Login	Open web browser and enter: http:// <pmac_management_network_ip> Login as pmacadmin user.</pmac_management_network_ip>						
2	PM&C GUI: Navigate to VM Management of the Target Server Blade	Navigate to Main Menu Main Menu Manage Software Softw						

Procedure 6. Create SOAMP Guest VMs

3	PM&C GUI:	Press Import Profile									
	Configure VM Guest										
	Parameters										
		Import Profile									
		Import Profile									
		ISO/Profile: DSR4.0.0_40.8.2872-2438-107x86_64 => DSR_SOAM									
		Num CPUs:4 Memory	Num CPUs:4 Memory (MBs):6144								
		Virtual Disks: Prim Size (MB) Pool TPD Dev									
		102400	102400 vaguests								
			Vgguests								
		NICer									
		Bridge TPD De	9V								
		control contr	ol 📤								
		imi ir	ni								
		xmi xr	ni 🔻								
		Select Profile									
		From the "ISO/Profile" drop-	down box, select th	e entry that matches depending on							
		the hardware that your SOAN	1 VM TVOE serve	r is running on and your preference							
		for NetBackup interfaces:									
		SOAM VM TVOE	Dedicated	Chaose Profile (< Application							
		Hardwara Type(s)	Notbookup								
		Hardware Type(s)	Interfaceo?								
		HP BL 460 Gen 8 Blade	Interface:								
		HP BL 460 Gen 6 Blade	No	DSR_SOAM							
		HP BI 460 Gen 8 Blade									
		HP BL 460 Gen 6 Blade	Yes	DSR_SOAM_NBD							
		III BL400 Gell 0 Blade									
		(NOTE: Application_ISO_NA	AME is the name o	f the DSR Application ISO to be							
		installed on this NOAMP)									
		Press Select Profile.									
		Values from the profile shoul	d now populate the	VM configuration screen Disk							
		Size, Number of CPUs, Mem	orv. and NICs: sho	ould all change fom their default							
		values to the profile values	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	6							
		You can edit the name if you	wish For instance	e "DSR SOAM A" or							
		DSR SOAM B" (This will	not become the u	timate hostname It is just an							
		internal tag for the VM hos	t manager.)	unite nostnume. It is just un							
		internal tag for the vivi nost manager.)									
		riess Create									
		Create									

4	PM&C GUI: Wait	Navigate to Main	Navigate to Main Menu > Task Monitoring to monitor the progress of the								
	for Guest Creation to	guest creation task A separate task will appear for each guest creation that you have									
	Complete	launched.									
		Wait or referesh th	Wait or referesh the screen until you see that the quest creation task has completed								
		successfully.	e sereen until yo	a see that the guest ere	ution tusk	nus com	Jieted				
		saccessiang	successivity.								
		ID Task	Target	Status	Running Time	Start Time	Progress				
		1739 VirtAction: Create	Enc: <u>9001</u> Bay: <u>11F</u> Guest: <u>DSR_NOAMP</u>	Guest creation completed (DSR_NOAMP)	0:00:04	2011-11-29 20:36:11	100%				
5	PM&C GUI: Verify	Navigate to Main	Menu -> VM	Management							
	Guest Machine is	C		-							
	Running	Select the TVOE se	erver blade on w	hich the guest machine	e was just	created.					
		Look at the list of g	guests present on	the blade and verify t	hat you se	e a guest	that				
		mataches the name	you configured	and that its status is "F	Running".						
			(
			Guests								
		Name Status									
		DSR_NOAMP Running									
		VM Creation for	this quest is som	nlota Danaat from (Stop 7 for	0 N N N 0	ainina				
		SOAMP VMs (for	rinstance the st	andby SOAMP) that	t must be	any rem created	aming				
		50AMI 1113 (101	motance, the st	anuby SOAMIT) that	i musi de	created.					

Procedure 6. Create SOAMP Guest VMs

4.4 Install Application Software on Servers

Procedure 7. IPM Blades and VMs

C	This was as down as:11	reversi de the stores to install TDD or Blade correct or d Blade correct VMs							
Э Т	This procedure will provide the steps to histan 11 D on blade servers and blade server guest vivis								
E	Prerequisite: Enclos	Prerequisite: Enclosures containing the blade servers targeted for IPM that have been configured.							
Р #	Prerequisite : TVOE has been installed and configured on Blade servers that will host DSR NOAMP VMs.								
	Prerequisite: DSR N	IOAMP and SOAM Guest VMs have been created successfully.							
	Needed material:								
	- TPD Media (64-	bits)							
	Check off (\checkmark) each step as it is	s completed. Boxes have been provided for this purpose under each step number.							
	IF THIS PROCEDURE FAILS	5, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.							
1	TVOE Host: Load	Add the TPD ISO image to the PM&C, this can be done in one of three ways:							
	Application ISO	1. Insert the TPD CD required by the application into the removable media drive.							
		2. Attach the USB device containing the ISO image to a USB port.							
		 Copy the TPD iso file to the management 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 <u>TVOE Host</u> (not on the PM&C server)							
		Using sftp, connect to the PM&C management server							
		<pre># sftp pmacftpusr@<pmac_management_network_ip> # put <image/>.iso</pmac_management_network_ip></pre>							
		After the image transfer is 100% complete, close the connection # quit							
2	PM&C GUI: Login	Open web browser and enter: http:// <pmac_management_network_ip> Login as pmacadmin user.</pmac_management_network_ip>							

Procedure 7. IPM Blades and VMs

3	PM&C GUI: Attach the software Image to the PM&C Guest	If in Step 1 the ISO image was transferred directly to the PM&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. In the PM&C GUI, nevigate to Main Menu ➤ VM Managmenet. . In the " VM Entities " list, select the PM&C guest. On the resulting " View VM Guest " page, select the " Media " tab.
		Under the Media tab, find the ISO image in the "Available Media" list, and click its "Attach" button. After a pause, the image will appear in the "Attached Media" list. View VM Guest Name: vm-pmacdev6 Host: fe80::461e:a1ff:fe06:484 VM Info Software Network Media
		Attached Media Attached Image Path Detach /var/TKLC/tvoe/mapping-isos/vm-pmacdev6.iso Detach /media/sdb1/000-0000-6.0.0_80.16.0-CentOS-6.2-x86_64.iso Available Media
		Attach Label Image Path Attach tkic_000-0000_Rev_A_80.16 //media/sdb1/000-0000-000-6.0.0_80.16.0-CentOS- 6.2-x86_64.iso Attach tkic_000-0000_Rev_A_80.17 //mar/TKLC/upgrade/TPD.install-6.0.0_80.17.0- CentOS6.2-x86_64.iso Edit Delete Install OS Clone Guest Upgrade Accept Upgrade

Procedure 7. IPM Blades and VMs

4	PM&C GUI: Select	Navigate to Sc	Navigate to Software -> Software Inventory.							
	Servers for OS install	Main Menu Hardware System Inventory FRU Info System Configuration Software Software Software Inventory Manage Software Images 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. Note: VM's will have the text "Guest: <vm_guest_name>" underneath the physical blade or RMS that hosts them.</vm_guest_name>								
		Ident Enc: <u>10101</u> Bay: <u>1F</u>	IP Address	Hostname	Plat Name	Plat Version	App Name	App Version	Design	Function
		Enc: <u>10101</u> Bay: <u>2F</u> Enc: <u>10101</u> Bay: <u>7F</u>								
		Enc:10101 Bay:8F								
		Enc: <u>10101</u> Bay: <u>15F</u>								
			192.168.1.1	pmac-mrsvnc-1	TPD (i686)	5.0.0-72.20.0	PMAC	4.0.0_40.11.0	1A	PMAC
		Click on Inst	call os	le Refresh	1					
5	PM&C GUI:	The left side of	f this scree	n shows the se	ervers to l	be affecte	d by th	is OS inst	allat	ion.
	Initiate OS Install	From the list o OS image to in	f available stall to all	bootable imag	ges on the l servers.	e right sid	e of the	e screen, s	elect	one
		co mage to m								
		Targets Entity	Status		Sele	ct an ISO to Ins	tall on the	listed Entities		
		Enc: <u>10101</u> Bay: <u>1F</u> Enc: <u>10101</u> Bay: <u>2F</u>		Image Name TPD5.0.0_72.20.0x86	_64	Type Bootable	Architectur	e Description		
		Enc: <u>10101</u> Bay: <u>7E</u> Enc: <u>10101</u> Bay: <u>8E</u> Enc: <u>10101</u> Bay: <u>15E</u>								
		Click on Star proceed with the	r t Insta he install.	ll, a confirm	ation wir	ndow will	pop uj	o, click on	Ok	to
		Start Instal								

6	PM&C GUI:	Navig	Navigate to Main Menu > Task Monitoring to monitor the progress of the OS									
	Monitor OS Install	Instal	Installation background									
		task.	A separate t	ask will appear	for each blade affected	l.						
		ID	Task	Target	Status	Running Time	Start Time	Progress				
		14	Install OS	Enc: <u>10101</u> Bay: <u>15F</u>	Boot install image	0:00:01	2011-09-20 11:12:02	50%				
		13	Install OS	Enc: <u>10101</u> Bay: <u>8F</u>	Boot install image	0:00:01	2011-09-20 11:12:02	50%				
		12	Install OS	Enc: <u>10101</u> Bay: <u>7F</u>	Boot install image	0:00:01	2011-09-20 11:12:02	50%				
		11	Install OS	Enc: <u>10101</u> Bay: <u>2F</u>	Boot install image	0:00:01	2011-09-20 11:12:02	50%				
		10	Install OS	Enc: <u>10101</u> Bay: <u>1F</u>	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%				
		Wher will i	n the installa ndicate "100	tion is complete)%".	e, the task will change	to green an	nd the Pro	gress bar				

Procedure 7. IPM Blades and VMs

Procedure 8. Install the Application Software on Blades

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

Procedure 8. Install the Application Software on Blades

2	PM&C GUI: Select	Navigate to So	ftware	-> Software	e Inver	tory.				
	Servers for	i ta rigate to								
	Application install	🖃 🚊 Main Men	🔜 💂 Main Menu							
	ripplication install	👘 🚊 📥 Hardw	💼 📥 Hardware							
		😑 📇 Sys	🗖 🚔 System Inventory							
			Endosure 10101							
		🕂 🔤 Sys	System Configuration							
		📄 🔂 Softwa	Software							
		- Soft	Software Inventory							
		👘 🛄 Mar	👘 🔚 Manage Software Images							
		Select the serve	select the servers on which the application is to be installed. If you want to install							
		the same applic	the same application image to more than one convert you may called multiple convert							
		by clicking mu	tiple rows	individually S	alacted ro	we will b	o highli	abted in c	roon	/15
		by cheking mu	upic rows	marviauarry. S		JWS WIII U	c mgnn	gincu in g	green.	
		Note: VM's wi	ll have the	text "Guest" «	M GUE	ST NAM	(E>" un	derneath	tha	
		note. Vivi S wi	that hosts the	icat Guest. <v< th=""><th></th><th></th><th>IL- un</th><th>uerneath</th><th>the</th><th></th></v<>			IL- un	uerneath	the	
		physical blade	inat nosts ti	iem.						
		Ident	IP Address	Hostname	Plat Name	Plat Version	Ann Name	Ann Version	Design	. Fur
		Enc: <u>10101</u> Bay: <u>1F</u>	192.168.1.247	hostname1316543479	TPD (x86_64)	5.0.0-72.20.0				
		Enc: <u>10101</u> Bay: <u>2F</u>	192.168.1.248	hostname1316543574	TPD (x86_64)	5.0.0-72.20.0				
		Enc: <u>10101</u> Bay: <u>7F</u>	192.168.1.250	hostname1316543105	TPD (x86_64)	5.0.0-72.20.0				
		Enc: <u>10101</u> Bay: <u>8F</u>	192.168.1.249	hostname1316543051	TPD (x86_64)	5.0.0-72.20.0				
		Enc: <u>10101</u> Bay: <u>13F</u>								
		Enc: <u>10101</u> Bay: <u>15F</u>	192.168.1.251	hostname1316543058	TPD (X86_64)	5.0.0-72.20.0	PMAC	400 40 11 0	14	PM
			132.100.1.1	pinde missile i	11 D (1000)	5.0.0 72.20.0	1 11/10	4.0.0_40.11.0	173	
		Click on Upgr	ade							
					-					
		Install OS	Upgrade	e Refresh						
3	PM&C GUI:	The left side of	this screen	shows the serv	vers to be	affected 1	by this (OS install	ation	
_	Initiate Application	From the list of	available t	pootable image	s on the r	ight side o	of the sc	reen, sele	ect on	e
	Install	OS image to in	stall to all c	of the selected s	servers.	U		,		
		0								
		Targets		S	elect an ISO to	o Upgrade on t	he listed Er	ntities		
		Entity Enc:10101 Bay:1E	Status	Imago Namo		Tuno	Architoctura	Description		
		Enc: <u>10101</u> Bay: <u>2F</u>		TPD5.0.0_72.20.0x86	_64	Bootable	x86_64	Description		
		Enc: <u>10101</u> Bay: <u>7F</u>		DSR3.0.0_30.8.0872-	_ 2329-101x86_64	4 Upgrade	x86_64			
		Enc: <u>10101</u> Bay: <u>8F</u>								
		Enc: <u>10101</u> Bay: <u>15F</u>	and the second							
		Click on Star	t Ingra	le a confirmat	ion wind	ow will n		lick on O	r to	
		proceed with th	a install	le, a comma		ow win p	op up, c		10	
		proceed with th	e mstan.							
		Ctart Unava	1.							
		Start Upgrad	ue -							
		1								

A	DMA C CITI.	Ът. •.						• • • •		· .1.	
4	PM&C GUI:	Navig	ate to Main	Menu >	Task	Monitoring	to mon	itor the p	rogress of	the	
\square	Monitor the	Applic	cation Installa	ation.	c	1 1 1 1 6	c 1				
	installation status	task. A	A separate tas	k will ap	opear for	each blade at	fected.				
	1	ID	Task	Target		Status		Running Time	Start Time	Prog	gress
		25	Upgrade	Enc: <u>10101</u> Br	ay: <u>15F</u>	Task ID assigned		0:00:00	2011-09-20 14:36:08	40	D%
		24	Upgrade	Enc: <u>10101</u> Ba	ay: <u>8F</u>	Task ID assigned		0:00:00	2011-09-20 14:36:08	40	D%
		23	Upgrade	Enc: <u>10101</u> Ba	ay: <u>7F</u>	Task ID assigned		0:00:01	2011-09-20 14:36:07	40	0%
		22	Upgrade	Enc: <u>10101</u> B	ay: <u>2F</u>	Task ID assigned		0:00:00	2011-09-20 14:36:07	40	D%
		21	Upgrade	Enc: <u>10101</u> B	ay: <u>1F</u>	Task ID assigned		0:00:00	2011-09-20 14:36:07	40	0%
		20	Add Image			Done: 872-2329-101-3.0 DSR-x86_64	0.0_30.8.0-	0:00:06	2011-09-20 14:24:41	10	0%
5	PM&C CIII:	When will in	the installation idicate "100%	on is con 6".	nplete, th	he task will ch	ange to g	green and	the Progr	ess t	oar
	Accpet Upgrade	installation. Select all the servers on which the application has been installed in the previous steps and click on "Accept Upgrade" as shown below. 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: To accept: /var/TKLC/backout/accept To reject: /var/TKLC/backout/reject 									
		Filter	•					F	ri Aug 10 17:45:1	15 2012	UTC
		Ident	IP /	Address	Hostname	Plat Name	Plat Version	App Name	App Version	Desig	Fun
	1	Enc:50/	202 Bay:1F 19'	2.168.1.4	RDU02-NO	TPD (x86 64)	6.0.0-80.16.0	DSR	4.0.0-0.40333		*
	1 1	Enc:50/	202 Bay:2F 19'	2.168.1.167	RDU02-MP	TPD (x86 64)	6.0.0-80.16.0	DSR	Pending Acc/Rej		
					1						
			Install OS	Upgra	ide	Accept Upgrade	Reject	t Upgrade	Refre	sh	
		Note t "Pend	hat once the ing Acc/Rej"	upgrade i to the v	has been ersion nu	accepted, the amber of the a	App ver pplicatio	rsion will m.	change fr	om	

