

Corporate Headquarters 5200 Paramount Parkway Morrisville, NC 27560 USA Phone +1.888.628.5521 +1.919.468.5500 Fax: +1.919.380.3862 E-mail: info@tekelec.com Copyright TEKELEC 2014. All Rights Reserved

EAGLE XG

Software Install Procedure

DSR 4.X HP C-Class Installation

P. Mouallem, M. Williams

CHANGE HISTORY

Date	ENG	ECN	Author	Description	Approved*	
	Version #	Revision #			(Yes/No)	
6/27/12	0.1		P. Mouallem	Copy of DSR 3.0 Install Doc Contents	No	
7/02/12	0.2		P. Mouallem, M. Williams	DSR 4.0 Updates	No	
7/03/12	0.3		P. Mouallem	Updates and PR Fixes	No	
7/05/12	0.4		P. Mouallem	Updates	No	
7/20/12	0.5		P. Mouallem	Updates	No	
7/25/12	0.6		M. Williams	Updates for Scalability, VM Profiles	No	
8/10/12	0.7		P. Mouallem	Additional Updates	No	
8/24/12	0.11		P. Mouallem	Updates after Formal Review	No	
8/30/12	0.12		M. Williams	Updates from Review and additional documentation for RMS configuration	No	
9/10/12	0.13		M.Williams	Further updates after desk review comments	No	
9/11/12	0.14		P. Mouallem	Further updates after desk review comments	No	
9/11/12	1.1		P. Mouallem	updates after desk review comments	Yes	
9/21/12	1.2		M. Williams	Revisions after comments from PSEs	Yes	
10/12/12	1.9		P. Mouallem	NetBackup PRs 218480, 218475, 218477	No	
10/17/12	1.10		P. Mouallem	Updates after Desk Review	No	
10/17/12	1.11		P. Mouallem	Updates after Desk Review, PR 220729	No	
10/19/12	2.0		P. Mouallem	Updates after Desk Review	Yes	
10/26/12	2.1		M. Williams	Fix for PR#220923	Yes	
10/29/12	2.2		P. Mouallem	Fix for PRs 218247, 215306, 212894	Yes	
10/30/12	2.5		P. Mouallem	Fix for PRs 220488	Yes	
11/07/12	2.7		P. Mouallem	Updates	Yes	
11/08/12	2.8		M. Williams	Update for PR#221271	Yes	
11/08/12	2.10		P. Mouallem	Misc Updates	Yes	
11/08/12	2.13		P. Mouallem	Adding Steps to configure ComAgent Connections	Yes	
11/13/12	2.14		P. Mouallem	Misc Updates	Yes	
11/13/12	2.16		P. Mouallem	Fix for PRs 221532, 221536, 221548	Yes	
11/29/12	2.17		M. Williams	Update to add workaround for Appworks XMI def. route issue	Yes	
11/30/12	2.18		P. Mouallem	Misc Updates	Yes	
12/11/12	2.19		P. Mouallem	Moving Appendix L to DR Doc (909-2246-001)	Yes	
12/11/12	2.20		P. Mouallem	Fix for PR 211593	Yes	
12/17/12	2.21		M. Williams	Misc. Updates/Fix for PR 219631	219631 Yes	
1/10/13	2.22		M. Williams	Updated section where MP server is inserted to clarify deletion of XMI default route if needed.	Yes	
1/25/13	2.23		P. Mouallem	Minor Update	Yes	
1/28/13	2.24		P. Mouallem	Fix for PRs 221489, 223446	Yes	
1/30/13	2.26		P. Mouallem	Adding step to set the timezone on the SO	Yes	
1/30/13	2.28		P. Mouallem	Update to Procedure 6, Step 17 (switch backup user)	Yes	
3/7/13	2.29		M. Williams	Fixed problem with table of contents	Yes	
3/14/13	2.30		M. Williams	Added installation map, updated sections Yes based on PRs.		
3/15/13	2.31		P. Mouallem	PR 223182, 218359, 220432 Yes		
3/19/12	2.32		M. Williams	Update document to be aware of PDRA Y Installations		

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2/10/12	0.00	D. M. 11	$\mathbf{U} = 1 + $	V
3/19/12	2.33	P. Mouallem	Update after Desk Review Ye	
3/26/13	2.34	M.Williams	Updates after Desk Review and added extra	Yes
			Appendix for openssh tunneling (PR	
			218359)	
4/19/13	2.35	P. Mouallem	Minor Updates	Yes
6/19/13	2.36	M. Williams	Add PDRA procedures; Update document	Yes
			references	
6/21/13	2.37	P. Mouallem	Minor Updates	Yes
6/26/13	2.38	M. Williams	Minor Updates	Yes
8/16/13	3.0	Duane Orton	Approved DSR 4.x installation procedure	Yes
			for DSR 4.0.x and 4.1.0	
8/22/13	3.1	M. Williams	Updates for NTP configuration on server	Yes
			insert screen for 4.1.X installations	
12/09/13	3.2	P. Mouallem	Changing PMAC's	Yes
			DEVICE.NETWORK.NETBOOT to use	
			Management instead of Control (proc 2 step	
			7)	
12/12/20	3.3	M. Williams	Update SOAM procedures to include	Yes
13			optional installation of Netbackup client	

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1.0INTRODUCTION

1.1 Purpose and Scope

This document describes methods utilized and procedures executed to configure an HP C-class system to be used with Diameter Signaling Router 4.X (DSR 4.X) and to install DSR 4.X. It is assumed that the hardware installation and network cabling were executed before hand.

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 4.0 Networking Interconnect Technical References*, TR007133/4/5/6/7/8/9, v. 1.0 or greater, P. Mouallem, 2012
- [3] TPD Initial Product Manufacture, 909-2130-001, v. 1.0 or greater, D. Knierim, 2011
- [4] Platform 6.x Configuration Procedure Reference, 909-2209-001, v. 1.0 or greater, L. Antosova et al., 2012
- [5] DSR 4.0 Communication Agent, 910-6575-001, Latest Revision, Tekelec, 2012
- [6] DSR 4.0 Full Address Based Resolution (FABR), 910-6578-001, Latest Revision, Tekelec, 2012
- [7] DSR 41 Full Address Based Resolution (FABR), 910-6634-001, Latest Revision, Tekelec, 2012
- [8] HP Solutions Firmware Upgrade Pack Upgrade Procedures 2.2, 909-2234-001, Latest Revision, Tekelec, 2012
- [9] Policy DRA Activation, WI006835, Latest Revision, Tekelec 2012

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 Variables

For a list of the variables used throughtout this document and their description, see 4.18Appendix M

1.4 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

1.5 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 the	at indicates the serve	r to which it applies
-----------	---------------	-----------------	------------------------	-----------------------

Management Server	HP ProLiant DL360 or DL380 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 4.X (DSR 4.X) application on new HP C-Class Hardware.