Procedure 8. Install the Application Software on Blades

4.5 Application Configuration

Procedure 9. Configure the First NOAMP NE and Server

S	This procedure will provide the steps to configure the First NOAMP blade server.								
T E	Check off (\checkmark) each step as it is	s completed. Boxes have been provided for this purpose under each step number.							
Р	IF THIS PROCEDURE FAILS	DURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.							
1	Save the NOAMP	Using a text editor, create a NOAMP Network Element file that describes the							
	Network Data to an XML file	networking of the target install environment of your first NOAMP server.							
		computer.							
		A suggested filename format is "Appname_NEname_NetworkElement.XML", so for example an DSR2 NOAMP network element XML file would have a filename "DSR2_NOAMP_NetworkElement.xml".							
		Alternatively, you can update the sample DSR 5.X/6.X Network Element file be found on the management server at:							
		/usr/TKLC/smac/etc/SAMPLE-NetworkElement.xml							
		sample XML file can also be found in Appendix A. Note that the following itations apply when specifying a Network Element name: "A 1-32-character ing. Valid characters are alphanumeric and underscore. Must contain at least one ha and must not start with a digit".							
2	Exchange SSH keys between PMAC and first NOAMP	e SSH keysUse the PMAC GUI to determine the Control Network IP address of the blade sPMACthat is to be the first NOAMP server. From the PMAC GUI, navigate to MainNOAMPMenu → Software →Software Inventory.							
	server	Note the IP address for the first NOAMP server.							
		Login to the PMAC terminal as the <i>admusr</i> .							
		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 st 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.							
		<pre>\$ keyexchange admusr@<noamp addr="" blade="" control="" ip="" net=""></noamp></pre>							
3	Connect a Web Browser to the NOAMP GUI	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. 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.							
		From the PMAC, enable the switch port that the laptop is plugged into.							
		Enable that laptop Ethernet port to acquire a DHCP address and then access the NOAMP-"A" GUI via its control IP address.							
4	NOAMP GUI:	Login to the NOAMP GUI as the guiadmin user.							
	Login								

5	Create the NOAMP	Navigate to	avigate to Main Menu->Configuration->Network Elements								
	Network Element using the XML	Select the "I	Browse" butt	on, and ent	er the pathr	ame of the	NOAMP network XML				
	File	file.									
		Select the "U	Jpload File"	button to u	pload the X	ML file an	d configure the NOAMP				
		Network Ele	ement.								
		Once the dat your networ describes the	once the data has been uploaded, you should see a folder appear with the name of our network element. Click on this folder and you will get a drop-down which escribes the individual networks that are now configured:								
			Network Element								
			SO0000 🔁	05							
			Network Name	Network Address	Netmask	VLAN ID	Gateway IP Address				
			INTERNALXMI	10.240.10.32	255.255.255.2	24 3	10.240.10.35				
			INTERNALIMI	10.240.10.0	255.255.255.2	24 4	10.240.10.3				
6	Map Services to Networks	Navigate to Main Menu \rightarrow Configuration \rightarrow Services. Select the "Edit" button and set the Services as shown in the table below:									
		N	lame	Int	ra-NE Net	work	Inter-NE Network				
		OAM		<	IMI Netwo	rk>	<xmi network=""></xmi>				
		Replication	1	<	IMI Netwo	rk>	<xmi network=""></xmi>				
		Signaling			Unspecifie	d	Unspecified				
		HA_Secon	dary		Unspecifie	d 1	Unspecified				
		HA_MP_S	econdary				Unspecified				
		ComAgent		<	<imi network=""></imi>		Unspecified				
		Contragent			11/11 1101//01	n/	Chiptenitu				
		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:									
						Name Intra-NE Network Inter-NE					
		Name			ntra-NE Network		Inter-NE Network				
		Name OAM			IMI -		Inter-NE Network				
		Name OAM Replication			IMI IMI IMI IMI IMI IMI IMI IMI IMI IMI		Inter-NE Network				
		Name OAM Replication Signaling			IMI Unspecified		Inter-NE Network XMI XMI Unspecified				
		Name OAM Replication Signaling HA_Secondary			IMI IMI Unspecified Unspecified		Inter-NE Network XMI XMI Unspecified ▼ Unspecified ▼				
		Name OAM Replication Signaling HA_Secondary HA_MP_Secondary			IMI IMI Unspecified Unspecified Unspecified		Inter-NE Network XMI XMI Unspecified Unspecified Unspecified				
		Name OAM Replication Signaling HA_Secondary HA_MP_Secondary Replication_MP			IMI IMI Unspecified Unspecified IMI Unspecified IMI Unspecified IMI		Inter-NE Network XMI • XMI • Unspecified • Unspecified • Unspecified •				
		Name OAM Replication Signaling HA_Secondary HA_MP_Secondary Replication_MP ComAgent			IMI IMI Unspecified Unspecified IMI Unspecified IMI IMI IMI IMI		Inter-NE Network XMI • XMI • Unspecified • Unspecified • Unspecified • Unspecified •				

7	Insert the 1st NOAMP server	Navigate to Mai	Navigate to Main Menu \rightarrow Configuration \rightarrow Servers. Select the "Insert" button to insert the new NOAMP server into servers table (the						
		first or "A" serv	ärst or "A" server).						
		Attribute	Value		Description				
		Hostname	NO-Server1 *	Unique name for the server. [Defa string. Valid characters are alphai with an alphanumeric and end wi					
		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				
		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.]				
		Fill in the fields	as follows:						
		Hostna	ame:	<hostname></hostname>					
		Role:		NETWORK OAM&P					
		System	n ID:	<site id="" system=""></site>					
	Hardware Profile: DSR TVOE Guest								
		Netwo	rk Element Name	[Choose NE from Da	rop Down Box]				
		The network int	erface fields will n	ow become available with s	election choices based				
		on the chosen ha	ardware profile and	l network element					
		Interfaces: Network		IP Address	Interface				
		INTERNALXMI (10.240.	84.128/25)	10.240.84.155	xmi 💟 🗌 VLAN (3)				
		INTERNALIMI (10.240.8	35.0/26)	10.240.85.10	imi 🔽 🗌 VLAN (4)				
				Ok Apply Cancel					
		Fill in the server Leave the "VL	r IP addresses for t AN'' checkbox un	he XMI network. Select "x checked.	ami" for the interface.				
		Fill in the server	r IP addresses for t	ne IMI network. Select "in	ni" for the interface.				
		Leave the "VL	AN'' checkbox un	checked.					
		Next. add the fo	llowing NTP serve	rs:					
			NTP Server	Prof	orrod?				
		<n01-tv0< th=""><th>OE-XMI/Platmgm</th><th>t-IP-</th><th>lineu. les</th></n01-tv0<>	OE-XMI/Platmgm	t-IP-	lineu. les				
			Address>						
		Select the "Ok"	button when you h	ave completed entering all	the server data.				
8	Export the Initial	Navigate to Mai	in Menu → Con	figuration → Serve	rs.				
	Configuration	From the GUU o	creen select the N	DAMP server and then sale	et "Export" action				
		button to genera	te the initial config	guration data for that server.	и вирон аснон				

Procedure 9. Configure the First NOAMP NE and Server

Procedure 9. Configure the First NOAMP NE and Server

9	Сору	Obtain a terminal window to the 1 st NOAMP server, logging in as the admusr user.
	Configuration File to 1 st NOAMP	(see 4.7Appendix F for instructions on how to access the NOAMP from iLO)
	Server	Become the super user by using the command:
		\$ sudo su
		You should see the prompt change to the hash mark:
		#
		Copy the configuration file created in the previous step from the /var/TKLC/db/filemgmt directory on the 1 st NOAMP to the /var/tmp directory. The configuration file will have a filename like TKLCConfigData.< <i>hostname</i> >.sh. The following is an example:
		<pre># cp /var/TKLC/db/filemgmt/TKLCConfigData.blade01.sh /var/tmp/TKLCConfigData.sh</pre>
10	Wait for Configuration to Complete	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.
		Wait to be prompted to reboot the server, but DO NOT reboot the server, it will be rebooted later on in this procedure.
		NOTE : Ignore the warning about removing the USB key, since no USB key is present
11	Configure Time	From the command line prompt, execute <i>set_ini_tz.pl</i> . This will set the system time
	Zone	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.
		<pre># /usr/TKLC/appworks/bin/set_ini_tz.pl "Etc/UTC" >/dev/null 2>&1</pre>
10		
12	Reboot the Server	
		# INIT 6

	(Optional) Configure Networking for Dedicated NetBackup Interface	<pre>NOTE: You will only execute this step if your NO is using a dedicated Ethernet interface for NetBackup. From a root login session (login as admusr, then become superuser) on the first NO, execute the following commands: # netAdm setdevice=netbackuptype=Ethernet onboot=yesaddress=<no1_netbackup_ip> netmask=<netbackup_netmask> # netAdm addroute=netdevice=netbackup address=<netbackup_network_id> netmask=<netbackup_network_netmask> gateway=<netbackup_network_gateway_ip></netbackup_network_gateway_ip></netbackup_network_netmask></netbackup_network_id></netbackup_netmask></no1_netbackup_ip></pre>
14	1 st NO Server: Verify Server Health	Execute the following command as super-user on the 1 st NO server and make sure that no errors are returned: # syscheck Running modules in class hardware Running modules in class disk Running modules in class net OK Running modules in class system OK Running modules in class proc LOG LOCATION: /var/TKLC/log/syscheck/fail_log

Procedure 9. Configure the First NOAMP NE and Server

Procedure 10. Configure the NOAMP Server Group

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

Procedure 10. Configure the NOAMP Server Group

2	Enter NOAMP	Using the GUI	session on the first NOAMP server,	go to the GUI					
	Server Group Data	Main Menu→	Main Menu→Configuration→Server Groups, select Insert and fill the following						
	-	fields:	fields:						
		Server	r Group Name → [Enter Server Gro	up Name]					
		• Level $\rightarrow \mathbf{A}$							
		• Parent : None							
		• Function: DSR (Active/Standby Pair)							
		WAN Replication Connection Count: Use Default Value							
			- man repleation connection count. Ose Default value						
		Select "OK" w	hen all fields are filled in.						
3	Edit the NOAMP	From the GUI	Main Menu→Configuration→Server	Groups, select the new server					
	Server Group	group, and ther	n select "Edit".	-					
		Select the Netv	vork Element that represents the NOA	MP.					
		NO_9000601	03						
		Server	SG Inclusion	Preferred HA Role					
		HPC6NO	✓ Include in SG	Preferred Spare					
		T d C		C 1.1					
		In the portion of	of the screen that lists the servers for the	he server group, find the					
		NOAMP serve	r being configured. Click the Include	e in SG checkbox.					
		Leave other by	avec blank						
		Leave other be	JACS OTATIK.						
		Press OK							

Procedure 10. Configure the NOAMP Server Group

4	Verify NOAMP	From terminal win	From terminal window to the iLO of the first NOAMP blade server, execute the							
			Tom terminar window to the first and the first first birds being sector, execute the							
	blade server role	ha.mystate con	u.mystate command to verify that the "DbReplication" and VIP item under the esourceId" column has a value of "Active" under the "role" column.							
		"resourceId" colun	resourceId" column has a value of "Active" under the "role" column.							
		You might have to	You might have to wait a few minutes for it to become in that state.							
		Press Ctrl+C to exit								
		Example:								
		root@labFe2b2dsrnoa: RWID=00	Prot@labFe2b2dsrnoa:-							
		[root@labFe2b2dsrnoa	~]#							
		[root@labFe2b2dsrnoa	~]#							
		[root@labre2b2dsrnoa	~j# na.n	iystate node	eubDeenurcee	lestUndete				
		DhRenlication	Active	A0878.188	Subresources	1110:055822				
		VIP	Active	A0878.188	ō	1110:055822				
		pSbrBBaseRepl	005	A0878.188	0	1110:055815				
		pSbrBindingRes	005	A0878.188		1110:055815				
		pSbrSBaseRepl	005	A0878.188		1110:055815				
		pSbrSessionRes	005	A0878.188		1110:055815				
		CacdProcessRes	Active	A0878.188	0	1110:055822				
		DA_MP_Leader	005	A0878.188	0	1110:055815				
		DSR_SLDB	005	A0878.188	0-63	1110:055815				
		VIP_DA_MP	005	AU878.188	0-63	1110:055815				
		EXGSTACK_Process	005	AU878.188	0-63	1110:055815				
		DSR_Process	005	AU878.188	U-63	1110:055815				
		DEPON DI Proc	005	AUO/0.100	U 0	1110:055015				
		DSROAM_RL_FICE	005	10878 188	0	1110.055815				
		DSROAM_FN_FFOC	005	10878.188	0	1110:055815	=			
		DSROAM TC Proc	005	A0878.188	0	1110:055815				
		DSROAM CA Proc	Active	A0878.188	0	1110:055822				
		[root@labFe2b2dsrnoa	~]#				*			
-	D ((1St NOAMD		CUIL	.1						
Э	Restart I ^{ac} NOAMP	From the NOAMP	GUI, S	elect the Mai	in menu→Sta	tus & Manage→S	erver menu.			
	blade server	Select the first NO	AMP se	erver. Select	the Restart	button. Answer OK	K to the			
		<u> </u>	XX7 ·	6	1.					
		confirmation popul	p. wait	for restart to	complete.					
		1								

Procedure 11. Configure the Second NOAMP Server

S	This procedure will provide the steps to configure the Second NOAMP server.			
I E	Check off (\checkmark) each step as it is	eck off (\mathbf{v}) each step as it is completed. Boxes have been provided for this purpose under each step number.		
Р	IF THIS PROCEDURE FAILS	OCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.		
1	Exchange SSH keys between PMAC and second NOAMP server	Achange SSH keys tween PMACUse 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 Main Menu → Software-→Software Inventory. Note the IP address for the second NOAMP server, usually the second blade in the first enclosure.		
		Login to the PMAC terminal as the admus	5r .	
		From a terminal window connection on th SSH keys for <i>admusr</i> between the PMAC the keyexchange utility, using the Control server. When prompted for the password, the NOAMP server.	e PMAC as the <i>admusr</i> user, exchange and the 2 nd NOAMP blade server using network IP address for the NOAMP blade enter the password for the <i>admusr</i> user of	
		<pre>\$ keyexchange admusr@<2ndNOAM</pre>	IP blade Control Net IP addr>	
		Note: if keyexchange fails, edit "/home/ad blank lines, and retry the keyexchange cor	musr/.ssh/known_hosts" and remove nmands.	
2	NOAMP GUI: Login	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: http:// <first address="" ip="" noamp="" xmi=""></first>		
		Login as the guiadmin user.		
3	Insert the 2 nd	Navigate to Main Menu → Configuration	n → Servers.	
3 Insert the 2 Navigate to Main Menu → Configuration → Ser NOAMP server Click on Insert to insert the new second NO. server). This server role should be the "NETWORK OAL Select the Network Element Name (should be the first NOAMP). Choose "DSR TVOE Guest" for the hardware pr Fill in the server IP addresses for the XMI network Leave the "VLAN" checkbox unchecked. Fill in the server IP addresses for the IMI network Leave the "VLAN" checkbox unchecked. Next, add the following NTP servers: Next, add the following NTP servers:		A Servers. ad NOAMP server into servers table ("B" K OAM&P". I be the same used when configuring the vare profile. I network. Select "xmi" for the interface. d. network. Select "imi" for the interface. d. Preferred? Yes		
		Select the Ok button when you have comp	leted entering the server data.	

Procedure 11. Configure the Second NOAMP Server

4	Export the initial	From the GUI screen, select the second server and then select Export action	
	configuration	button to generate the initial configuration data for that server.	
5	Copy	Obtain a terminal session to the 1 st NOAMP as the admusr user	
	Configuration File to 2 nd NOAMP Server	Use the awpushcfg utility to copy the configuration file created in the previous step from the /var/TKLC/db/filemgmt directory on the 1 st NOAMP to the 2 nd NOAMP blade server, using the Control network IP address for the 2 nd NOAMP blade server. The configuration file will have a filename like TKLCConfigData.< <i>hostname</i> >.sh.	
		<pre>\$ awpushcfg</pre>	
		 The awpushcfg utility is interactive, so the user will be prompted for the IP address of the local PMAC server. Use the local control network address from the PMAC. the blade inventory will be presented, prompted for the Control network IP address for the target server (In this case, the standby NOAMP server). prompted for the hostname of the target server Note: If prompted for a username, please use admusr 	
6 Set the timezone and Reboot the Sorwor		Obtain a terminal window connection on the 2 nd NOAMP iLO from the OA. Login as the admusr user.	
	Server	(Use the procedure in 4.7Appendix F).	
		Become the super user by using the command:	
		\$ sudo su	
		You should see the prompt change to the hash mark:	
		#	
		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.	
		Verify awpushcfg was called by checking the following file	
		<pre># cat /var/TKLC/appw/logs/Process/install.log</pre>	
		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.	
		<pre># /usr/TKLC/appworks/bin/set_ini_tz.pl "Etc/UTC" >/dev/null 2>&1</pre>	
		Now Reboot the Server:	
		# sudo init 6	
		Wait for the server to reboot	

7	(Optional) Configure Networking for Dedicated	NOTE: You will only execute this step if your NO is using a dedicated Ethernet interface for NetBackup.	
	NetBackup Interface	<pre># netAdm setdevice=netbackuptype=Ethernet onboot=yesaddress=<no2_netbackup_ip> netmask=<netbackup_netmask></netbackup_netmask></no2_netbackup_ip></pre>	
		<pre># netAdm addroute=netdevice=netbackup address=<netbackup_network_id> netmask=<netbackup_network_netmask> gateway=<netbackup_network_gateway_ip></netbackup_network_gateway_ip></netbackup_network_netmask></netbackup_network_id></pre>	
8	2nd NO Server: Verify Server Health	Execute the following command as super-user on the 2 ^{ndt} NO server and make sure that no errors are returned:	
		<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 LOG LOCATION: /var/TKLC/log/syscheck/fail_log</pre>	

Procedure 11. Configure the Second NOAMP Server

Procedure 12. Complete Configuring the NOAMP Server Group

This procedure will provide the steps to finish configuring th NOAMP Server Group.
Check off (\checkmark) 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.