DSR 4.X 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

2.1 ACQUIRING FIRMWARE

Several procedures in this document pertain to the upgrading of firmware on various servers and hardware devices. The required firmware media and binaries are managed and distributed as part of the *HP Solutions Firmware Upgrade Pack* 2.2.x, released under Tekelec Part Number 795-0000- $2yy^{1}$. The minimum firmware release required for this product is *HP Solutions Firmware Upgrade Pack* 2.2.3 (PN: 795-0000-201) although the latest 2.2.x release is recommended.

The *HP Solutions Firmware Upgrade Pack* contains multiple BOM items including media and documentation. This document only requires access to the media (CD/DVD/USB or ISOs) as well as the *Release Notes* [1] document.

The two pieces of required firmware media provided in the HP Solutions Firmware Upgrade Kit 2.2.x releases are:

- HP Smart Update Firmware DVD/USB/ISO
- HP Misc Firmware CD/USB/ISO

Refer to the Release Notes of the target release of the *HP Solutions Firmware Upgrade Pack* used to determine specific media part numbers to use and the specific firmware versions provided.

¹ Where *yy* is a 2-digit number which increases with every new release.

Diameter Signaling Router 4.X Servers and devices requiring possible firmware updates are:

- HP c7000 BladeSystem Enclosure Components:
 - Onboard Administrator
 - Cisco 3020 Network Switches / HP 6120XG Network Switches
 - BL460c Blade Servers
- HP Rack Mount Servers (DL360 / DL380)
- Cisco 4948E/4948E-F Rack Mount Network Switch (Optional)

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 CD-ROM, or a target-release ISO
- 2. One (1) CD-ROM or ISO of TPD release 6.0.0-80.25.0 64 bits, or later shipping baseline as per Tekelec ECO
- 3. One (1) CD-ROM or ISO of PM&C release 5.0.0-50.14.0, or later shipping baseline as per Tekelec ECO
- 4. One (1) CD-ROM or ISO of TVOE release 80.22, or later shipping baseline as per Tekelec ECO
- 5. Passwords for users on the local system
- 6. Access to the iLO Terminal or direct access to the server vga port.
- 7. HP Solution firmware upgrade pack as described in [1].
- 8. A 1Gb or larger USB Flash Drive
- 9. All relevant configuration materials for ALL sites involved. This includes host IP addresses, site network element XML files, and netconfig configuration files.

The material for the list above can also be downloaded from Tekelec's secure website, locate at https://secure.tekelec.com/

3.2 Installation Overview

This section describes the overal strategy to be employed for a single or multi-site DSR 4.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 4.X system. These latter sections expand on the information from the matrix and provide a general timeline for the installation.

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?)

DSR 4.X HP C-Class Installation

- 2. A site survey is conducted with the customer to determine exact networking and site details.
- 3. For each site being configured, the installer will consult Figure 4 to determine the exact procedures that are to be executed for that site.
- 4. The installer will then install the "main" site that contains the NOAMP -- again, consulting Figure 4 to determine the procedure list. (note: for sites where the NOAMP is co-located with the SOAM and other servers, steps 3 and 4 are combined). During this install, he will "bring up" the other sub-sites that were configured in step 3.
- 5. Once the NOAMP site has been installed according to Figure 4, full DSR installation is complete.



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). 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 NOT be seen at the SOAM OR at the NOAM. They will be viewable at the configured NMS(s) only.

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)
- TVOE for DSR Servers

Should have their SNMP trap destinations set to:

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

3.2.3 Installation Procedures

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

Table 2. Installation Overview

Procedure	Phase	Elapsed Time (Minutes)	
		This Step	Cum.
Procedure 1	Configure the RMS Server BIOS Settings and Update Firmware	30	30

Table 2. Installation Overview

Procedure	Phase	Elapsed Time (Minutes)	
		(Minut This Sten	es) Cum.
Procedure 2	Install TVOE 2.0 on First RMS Server	15	45
Procedure 3	TVOE/Management Server Network Configuration	30	75
Procedure 4	PM&C Deployment Procedure	20	95
Procedure 5	Gather/Prepare Configuration Files and start services	10	105
Procedure 6*	Configure Cisco 4948E/4948E-F Switch using NetConfig*	45*	150
Procedure 7	Configure the PM&C Server	10	160
Procedure 8	Configure initial OA IP	10	170
Procedure 9	Configure the OA	40	210
Procedure 10	OA security configuration	5	215
Procedure 11 and/or 12	Upgrade Cisco 3020/HP 6120 switch firmware	30	245
Procedure 13	Upgrade OA firmware	10	255
Procedure 14	Add Cabinet & Enclosure to the PM&C Inventory	20	275
Procedure 15	Configure iLO password for Administrator account	10	285
Procedure 16 and/or 17	Configure Cisco 3020/HP 6120 switch	30	315
Procedure 18	Upgrade blade server firmware	10	325
Procedure 19	Confirm/Update Blade Server BIOS Setup	10	335
Procedure 20	Disable SNMP on iLO Interface	20	355
Procedure 21	Install TVOE on Additional RMSs	25	380
Procedure 22	Continue TVOE Configuration on First RMS	15	395
Procedure 23	Configure TVOE on Addional RMSs	20	415
Procedure 24	Install TVOE on Server Blades	20	435
Procedure 25	Configure TVOE on Server Blades	10	445
Procedure 26	Load Application ISO onto PM&C Server	5	450
Procedure 27	Create NOAMP Guest VMs	5	455
Procedure 28	Create SOAMP Guest VMs	5	460
Procedure 29	IPM blades	20	480
Procedure 30	Install the application software on the blades	20	500
Procedure 31	Configure the First NO Blade Server	25	525
Procedure 32	Configure the NO Server Group	15	540
Procedure 33	Configure the Second NO Server	15	555
Procedure 34	Complete Configuring the NOAMP Server Group	10	565

Table 2. Installation Overview

Procedure	Phase	Elapse Time (Minut	ed e es)
		This Step	Cum.
Procedure 35	Install NetBackup Client on NOAMP Servers (Optional)	10	575
Procedure 36	NO Configuration for DR Site (Optional)	10	585
Procedure 37	NO Pairing for DSR NO DR Site (Optional)	10	595
Procedure 38	Configure the SOAM NE	15	610
Procedure 39	Configure the SOAM Servers	10	620
Procedure 40	Configure the SOAM Server Group	10	630
Procedure 41	Optimize NO and SO Databases	5	635
Procedure 42	Configure the MP Blade Servers	10	645
Procedure 43	Configure Places and Assign MP Servers to Places (PDRA)	10	655
Procedure 44	Configure the MP Server Groups	10	665
Procedure 45	Configure the Signaling Network	30	695
Procedure 46	Configure the Signaling Devices	10	705
Procedure 47	Configure the Signaling Network Routes	15	720
Procedure 48	Add VIP for Signaling Networks	5	725
Procedure 49 (Optional)	Configure SNMP for Traps Receivers	5	730
Procedure 50	PDRA Resource Domain Configuration (PDRA Only)	15	745
Procedure 51	Activate Optional Features	varies*	745
Procedure 52	Configure ComAgent Connections	15	760

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> , WI006837, 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)

DSR Meta Administration Feature Activation, WI006761, latest version, Fisher
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)
DSR RBAR Feature Activation, WI006763, latest version, Fisher
PRAP User Cuide 010 6622 001 Day A
KDAR User Guide, 910-0055-001, Rev A
DSR 4.0 Half-Height to Full-Height MP Server Capacity
Migration, WI006766, latest version, Fisher
DSR 4.0 – Per connection ingress message control. WI006764

4.0 SOFTWARE INSTALLATION PROCEDURE

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

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 and IPM Management Server

S T	This procedure will configure the BIOS of the DL380 server and update its firmware if needed		
E P	Needed material:		
#	 HP Firmware Maintenance Media HP Solutions Firmware Upgrade Pack Release Notes [1] 		
	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.		
1	DL360/380 server: Connect to the Server	Connect to the Server using a VGA Display and USB Keyboard, or via the iLO interface using IE. Appendix C though F explains how to access the PM&C iLO and change the	
		address if necessary.	
2	DL360/380 server: Prepare to upgrade DL380 server firmware	Insert HP Smart Update Firmware DVD/USB into the server	
3	DL360/380 server: Access the Server BIOS	Reboot the server and after the server is powered on, as soon as you see <f9=setup> in the lower left corner of the screen, press F9 to access the BIOS setup screen.</f9=setup>	

4	DI 360/380. Sat	Scroll to Date and Time and prose Entern
4	CMOS Clock	Scroll to Date and time to summer LUTC time and press Enter
	CIVIOS CIOCK	Set the date and time to current OTC time and press Enter.
		NOTE: IT IS CRUCIAL TO CORRECTLY SET THE TIME AND DATE
		TO THE CURRENT LITC TIME DO NOT CONTINUE THIS
		PROCEDURE UNLESS THE TIME AND DATE ARE CORRECTELY SET.
		ROM-Based Setup Utility, Version 3.00
		Copyright 1982, 2010 Hewlett-Packard Development Company, L.P.
		System Options HP ProLiant DL380 GG
		Power Management Op
		PCI IRQ Settings Date(mm-dd-yyyy) oduct ID: 494329-B21
		PCI Device Enable/D 06-07-2010 BIOS P62 03/01/2010
		Boot Controller Ord Time(h):mm:ss) oiblock 81/22/2918
		Date and Time 18:41:25 mer Management Controller - 2.9
		Server Availability
		Server Security
		BIUS Serial Console & His Server Asset Text
		Advanced Options Proc 1:Intel 2.53GHz,8MB L3 Cache
		System Default Options Proc 2:Intel 2.53GHz,8MB L3 Cache
		Utility Language
		Press (TAB) for More Information
		Modify Date and Time ZENTERS to Save Changes ZESCS to Main Menu
		LITILAT CO SAVE CHANGES, LISCT CO MAIN MENA
		Go back to the main menu by pressing <esc></esc> and scroll down to <i>Power</i>
		Management Options and press Enter
		Select HP Power Profile and press Enter
		Scroll down to Maximum Performance and press Enter
		System Options Power Management Options
		PO HP Power Kegulator
		PCI Device Enable/Disable
		Standard Boot Order (IPL) Stan Balanced Power and Performance
		Boot Controller Order Boot Minimum Power Usage
		Date Maximum Performance
		Server Hvallability Server Security
		BIOS Servial Console & EMS
		Server Asset Text
		Advanced Options Advanced Options
		System Default Options System Default Options
	1	Ultilitu Language
		Utility Language

5	DL360/380 server:	Scroll to System Options and press Enter
	Configure iLO Serial	Change power profile (same as blades)
	Port	
		Select Serial Port Options and press Enter
		Serial Port Ontions
		Oduanced Monoru Protection
		Processor Uptions
		NUMLUCK Power-Un State
		Press Enter to select <i>Embeded Serial Port</i> and change it to <i>COM2</i> and press
		Enter
		Embedded Serial Port
		Virtual Serial Port
		tion
		P CUM 1; IKU4; IU: 3F8h-3FFh
		N COM 2; IRQ3; IO: 2F8h-2FFh
		└── <mark>──────────────────────────────────</mark>
		ry Disahled
		Proud tou
		Press Enter to select <i>Virtual Serial Port</i> and change it to <i>COM1</i> and press
		Enter
		Embedded Serial Port
		Virtual Serial Port
		tion
		N COM 1; IRQ4; IO: 3F8h-3FFh
		COM 2: IR03: IO: 2F8h-2FFh
		11 COM 3 . 1805 . 10 . 3E86-3EE6
		v pisabled
)S ^{IL}
		Press <esc></esc> 2 times to return to the main menu

Procedure 1.	Configure the	RMS Server	BIOS Settings	and Update Firmware
			2100 Strings	

6	6 DL360/380 server: Scroll to <i>Standard Boot Order (IPL)</i> and press Enter		
	Order	If DL360 of DL380 Gen6: Select <i>CD-ROM</i> , and set its boot order to 1 as shown below	
		If DL380 Gen8: Select USB DriveKey, and set its boot order to 1 as shown below	
		IPL:1 CD-ROM IPL:2 Flo IPL:3 USB Set the IPL Device Boot Order to 1 IPL:4 Har Set the IPL Device Boot Order to 2 D RCL Set the IPL Device Boot Order to 2	
		Set the IPL Device Boot Order to 3 Set the IPL Device Boot Order to 4 Set the IPL Device Boot Order to 5	
		Press Enter Press <esc> to return to the main menu.</esc>	
7	DL360/380 server: Configure Server	Select "Server Availability"	
	Availability	Verify that Power-On Delay" is set to "No Delay", if it is not, then set it.	
8	DL360/380 server: Save Configuration and Exit	Press <esc></esc> twice then press F10 to save the configuration and exit. The server will reboot	
9	DL360/380 server: Perform an unattended firmware	The server will reboot into the <i>HP Smart Update Firmware</i> ISO and present the following boot prompt.	
	upgrade	Press [Enter] to select the Automatic Firmware Update procedure.	
		Automatic Firmware Update Version 9.00 Interactive Firmware Update Version 9.00	
		28	
		If no key is pressed in 30 seconds the system will automatically perform an Automatic Firmware Update.	