Procedure 12. Complete Configuring the NOAMP Server Group

1	Edit the NOAMP	From the GUI se	ession on the first NOAMP server, g	go to the GUI
	Server Group Data	Main Menu->Configuration->Server Groups.		
		Select the NOAMP Server group and click on Edit and add the second NOAMP		
		server to the Ser	ver Group by clicking the "Include	in SG" checkbox for the second
		NOAMP server.	Click Apply.	
		RMSNO 900060102		
		Server	SG Inclusion	Preferred HA Role
		RMSNOA	Include in SG	Preferred Spare
		RMSNOB	Include in SG	Preferred Spare
		Add a NOAMP shown below	VIP by click on Add . Fill in the VI	P Address and press Ok as
			VIP Address	Add
				Remove
				Ok Apply Cancel
2	Wait for Replication	After replication	, which will initially take up to 5 m	inutes, the HA status should be
	Replication	minutes while th	e NOAMP servers figure out maste	r/slave relationship.
		Log out of GUI	from the first NOAMP XMI addres	S.
3	Establish GUI Session on the	Establish a GUI	session on the NOAMP by using th	e XMI VIP address. Login as
	NOAMP VIP	user gulacillin		
4	Wait for Remote	Wait for the ala	rm "Remote Database re-initializati	on in progress" to be cleared
	Clear	before proceedin	ig. (iviain menu->Aiarins & Even	is->view Active)
5	Verify HA Role for 2 nd NOAMP server	In the Main men HA Role" for the	nu->Status & Manage->HA menu e 2 nd NOAMP server is "Active".	, verify that the "Max Allowed
			the Table button and in the nearly	ing source shows the Ond
		If it is not , press the Edit button and in the resulting screen, change the 2 nd NOAMPs server's "Max Allowed HA Role" to "Active" using the dropdown box.		
		Hostname	Max Allowed HA Role	
		HPC6NO	Active 🔽	
		D		
		Press OK.		

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

Procedure 12. Complete Configuring the NOAMP Server Group

Procedure 13. Install NetBackup Client (Optional)

S	This procedure will	download and install NetBackup Client software on the server.	
I E P #	Location of the bpstart_notify and bpend_notify scripts is required for the execution of this procedure. For Appworks based applications the scripts are located as follows: /usr/TKLC/appworks/sbin/bpstart_notify /usr/TKLC/appworks/sbin/bpend_notify		
	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	Install Netbackup Client Software	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</i> <i>Install with nbAutoInstall.</i> This is not common. If the answer to the previous <u>question is not known</u> then use <i>Appendix L.1 Netbackup Client Install with platcfg</i> .	
2	Install Netbackup Client Software	Choose the same method used in step 1 to install NetBackup on the 2 nd NO.	

Procedure 14. NO Configuration for DR Site (Optional)

		Login using the guiadmin user.		
1	Primary NOAMP VIP GUI : Login	Using a web browser, navigate to the XMI Virtual IP Address (VIP) of the Primary NO Site.		
	 DR Site installec DSR NO DR Site IF THIS PROCEDURE FAILS 	 DR Site installed with its PM&C Configured DSR NO DR Site Network Element File IF THIS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE. 		
#	Needed material:			
T E P	Check off ($\sqrt{2}$) each step as it is completed. Boxes have been provided for this purpose under each step number.			
S	This procedure will provide the steps to configure the First DR NOAMP blade server.			
2	Primary NOAMP	Refer to appendix A for a sample network element xml file.		
---	---	---		
	VIP GUI: Insert Network Element for DR Site	Using the GUI menu, Navigate to Configuration -> Network Elements as shown below Administration Configuration Network Elements Services		
		The " Network Elements" screen will display, select the " Browse " dialogue button (scroll to bottom left corner of screen).		
		To create a new Network Element, upload a valid configuration file: Browse Upload File		
		Insert Edit Delete Lock/Unlock Report Export		
		A dialogue will pop up, browse to the location of the DSR DR NO Site Element XML File and click the "Open" button.		
		Then click "Upload File" as shown below		
		To create a new Network Element, upload a valid configuration file: E:\DR_NO_DEV.ne.xml Browse Upload File		
		Insert Edit Delete Lock/Unlock Report Export		
		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.		

VIP GUI: Insert Click the "Insert" button (bottom left corner of screen). An "Adding a new server" Servers screen will be displayed up as shown below Adding a new server Attribute Value Description Unique name for the server. [Default = n/a. Range = A 20-character string Valid characters are alphanumeric and minus sign. Must start with an Host Name alphanumeric and end with an alphanumeric.] * Select the function of the server Role - Select Role -Hardware TVOE Guest Hardware profile of the server Profile Network Element Name - Unassigned - 🔽 * Select the network element Location description [Default = ". Range = A 15-character string. Valid value is any text string.] Location Ok Apply Cancel Fill in the following Values: Host Name: Name of DSR DR NO Server A Role: Select the NETWORK OAM&P System ID: Enter value for <Site System ID> Hardware Profile: Select DSR TVOE Guest Network element Name: Select the network Element Name for the DSR DR Site (the one inserted in step 2 above). Location: Fill in the server geographical location (optional). The network interface fields will now become available with selection choices based on the chosen hardware profile and network element Interfaces: IP Address Interface Network INTERNALXMI (10.240.84.128/25) 10.240.84.155 xmi 🖌 🗌 VLAN (3) INTERNALIMI (10.240.85.0/26) 10.240.85.10 imi 🔽 🗌 VLAN (4) Ok Apply Cancel Fill in the server IP addresses for the XMI network. Select "xmi" for the interface. Leave the "VLAN" checkbox unchecked. Fill in the server IP addresses for the IMI network. Select "imi" for the interface. Leave the "VLAN" checkbox unchecked. Next, add the following NTP servers: **NTP Server Preferred**? <DR-NO1-TVOE-XMI/Platmgmt-Yes IP-Address> Select the "Ok" button when you have completed entering the server data.

Using the GUI menu, Navigate to Configuration -> Servers

Procedure 14. NO Configuration for DR Site (Optional)

3

Primary NOAMP

4	Primary NOAMP VIP GUI: Export	Navigate to Main Menu -> Configuration -> Servers				
	the Initial Configuration	From the GUI screen, select the DR NO server added in the previous step and click the " Export " button to generate the initial configuration data for that server.				
		The user will receive a banner information message as shown below.				
		Info				
		• Exported server data in TKLCConfigData.drsds-dallastx-a.sh may be downloaded				
_						
5	Exchange SSH keys between PMAC and first DR-	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 Main Menu \rightarrow Software \rightarrow Software Inventory.				
	NOAMP server	Note the IP address for the first DR NOAMP server.				
		Login to the DR NOAM site PMAC terminal as the <i>admusr</i> .				
		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 st DR NOAMP blade server using the keyexchange utility, using the Control network IP address for theDR-NOAMP blade server. When prompted for the password, enter the password for the <i>admusr</i> user of the DR NOAMP server.				
		<pre>\$ keyexchange admusr@<dr_noamp blade="" control="" ip<br="" net="">addr></dr_noamp></pre>				
6	Euchongo SSII korg	Erom a terminal window connection on the NOAMD VID as the admuse evolution				
0	Exchange SSH keys between NOAMP and PMAC at the DR site	SSH keys for admusr between the NOAMP and the DR NO's PMAC using the keyexchange utility.				
		When prompted for the password, enter the appropriate password for admusr on the PMAC server.				
		<pre>\$ keyexchange admusr@<dr_no_site_pmac_management_ip></dr_no_site_pmac_management_ip></pre>				

Procedure 14. NO	Configuration fo	r DR Site (Optional)
------------------	------------------	----------------------

7	Copy Configuration File to 1 st DR NO Server	SSH to the NOAMP VIP as admusr and use the awpushcfg utility to copy the configuration file created in the previous step from the /var/TKLC/db/filemgmt 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 TKLCConfigData. <hostname>.sh.</hostname>					
2		 awpushcfg he awpushcfg utility is interactive, so the user will be prompted for the IP address of the PMAC server (make sure you enter the Management IP address of the PM&C on the DR Site), the blade inventory will be presented, prompted for the Control network IP address for the target server (in this case, the first DR NOAMP server). prompted for the hostname of the target server, Note: If prompted for a username, please use admusr 					
8	DR NO Server A: Verify awpushcfg was successful	 Access the TVOE machine hosting the DR NO Server A using the iLO Connection and log in as root. Access the DR NO Server A VM console by running the following commands <i>virsh</i> <i>virsh</i> <i>state</i> <i>running</i> <i>DSR-NO</i> <i>running</i> <i>running</i> <i>virsh</i> <i>console</i> <i>DSR-NO</i> <i>vurning</i> <i>virsh</i> <i>console</i> <i>DSR-NO</i> <i>console</i> <i>console</i> <i>DSR-NO</i> <i>sroot</i> <i>virsh</i> <i>console</i> <i>Connected</i> <i>domain</i> <i>vm-DSR-NO</i> <i>connected</i> <i>domain</i> <i>vm-DSR-NO</i> <i>connected</i> <i>domain</i> <i>vm-DSR-NO</i> <i>console</i> <i>domain</i> <i>domain</i> <i>sroot</i> <					

9	DR NO Server A VM: Wait for Configuration to Complete	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. Wait to be prompted to reboot the server, but DO NOT reboot the server, it will be rebooted later on in this procedure. NOTE : Ignore the warning about removing the USB key, since no USB key is present
	DR NO Server A VM: Configure Time Zone	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. # /usr/TKLC/appworks/bin/set_ini_tz.pl "Etc/UTC" >/dev/null 2>&1
11	DR NO Server A VM: Reboot the VM	Reboot the server using the following command: # init 6 Then wait for the server to reboot (takes between 5 and 10 minutes)
	DR NO Server A VM: Configure Networking for Dedicated NetBackup Interface (Optional)	NOTE: You will only execute this step if your NO is using a dedicated Ethernet interface for NetBackup. From a super user session on the first DR NO, execute the following commands: # netAdm setdevice=netbackuptype=Ethernet onboot=yesaddress= <no1_netbackup_ip> netmask=<netbackup_netmask> # netAdm addroute=netdevice=netbackup address=<netbackup_network_id> netmask=<netbackup_network_netmask> gateway=<netbackup_network_gateway_ip></netbackup_network_gateway_ip></netbackup_network_netmask></netbackup_network_id></netbackup_netmask></no1_netbackup_ip>

13	DR NO Server A	Execute the following command as super-user and make sure that no errors are			
	VM: Verify Server	returned:			
	Health				
		# 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			
		LOG LOCATION: /Var/TKLC/log/syscheck/fail_log			
14	Repeat for DR NO	Repeat Steps 3 through 12 to configure DR NO Server B. When inserting the 2 nd			
	Server B	server, change the NTP server address to the following:			
		NTP Server Preferred?			
		<i><dr-no2-tvoe-xmi i="" platmgmt-<=""> Yes</dr-no2-tvoe-xmi></i>			
		IP-Addross>			

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

S	This procedure will	provide the steps to configure the First DR NOAMP blade server.			
T E	Check off (ψ) each step as it is completed. Boxes have been provided for this purpose under each step number.				
Р	Prerequisite: Procee	lure 36. NO Installation for DR Site complete			
#					
	IF THIS PROCEDURE FAILS	, CONTACT TERELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.			
1	Primary NOAMP	Using a web browser, navigate to the XMI Virtual IP Address (VIP) of the Brimony NO Site			
	VII GUI. Login	rimary NO Site.			
		Login using the guiadmin user.			
2	Primary NOAMP	Using the GUI menu, Navigate to Configuration -> Server Groups as shown			
	Server Group	below			
	Server Crowp	🖃 💻 Main Menu			
		🚊 🚞 Administration			
		📋 🚔 Configuration			
		🚽 📑 Network Elements			
		🚽 📑 Services			
		🚽 📑 Servers			
		Server Groups			
		主 🧰 Network			
		🥫 🧰 Alarms & Events			

P	Procedure 15. NO Pairing for DSR NO DR Site (Optional)				
3	Primary NOAMP	The Server Groups screen will display, click on Insert to add a new Server Group			
	GUI: Insert Server				
	Crown				

Dressedures 15 NO Desiring for DSD NO DD Site (Ontional)

	GUI: Insert Server						
	Group	Fill in the following values:					
		Server Group Name: Enter Server Group Name of DSR DR NO Site					
		Level: Select A	L				
		Parent: Select I	None				
		Function: Selec	et DSR Active/Standby P	Pair			
		WAN Replicat	ion Connection Count: U	se Default Value			
		Then press "Ap	oply ", make sure the valid	lation is successful			
4	Primary NOAMP	Select the Serv	er Group that was create	d in the previous step, and click on "Edit".			
	GUI: Update Server Group		Insert	Delete Report			
		The user will b	e presented with the "Ser	ver Groups [Edit]" screen			
		Check the chec shown below a	kbox labeled " Include in nd click on " Apply "	SG" for the "A" and "B" DR Servers as			
		deaDR_CSLA	B_ATT				
		Server	SG Inclusion	Preferred HA Role			
		deaNO- ChaNC-A	Include in SG	Preferred Spare			
		deaNO- ChaNC-B	Include in SG	Preferred Spare			
5	Primary NOAMP GUI: Add VIP	Click the "Add the VIP as show	l" dialogue button for the win below	VIP Address and enter an IP Address for			
]			VIP Address	Add			
		10 250 55 163					
		10.200.00.1					
		Then click the " Apply " dialogue button. Verify that the banner information message states " Data committed ".					
		Ok Apply Cancel					
6	Wait for Remote Database Alarm to Clear	Wait for the alarm "Remote Database re-initialization in progress" to be cleared before proceeding. (Main menu->Alarms & Events->View Active)					
7	Primary NOAMP GUI: Wait for 5 minutes	Now that the set their proper role process to be c	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.				
		Allow a minimu	m of 5 minutes before co	ntinuing to the next Step.			

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

8	Primary NOAMP	Using the GUI main menu, Navigate to Status & Manage -> HA						
	GUI: Verify/Change HA Status	Verify that the "Active" .	he " Max A	llowed HA	Role" for D	R NO Servo	ers A and B	shows
		If the " Max Allowed HA Role " is set to standby for Server A or Server B , then click on " Edit " and set the " Max Allowed HA Role " to be " Active " for both DR Servers then press " OK ".						
		You will be Role" for D	returned to R NO Serv	the previous ers A and B	s screen, ver now shows	ify that the " "Active".	'Max Allow	ved HA
9	Primary NOAMP	Using the GUI main menu, Navigate to Status & Manage -> Server						
	GUI: Verify Server Status	The "A" and the "DB" sta servers before	1 "B" DR M atus shows re proceedi	NO servers s "Norm" and ng to the ne?	hould now a d the "Proc' xt Step.	appear in the status show	right panel. vs "Man" fo	. Verify that or both
				DB	HA	Proc		
				Norm	Err	Man		
				Norm	Err	Man		
10	Primary NOAMP GUI: Restart	Using the mouse, select DR NO Server A . The line entry should now be highlighted in GREEN .						
	Application on DR NO A	Click the "R	lestart" bu	tton from the	e bottom left	t corner of th	ne screen.	
				Stop	Restart	Reboot		
		Click the "O	K " button	on the confi	rmation dial	ogue box.		
		The user sho DR NO Ser	ould be pres ver A statin	sented with a ng: "Success	a confirmation sfully restar	on message (ted applica	in the bannet tion ".	er area) for
11	Primary NOAMP	Using the G	UI main me	enu, Navigat	e to Status	& Manage -	-> Server	
	GUI: Verify Application State on DR NO Server A	Verify that the DB , HA & I proceeding t	he "Appl S Proc" statu o the next S	State" now s is columns al Step.	hows "Enal ll show "No	oled" and th rm" for DR	at the "Alm NO Server	A, Repl, Coll, A before
		Appl State	Alm	Repl	Coll	DB	HA	Proc
		Enabled	Err	Norm	Norm	Norm	Norm	Norm
		NOTE: If us setting (15-3 → Server")	ser chooses 80 sec.). Th option fron	to refresh th nis may be do n the Main m	he Server sto one by simpl aenu on the l	utus screen it y reselecting left.	n advance o 3 the "Statu	of the default s & Manage
12	Primary NOAMP GUI: Restart the application on DR NO Server B	Repeat Steps	s 8 – 10, bu	it this time so	electing DR	NO Server I	B instead of	A

Procedure 16. Configure the SOAM NE

S	This procedure will	provide the steps to configure the SOAM Network Element					
Т							
Ε	Check off (\mathbf{v}) each step as it is completed. Boxes have been provided for this purpose under each step number.						
Р							
#	IF THIS PROCEDURE FAILS	5, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.					
1	Establish GUI	If needed, establish a GUI session on the NOAMP by using the OAM VIP address.					
	Session on the	Login as user "guiadmin".					
	NOAMP VIP						
2	Create the SOAM	Make sure to have an SOAM Network Element XML file available on the PC that is					
_	Network Element	running the web browser. The SOAM Network Element XML file is similar to what					
	using an XML File	was created and used in Procedure 9 but defines the SOAM "Network Element"					
	using an Mill The	was created and ased in Freedure y , but defines the Sortin Pretwork Element .					
	Refer to Appendix A for a sample Network Element xml file (and instructions on						
		what NTP server to choose)					
		Navigate to Main Monu-Configuration-Network Floments					
		Navigate to Marin Menu->configuracion->Network Elements					
		Select the "Provise" button and enter the path and name of the SOAM network					
		Select the Browse button, and enter the path and name of the SOAM network					
		Colort the "Unload File" button to unload the VML file and configure the SOAM					
		Network Element					
		Network Element.					