10	DL360/380 server: System analysis	The firmware install will perform a system scan of the server in which it will identify all of the firmware components that are eligible for upgrade. This process may take up to 10 minutes and during that time the following screen is displayed on the console.		
		Integrated Lights-Out 2 HP ProLiant Remote Console host Right mouse drag whenever necessary to align the If necessary, click in Remote Console image below		
		Refresh Terminal Bycs Ctrl-Alt-Del Alt Lock High Performance Mouse Local Cursor Def Analyzing the system for unattended installation. This could take several minutes Image: Course of the system for unattended installation.		
		Note : No progress indication is displayed during the system scan and analysis stage. In about 10 minutes the installation will automatically proceed to the next step.		
	DL360/380 server: Monitor installation	Once analysis is complete the installer will begin to upgrade the eligible firmware components. A progress indicator is display at this time as shown below. Step 1 of 3: Build Inventory of Available Updates Step 2 of 3: Check System for Installed Items		
		Step 3 of 3: Install Updates Installing: HP SAS EXP Card ↓ Updates Remaining: 5 Estimated Time Remaining: 9 Minutes, 43 Seconds 1%		
		<u>Cancel</u> Note: If the iLO2 firmware is to be upgraded it will be upgraded last. At this point the iLO2 session will be terminated and you will lose the remote console, virtual media and Web GUI connections to the server. This is expected and will not impact the firmware upgrade process.		
12	Local Workstation: Clean up	Once the firmware updates have been completed the server will automatically be rebooted. At this time you may close the remote console and the iLO2 Web GUI browser session.		

13	Local Workstation: Verify server availability	Wait 3 to 5 minutes and verify the server has rebooted and is available by gaining access to the login prompt.
14	DL360/380 server: Remove the firmware Media	Remove the HP Smart Update Firmware DVD/USB media from the drive. Exit from the Integrated Remote Console.
15	Repeat for all remaining RMS	Repeat this procedure for all remaining RMS Server, if any.

Procedure 2. Install TVOE 2.0 on First RMS Server

S T	This procedure will install TVOE 2.0 on the First RMS Server		
E P	Needed material: - TVOE 2.0 Media on DVD or bootable USB Drive (if DL380 Gen8) Check off (𝔄) 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	Connect to the First RMS Server	Connect to the Server using a VGA Display and USB Keyboard, or via the iLO interface using IE.	
		Appendix C though F explains how to access the PM&C iLO and change the address if necessary.	
	DL360/380 Server 1: Insert TVOE Media into Server	Insert the DVD or Bootable USB Drive (if DL380 Gen8) containg the TVOE media.	
3	DL360/380 Server 1: Begin IPM Process	Once the Server reboots, it will reboot from the TVOE media and a boot prompt shall be displayed.	
		IPM the server using the following command:	
		TPDnoraid diskconfig=HPHW, force console=tty0	

Procedure 2. Install TVOE 2.0 on First RMS Server

4	DL360/380 Server 1: IPM Complete	The IPM process takes about 30 minutes, you will see several messages and screens in the process. Once the IPM is complete, you will be prompted to press Enter as shown below. Remove the media from the drive or unmount the TPD image from the iLO and press Enter to reboot the server. Note that the CD may eject automatically. CentOS-4 i306 Released via the GPL Congratulations, your CentOS-4 i306 installation is complete. Remove any installation media (diskettes or CD-ROMs) used during the installation process and press (Enter) to reboot (Enter) to reboot
5	DL360/380 Server 1: Server Reboot	Once the Server Reboots, you should see a login prompt. Note that during the first system boot, swap files may be initialized and activated. Each swap file will take about 2 minutes. If no login prompt is displayed after waiting 15 minutes, contact Tekelec Customer Support for Assistance.

Procedure 3. TVOE/Management Server Network Configuration

S T	This procedure will con	figure the Networl	k on the TVOE/Manag	gement Serv	er		
E	Prerequisite: <i>Procedure 1</i> . has been completed.						
P #	Check off (ψ) each step as it is completed. Boxes have been provided for this purpose under each step number.						
"	IF THIS PROCEDURE FAILS, CO	NTACT TEKELEC TECHN	NICAL SERVICES AND ASK F	OR ASSISTANCE	1.		
	Refer to the table below to determine the Ethernet port names to use throughout this procedure based on the hardware type and configuration.						
	Network Interface	DL360 (w/o HP NC364T 4pt Gigabit)	DL360 (with HP NC364T 4pt Gigabit in PCI Slot 1)	DL380	DL380 (with HP NC364T 4pt Gigabit in PCI Slot 1)		
	<pre><ethernet_interface_1></ethernet_interface_1></pre>	eth01	eth01	eth01	eth01		
	<pre><ethernet_interface_2></ethernet_interface_2></pre>	eth02	eth02	eth02	eth02		
	<pre><ethernet_interface_3></ethernet_interface_3></pre>		eth21	eth03	eth03		
	<ethernet_interface_4></ethernet_interface_4>		eth22	eth04	eth04		
	<pre><ethernet_interface_5></ethernet_interface_5></pre>		eth23		eth11		
	<u>.</u>	. <u>i</u>	. <u>i</u>	<u>i</u>			

1	Determine Bridge names and interfaces	Determine the bridge name to be used on the TVOE management server for the management network and fill in the <tvoe_management_bridge> and <tvoe_management_bridge_interface> values in the table below. If netbackup is to be used, determine the bridge name to be used for the netbackup network and fill in the <tvoe_netbackup_bridge> and <tvoe_netbackup_bridge_interface> values in the table below</tvoe_netbackup_bridge_interface></tvoe_netbackup_bridge></tvoe_management_bridge_interface></tvoe_management_bridge>			
		PM&C Interface Alias	TVOE Bridge Name	TVOE Bridge Interface	
		control	control	Fill in the appropriate value (default is bond0):	
				<tvoe_control_bridge_interfac e></tvoe_control_bridge_interfac 	
		management	Fill in the appropriate value: (default is management)	Fill in the appropriate value:	
			<tvoe_management_bridge></tvoe_management_bridge>	<tvoe_management_bridge_in terface></tvoe_management_bridge_in 	
		Netbackup (if applicable)	Fill in the appropriate value: (default is netbackup)	Fill in the appropriate value:	
			<tvoe_netbackup_bridge></tvoe_netbackup_bridge>	<tvoe_netbackup_bridge_inte rface></tvoe_netbackup_bridge_inte 	
2	TVOE iLO: Login and launch the integrated remote console	Log in to iLO i http:// <ma Click in the Re Console on the Click Yes if</ma 	in IE using password provided by nagement_server_iLO_ip emote Console tab and launch he server. the Security Alert pops up	y application: >> h the Integrated Remote	