S T P #	This procedure will Check off (1) each step as i IF THIS PROCEDURE FAI	Il provide the steps to configure the SOAM Servers t is completed. Boxes have been provided for this purpose under each step number. I.S, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.
	Exchange SSH keys between SOAM site's local PMAC and the SOAM server	Use the SOAM site's 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 Main Menu → Software→Software Inventory. Note the IP address for the SOAM server. Login to the SOAM site's PMAC terminal as the <i>admusr</i> . From a terminal window connection on the SOAM site's 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. \$ keyexchange admusr@ <soam addr="" blade="" control="" ip="" net=""></soam>

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

4	Insert the SOAM	Navigate	Navigate to Main Menu->Configuration->Servers				
	"A" server	Select the "Insert" button to insert the new SOAM "A" server into servers table.					
		Attribute	Value		Description		
		Hostname	SOAM-A *		Unique name fo 20-character sti minus sign. Mu alphanumeric.]		
		Role	SYSTEM OAM 🔹 *		Select the funct		
		Hardware Profile	DSR TVOE Guest		 Hardware profil 		
		Network Element Name	HPC6_90006 •		Select the netw		
		Location			Location descri string. Valid valu		
		Fill in the	e fields as follows:				
]	Hostname:	<hostname< th=""><th>></th><th></th></hostname<>	>		
]]	Role:	SYSTEM O	AM		
		5	System ID:	<site sys<="" th=""><th>stem ID></th><th></th></site>	stem ID>		
]]	Hardware Profile:	DSR TVOE	Guest		
]]	Network Element Nam	e: [Choose]	NE from Drop	p Down Box]	
		The netw on the che	ork interface fields will osen hardware profile a	now become av nd network elen	ailable with sele	ection choices based	
		Interfaces:					
		Network INTERNALXN	II (10.240.84.128/25)	IP Address 10.240.84	155	Interface	
		INTERNALIM	l (10.240.85.0/26)	10.240.85.	10	imi VLAN (4)	
				Ok Ar	oply Cancel		
		Fill in the Leave th	Fill in the server IP addresses for the XMI network. Select "xmi" for the interface. Leave the "VLAN" checkbox unchecked .				
		Fill in the Leave the	e server IP addresses for e ''VLAN'' checkbox u	the IMI netwo	rk. Select "imi"	for the interface.	
		Next, add	the following NTP serv	vers:			
			NTP Server		Preferr	red?	
		<50	D1-TVOE-XMI-IP-Add	ress>	Yes		
		Select the	e "Ok" button when you	have completed	l entering the ser	rver data.	
5	Export the initial configuration	From the to generat	GUI screen, select the c te the initial configuration	lesired server ar on data for that	nd then select "E server.	xport" action button	

6	Copy Configuration File to SOAM "A" server	From a terminal window connection on the Active NOAMP as the admusr , use the awpushcfg utility to copy the configuration file created in the previous step from the /var/TKLC/db/filemgmt directory on the 1 st NOAMP to the SOAM server, using the Control network IP address for the SOAM server. The configuration file will have a filename like TKLCConfigData.< <i>hostname>.sh.</i> Verify that the server is in the "ProvideSvc" role and the availability is "Available", then proceed with \$ awpushcfg				
		 The awpushcfg utility is interactive, so the user will be prompted for the management IP address of the PMAC server at the site where the target blade is located. prompted for the hostname of the target server, prompted for the Control network IP address for the target server (in this case, the SOAM server). (Note: If you are prompted for a username, use admusr) 				
		Use the SOAM IP address from step 1. The configuration success message can also be found in the /var/log/messages file.				
7	Wait for the reboot prompt and boot the	Obtain a terminal window connection on the SOAM "A" server console as the admusr.				
	Configured Server	Become the super user by using the command:				
		\$ sudo su				
		You should see the prompt change to the hash mark:				
		#				
		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.				
		Wait to be prompted to reboot the server.				
		<u>NOTE</u> : 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.				
		Verify awpushcfg was called by checking the following file				
		<pre># cat /var/TKLC/appw/logs/Process/install.log</pre>				
		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.				
		<pre># /usr/TKLC/appworks/bin/set_ini_tz.pl "Etc/UTC" >/dev/null 2>&1</pre>				
		Now reboot the server using the following command:				
		# init 6				

8	SOAM Server:	After the system reboots, login again as admusr and become the superuser.					
	Verify Server Health	Execute the following command as super-user on the server and make sure that no errors are returned:					
		<pre># syscheck Running modules in class hardwar Running modules in class disk Running modules in class net Running modules in class system. Running modules in class proc LOG LOCATION: /var/TKLC/log/system.</pre>	OK OK OK OK OK Check/fail_log				
9	Insert and Configure the SOAM "B" server	Repeat this procedure to insert and configure the SOAM "B" server, with the exception of the NTP server, which should be configured as so:					
		<so2-tvoe-xmi-ip-address></so2-tvoe-xmi-ip-address>	Yes				
		Instead of data for the "A" Server, insert the TKLCConfigData file to the "B" serve at a terminal window. Make sure to set the	ne network data for the "B" server, transfer r, and reboot the "B" server when prompted timezone as well.				
10	(OPTIONAL) Insert and Configure the SOAM Spare Server	Instead of data for the "A" Server, insert the the TKLCConfigData file to the "B" server at a terminal window. Make sure to set the If your site has SOs in Active/Standby/Spa repeat this procedure to insert and configur Instead of data for the "A" Server, insert the preferred NTP server of SO-SPARE-XM TKLCConfigData file to the spare server, prompted at a terminal window. Make sure	he network data for the "B" server, transfer r, and reboot the "B" server when prompted timezone as well. The configuration such as PDRA, then re the SOAM spare server for this site. The network data for the spare server, use a I-IP-Address , transfer the and reboot the spare server when the to set the timezone as well.				

Procedure 18. Configure the SOAM Server Group

S	This procedure will provide the steps to configure the SOAM Server Group
Т	
Ε	Check off (\checkmark) each step as it is completed. Boxes have been provided for this purpose under each step number.
P #	IF THIS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.

Procedure 18. Configure the SOAM Server Group

	Enter SOAM Server Group Data Edit the SOAM Server Group and add VIP	 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->Configuration->Server Groups, select Insert and add the SOAM Server Group name along with the values for the following fields: Name → [Enter Server Group Name] Level → B Parent [Select the NOAMP Server Group] Function: DSR (Active/Standby Pair) WAN Replication Connection Count: Use Default Value Select "OK" when all fields are filled. From the GUI Main Menu->Configuration->Server Groups, select the new SOAM server group, and then select "Edit". 						
		SO_900060102		2. (
		Server	SG Inclusion	Preferred HA Role				
		RMSSOA	Include in SG	Preferred Spare				
		RMSSOB	Include in SG	Preferred Spare				
		Add both SOAM If you are adding checkbox next to Server	servers to the Server Group by click a SOAM spare sever to this server the spare server and also check the SG Inclusion	king the "Include in SG" checkbox group, then click the "Include in SG" "Preferred Spare" checkbox. Preferred HA Role				
		HUBTONES-SO1	I 🗹 Include in SG	Preferred Spare				
		Click Apply . Add a SOAM VII below	P by click on Add . Fill in the VIP	Address and press Ok as shown				
		v	/IP Address	Add				
		Remove						
		Ok Apply Cancel						
3	Wait for Replication	After replication, active (Main men minutes while the Look for the alarr proceeding. (Main	which will initially take up to 5 min u->Status & Manage->Replication) servers figure out master/slave rela n "Remote Database re-initialization n menu->Alarms->View Active)	nutes, the server status should be . Note: This may take up to 5 ationship. n in progress" to be cleared before				

Procedure 18. Configure the SOAM Server Group

4	Verify HA Role for 2 nd SOAMP server	In the Main menu->Status & Manage->HA menu, verify that the "Max Allowed HA Role" for the 2 nd SOAMP server is "Active". If it is not , press the Edit button and in the resulting screen, change the 2 nd NOAMPs server's "Max Allowed HA Role" to "Active" using the dropdown box.					
		Hostname	Max Allowed HA Role				
		HPC6NO Active V					
		Press OK.					
5	Restart 1 st	From the NOAMP GUI,	From the NOAMP GUI, select the Main menu->Status & Manage->Server menu. Select				
	SOAM server	the "A" SOAM server. Select the "Restart" button. Answer OK to the confirmation					
		popup. Wait for restart to complete.					
6	Restart 2 nd	Continuing in the Main r	Continuing in the Main menu->Status & Manage->Server menu, now select the "B"				
	SOAM server	SOAM server. Select the "Restart" button. Answer OK to the confirmation popup.					
7	Restart Spare	Continuing in the Main r	nenu->Status & Manage->Server menu, now select the Spare				
	SOAM server if	SOAM server. Select the	"Restart" button. Answer OK to the confirmation popup.				
	Present						

Procedure 19. Post NOAMP & SOAM Setup Operations

S	This procedure details other operations that should happen once the NOAMP and all SOAM sites							
Т	have been configu	ured.						
Ε	0							
Р	Check off (\checkmark) each step as	it is completed. Boxes have been provided for this purpose under each step number.						
#	IF THIS PROCEDURE FA	AILS. CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.						
1	(PDRA Only) If you are installing PDRA, execute Procedure 4 of [10] to activate PDRA. NOTE: If							
	Activate PDRA not all SOAM sites are ready at this point, then you should repeat activation for							
	Feature	each *new* SOAM site that comes online.						

Procedure 19. Post NOAMP & SOAM Setup Operations

2	*(PDRA Only), Optional	(*) NOTE: H for PSBR Re	(*) NOTE: Execute this step only if you are defining a separate, dedicated network for PSBR Replication.					
	Define PSBR DB Replication Network	Navigate to Main Menu -> Configuration -> Network Click on Insert in the lower left corner.						
		You will see the following screen, depending on your software version:						
		DSR 5.X:						
		Field Value Description Network The name of this VLAN. [Default= n/a. Ranne = Alphanumeric string up to						
		VLAN ID 5		31 chars The VLA 4-4094 (, starting with a letter.] VID to use for this VLAN. (Default = network dependent. Range = //ZAN 1-3 reserved for Management, XMI and IMI).]			
		Network Address 10.240.71.128 The network in dotted of the network in dotted decimal (IPv4) or colon hex (IPv6) format						
		Netmask 255.255.255	.192 •	Subnettii Valid Nei decimal	ig to apply to servers within this VLAN. [Default = n/a. Range = mask for the network in prefix length (IPv4 or IPv6) or dotted [Pv4] format]			
			Ok	Apply Ca	nce) :			
		DSR 6.X						
		Insert Netw	vork					
		Field	Value	_	Description			
		Network Name	XSI1	*	The name of this network. [Default = N/A. Range = Alpha			
		Network Element	- Unassigned -	*	The network element this network is a part of. If not spec			
		VLAN ID	5	*	The VLAN ID to use for this network. [Default = N/A. Rang			
		Network Address	10.71.88.0	*	The network address of this network. [Default = N/A. Ran colon hex (IPv6) format.]			
		Netmask	255.255.255.0	*	Subnetting to apply to servers within this network. [Defau IPv6) or dotted decimal (IPv4) format.]			
		Router IP	10.71.88.3		The IP address of a router on this network. If this is a def route on servers with interfaces on this network. If custor monitored.			
		Default Network	OYes ⊚No		A selection indicating whether this is the network with a c			
		Routable	●Yes ◯No		Whether or not this network is routable outside its netwo be possibly present in all network elements.			
					Ok Apply Cancel			
		Enter the Network Name, VLAN ID, Network Address, Netmask, and Router IP (6.X only) that matches the PSBR DB Replication network (note: Even if the network does not use VLAN Tagging, you should enter the correct						
		VLAN ID her	te as indicated by	the N	(APD)			
		DSR 6.X only	y fields:					
		 IMPORTANT: Leave the Network Element field as Unassigned. Select No for Default Network Select Yes for Routable. 						
		Press Ok . if y Press Apply signaling netw	ou are finished add to save this signa vorks.	ding aling	signaling networks -OR - network and repeat this step to enter additional			

3	(PDRA Only) Perform	Log Into Active NO GUI.	Log Into Active NO GUI.						
	Additional	Navigate to Main Menu \rightarrow Configuration \rightarrow Services.							
	Services to								
	Networks	Select the "Edit" button and s	set the Services as shown i	n the table below:					
	Mapping								
		Name	Intra-NE Network	Inter-NE Network					
		Replication_MP	<imi network=""></imi>	<psbr db="" replication<="" th=""></psbr>					
				Network>*					
		ComAgent <imi network=""> <psbr db="" replication<="" th=""> Network>*</psbr></imi>							
		(*) It is recommended that du PSBRs. This requires particip networks. Select the "Ok" button to app	al-path HA heartbeats be bating servers to be attache bly the Service-to-Network	enabled in support of geo-diverse ed to at least two routable					

Procedure 19. Post NOAMP & SOAM Setup Operations

S T	This procedure will provide the steps to configure an MP Blade Server							
Ē	Check off (ψ) each step as it is completed. Boxes have been provided for this purpose under each step number.							
Р #	IF THIS PROCEDURE FAILS	5, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.						
1	I Exchange SSH keys Use the MP site's PMAC GUI to determine the Control Network IP address of blade server that is to be an MP server. From the MP site's PMAC GUI, naviga □ Incal PMAC and the MP server Wain Menu → Software-→Software Inventory. Note the IP address for an M server.							
		Login to the MP site's PMAC terminal as the <i>admusr</i> .						
		From a terminal window connection on the MP site's PMAC as the admusr , 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.						
		<pre>\$ keyexchange admusr@<mp addr="" blade="" control="" ip="" net=""></mp></pre>						
2	Establish GUI Session on the NOAMP VIP	If needed, establish a GUI session on the NOAMP by using the XMI VIP address. Login as user "guiadmin".						