3	TVOF il O. Varify	Varify the control network by running the following command
5	the Control Network	Note: The output below is for illustrative purposes only. The example output below
	the Control Network	shows the control bridge configured
		snows the control offage configured.
		# netAdm querytype=Bridgename=Control
		Bridge Name: control
		On Boot: yes
		Protocol: dhcp
		Persistent: yes
		Promiscuous: no
		If the output matches the one above, then the Control Bridge already exists, do not
		execute the rest of this step and skip to the next step
		execute the rest of this step that ship to the next step.
		Create control bridge (<tvof bridge="" control="">)</tvof>
		# net1dm adddevice=hond0
		onboot=vestype=Bondingmode=active-backupmiimon=100
		Interface <tvoe bridge="" control="" interface=""> added</tvoe>
		<pre># netAdm setdevice=eth01type=Ethernet</pre>
		master= <tvoe bridge="" control="" interface="">slave=ves</tvoe>
		onboot=ves
		Interface <ethernet 1="" interface=""> updated</ethernet>
		<pre># netAdm setdevice=eth02type=Ethernet</pre>
		master- <tvoe bridge="" control="" interface="">slave=ves</tvoe>
		onboot=yes
		Interface <ethernet 2="" interface=""> updated</ethernet>
		<pre># netAdm addtype=Bridgename=controlbootproto=dhcp</pre>
		onboot=yes
		bridgeInterfaces= <tvoe_control_bridge_interface></tvoe_control_bridge_interface>
	TVOE iLO: Create	If you are using a tagged control network interface on this PMAC, then complete
	tagged control	this step. Otherwise, skip on to the next step.
	interface and bridge	I I I I I I I I I I I I I I I I I I I
	(ontional)	<pre># netAdm settype=Bridgename=controldelBridgeInt=bond0</pre>
	(optional)	Interface bond0 updated
		Bridge control updated
		<pre># netAdm adddevice=<tvoe bridge="" control="" interface=""></tvoe></pre>
		Interface <tvoe bridge="" control="" interface=""> created</tvoe>
		<pre># netAdm settype=Bridgename=control</pre>
		bridgeInterfaces= <tvoe_control_bridge_interface></tvoe_control_bridge_interface>

5	TVOE iLO. Verify	Verify the management network by running the following command
5	the Manamgent	Note: The output below is for illustrative purposes only. The example output below
	Network	shows the control bridge configured
	1 totwork	shows the control of age configured.
		<pre># netAdm guerytype=Bridgename=management</pre>
		Bridge Name: manamgent
		On Boot: yes
		Protocol: none
		IP Address: 10.240.4.86
		Netmask: 255.255.255.0
		Promiscuous: no
		Hwaddr: 00:24:81:fb:29:52
		MTU:
		Bridge Interface: bond0.2
		If the bridge has been configured, skip to the next step.
		Note: The output below is for illustrative purposes only. The site information for
		this system will determine the network interfaces, (network devices, bonds, and
		bond enslaved devices), to configure.
		If the management interface is on a separate bond then the bond which control uses
		(and already exists), execute the next 3 commands to create the new bond, otherwise
		skip to executing example 1 or example 2.
		<pre># netAdm adddevice=<tvoe_management_bridge_interface></tvoe_management_bridge_interface></pre>
		onboot=yestype=Bondingmode=active-backupmiimon=100
		Interface <tvoe_management_bridge_interface> added</tvoe_management_bridge_interface>
		# netAdm setdevice= <ethernet 3="" interface="">type=Ethernet</ethernet>
		master= <tvoe bridge="" interface="" management="">slave=ves</tvoe>
		onboot=yes
		Interface <ethernet_interface_3> updated</ethernet_interface_3>
		<pre># netAdm setdevice=<ethernet_interface_4>type=Ethernet</ethernet_interface_4></pre>
		master- <tvoe_management_bridge_interface>slave=yes</tvoe_management_bridge_interface>
		Interface <ethernet 4="" interface=""> undated</ethernet>
		EXAMPLE 1: Create Management bridge using untagged interfaces
		(<tvoe bridge="" management="">).</tvoe>
		<pre># netAdm addtype=Bridgename=<tvoe_management_bridge></tvoe_management_bridge></pre>
		bootproto=noneonboot=yes
		address= <management_server_tvoe_ip></management_server_tvoe_ip>
		netmask= <management_server_tvoe_netmask></management_server_tvoe_netmask>
ĺ		bridgeinterraces-sivor_management_bridge_interrace/
ĺ		EXAMPLE 2: Create Management bridge using tagged interfaces
		<pre># netAdm adddevice=<tvoe_management_bridge_interface></tvoe_management_bridge_interface></pre>
		<pre># netAdm addtype=Bridgename=<tvoe bridge="" management=""></tvoe></pre>
		address= <management ip="" server="" tvoe=""></management>
		netmask= <management_server_tvoe_netmask>onboot=yes</management_server_tvoe_netmask>
		bridgeInterfaces= <tvoe_management_bridge_interface></tvoe_management_bridge_interface>

6	TVOE iLO: Add/Verify the	If NetBackup is to be used, execute this step, otherwise skip to the next step.
	NetBackup Network	NetBackup is a tool that allows the customer to take remote backups of the system.
	(Optional)	Note: The output below is for illustrative purposes only. The example output below
		shows the control bridge configured.
		# netAdm querytype=Bridgename=netbackup Bridge Name: netbackup
		On Boot: yes
		Protocol: none IP Address: 10 240 6 2
		Netmask: 255.255.255.0
		Promiscuous: no Hwaddr: 00.24.81.fb.29.58
		MTU:
		Bridge Interface: bond2
		If the bridge has been configured, skip to the next step.
		Note: The output below is for illustrative purposes only. The site information for this system will determine the network interfaces, (network devices, bonds, and
		bond enslaved devices), to configure.
		Note: The example below illustrates a TVOE management server configuration with the NetBackup feature enabled. The NetBackup network is configured with a non-
		default MTU size.
		Note: The MTU size must be consistent between a network bridge, device, or bond, and associated VLANs.
		Select <u>only one</u> of the following configurations:
		Option 1: Create netbackup bridge using a bond containing an untagged interface # netAdm adddevice= <tvoe_netbackup_bridge_interface> onboot=yestype=Bondingmode=active-backupmiimon=100</tvoe_netbackup_bridge_interface>
		MTU= <netbackup_mtu_size> Interface <tvoe_netbackup_bridge_interface> added</tvoe_netbackup_bridge_interface></netbackup_mtu_size>
		<pre># netAdm setdevice=<ethernet_interface_5>type=Ethernetmaster=<tvoe_netbackup_bridge_interface>slave=yesonboot=yes</tvoe_netbackup_bridge_interface></ethernet_interface_5></pre>
		Interface <ethernet_interface_5> updated</ethernet_interface_5>
		<pre># netAdm addtype=Bridgename=<tvoe_netbackup_bridge>onboot=yesbootproto=noneMTU=<netbackup_mtu_size>bridgeInterfaces=<tvoe_netbackup_bridge_interface>address=<tvoe_netbackup_ip>netmask=<tvoe_netbackup_netmask></tvoe_netbackup_netmask></tvoe_netbackup_ip></tvoe_netbackup_bridge_interface></netbackup_mtu_size></tvoe_netbackup_bridge></pre>
		<u>Option 2:</u> Create NetBackup bridge using an untagged native interface:
		<pre># netAdm addtype=Bridgename=<tvoe_netbackup_bridge>onboot=yesbootproto=noneMTU=<netbackup_mtu_size>bridgeInterfaces=<ethernet_interface_5>address=<tvoe_netbackup_ip>netmask=<tvoe_netbackup_netmask></tvoe_netbackup_netmask></tvoe_netbackup_ip></ethernet_interface_5></netbackup_mtu_size></tvoe_netbackup_bridge></pre>
		Option 3: Create NetBackup bridge using a tagged device:
		<pre># netAdm adddevice=<tvoe_netbackup_bridge_interface>onboot=ves</tvoe_netbackup_bridge_interface></pre>
		Interface <tvoe_netbackup_bridge_interface> added</tvoe_netbackup_bridge_interface>