3	Insert the MP	Navigate to Main Menu->C	onfiguration->	Servers				
	server - Part I	Select the "Insert" button to insert the new MP server into servers table. Fill out the following values:						
		Hostname: (Hostname of the MD)						
		Role: MP						
		Network Element: [Choose Network Element] Hardware Profile: 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, mezzannine cards and Ethernet interfaces of the network prior and blade(s) used before selecting the profile.						
		Profile	Blade Size	Multiple Pairs	Bonded			
		Name		of Enc.	Signaling			
				Switches?	Interfaces?			
		BL460 HP c-Class Blade	Half	No	Yes			
		L2D3 BL460 HP c-Class	Half	Yes	Yes			
		Blade	Eull	Voc	Voc			
		Blade	ruli	Tes	Tes			
		L2D3 BL620 HP c-Class	Full	Yes	No			
		DSR TVOE Guest	N/A (Virtual)	N/A	N/A			
		NOTE: If none of the above then you will have to create copy it into the /var/TKLC/a server, the standby NOAM applicable). Then come bas Location: <enter an="" optional<br="">The interface configuration f Interfaces: Network INTERNALIMI (10.240.84.128/25) INTERNALIMI (10.240.85.0/26) For the XMI network, enter the interface. If your XMI network checkbox. If your XMI network the vlan checkbox. For the IMI network, enter the interface, and select the VLA</enter>	e profiles prope e your own in a appworks/profil P server, and b ck and repeat t l location descrip form will now ap in Address in 240.84.177 in 240.85.16 in Apply the MP's XMI IF fork uses VLAN york does NOT the MP's IMI IP AN checkbox.	erly describe your M a text editor (See 4.74 es/ directory of the a soth the DR NOAM s his step. ption> opear. Cancel P address. Select the of tagging, then select th use VLAN tagging, the address. Select the pr	P server blade, Appendix A) and ctive NOAMP servers (if			

4	Insert the MP server - Part 2	Next, add the following NTP servers:				
		NTP Server	Preferred?			
		<so1-tvoe-xmi-ip-address></so1-tvoe-xmi-ip-address>	Yes			
		<so2-tvoe-xmi-ip-address></so2-tvoe-xmi-ip-address>	No			
		<site-pm&c-tvoe-server-mgmt- IP-Address></site-pm&c-tvoe-server-mgmt- 	No			
		Select "OK" when all fields are filled in to	finish MP server insertion.			
5	Export the initial configuration	From the GUI screen, select the server that "Export" action button to generate the initi	t was just inserted and then select al configuration data for that server.			
6	Log onto the MP iLO	Obtain a terminal window connection on the second s	he MP server iLO from the OA.			
7	Copy Configuration File to MP server	<pre>From a terminal window connection on the awpushcfg utility to copy the configurat the /var/TKLC/db/filemgmt directo server, using the Control network IP addre configuration file will have a filename like TKLCConfigData.<hostname>.sh. \$ awpushcfg The awpushcfg utility is interactive, so the - prompted for the management IH where the target blade is located. - the blade inventory will be presen - prompted for the Control network case, the MP server). - prompted for the hostname of the - Note: If prompted for a username The automatic configuration daemon will I "TKLCConfigData.sh" in the /var/tmp direction file, and then prompt the user to reboot the</hostname></pre>	e active NOAMP as the admusr , use the ion file created in the previous step from ry on the active NOAMP to the MP blade ss for the MP blade server. The user will be P address of the PMAC server at the site atted, IP address for the target server (in this target server, , please use admusr look for the file named ectory, implement the configuration in the server.			

8	Set the Timezone	From the MP server iLO terminal login as admusr.				
	and Reboot the Configured Server	Become the super user by using the command:				
		\$ sudo su				
		You should see the prompt change to the hash mark:				
		#				
		Wait for the message ro reboot the server.				
		Verify awpushcfg was called by checking the following file				
		<pre># cat /var/TKLC/appw/logs/Process/install.log</pre>				
		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.				
		<pre># /usr/TKLC/appworks/bin/set_ini_tz.pl "Etc/UTC" >/dev/null 2>&1</pre>				
		Use "init 6" in the terminal window to reboot the server.				
		# init 6				
		Proceed to the next step once the Server finished rebooting, The server is done rebooting once the login prompt is displayed.				
9	MP Server: Verify Server Health	After the reboot, login as admusr again and become the superuser.				
		Execute the following command as super-user on the server and make sure that no errors are returned:				
		# 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				
		Kunning modules in class proc OK				
		LOG LOCATION: /var/TKLC/log/syscheck/fail_log				

10	(OPTIONAL) Delete Auto- Configured Default Route on MP and Replace it with a Network Route via the XMI Network	***NOTE: THIS STEP IS OPTIONAL AND SHOULD ONLY BE EXECTUED 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.) ***
		log into the site's PMAC then SSH to the MP's control address.)
		Become the super user by using the command:
		\$ sudo su
		Determine <xmi_gateway_ip> from your SO site network element info. Gather <no_xmi_network_address>,<no_xmi_network_netmask> ; <dr_no_xmi_network_addres>,<dr_no_xmi_network_netmask> 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</i> <i>Menu>Configuration>Network Elements</i> screen.</dr_no_xmi_network_netmask></dr_no_xmi_network_addres></no_xmi_network_netmask></no_xmi_network_address></xmi_gateway_ip>
		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.
		[MP console] Create network routes to the NO's XMI(OAM) network:
		<pre># netAdm addroute=netaddress=<no_xmi_network_address> netmask=<no_xmi_network_netmask>gateway=<xmi_gateway_ip> device=<mp_xmi_interface></mp_xmi_interface></xmi_gateway_ip></no_xmi_network_netmask></no_xmi_network_address></pre>
		Route to <mp_xmi_interface> added.</mp_xmi_interface>
		[MP console] Create network routes to the DR NO's XMI(OAM) network:
		<pre># netAdm addroute=netaddress=<dr_no_xmi_network_address>netmask=<dr_no_xmi_network_netmask> gateway=<xmi_gateway_ip>device=<mp_xmi_interface></mp_xmi_interface></xmi_gateway_ip></dr_no_xmi_network_netmask></dr_no_xmi_network_address></pre>
		Route to <mp_xmi_interface> added.</mp_xmi_interface>
		(Optional) [MP console] If Sending SNMP traps from individual servers, create host routes to customer SNMP trap destinations on the XMI network:
		<pre># netAdm addroute=hostaddress=<customer_nms_ip> gateway=<xmi_gateway_ip>device=<mp_xmi_interface></mp_xmi_interface></xmi_gateway_ip></customer_nms_ip></pre>
		Route to <mp_xmi_interface> added. (Repeat for any existing cusomter NMS stations)</mp_xmi_interface>
		Delete the existing default route:
		<pre># netAdm deleteroute=defaultgateway=<mp_xmi_gateway_ip>device=<mp_xmi_interface></mp_xmi_interface></mp_xmi_gateway_ip></pre>
		Route to <mp_xmi_interface> removed.</mp_xmi_interface>

11	(OPTIONAL,	[MP Console] Ping active NO XMI IP address to verify connectivity:
	Continued from	
	Previous Step)	<pre># ping <active_no_xmi_ip_address></active_no_xmi_ip_address></pre>
	Delete Auto-	DING 10 240 100 C (10 240 100 C) EC(04) but a se data
	Configured Default	64 bytes from 10.240.108.6: icmp seq=1 ttl=64 time=0.342 ms
	Route on MP and	64 bytes from 10.240.108.6: icmp seq=2 ttl=64 time=0.247 ms
	Network Doute vie	(Ontional) [MP Console] Ping Customer NMS Station(s):
	the XMI Network	(opwona) [console] i mg customer (
	the AWII Network	<pre># ping <customer ip="" nms=""></customer></pre>
		PING 172.4.116.8 (172.4.118.8) 56(84) bytes of data.
		64 bytes from 172.4.116.8: icmp seq=2 ttl=64 time=0.342 ms
		If we do not not a source of the source of t
		If you do not get a response, then verify your network configuration. If you
		continue to get failures then halt the instantation and contact Oracle customer
		support.
12	Repeat for	Repeat this entire procedure for all remaining MP blades at all sites.
	remaining MP at	
	all sites	

S This procedure will provide the steps/reference to add "Places" in the PDRA Network. Т Check off ($\mathbf{\psi}$) each step as it is completed. Boxes have been provided for this purpose under each step number. Ε IF THIS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE. Р # Establish a GUI session on the NOAMP by using the XMI VIP address. Login as user "guiadmin". 1 (PDRA Only) NOAMP VIP: Navigate to Main Menu -> Configuration -> Places **Configure Places** Screen. Main Menu: Configuration -> Places [Insert] + Info Inserting a new Place Place Value Field 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 Name: Choose the site NAME Parent: Choose "NONE" Place Type: Choose "Site" Repeat this step for all Places you wish to define. 2 (PDRA Only) Click on **Insert** in the lower left corner and enter the information to create the place association for mated pairs, click Ok. NOAMP VIP: Place Association **Configure Place** Field Value Associations Place Association rtpLabMatedPair1 Name Place Association Policy DRA Mated Sites * * Type Places Places rtpLabC 🗹 rtpLabD NOTE: . Place Association Name: .Enter Association Name Place Association Type: . Policy DRA Mated Sites Places: .Click on the list of Places you wish to define under this Place Association. Repeat this step for all place associations you wish to define.

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

3	(PDRA Only) NOAMP VIP:	For each place to those places	you have defin	ed, choose the se	t of MP servers that will be assigned
	Assign MP Servers To Places	Place Field	Value		
		Place Name	rtpLabC	*	
		Parent	NONE	*	
		Place Type	Site	*	
		Servers			
		LABCSONE	abCe1	b04pdra1	
		Check all the c place.	heck boxes for	PDRA and pSBI	R servers that will be assigned to this
		Repeat this steplaces.	ep for all other	PDRA or pSBF	R servers you wish to assign to

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

S	This procedure will provide the steps to configure MP Server Groups
Т	
Ε	Check off (\checkmark) each step as it is completed. Boxes have been provided for this purpose under each step number.
P #	IF THIS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.

1	Enter MP Server Group Data	From the GUI session on the NOAMP VIP address, go to the GUI Main Menu→Configuration→Server Groups, select Insert and fill out the following fields: Server Group Name: [Server Group Name] Level: C Present [Select the SOAMB Server Crown That is Depart To this MD]					
		Function: Select the Prope	r Function for this MP Ser	ver Group:			
		Server Group Function	MPs Will Run	Redundancy Model			
		DSR (multi-active	Diameter Relay and	Multiple MPs active Per			
		cluster)	Application Services	SG			
		DSR (active-standby	Diameter Relay and	1 Active MP and 1			
		pair)	Application Services	Standby MP / Per SG			
		Session Binding	Session Binding	1 Active MP and 1			
		Repository	Repository Function	Standby MP / Per SG			
		IP Load Balancer	IPFE application	I 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			
		 WAN Replication Connection Count: For non-Policy SBR Server Groups: Use Default Value. For Policy SBR Server Groups: 8. Select OK when all fields are filled in. 					
2	Repeat For Addional Server Groups	Repeat Step 1 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.					

3	Edit the MP Server Groups to include MP blades.	From the GUI Main Menu->Configuration->Server Groups, select a server group that you just created and then select Edit. Select the Network Element that represents the MP server group you wish to edit. 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.						
		HPC6_90006	SG Inclusion			roforrod UA D	Polo	
		MD 1						
			Include in SG				pare	
		MP-2	Include in SG		L	Preferred S	pare	
		Select Ok. Repeat for any remaining MP server groups untili all MPs have been assigned to a server group.						
4	Wait for Replication to complete on all MP blades	Browse to Ma Identify all the corresponding <i>I</i> may take up to	Browse to Main menu->Status&Manage->Server. 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.					
		Server Hostname Appl State Alm DB Reporting Status						
		HPC6-NO		Enabled	Norm	Norm	Norm	
		HPC6-SO		Enabled	Wai	m Norm	Norm	
		HPC6-MP2		Enabled	Wai	n Norm	Norm	
		HFC0-WF1		Enabled	vval		NUTT	
5	Wait for Remote Database Alarm to Clear	Wait for the ala cleared. (Main This should hap previous step.	urm "10200: Remoto a menu->Alarms & open shortly after yo	e Database re Events->A ou have verif	e-initializ c tive Al a ied the "	zation in progr arms) 'Norm'' DB sta	ess" to be itus in the	

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

6	Assign Profiles to	Log onto the GUI of the a	active SOAM server.			
	DA-MPs from		Note that the second se			
	SOAM GUI.	From the SU GUI, select MainMenu->Diameter->Configuration->DA-MPs-				
		>rromes Assignments				
		Refer to the DA-MP secti	ion. (If the site has both DSR and MAP-IWF server groups,			
		you will see both a DA-M	IP section and an SS7-MP section)			
		Main Menu: Diameter -> C	Configuration -> DA-MPs -> Profile Assignments			
		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			
			Assign Cancel			
		For each MP, select the p	proper profile assignment based on the MP's hardware type			
		and the function it will ser	rve:			
		Profile Name	Description			
		Go:Kelay	G6 DA-MP nair neight blade running relay			
		C6:Database	G6 DA MP half height blade running a			
l		GU.Databast	database application (e.g FABR RBAR)			
		G6:Session	G6 DA-MP half height blade running a			
			session application (e.g CPA, PDRA)			
		G8:Relay	G8 DA-MP half height blade running the			
			relay application			
		G8:Database	G8 DA-MP half height blade running a			
			database application (e.g. FABR, RBAR)			
		G8:Session	G8 DA-MP half height blade running a			
l			session application (e.g. CPA, PDRA)			
l		G7:Relay	G7 DA-MP Full height blade running the			
			relay application			
		G/:Database	G/DA-MP Full neight blade running a detebase application (a.g. EABP, BBAP)			
		C7:Session	C7 DA MD Full height blade running a			
		07.50551011	session application (e.g. CPA PDRA)			
			session appreation (e.g. er m, i Divin)			
		Note: If the DA-MPs at th	his site are configured for Active/Standby then there will be			
		a single selection box visi	ble that assigns profiles for all MPs.			
		When finished, press the 7	Assign button			

7	Assign Profiles to SS7-MPs from SOAM GUI.	ofiles to Log onto the GUI of the active SOAM server. from From the SO GUI, select MainMenu->Diameter->Configuration->DA-MPs- VI. Profiles Assignments Refer to the SS7-MP section. (If the site has both DSR and MAP-IWF server				
groups, you will see both a DA-MP section and an SS7-MP section)						
		SS7-MP	MP Profile		current value	
		SS7MP	G8:MD-IWF	•	This MP has not been assigned an MP Profile.	
					Assign Cancel	
		For each SS' hardware typ	7 MP, select the and the funct	e proper profile a ion it will serve:	assignment based on the SS7 MP's	
		Profi	le Name		Description	
		G8:M	ID-IWF	HP BL460 Ger fucntions	18 Running MAP-IWF	
		When finishe	ed, press the As	sign button		
8	Update DpiOption	Log on to the active SOAM console as admusr via the XMI address or iLO.				
	table from the active SOAM	Execute the f	following comm	nand (advise cut	and paste to prevent errors):	
		\$ sudo ise "name='MpH	et -fvalue=" IngIngressMp	50" DpiOptio Percentile	n where "	
		=== changed	d 1 records ==	=		
9	Restart MP blade	From the NO	AMP GUI, sel	ect the Main me	nu->Status & Manage->Server menu	
	servers	For each MF	server:			
		• Sele	ect the MP serv	ver.		
		• Sele	ect the Restar	t button.		
		• Ans you	wer OK to the that the restart	confirmation pop was successful.	pup. Wait for the message which tells	
		PDRA INST until you con	ALLATIONS	: You may contrastallation by fin	inue to see alarms related to ComAgent ishing Procedure 29 .	

4.6 Signaling Network Configuration

Procedure 23. Configure the Signaling Networks

S	This procedure will provide the steps to configure the Signaling Networks.						
T E	Check off (\checkmark) each step as it is	Check off (\checkmark) each step as it is completed. Boxes have been provided for this purpose under each step number.					
Р	IF THIS PROCEDURE FAILS	5, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.					
	NOTE: SCREENSHOTS DISPLAYED ARE FOR EXAMPLE PURPOSES ONLY. ACTUAL DATA IN YOUR INSTALLATION MAY VARY						
1	Establish GUI Session on the NOAMP VIP	Establish a GUI session on the NOAMP by using the XMI VIP address. Login as user "guiadmin".					
2	NOAMP VIP:	Navigate to Main Menu -> Configuration -> Network					
	Navigate to Signaling Network Configuration Screen	Click on Insert in the lower left corner.					

Procedure 23. Configure the Signaling Networks

3	NOAMP VIP: Add	You will see the following screen, depending on your software version:						
	Signaling Networks	DSR 5.X:						
		Eigld Value	I Value Description					
		Network Network	* The name	of this VLAN. [Default = n/a. Range = Alphanumeric string up to				
		Name Kan	31 chars,	starting with a letter.]				
		VLAN ID 5	* The VLAN 4-4094 (VI	ID to use for this VLAN. [Default = network dependent. Range = .AN 1-3 reserved for Management, XMI and IMI).]				
		Network Address 10.240.71.12	8 The network Address o format.)	The network address of this VLAN. [Default = n/a. Range = Valid Network * Address of the network in dotted decimal (Pv4) or colon hex (IPv6) format!				
		Netmask 255.255.255	192 * Subnetting Valid Netn decimal (I	t to apply to servers within this VLAN. [Default = n/a. Range = ask for the network in prefix length (IPv4 or IPv6) or dotted ≥v4 format I				
			Ok Apply Car	cel				
		DSR 6.X:						
		Insert Netw	/ork					
		Field	Value	Description				
		Network Name	XSI1 *	The name of this network. [Default = N/A. Range = Alpha				
		Network Element	- Unassigned - 🗸	The network element this network is a part of. If not spec				
		VLAN ID	5 *	The VLAN ID to use for this network. [Default = N/A. Rang				
		Network Address	10.71.88.0 *	The network address of this network. [Default = N/A. Ran colon hex (IPv6) format.]				
		Netmask	255.255.255.0 *	Subnetting to apply to servers within this network. [Defau IPv6) or dotted decimal (IPv4) format.]				
		Router IP	10.71.88.3	The IP address of a router on this network. If this is a def route on servers with interfaces on this network. If custor monitored.				
		Default Network	⊂Yes ©No	A selection indicating whether this is the network with a c				
		Routable	®Yes ⊙No	Whether or not this network is routable outside its netwo be possibly present in all network elements.				
				Ok Apply Cancel				
		Enter the Net and Router (note: Even if correct VLAN	work Name, VLAN IP (6.X only) the network does not u ID here as indicated b	ID, Network Address, Netmask, that matches the Signaling network se VLAN Tagging, you should enter the y the NAPD)				
		DSR 6.X only fileds:						
	 IMPORTANT: Leave the Network Element field as Unassigned. Select No for Default Network Select Yes for Routable. 							
		Press Ok . if you are finished adding signaling networks -OR - Press Apply to save this signaling network and repeat this step to enter additional signaling networks.						