		<pre># netAdm addtype=Bridgename=<tvoe_netbackup_bridge>onboot=yesMTU=<netbackup_mtu_size>bridgeInterfaces=<tvoe_netbackup_bridge_interface>address=<tvoe_netbackup_ip>netmask=<tvoe_netbackup_netmask></tvoe_netbackup_netmask></tvoe_netbackup_ip></tvoe_netbackup_bridge_interface></netbackup_mtu_size></tvoe_netbackup_bridge></pre>
7	TVOE iLO: Verify the Default Route	Note: The output below is for illustrative purposes only. The example output below shows the control bridge configured.
		<pre># netAdm queryroute=defaultdevice=management Routes for TABLE: main and DEVICE: management * NETWORK: default GATEWAY: 10.240.4.1</pre>
		If the route has been configured, skip to the next step. Note: The output below is for illustrative purposes only. The site information for this system will determine the network interfaces, (network devices, bonds, and bond enslaved devices), to configure.
		<pre>For this example add default route on management network. # netAdm addroute=defaultdevice=<tvoe_management_bridge>gateway=<mgmt_gateway_address> Route to <tvoe_management_bridge> added</tvoe_management_bridge></mgmt_gateway_address></tvoe_management_bridge></pre>
8	TVOE iLO: Add	Add a route to the NetBackup network using one of the following commands.
	NetBackup Route (Optional)	If the NetBackup network is routed:
		<pre># netAdm addroute=net</pre>
		device= <tvoe_netbackup_bridge> address=<netbackup_gateway_network_address></netbackup_gateway_network_address></tvoe_netbackup_bridge>
		netmask= <netbackup_gateway_netmask></netbackup_gateway_netmask>
		Route to <tvoe_netbackup_bridge> added</tvoe_netbackup_bridge>
9	TVOE iLO: Restart	Restart the network interfaces
	interfaces	<pre># service network restart</pre>
10	TVOE iLO: Set	Set the server hostname by running the following:
	Hostname	# su - platcfg
		1. Navigate to Server Configuration > Hostname > Edit.
		3. Press OK.
		4. Navigate out of Hostname
11	TVOE iLO: Set the time zone and/or	1. Navigate to Server Configuration ➤ Time Zone. 2. Salact Edit
	hardware clock	 Sect Edit. Set the time zone and/or hardware clock to UTC or appropriate time zone value. Press OK. Navigate out of Server Configuration
I		

12	TVOE iLO: Set NTP	 Navigate to Network Configuration ➤ NTP. Set NTP server IP address to point to the customer provided NTP server. Press OK. Exit platcfg. Ensure that the time is set correctly by executing the following commands: # service ntpd stop # ntpdate ntpserver1 # service ntpd start
13	TVOE iLO: Set SNMP	 Set SNMP by running the following: # su - platcfg 1. Navigate to Network Configuration > SNMP Configuration > NMS Configuration. 2. Select Edit and then choose Add a New NMS Server. The 'Add an NMS Server' page will be displayed. 3. Complete the form by entering in all information about the SNMP trap destination. Create an entry for the customer SNMP server and another entry for the 4. NO VIP (if 2 tier deployment) or SO VIP (if 3 tier system. Select OK to finalize the configuration. The 'NMS Server Action Menu' will now be displayed. Select Exit. The following dialogue will then be presented. 5. Select Yes and then wait a few seconds while the Alarm Routing Service is restarted. At that time the SNMP Configuration Menu will be presented. 6. exit platcfg.

	1	1
14 □	TVOE iLO: Configure NetBackup	If the NetBackup feature is enabled for this system, configure the appropriate NetBackup client on the PM&C TVOE host.
	(Optional)	1. Enable and start the TVOE-netbackup service using the following commands:
		<pre># service_conf add TVOE-netbackup rc runlevels=345 # service_conf magazing</pre>
		<pre># service_conf feconing # service TVOE-netbackup start</pre>
		2. Enable platcfg to show the Netbackup Menu Items by executing the following commands:
		<pre># platcfgadmshow NBConfig; # platcfgadmshow NBInit:</pre>
		<pre># platefgadmshow NBDeInit; # platefgadmshow NBDeInit;</pre>
		<pre># platcigadmshow NBInstall; # platcfgadmshow NBVerifyEnv;</pre>
		<pre># platcfgadmshow NBVerify;</pre>
		3. Create LV and filesystem for Netbackup client software on the vgguests volume group:
		<pre># echo "lvmountpoint=/usr/openvsize=2G</pre>
		name=netbackup_lvvg=vgguests" > /tmp/nb.lvm
		<pre># /usr/TKLC/plat/sbin/storageMgr /tmp/nb.lvm</pre>
		This will create the LV, format it with a filesystem, and mount it under /usr/openv/.
		Called with options: /tmp/nb.lvm
		VG vgguests already exists.
		Volume netbackup_lv will be created.
		Success: Volume netbackup_lv was created.
		Updating fstab for lv netbackup_lv.
		Configuring existing lv netbackup_lv. The LV for netbackup has been created!
		4. Install the netbackup client software:
		Refer to Appendix J on instructions how to install the netbackup client.
		Note: Skip any steps relating to copying netbackup "notify" scripts to /usr/openv/netbackup/bin. The TVOE netbackup notify scripts are taken care of in the next step.
		5. Create softlinks for TVOE specific netbackup notify scripts.
		<pre># ln -s /usr/TKLC/plat/sbin/bpstart_notify /usr/openv/netbackup/bin/bpstart_notify</pre>
		<pre># ln -s /usr/TKLC/plat/sbin/bpend_notify /usr/openv/netbackup/bin/bpend_notify</pre>
		Note: Once the Netbackup Client is installed on TVOE, the NetBackup Master should be configured to backup the following files form the TVOE host: • /var/TKLC/bkp/*.iso

15	Management server iLO: Setup syscheck	syscheck must be configured to monitor bonded interfaces. Replace "bondedInterfaces" with "bond0" or "bond0,bond1" if segregated networks are used:
		<pre># syscheckAdm net ipbondsetvar=DEVICESval=<bondedinterfaces></bondedinterfaces></pre>
		<pre># syscheckAdm net ipbondenable</pre>
		# syscheck -v net ipbond
16	TVOE iLO: Verify Server Health	Execute the following:
		<pre># alarmMgralarmStatus</pre>
		This command should return no output on a healthy system. If any alarms are reported, contact Customer Care Center.
17	Management server	Execute the following:
	TVOE backup using	# su - platcfg
	ITD platerg utility	Navigate to Maintenance ➤ Backup and Restore Select "Backup Platform (CD/DVD)"
		Note: If no cdrom device is found by TPD, you will receive an error dialog with the message: "No disk device available. This is normal on systems without a cdrom device." Press enter to continue.
		Select an applicable backup option (e.g. Build ISO file only), and press enter to continue. Exit from TPD platcfg utility.
		The TVOE backup can be found in the "/var/TKLC/bkp/" directory, and is prefixed by the server hostanem. An example of a TVOE backup ISO follows: /var/TKLC/bkp/RMS503u14-plat-app-201210301505.iso
		Move the TVOE backup to a customer provided backup server for safe keeping.