S	This procedure will provide the steps to configure the Signaling Devices.									
Т										
Ε	Note: The site specif	ic HW co	onfigura	tion will affect which	h steps ne	ed to be exe	ecuted			
Р	Questions:	How	many pa	airs of switches are in	Will the	e MP use a				
			the	enclosure?	bonded	interface?				
	Possible Execution			Single	Ν	N/A				
	Scenarios:		l	Multiple		Yes				
			l	Multiple]	No				
	Check off (\mathbf{v}) each step as it is	Check off (\mathbf{v}) 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 AN	JD ASK FOR	ASSISTANCE.				
1		NOTE	X 7 •1		•0			T7T A N T		
1	NOAMP VIP: Make Signaling	NOTE:	You will othernet	ll only execute this ste t interfaces for signali	ep if you a ng traffic	re using uni	bonded, nor	1-VLAN		
	Devices	taggeu	ethernet	, interfaces for signam	ng trainc	•				
	Configurable	NOTE:	If this N	/IP will be an IPFE se	rver, ther	n ensure <i>ipfe</i>	NetUpdate.	sh from		
	(Unbonded, non-	[13] has	s been ex	kecuted before proceed	ding with	this step.				
	VLAN signaling									
	interfaces only)	Login as	s root to	the NOAMP VIP conse	ole.					
		Navigat	e to Mai	n Menu -> Confi	muratio					
		INavigan			guracic	n > Net	WOIR /	Devices		
		You sho	uld see s	several tabs each repres	senting a b	plade in the s	ystem. Click	on the tab		
		represen	iting the	first MP Blade.						
		Vousho	uld soo (a list of natwork davica	a installad	l on the MD				
		1 ou silo	ulu see a			i oli ule Ivir.				
		Select all ethernet devices that will be used as unbonded signaling inte								
		"Discovered" as their Configuration Status. Next, press the Take Ownersh								
		button.		-		-				
		eth22		ethtoolOpts =set-ring eth22 rx 4078;offi gro off gso off onboot = no	fload eth22		Discovered)		
				onboot = yes		02.00.00.00	\sim			
		eth11	Ethernet	ethtoolOpts =set-ring eth11 nx 4078;off gro on gso on	load eth11 fe80::ae	e16:2dff:fe7f:d0d8 (/64)	Deployed			
				bondinterfaces = eth01,eth02 bondOnts = mode=active-backup milmon	=100					
		bond0	Bonding	updelay=200 downdelay=200 bootProto = dhcp	192.168 fe80::da	3.1.19 (/24) a9d:67ff:fe62:dab0 (/64)	Discovered			
				onboot = yes persistent_dhclient = yes						
		bond0.4	Vlan	baseDevice = ["bond0"] bootProto = none	169.254 fe80:rds	4.3.14 (INTERNALIMI) 90(167#1662:dab0.(/64)	Deployed			
				onboot = yes onboot = yes	1000.140					
eth12 Ethemet boltProto = none atting atti12 or 4078: atting a						86.39 (IPv4intXSI2)	Deployed			
		Insert Edit Delete Report Report All Take Ownership								
		After a brief moment, the selected devices should new show a Configuration Status								
		After a orier moment, the selected devices should now snow a Configuration Status of "Configured"								
		or com	inguieu							
				ethtoolOpts =set-ring eth22 p	x 4078;offload			\frown		
		eth22		eth22 gro off gso off onhoot = no			(Configured		

2	NOAMP VIP: Configure the Signaling Interfaces of the first MP	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.							
		Main Menu: Configuration -> Network -> Devices							

		blade07 blade08 blade09							
		bond0	Bonding	onboot = yes bootProto = dhcp baseDevice = ["eth01","eth02"] milmon = 100	IP inter				
		bond0.3	Vlan	onboot = yes bootProto = none baseDevice = ["bond0"]	10.240				
		bond0.4 Vlan onboot = yes bootProto = none baseDevice = ["bond0"]		10.240					
		eth01 Ethernet onboot = yes bootProto = none							
		Insert Edit Delete Report 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							
		Nb of Enclosure Bonded Interface Steps to Execut							
	Switch Pairs								
			N/A	3 and 6					
		2 or 3 No $5 and 6$							
			,	100	J and U				

3	NOAMP VIP:	Click on Insert . The following screen should be displayed. Verify that the blade						
	Configure the	name on the top corresponds to the MP.						
	Signaling Interfaces							
	of the MP (1 pair of	Insert Device on blade09						
	enclosure switches)	General Options MII Monitoring Options ARP Monitoring Options IP Interfaces						
		Field Value Description						
		Device Type OBond Select the device type. [Default = N/A]						
		Device Choose a monitoring style to use with a bonded device. Disabled for non-bonded devices.						
		Start On Boot VEnable Start the device, and also start on boot. [Default = enabled]						
		Boot Protocol None Select the boot protocol. [Default = None, Range = [None, DHCP]						
		[™] bond0 Base Device [™] bond0.4 Select the base device(s); VLAN and Alias device require a single base device and bond (s) [™] bench eth01 devices require two base devices. [Default = None]						
		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 bond0.						
		Now Click on the IP Interfaces tab as shown below.						
		Insert Device on blade09						
		General Options MII Monitoring Options ARP Monitoring Options Platefaces						
		Address List: Add Row						
Now Click on Add Row, the following will be displayed								
		IP Address List: Add Row						
		XSI1 V						
	ASII V Re							
		Select the first Signaling Network from the drop down menu						
		If configuring an IPv4, then enter the IPv4 address.						
		If configuring an IP-C address and IP-C auto configuration is analled an array						
		ignaling network, and the MPs are in active/standby configuration, then there's no eed to enter an IP address, it will be assigned automatically.						
		If configuring an IPv6 address and IPv6 auto-configured is disabled, or the MPs are in multi-active mode:						
		• If an IPv4 already exists, click on "Add Row" and enter the IPv6 address.						
• If an IPv4 doesn't exist, simply enter the IPv6 address.								
	Click on Ok at the bottom of the screen.							
		Ok Apply Cancel						
To add additional Signaling Interfaces, click on Insert again and repeat this otherwise continue with the next step. Skip the next 2 steps and continue to step 6								

4	NOAMP VIP:	Click on Insert . The following screen should be displayed. Verify that the blade					
	Configure the	name on the top corresponds to the MP.					
	Signaling Interfaces	General Options MII Monitoring Options ARP Monitoring Options IP Interfaces					
	of the MP (finduple	Field Value Description					
	switches with bonded interfaces)	Device Type Oracle And					
	,	Device Mile Choose a monitoring style to use with a bonded device. Disabled for non-bonded devices. [Default = Mil. Options = Mil ARP.]					
		Start On Boot Enable Start the device, and also start on boot. [Default = enabled]					
		Boot Protocol None Select the boot protocol. [Default = None, Range = [None, DHCP]					
		bond0 bond0 4 eth01 beh02 beh03 beh04 beh04 beh04 welh04 wellable base devices per device type.] welh23 welh24					
		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 et and eth12) Click on Ok at the bottom of the screen.						
		Ok Apply Cancel Next click Insert again. The same screen as above with 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.					
		IP Address List:					
		Now Click on Add Row, the following will be displayed					
		IP Address List: Add Row					
		XSI1 Remove					
		Select the first Signaling Network from the drop down menu.					
	Enter the IP address that corresponds to the IPv4 or IPv6 interface.						

	Click on Ok at the bottom of the screen.								
		Ok Apply Cancel							
		To add addition otherwise con	es, clio p.	ck on Insert again an	d repeat this step,				
		Skip the next step and continue to step 5							
5	NOAMP VIP: Configure the Signaling Interfaces of the MP (multiple pairs of enclosure switches without bonded interfaces)	Select the appropriate ethernet interface and click on Edit.							
		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 = bootProt monitor1	oot = no Proto = none iitorType = none				
		eth24	Ethernet	onboot = no bootProto = none monitorType = none					
		Insert Edit Delete Report							
		The following screen should be displayed. Verify that the blade name on the top corresponds to the MP.							
		Edit Ethernet device eth21 on $dsrMP-\Delta$							
			net device	e etn21	L ON	dsrimp-A			
		General Opt	ions Mil Mor	nitoring Opt	ions	ARP Monitoring Option	IP Interfaces		
		Field	•Ethernet		Desc		Desc		
		Device Type	Conding Vlan Alias		Select the device type. It cannot be changed after devic Alias.]				
		Device Monitoring	Monitoring Type Enable None		Choose a monitoring style to use with a bonded device Options = MII, ARP.]				
		Start On Boot			Start the device, and also start on boot. [Default = enat				
		Boot Protocol			Select the boot protocol. [Default = None, Range = [No				
		Base Device (s)	bond0 bond0.4 eth01 eth02 eth03 eth04 eth21 eth22 eth23 eth23 eth24		The ba Bondir availal	ase device(s) for Bonding ng devices require 2 sele ble base devices per dev	g, Alias and Vlan device edions. It cannot be cha ice type.]		
Procedure 24. Configure the Signaling Devices

		For "Start on Boot", verify that the checkbox is selected.				
		For "Boot Protocol", verify that "None" is selected				
		Now Click on the IP Interfaces tab as shown below.				
		Insert Device on blade09				
		General Options MII Monitoring Options ARP Monitoring Options				
		IP Address List: Add Row				
		Now Click on Add Row, the following will be displayed				
		IP Address List. Add Row				
		XSI1 Remove				
		Select the first Signaling Network from the drop down menu.				
		Enter the IP address that corresponds to the IPv4 or IPv6 interface.				
		Click on Ok at the bottom of the screen.				
		Now repeat this step to configure the second signaling interface (eth22).				
		Skip the next step and continue to step 6				
6	NOAMP VIP: Configure the	Repeat this procedure to configure the signaling devices of all other MPs.				
	Interfaces of the					
	other MPs.					

This procedure will servers. DSCP value traffic using a specific executed if has been Service purposes. IF YOUR ENCLOS SIGNALING VLAN SETTINGS IN THIS It is strongly recommon you have the most k Check off (1) each step as it is IF THIS PROCEDURE FAILS	provide the steps to configure the DSCP values for outgoing packets on es can be applied to an outbound interface as a whole, or to all outbound ic TCP or SCTP source port. This step is optional and should only be decided that your network will utilize packet DSCP markings for Quality-of- URE SWITCHES ALREADY HAVE DSCP CONFIGURATION FOR THE NS, THEN THE SWITCH CONFIGURATION WILL OVERRIDE THE S PROCEDURE. nended, however, that you configure DSCP here at the application level where nowledge about outging traffic patterns and qualities. s completed. Boxes have been provided for this purpose under each step number. 3, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.
Establish GUI Session on the NOAMP VIP	Establish a GUI session on the NOAMP by using the XMI VIP address. Login as user "guiadmin".
	This procedure will servers. DSCP value traffic using a specifi executed if has been Service purposes. IF YOUR ENCLOS SIGNALING VLAN SETTINGS IN THIS It is strongly recommyou have the most k Check off (√) each step as it is IF THIS PROCEDURE FAILS Establish GUI Session on the NOAMP VIP

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

2	NOAMP VIP	Note: The values displayed in the screenshots are for demonstration nurnoses			
	Option 1: Configure	only. The exact DSCP values for your site will vary.			
	Interface DSCP				
		Navigate to Main Menu -> Configuration -> DSCP -> Interface DSCP			
		📋 🥽 Configuration			
		- Network Elements			
		🚽 🔤 Services			
		📑 Resource Domains			
		🔤 🔤 Servers			
		🔤 🔤 Server Groups			
		Places			
		Place Associations			
		Interface DSCP			
		Rout DSCR			
		Select the server you wish to configure from the list of servers on the 2^{nd} 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)			
		server group by enexing on that server group hance's tub).			
		Click Insert			
		Main Menu: Configuration -> DSCP -> Interface DSCP			
		Tasks 🔻			
		Entire Network NOAMMEMORYTEST			
		FZTEST-NO1 FZTEST-MP1			
		Interface DSCP			
		Select the network interface from the drop down box, then enter the DSCP value you			
		wish to have applied to packets leaving this interface.			
		Main Menu: [Insertdscpbyintf]			
		Insert DSCP by Interface on FZTEST-MP1			
		Interface xsi1 • *			
		DSCP 34 *			
		Ok Apply Cancel			
		Click OK if there are no more interfaces on this server to configure, or Apply to			
		finish this interface and continue on with more interfaces by selecting them from the			
		drop down and entering their DSCP values.			

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

3	NOAMP VIP: Option 2: Configure	Note: The values displayed in the screenshots are for demonstration purposes only. The exact DSCP values for your site will vary.			
	Port DSCP	Navigate to Main Menu -> Configuration -> DSCP -> Port DSCP DSCP Port DSCP Port DSCP Port DSCP Select the server you wish to configure from the list of servers on the 2 nd 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).			
		Click Insert Main Menu: Configuration -> DSCP -> Port DSCP			
		Entire Network IPFESG MPSG NOSG SOSG SS7SG SS7SG1 SunNetraNO1 SunNetraNO2 SunNetraSO1 SunNetraSO2 SunNetraMP1 Port DSCP F Enter the source port DSCP F			
		Main Menu: Configuration -> DSCP -> Port DSCP [Insert]			
		Insert DSCP by Port on SunNetraNO1			
		Poit 3386 A valid FCP of SCTP poit. [Default = DSCP 15 A valid DSCP value. [Default = N/A.] Protocol TCP • TCP of SCTP protocol. [Default = TO Ok Apply Cancel			
		Click OK if there are no more port DSCPs on this server to configure, or Apply to finish this port entry and continue entering more port DSCP mappings.			
4	Repeat for additional servers.	Repeat Step 2-3for all remaining servers.			

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

S T	This procedure will provide the steps to configure Signaling Network Routes on MP-type servers					
E P	Check off (1) each step as it is IF THIS PROCEDURE FAILS	completed. Boxes have been provided for this purpose under each step number. CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.				
1	Establish GUI Session on the NOAMP VIP	Establish a GUI session on the NOAMP by using the XMI VIP address. Login as user "guiadmin".				
2	NOAMP VIP: Navigate to Routes Configuration Screen	Navigate to Main Menu -> Configuration -> Network -> Routes Select the first MP Server you see listed on the first row of tabs as shown, then click the "Entire Server Group" link. Initially, no routes should be displayed. Image: Construct Server Group Evonor Evo_BPSBR_A Evo_BPSBR_B Evo_BPSBR_C Evo_DAMP Evo_JPF Image: Construct Server Group Evo-DAMP-10 Evo-DAMP-11 Evo-DAMP-12 Evo-DAMP-13 Evo-DAMP-14 Route Type Destination				
3	NOAMP VIP: Add					

4	NOAMP VIP:	***OPTIONAL - Only execute this step if you performed Procedure 20, Step					
	(Optional) Add	#10 which removed the XMI gateway default route on MPs ***					
	Default Route for						
	MPs Going Through	If your MP servers no longer have a default route, then you can now insert a default					
	Signaling Network	route h	ere which uses of	ne of the signaling network gateways.			
	Gateway						
		Field Value Description					
		Route Type	⊙Net ODefault OHost	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	ateway IP 10.240.70.99 * A valid IP address of the gateway. Must be in dotted quad format				
		Ok Apply Cancel					
		For Ro	ute Type Sele	ct Default,			
		for Dev	vice select the	e signaling device that is directly attached to the network			
		where t	he XSI default o	ateway resides			
		Eon Co	t arrant TD anta	the VSL externor you wish to use for default signaling			
		For Ga	teway iPente	r the XSI gateway you wish to use for default signaling			
		networ	k access.				
		Press O	k.				