4.2 Install PM&C

Procedure 4. PM&C Deployment Procedure

S	This procedure will	deploy PM&C on the TVOE Host
E P	Prerequisite: Proced	ure 3. TVOE/Management Server Network Configuration has been completed.
#	Check off (\mathbf{v}) each step as it is	s completed. Boxes have been provided for this purpose under each step number.
	IF THIST ROCEDORE FAILS	, CONTACT TERELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.
1	TVOE iLO: Login and launch the integrated remote	Log in to iLO in IE using password provided by application: http:// <management_server_ilo_ip></management_server_ilo_ip>
	console	Click in the Remote Console tab and launch the Integrated Remote Console on the server.
		Click Yes if the Security Alert pops up.
2	TVOE iLO: Mount	If using a DVD media, insert the pmac DVD into the optical drive and execute the
---	-------------------	---
	the PM&C media to	following to get the Optical Drive letter and mount it:
	the TVOE	
	Management server	# getCDROM
		DV-W28E-RW sr0
		/dev/sr0
		<pre># mount -t iso9660 /dev/sr0 /mnt/upgrade/</pre>
		If using a USB Drive, run the following to mount it:
		# ls /media/*/*.iso
		/media/sdd1/872-2441-104-5.0.0_50.8.0-PMAC-x86_64.iso
		Use the output of the previous command to populate the next command
		<pre># mount -o loop /media/sdd1/872-2441-104-5.0.0_50.8.0- PMAC-x86_64.iso /mnt/upgrade</pre>
		If using an ISO image, run the following to mount it:
		<pre># mount -o loop ISO_FILENAME.iso /mnt/upgrade</pre>
		Validate the pmac media by executing the following commands:
		<pre># cd /mnt/upgrade/upgrade</pre>
		# .validate/validate_cd
		<pre>Validating cdrom UMVT Validate Utility v2.2.2, (c)Tekelec, June 2012 Validating <device iso="" or=""> Date&Time: 2012-10-25 10:07:01 Volume ID: tklc_872-2441-106_Rev_A_50.11.0 Part Number: 872-2441-106_Rev_A Version: 50.11.0 Disc Label: PMAC Disc description: PMAC The media validation is complete, the result is: PASS CDROM is Valid</device></pre>
		If the media validation failes, the media is not valid and should not be used.

3	TVOE iLO: deploy PM&C	Using the pmac-deploy script, deploy the PM&C instance using the configuration captured during the site survey. # cd /mnt/upgrade/upgrade If deploying PM&C without netbackup feature, run the following command: # ./pmac-deployguest= <pmac_name> hostname=<pmac_name> controlBridge=<tvoe_control_bridge> controlIP=<pmac_control_ip_address> controlIM=<pmac_control_netmask> managementIP=<pmac_management_ip_address> managementIP=<pmac_management_ip_address> ntpserver=<tvoe_management_gateway_address> ntpserver=<tvoe_management_server_ip_address> If deploying PM&C with netbackup feature, run the following command: # ./pmac-deployguest=<pmac_name> hostname=<pmac_name> controlIP=<pmac_control_bridge> controlIP=<pmac_control_pridge> controlIP=<pmac_control_ip_address> controlIP=<pmac_control_ip_address> controlIP=<pmac_control_ip_address> controlIP=<pmac_control_netmask> managementIP=<pmac_management_ip_address> managementIP=<pmac_management_ip_address> managementIP=<pmac_management_ip_address> managementIP=<pmac_management_ip_address> ntpserver=<tvoe_management_server_ip_address> ntpserver=<tvoe_management_server_ip_address> ntpserver=<tvoe_management_server_ip_address> ntpserver=<tvoe_management_server_ip_address> ntpserver=<tvoe_management_server_ip_address> ntpserver=<tvoe_management_server_ip_address> ntpserver=<tvoe_management_server_ip_address> ntpserver=<tvoe_management_server_ip_address> ntpserver=<tvoe_management_server_ip_address> ntpserver=<tvoe_management_server_ip_address> ntpserver=<tvoe_management_server_ip_address> ntpserver=<tvoe_management_server_ip_address> ntpserver=<tvoe_management_server_ip_address> ntpserver=<tvoe_management_server_ip_address> ntpserver=<tvoe_management_server_ip_address> ntpserver=<tvoe_management_server_ip_address> ntpserver=<tvoe_management_server_ip_address> ntpserver=<tvoe_management_server_ip_address> ntpserver=<tvoe_management_server_ip_address> ntpserver=<tvoe_management_server_ip_address></tvoe_management_server_ip_address></tvoe_management_server_ip_address></tvoe_management_server_ip_address></tvoe_management_server_ip_address></tvoe_management_server_ip_address></tvoe_management_server_ip_address></tvoe_management_server_ip_address></tvoe_management_server_ip_address></tvoe_management_server_ip_address></tvoe_management_server_ip_address></tvoe_management_server_ip_address></tvoe_management_server_ip_address></tvoe_management_server_ip_address></tvoe_management_server_ip_address></tvoe_management_server_ip_address></tvoe_management_server_ip_address></tvoe_management_server_ip_address></tvoe_management_server_ip_address></tvoe_management_server_ip_address></tvoe_management_server_ip_address></pmac_management_ip_address></pmac_management_ip_address></pmac_management_ip_address></pmac_management_ip_address></pmac_control_netmask></pmac_control_ip_address></pmac_control_ip_address></pmac_control_ip_address></pmac_control_pridge></pmac_control_bridge></pmac_name></pmac_name></tvoe_management_server_ip_address></tvoe_management_gateway_address></pmac_management_ip_address></pmac_management_ip_address></pmac_control_netmask></pmac_control_ip_address></tvoe_control_bridge></pmac_name></pmac_name>
4	TVOE ILO: Unmount the media	The media should auto-unmount, if it does not, unmout the media using the following command:
		<pre># cd / # umount /mnt/upgrade</pre>
		Remove the media from the drive.