5	NOAMP VIP: Add	Use this step to add IP and/or IPv6 routes to diameter peer destination networks.					
	Network Routes for	The goal here is to ensure that diameter traffic uses the gateway(s) on the signaling					
	Diameter Peers	networks.					
		Field Value	Description				
		Route Type ODefault OHost	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				
			Ok Apply Cancel				
		For Route Type Sel	ect Net,				
		for Device select the	appropriate signaling interface that will be used to connect				
		to that network,					
		For Destination er	ter the Network ID of Network to which the peer node is				
		connected to.					
		For Netmask enter the	e corresponding Netmask.				
		For Gateway IP ente	er 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.					
		If you have more routes to enter, Press Apply to save the current route entry and repeat this step to enter more routes					
		If you are finished entering routes, Press OK to save the latest route and leave this					
		screen.					
		If aggregation switche	es are used, routes should be configured on the				
aggregation switches so that the destination networks conf		so that the destination networks configured in this step					
		are reachable. This c	can be done by running the following netconfig commands				
		from the site's local P	MAC (examples shown actual values will vary) :				
		Add Routes ([IPv4 & IPv6):				
		\$ sudo netCo	onfigdevice=switch1A addRoute network=10.10.10.0				
		Mask=255.255	0.255.0 nexthop=10.250.76.81				
		\$ sudo netCo	onfigdevice=switch1A addRoute network6=2001::/64				
		nexthop=fd0f	::1				
		Delete Route	es (IPv4 & IPv6):				
		\$ sudo netCo	onfigdevice=switch1A deleteRoute				
		network=10.1	0.10.0 mask=255.255.255.0 nexthop=10.250.76.81				
		\$ sudo netCo	onfigdevice=switch1A deleteRoute				
		network6=200	11::/64 nexthop=fd0f::1				
		After the routes are a	dded via netconfig, a netconfig backun should be taken so				
		that the new routes ar	e retained in the backup.				

6	Repeat steps 2-5 for	The routes entered in this procedure should now be configured on *all* MPs in the
	all other MP server	server group for the first MP you selected. If you have additional MP server groups,
	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)

S	This procedure will provide the steps to configure the VIPs for the signaling networks on the MPs.						
Т							
Е	Check off (\mathbf{v}) each step as it is completed. Boxes have been provided for this purpose under each step number.						
Р							
#	IF THIS PROCEDURE FAILS	5, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.					
"							
1	Edit the MP	IF YOUR MPs ARE IN A DSR MULTI-ACTIVE CLUSTER SERVER					
	Server Group and	GROUP CONFIGURATION (N+0), THEN SKIP THIS STEP					
	add VIPs						
	(ONLVFOR 1+1)	From the GUI Main Menu->Configuration->Server Groups, select the MP server					
	(ONLIFOR ITI)	group, and then select Edit.					
		Click on Add to add the VIP for XSI1					
		Enter the VIP of int-XSI-1 and click on Apply.					
		Click on Add again to add the VIP for XSI2					
		Enter the VIP of int-XSI-2 and click on Apply.					
		If more Signaling networks exists, add their corresponding VIP addresses.					
		Finally Click on Ok.					
		VIP Address Add					
		Remove					

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

S	This procedure will provide the steps to configure forwarding of SNMP Traps from each						
T	individual server.						
E P	Check off ($$) each step as it is completed. Boxes have been provided for this purpose under each step number.						
#	IF THIS PROCEDURE FAILS	5, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.					
1	NOAMP VIP:	Using a web browser, log onto the NOAMP VIP and navigate to Main Menu ->					
	Configure System-	Administration -> SNMP, as shown below					
	Wide SNMP Trap						
	Receiver(s)	Connected using INTERNALXMI t					
		= 💻 Main Menu					
		📄 📄 😋 Administration					
		🔲 🖥 Users					
		- 🔁 Groups					
		- Sessions					
		🗖 🚽 🔄 Single Sign-On					
		LDAP Servers					
		Zones					
		- 📑 Authorized IPs					
		- Options					
		SNMP					
		Verify that "Traps Enabled" is checked:					
		Traps Enabled					
		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.					
		Continue to fill in additional secondary, tertiary, etc manager IPs in the corresponding slots if desired.					
		/ariable Value					
		Manager 1 10.10.55.88					
		Enter the SNMP community name:					
		SNMPv2c Community snmppublic Name					
		Leave all other fields at their default values.					
		Press OK					

2 NOAMP VIP: Enable Traps from **NOTE:** By default snmp traps from MPs are aggregated and then displayed Individual Servers at the active NOAMP. If instead, you wish for every server to send its own (OPTIONAL) traps directly to the NMS, then execute this procedure. This procedure requires that all servers, including MPs, have an XMI interface on which the customer SNMP Target server (NMS) is reachable. Using a web browser, log onto the NOAMP VIP and navigate to Main Menu -> Administration -> SNMP, as shown below **Connected using INTERNALXMI t** 🖳 Main Menu 🖻 🚖 Administration 🏺 Users 🞁 Groups 📑 Sessions 🖻 🚖 Single Sign-On LDAP Servers Zones 📑 Authorized IPs 📑 Options SNMP Make sure the checkbox next to "Enabled" is checked, if not, check it as shown below [Default: enabled.] Traps from Enable or disable SNMP traps fro Individual Enabled sent from individual servers, othe OAM&P server. [Default: disabled Servers Configured Community Name (SI Then click on **Apply** and verify that the data is committed.

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

Procedure 29:PDRA Resource Domain Configuration (PDRA Only)

S	This procedure configures the Resource Domain. It should be executed for PDRA Installations ONLY.					
T E	Check off (\mathbf{v}) each step as it	is completed. Boxes have been provided for this purpose under each step number.				
E P #	SHOULD THIS PROCEDURE ASSUMPTION: POI	FAIL, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR <u>EAGLE XG TAC</u>. ICY DRA FEATURE IS ALREADY ACTIVATED USING WI006835.				
1	Establish GUI Session on the NOAMP VIP	Establish a GU	Establish a GUI session on the NOAMP by using the XMI VIP address. Login as user "guiadmin".			
2	NOAMP VIP: Navigate to Resource Domain Screen	Navigate to Main Menu -> Configuration -> Resource Domains Screen.				
4	NOAMP VIP: Add Binding Resource Domain	Click on Ins You will see a Main Menu Info • Inserting a Resource Doma Field Resource Domain Name Resource	ert in the lower left corner. a screen similar to: :: Configuration -> Resource a new Resource Domain in Value pSbrBindingRes *	E Domains [Insert] Tue Jul 03 12:03:54 2012 UTC Description Unique identifier used to label a Resource Domain. [Default = n/a. Range = A 1-32-character string. Valid characters are alphanumeric and underscore.]		
		Domain Profile Server Groups Server Groups Enter the Bin Profile and se	NOServerGroup Site 1BindingPsbrMpSg Site 1DsrMp1Sg Site 1DsrMp2Sg Site 1SoServerGroup Ok App ding Resource Domain Name, s slect the Server Groups associat	Server Groups associated with this Resource Domain		

5	NOAMP VIP: Add	Click on Insert in the lower left corner.				
	Policy DRA Resource Domain	You will see a screen similar to:				
		Main Menu: (Configuration -> Resource Do	omain	s [Insert]	
		Info 🔻			Tue Sep 04 05:49	
		Inserting a n	ew Resource Domain			
		Deserves Devesion				
		Resource Domain Field	Value	Descript	tion	
		Resource Domain Name	PolicyDRARD *	Unique string. V	identifier used to label a Resource Domain. [Default = n/a. Range = A 1-32-character /alid characters are alphanumeric and underscore.]	
		Resource Domain Profile	Policy DRA 💌 *	- The Pro	file of this Resource Domain	
		Server Groups				
		Server Groups	BindingPsbr1MpSg Dipfe1ServerGroup LabcSOAMSG2 LabDDSRMSG LabDSOAMSG NOAMP_SG VPDRASG SOAM_SG SessionPsbr1MpSg	Server (Groups associated with this Resource Domain	
				Ok		
Enter the Resource Dom select the Server Groups NOTE: For Mated Pair DS add the DA-MP Se Resource Domain For non-mated pa Resource Domain			d Pair DSR, create o A-MP Server Group Domain. mated pair DSRs an Domain per Site.	n the only os fr	Resource Domain and Press Ok. one PDRA Resource Domain and rom both sites into this PDRA	
6	NOAMP VIP: Add	Click on Insert in the lower left corner.				
	Session Resource Domain	You will see a screen similar to:				
		Main Monu	u Configuration -> Deco	urce	Domains [Incort]	
			. comgaration -> Kesu	urce	Tue Jul 03 12:03:54 2012 UTC	
		Inserting a	a new Resource Domai	n		
		Pasource Doma	sin			
		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	Policy Session	*	The Profile of this Resource Domain	
		Server Groups	· ·			
		Server Groups	NOServerGroup Site1BindingPsbrMpSg Site1DsrMp1Sg Site1DsrMp2Sg VSite1SessionPsbrMpSg Site1SoServerGroup		Server Groups associated with this Resource Domain	
		Ok Apply Cancel				
	Enter the Session Resource Domain Name, select "Policy Session" as the Resource Profile and select the Server Groups associated with the Resource Domain and Pr					

7	NOAMP VIP: Add other Session Resource Domains.	Repeat Step 6 for all other Session Resource Domains that are to be added.
8	NOAMP VIP: Restart PDRA MP servers	 From the NOAMP GUI, select the Main menu->Status & Manage->Server menu For each PDRA MP server: Select the MP server. Select the Restart button. Answer OK to the confirmation popup. Wait for the message which tells you that the restart was successful.

4.7 Post-Install Activities

Procedure 30. Activate Optional Features

S T E	This procedure will installation is complete	provide instruction on how to install DSR optional components once regular ete.		
г #	Prerequisite: All prev	vious DSR installation steps have been completed.		
п	Check off (\checkmark) each step as it is	Check off (\mathbf{v}) 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	Refer to Activation	Refer to 3.3 Optional Features for a list of feature activation documents whose		
	Guides for	procedures are to be executed at this moment.		
	Optional Features			

Procedure 31. Configure ComAgent Connections

S T E	This procedure will provide instruction on how to configure ComAgent connections on DSR for use in the FABR application.		
Р #	Prerequisite: FABR application is activated. Check off (v) 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	Configure ComAgent	Refer to [5] for the steps required to configure ComAgent	

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>
            <qateway>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>
<option>
<monitoring>mii</monitoring>
<primary>eth11</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 ($\sqrt{}$) each step as it is completed. Boxes have been provided for this purpose under each step number.

Step Procedure	Result		
1. Access the	Windows XP	Windows Vista	
laptop network interface card's TCP/IP "Properties" screen. NOTE: For this step follow the instruction specific to the laptop's OS (XP	 Go to Control Panel Double-click on Network Connections Right-click the wired Ethernet Interface icon and select "Properties" Select "Internet Protocol (TCP/IP)" and select "Properties" 	 Go to Control Panel. Double-click on Network and Sharing Center Select Manage Network Connections (left menu) Right-click the wired Ethernet Interface icon and select "Properties" Select "Internet Protocol Version 4 (TCP/IPv4)" 	
	Local Area Connection Properties General Advanced Connect using: Broadcom NetXtreme Gigabit Etheme Configure This connection uses the following items: Image: State in the international properties Image: State international properties Install Uninstall Properties Description Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks. Show icon in notification area when connected Notify me when this connection has limited or no connectivity	Local Area Connection Properties Networking Connect using: Image: NVIDIA n Force Networking Controller Image: NVIDIA n Force Networking Controller Corfigure This connection uses the following items: Image: Connection uses the following item	

Procedure B.1 Connecting to the EAGLE XG TVOE iLO

Procedure B.1 Connecting to the EAGLE XG TVOE iLO

2.	 Clock "use the following IP address", set the IP address to "192.168.100.10 0", the Subnet mask to "255.255.255.0" and th Default gateway to "192.168.100.1", click "OK". Click "Close" from the network interface card's main "Properties" screen. 	Internet Protocol (TCP/IP) Properties Image: The settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings. Obtain an IP address automatically 1 Obtain an IP address: 192.168.100.100 Subnet mask: 255.255.0 Default gateway: 192.168.100.11 Obtain DNS server address automatically Image: Server addresse: Preferred DNS server: . Alternate DNS server: . Advanced 0K	Local Area Connection Properties General Advanced Connect using: Broadcom NetXtreme Gigabit Etheme Configure This connection uses the following items: Install Oeterministic Networks Install Uninstall Properties Install Uninstall Properties Show icon in notification area when connected Notify me when this connection has limited or no connectivity
3.	Connect the laptop's Ethernet port directly to the TVOE iLO port using a standard Cat-5 cross-over cable.		Connect the laptop's Ethernet port to the PM&C iLO port.

Appendix C. TVOE ILO ACCESS

This procedure contains the steps to access the TVOE iLO. Check off ($\sqrt{}$) 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	
	Launch a terminal emulator, e.g. Putty, Secure CRT. Navigate to File=> Connect Click on the "New Session" icon. Note: This example demonstrates Secure CRT.	Image: Second connected - SecureCRT Image: Second connected conn	
		Show dialog on startup	
		Ready 5, 1 24 Rows, 80 Cols VT100 NUM	
			2

Procedure C.1 Accessing the TVOE iLO

2 .	Enter TVOE iLO	Session Options - 10.240.240.15	
2.	Enter TVOE iLO for 'Name' and 192.168.100.5 (m anufacturing default) or customer IP set during installation for 'Hostname'. Enter root for Username. Click OK NOTE 1 See Appendix B to configure your system network to access the EAGLE XG.	Enter TVOE iLO for 'Name' and 192.168.100.5(m anufacturing default) or customer IP set during installation for 'Hostname'. Enter root for Username. Click OK NOTE 1 See Appendix B to configure your system network to access the EAGLE XG.	Category: Connection Cogn Scripts SSH2 Port Forwarding Remote X11 Formacs Mapped Keys Advanced Advanced File Transfer XModem Cog File Printing Advanced
3.	Navigate FILE => Connect to open the Connect window. Highlight the session you created and click Connect.	Connect	

4.	Login to the TVOE iLO using the appropriate password.	Enter Secure Shell Password Image: Conceleration root@10.240.240.15 requires a password. Please enter a password now. Image: OK Username: root Password: Image: Conceleration Save password Image: Conceleration		
5.	The TVOE iLO is displayed.	PM&C iLO - SecureCRT Image: Control of the second seco		
	THIS PROCEDUKE HAS BEEN COMPLETED			

Procedure C.1 Accessing the TVOE iLO

Appendix D. TVOE ILO GUI ACCESS

This procedure contains the steps to access the TVOE iLO GUI. Check off ($\sqrt{}$) 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	
1.	Launch Internet Explorer and "Go To" 192.168.100.5 (manufacturing default) or customer IP set during installation.	Log in - Tekelec Platform Management & Configuration - Windows Internet Explorer	
2.	Internet Explorer may display a warning message regarding the Security Certificate.	 Certificate Error: Navigation Blocked There is a problem with this website's security certificate. The security certificate presented by this website was not issued by a trusted of The security certificate presented by this website has expired or is not yet valid. The security certificate presented by this website was issued for a different web Security certificate problems may indicate an attempt to fool you or intercept server. We recommend that you close this webpage and do not continue to thi © Click here to close this webpage. Continue to this website (not recommended). More information 	
3.	Select the option to "Continue to the website (not recommended)"	 We recommend that you close this webpage and do not continue to this website. Click here to close this webpage. Continue to this website (not recommended). More information 	

Procedure D.1 Accessing the TVOE iLO GUI

4. Log in as us "root".	Integrated Lights-Out 2 HP ProLiant
5. The TVOE i Home page displayed.	Image: Status Remote Console Vartual Madia Power Management Administration System Status Remote Console Vartual Madia Power Management Administration System Status Remote Console Vartual Madia Power Management Administration Summary Server Name: mac; Product ID: USED19ND08 / 444184-821 UUT: 31343343-4338-5355-4530-31394E443038 Value Server Power: 13143334-3438-5355-4530-31394E443038 System Health: © OK UDI: 31343934-3438-5355-4530-31394E443038 System Health: © OK UDI: Server Power: Immembra Product ID: Sorver Power: UDI: Server Power: Immembra Product ID: OK Server Power: Immembra Prof OF Launch Remote Console Latest ID & Immer Version: 1.02 2 (0) (0) OF Launch Letest ID 0 2 Fernet Log Entry: Bio Offician Di Console Mathematic Mager In 2 doressi 1.02 (0) (2) (2) (0) (7) (4) (2) (0) (7) (4) (2) (2) (1) (7) (4) (2) (2) (1) (7) (4) (2) (2) (1) (7) (4) (2) (2) (1) (7) (4) (2) (2) (1) (7) (4) (2) (2) (1) (7) (4) (2) (2) (1) (7) (4) (2) (2) (1) (7) (4) (2) (2) (2) (2) (2) (2) (2) (2) (2) (2
6. Click on Lau to start the p iLO CLI	Status Summary Server Name: pmac; ProLiant DL360 G6 Server Name: USE019HD00 / 404184-821 UUD: 31343834-3438-5355-4530-31394E443038 System ROM: P44-03/30/2010; backup system ROM: 03/30/2010 System Rom: P44-03/30/2010; backup system ROM: 03/30/2010; backup syste

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	
1.	Connect to the TVOE iLO GUI	Integrated Lights-Out 2	iLO 2 Name: ILOUSE019ND08 Current User: root Log out
	instructions in Appendix D	System Status Remote Console Virtual Media Power Management Administration Status Summary	2
		Summary Server Name: pmac; ProLiant DL360 G6 System Serial Number / Product ID: USE019ND08 / 484184-821 UUID: 31343834-3438-5355-4530-31394E443038 LO 2 Log System ROM: P64 03/30/2010; backup system ROM: 03/30/2010 System ROM: Ok System ROM: Diagnostics Server Power: Momentary Press I/O 2 Log UID Light: Turn UID On Jinsight Agent Latest IML Entry: System Power Supply: General Failure (Power Supply 1) LO 2 Name: ILOUSE019ND08 License Type: LiO 2 Tirmware Version: 1.82 03/31/2010 IP address: 192.168.100.5 Active Sessions: LiO 2 user:root Latest ILO 2 Event Log Entry: Browser login: root - 10.25.170.106(DNS name not found). LO 2 Date/Time: 10/21/2010 17:48:22	
2.	Click the "Administration" tab. Under	Integrated Lights-Out 2 HP Proliont System Status Remote Console Virtual Media Power Management	iLO 2 Name: ILOUSE019ND08 Current User: root Log out
	"Settings" in the left column click on	Network Settings	2
	"Network".	LO 2 Network Dic/2/045 Firmware Licensing NIC: Enabled Disabled Shared Network Port User DHCP: Enabled Disabled Settings VLAN: Enabled Disabled Access VLAN: Enabled Disabled Access VLAN tag: Image:	Apply g the seconds

DSR 5.X/6.X Installation - Part 2/2: Software Installation and Configuration

Software Install Procedure

Step	Instruction	Result
3.	Change the IP Address, Subnet	Integrated Lights-Out 2 HP ProLiant
	Mask and Gateway IP Address to the values supplied in the IP Site Survey for the TVOE iLO. Hit Apply. NOTE: You will lose access after you hit the Apply button.	System Status Remote Console Virtual Media Power Management Administration ILO 2 Introvic DHCP/DNS Introvic Intret Introvic Int
		NOTE: The Lights-Out subsystem must be restarted before any changes you make on this screen will take effect. Pressing the Apply button above terminates your browser connection and restarts Integrated Lights-Out 2. You must wait at least 30 seconds before attempting to reestablish a connection.
4.	Using the instructions found in Appendix B , re set the PC's network connection replacing the Subnet Mask and Gateway with those just used for the TVOE iLO. Use an appropriate IP address for this subnet. Call Customer Support if needed.	Internet Protocol (TCP/IP) Properties General You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings. Obtain an IP address: IP address: 192_168_100_100 Subnet mask: 255_255_0 Default gateway: 192_168_100_1 Obtain DNS server address automatically Use the following INS server addresses: Preferred DNS server: . Advanced
5.	Connect to the TVOE iLO GUI using the instructions in Appendix D Note: Use the IP address entered in Step 3 and not the 192.168.100.5.	Integrated Lights-Out 2 ILO 2 Name: 1LO USED 19ND08 Image: System Status Remote Console Virtual Media Power Management Administration System Status Remote Console Virtual Media Power Management Administration Summary Server Name: pmac; ProLiant DL360 G6 Server Name: USED 19ND08 / 494184-821 UUID: 31343834-3438-5355-4530-31394E443038 System ROM: 3/30/2010; backup system ROM: 03/30/2010 ML System Health: © ok © ok Diagnostics Server Power: UID Light: Iaunch Lo 2 User UID Light: Last Used Remote Console: System Power Supply: General Failure (Power Supply 1) Lo 2 User UID Light: Launch System Power Supply: General Failure (Power Supply 1) Lo 2 Vame: ULO USED 19ND08 System Power Supply: General Failure (Power Supply 1)
		Lice stantic Los 2 Advanced LiCe stantic Los 2 Advanced LO 2 Firmware Version: 1.82 03/31/2010 IP address: 192.168.100.5 Active Sessions: LO 2 user:root Latest ILO 2 Event Log Entry: Browser login: root - 10.25.170.106(DNS name not found). LO 2 Date/Time: 10/21/2010 17:48:22 THIS PROCEDURE HAS BEEN COMPLETED

Appendix F. PM&C/NOAMP/SOAM CONSOLE ILO ACCESS

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

			I
Step	Instruction	Result	
	Log In as root on	RC: dsrTVOE-blade11: Bay 11 in USE0324F16 in USE0324F1H - HP iLO 2 Integrated Remote Console - Windows Internet Explorer	→
1.	the IVOE server	(10.240.9.151/HRemCons.htm?tullscreen=08restart=0 (1.0.2	Certificate Error
	using either ILO or	Centfly release 5.6 (Final)	
	SSH to the TVOE	Kernel 2.6.18-238.19.1.el5prere15.0.0 72.22.0 on an x86.64	
	server's XMI	······································	
	address	dsrTVOE-blade11 login: root	
		Done	🕄 100% 👻 🛒
2.	Find the NOAMP's	On the TVOE host, execute:.	
	current VM number	#virsh list	
		This will produce a listing of currently running virtual machines.	
		Iroot@dsr1VUE-blade11 J# virsh list	
		ld Name State	
		4 DSR_HOHEE Funning	
		[montOlow]]OF blade11 ~1#	
		Find the VM name for your DSR NOAMP and note it's ID number in the first colun	nn.
		NOTE: If the VM state is not listed as "running" or you do not find a VM you confi	gured for your
		NOAMP at all, then halt this procedure and contact Tekelec Customer Support.	

Step	Instruction	Result
3.	Connect to console	On the TVOE host, execute:.
	VM number obtained in Step 2.	<pre>#virsh console <dsrnoamp-vmid></dsrnoamp-vmid></pre>
		Where DSRNOAMP-VMID is the VM ID you obtained in Step 2:
		Connected to domain DSR_NOAMP Escape character is ^]
		CentOS release 5.6 (Final) Kernel 2.6.18-238.19.1.el5prerel5.0.0_72.22.0 on an x86_64
		hostname1322840832 login: _
		You are now connected to the DSR NOAMPs console.
		If you wish to return to the TVOE host, you can exit the session by pressing CTRL +]

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

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

Step	Instruction	Result
1.	Log In to the ILOM web interface using	Open your web browser to the ILOM web address.
	your proper credentials.	CRACLE® Integrated Lights Out Manager SP Hostname: pc1031121-lio User Name: root Password: root Log In 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.

Step	Instruction	Result
2.	Start Redirection	Navigate to Remote Control->Redirection.
2.	Start Redirection	Navigate to Remote Control->Redirection. System Information Summary Processors Memory Power Cooling Storage Networking PCI Devices Firmware Open Problems (0) Redirection KVMS Host Management System Management Press Launch Remote Console ORACLE: Integrated Lights Out Manager System Information System Information System Information Summary Processors Manage the host remotely by redirecting the s Memory Power Cooling Storage

Step	Instruction	Result
3.	Accept Java Application Download .	You will be prompted to download and run a small Java application. Press OK to accept and run the download.
		Opening jnlpgenerator-16
		You have chosen to open:
		jnlpgenerator-16
		which is: JNLP File
		from: https://10.250.50.234
		What should Firefox do with this file?
		Open with Java(TM) Web Start Launcher (default)
		Do this <u>a</u> utomatically for files like this from now on.
		OK Cancel

DSR 5.X/6.X Installation - Part 2/2: Software Installation and Configuration

4. Log into RMS console and proceed You will now be presented with an RMS console window. Log in and proceed. Proceed Oracle(R) Integrated Lights Out Manager Remote Console Redirection Devices Keyboard Video I0.250.50.234 Proceed Oracle Linux Server release 6.4 Kernel 2.6.32-358.14.1.el6prerel6.7.8_84.2.8.×86_64 on an ×86_64 SunNetralTvoe login: 	Step	Instruction	Result
proceed A Oracle(R) Integrated Lights Out Manager Remote Console Redirection Devices Keyboard Video Dracle Linux Server release 6.4 Kernel 2.6.32-358.14.1.el6prerel6.7.0_84.2.0.x86_64 on an x86_64 SunNetra1Tvoe login: _	4.	Log into RMS console and	You will now be presented with an RMS console window. Log in and proceed.
Redirection Devices Keyboard Video Image: Interview of the second state of the se		proceed	A Oracle(R) Integrated Lights Out Manager Remote Console
Dracle Linux Server release 6.4 Kernel 2.6.32-358.14.1.el6prerel6.7.0_84.2.0.x86_64 on an x86_64 SunNetra1Tvoe login: _			Redirection Devices Keyboard Video
Dracle Linux Server release 6.4 Kernel 2.6.32-358.14.1.el6prerel6.7.0_84.2.0.x86_64 on an x86_64 SunNetra1Tvoe login: _			10.250.50.234
			Oracle Linux Server release 6.4 Kernel 2.6.32-358.14.1.el6prerel6.7.0_84.2.0.x86_64 on an x86_64 SunMetralTvoe login: _
*****END OF PROCEDURE****			****END OF PROCEDURE****

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

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





Appendix I. ACCESSING THE NOAMP GUI USING SSH TUNNELING WITH OPENSSH FOR WINDOWS

S T	 NOTE: This procedure assumes that the NOAMP server you wish to create a tunnel to has been IPM'ed with the DSR application ISO NOTE: This procedure assumes that you have exchanged SSH keys between the PMAC and the first NOAMP server. 		
E P			
	NOTE: This procedu NOAMP server. You will be refered to as	The assumes that you have obtained the control network IP address for the first can get this from the PMAC GUI's <i>Software Inventory</i> screen. That variable <i>NOAMP-Control-IP</i> in thiese instructions.	
	NOTE: This is the r	ecommended tunneling method if you are using Windows 7.	
1	If Needed, Download and	 Dowload <i>oppenssh</i> for Windows from <u>here</u>. Extract the installar from the ZIP file, then run the installar 	
	Install <i>openssh</i> for Windows	openssh is now installed on your PC.	
2	Create SSU Transl		
	Through the	 Open up a Command Prompt shell Within the command shell, enter the following to create the SSH tunnel to the lat NO through the DMAC. 	
	rmac	the 1st NO, through the PMAC:	
		<pre>> ssh -L 443:<1st_NO_Control_IP_Address>:443 root@<pmac address="" ip="" management=""></pmac></pre>	
		(Answer 'yes' if it asks if you want to continue connecting)	
		C:\>ssh -L 443:192.168.1.14:443 root@10.240.9.132 The authenticity of host '10.240.9.132 (10.240.9.132)' can't be established. RSA key fingerprint is e0:f5:2c:bf:70:d9:a6:fd:42:74:83:09:a0:7a:da:0c. Are you sure you want to continue connecting (yes/no)? yes Warning: Permanently added '10.240.9.132' (RSA) to the list of known hosts. root@10.240.9.132's password: Last login: Sat Mar 23 09:28:00 2013 from 10.26.15.162 [root@pmac-90006 ~]# _	
		The tunnel to the first NOAMP is now established.	
3	Use Local Web	Using your web browser, navigate to the URL: https://localhost/	
	Browser to Connect to GUI	C Home - Windows Internet Ex	
		G S + Image: All the state of t	
		You should arrive at the login screen for the NOAMP GUI.	
		This procedure is now complete	
Appendix J. MANUAL TIMEZONE SETTING PROCEDURE

1100				
S T E P	 NOTE: This procedure assumes that the first NO-AMP server has been initially configured and rebooted. NOTE: This procedure assumes that one system-wide time zone has been selected. 			
1	Access Active Login as "root" to the Active NO-AMP console. NOAMP Console Login as "root" to the Active NO-AMP console.			
2 Active NOAMP Console: Execute time zone configuration script and verify successful result From the command line prompt, execute set_ini_tz.pl. This will set Zero The following command example uses the America/New_York Replace as appropriate with the time zone you have selected for the See Appendix L for a list of valid time zones. # /usr/TKLC/appworks/bin/set_ini_tz.pl "America/New_York"		<pre>From the command line prompt, execute set_ini_tz.pl. 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. # /usr/TKLC/appworks/bin/set_ini_tz.pl "America/New_York" >/dev/null 2>&1</pre>		
3	Verify Success of Time Zone Script# echo \$?If this returns anything other than "0", then halt this procedure and Tekelec Customer Support.			

Procedure 1 Timezome Setting

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

S	This procedure configu	res a single server to operate in 2-tier OAM mode	
Т	***WARN	NING: 2-TIER CONFIGURATION IS NOT SUPPORTED BY DSR 6.X***	
Е	Check off (1) each stop as it i	is some lated. Denote have been accorded at the drive some some denotes the stars much as	
P	Check off (v) each step as it i	is completed. Boxes have been provided for this purpose under each step number.	
#	Should this procedure fail, co	act the Tekelec Customer Care Center and ask for assistance.	
1	IPM the server with the	Execute Procedure 4 ("IPM Blades and VMs") of 909-2278-001 for the server. Use	
	proper TFD mage.	the TPD image that corresponds to the DSR release you are using.	
		When done, only the TPD image will be installed on the server.	
2	Login to server using iLO	1. Login as root to the server using either	
	or the control IP address		
	existence of 2-tier flag.	\circ il O facility	
	-		
		• -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 ssn into this IP address.	
		2. Execute the following command on the server:	
		touch /usr/TKLC/DsrDataAsourced	
		(if the command is successful, there will be no output)	
3	Proceed with normal		
	install starting with the	The server is now configured for 2-tier OAM. Proceed with installing the Application	
	Application ISO IPM.	ISO (Procedure 5 of 909-2278-001) and further tasks.	

Appendix L. DISABLING ACCESS TO A DSR NODE

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

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

Table 5. List of Selected Time Zone value

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

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

Appendix 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 not 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**



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

latform	Configuration Utility 3.05 (C) 2003 - 2011 Tekelec, Inc.	
Hostname	e: pmacDev8	
	Verify NetBackup Client Environment	
[OK]	- User acct set up: netbackup	
[OK]	- User netbackup shell set up: /usr/bin/rssh	
[OK]	- Home directory: /home/rssh/home/netbackup	
[OK]	- Tmp directory: /home/rssh/tmp	
[OK]	- Tmp directory perms: 1777	
	Forward Backward Top Bottom Exit	

- 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/openv/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/openv/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/openv/NB-Java.tar.Z" not found. ./sftp_to_client: line 793: [: : integer expression expected ./sftp_to_client: line 793: [: : integer expression expected

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

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

- ./sftp_to_client: line 793: [: : integer expression expected
- ./sftp_to_client: line 793: [:: integer expression expected
- ./sftp to client: line 793: [:: integer expression expected
- ./sftp_to_client: line 793: [:: integer expression expected
- ./sftp to client: line 793: [:: integer expression expected
- ./sftp_to_client: line 793: [: : integer expression expected
- ./sftp_to_client: line 793: [:: integer expression expected
- sftp completed successfully.

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

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

Note: Although the command executed above instructs you to execute the client_config command, <u>DO NOT</u> 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

Install NetBackup Client
Do you wish to install the 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.

Hostname:	pmacDev8
	Verify NetBackup Client Installation
[OK] –	Looks like a 6.5 Client is installed
[OK] –	RC script: nbclient
[OK] –	Pre-processor script installed
[OK] –	Pre-processor script configured
	Forward Backward Top Bottom Exit

- 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

Add Host	
IP Address: Initial Alias:	
OK Cancel	

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

ln -s <path>/bpend_notify /usr/openv/netbackup/bin/bpend_notify

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

4. Application server iLO: Verify NetBackup configuration file

- Open /usr/openv/netbackup/bp.conf and make sure it points to the NetBackup Server using the following command:
 - # vi /usr/openv/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 revie This is to certify that all steps required for	ew this entire document. *** or the upgrade successfully completed without failure.
Sign your name, showing approval of this procedur FAX	re, and fax this page and the <mark>above completed matrix</mark> to Tekelec (* # 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 Oracle and the customer representative. A copy of thi SWOPS supervisor will also maintain a signed copy of	l. Any deviations from this procedure must be approved by both is page should be given to the customer for their records. The of this completion for future reference.
Tekelec Signature:	Date:
Customer Signature:	Date:

Appendix P. MY ORACLE SUPPORT (MOS)

MOS (<u>https://support.oracle.com</u>) is your initial point of contact for all product support and training needs. A representative at Customer Access Support (CAS) can assist you with MOS registration.

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

When calling, there are multiple layers of menus selections. Make the selections in the sequence shown below on the Support telephone menu:

1. For the first set of menu options, select 2, "New Service Request". You will hear another set of menu options.

2. In this set of menu options, select 3, "Hardware, Networking and Solaris Operating System Support". A third set of menu options begins.

3. In the third set of options, select 2, "Non-technical issue". Then you will be connected to a live agent who can assist you with MOS registration and provide Support. Identifiers. Simply mention you are a Tekelec Customer new to MOS.