5	TVOE iLO: SSH	Using an SSH client such as putty, ssh to the TVOE host using root credentials.
	into the Management	
	Server	Login using virsh , and wait until you see the login prompt :
		virsh # list
		Id Name State
		13 myTPD running 20 pmacdev7 running
		virsh # console pmacdev7
		[Output Removed]
		Starting ntdMgr: [OK] Starting atd: [OK]
		'TPD Up' notification(s) already sent: [OK] upstart: Starting tpdProvd
		upstart: tpdProvd started.
		Kernel 2.6.32-220.17.1.el6prerel6.0.0_80.14.0.x86_64 on an
		x86_64
6	Virtual PM&C:	Run the following command (there should be no output):
	configured correctly	<pre># ls /usr/TKLC/plat/etc/deployment.d/</pre>
	on first boot	
7	Virtual PM&C: Set	Determine the TimeZone to be used for the PM&C
	the FM&C timezone	Note: Valid time zones can be found in Appendix J
		Run
		<pre># set_pmac_tz.pl <timezone></timezone></pre>
		For example
		<pre># set_pmac_tz.pl Etc/UTC</pre>
		Verify that the timezone has been updated:
		# date
8	Virtual PM&C: Set SNMP	Set SNMP by running the following:
		# su - platcfg
		1. Navigate to Network Configuration ➤ SNMP Configuration ➤ NMS Configuration.
		 Select Edit and then choose Add a New NMS Server. The 'Add an NMS Server' page will be displayed. Complete the form by entering in all information about the SNMP trap destination (generally the SO VIP should be used). Select OK to finalize the configuration. The 'NMS Server Action Menu' will now be displayed. Select Exit. The following dialogue will then be presented. Select Ves and then wait a few seconds while the Alarm Bouting Service is
		restarted. At that time the SNMP Configuration Menu will be presented. 5. exit platcfg.

9	Virtual PM&C:	Reboot the server by running:
	Reboot the server	
		# INIC 6

4.3 Gather and Prepare Configuration Files

Procedure 5. Gather/Prepare Configuration Files

S T	Use this procedure to DSR 4 x installation	gather and prepare configuration files that are required to proceed with the
Ē	Dort 4.X instantation.	
Р #	Needed material:	
#	- HP Misc. Firmw	are DVD
	- HP Solutions Fir	mware Upgrade Pack Release Notes [1]
	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.
1	TVOE Host: Get the application ISO	Once the PM&C is done rebooting, SSH to the PM&C server as root using the PM&C Management Network IP. Depending on whether the PM&C server is a VM guest, or installed directly on a rack-mount server, and depending on whether your upgrade media is an actual DVD disk or an ISO image, make the upgrade media available to the server.
		Since the PM&C is installed as a guest VM on TVOE, mount the media on the TVOE Host using one of the following commands:
		 If the DSR 4.x application in on a physical disk, insert disk into the drive. Determine the cdrom of the server # getCDROM
		/dev/sr0 (the physical Optical Drive for this server)
		/dev/sr1 (Virtual Optical Drive)
		Mount the Optical media
		<pre># mkdir /media/cdrom</pre>
		<pre># mount /dev/sr0 /media/cdrom</pre>
		2. If using a USB Drive, run the following to mount it:
		<pre># ls /media/*/*.iso /media/sdd1/872-2507-111-4.1.0_41.16.2-DSR-x86_64.iso</pre>
		Use the output of the previous command to populate the next command
		<pre># mount -o loop /media/sdd1/872-2507-111-4.1.0_41.16.2- DSR-x86_64.iso /mnt/upgrade</pre>
		3. If the DSR in on an ISO, mount it using the following commands # mkdir /media/cdrom # mount -o loop <path iso="" to=""> /media/cdrom</path>

Procedure 5. Gather/Prepare Configuration Files

2	Management	If the PM&C in installed on directly on the RMS, execute the following commands
	server: Get	to copy the required files (Optionally, these files can be retrieved from the NAPD):
	Netconfig, csv, and other support files	<pre># cp -R /media/cdrom/upgrade/overlay/* /usr/TKLC/smac/etc</pre>
	from the application ISO	If using a CDROM or ISO, unmount it using the following command: # umount /media/cdrom
		If the PM&C in installed as a TVOE Guest, execute the following commands to copy the required files: Note that the < PMAC Management_IP Address > is the one used to deploy PM&C in procedure 4, step 3
		<pre># scp -R /media/cdrom/upgrade/overlay/* root@<pmac address="" management_ip="">:/usr/TKLC/smac/etc</pmac></pre>
		If using a CDROM or ISO, unmount it using the following command:
		<pre># umount /media/cdrom</pre>
		Remove the DSR 4.x application media from the management server.
3	Management server: Copy IOS images into place (this will copy both the 4948E and 3020 IOS images into place).	Insert the <i>Misc. Firmware</i> media into the CD or USB drive of the management server. For this step, be sure to use the correct IOS version specified by the <i>Firmware Upgrade Pack Release Notes[1]</i> . Copy each IOS image called out by the release notes [1]. If using a CDROM drive, mount it using the following command. If using a USB, skip this command as it will get auto-mounted: # mount /dev/sr0 /media/cdrom Execute the following commands to copy the required files. Note that the <pmac Management_IP Address> is the one used to deploy PM&C in procedure 4, step 3 # scp -p /media/cdrom/files/<4948E_IOS_image_filename> root@<pmac address="" management_ip="">:/var/TKLC/smac/image # scp =p</pmac></pmac
		<pre># scp -p /media/cdrom/files/<3020(6120)_IOS_image_filename> root@<pmac address="" management_ip="">:/var/TKLC/smac/image</pmac></pre>
		Note that If both 3020 and 6120 enclosure switches are present, make sure you copy the images for both type of switches by re-running the previous command.
		If using a CDROM drive, unmount it using the following command:
		<pre># umount /media/cdrom</pre>
		Remove the Misc. Firmware media from the drive.
4		If configuring a system with Aggregation switches, continue to procedure 6. If configuring a system without aggregation switches, skip to procedure 7.

4.4 Configure Cisco 4948E Aggregation Switch

4.4.1 Configure Cisco 4948E/4948E-F Switch

The procedures in this section uses NetConfig to configure the switches.

S T E	This procedure will configure 4948E-4948E-F switches with an appropriate IOS and configuration specified by Platform Engineering and Application requirements.		
P #	Prerequisite: This procedure assumes a recently IPM'ed TVOE server with a VM hosting the PM&C application.		
	Note: Uplinks must k One of the steps in th <i>Diameter Signaling Ro</i> details.	be disconnected from the customer network prior to executing this procedure. is procedure will instruct when to reconnect these uplink cables. Refer to [2] <i>uter 4.0 on HP C-Class Networking Interconnect Technical Reference</i> , for more	
	Needed material:		
	 HP Misc. Firmware DVD HP Solutions Firmware Upgrade Pack Release Notes [1] Application CD/DVD 		
	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 TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.	
1	Management server iLO: Log into Management Server	Log in to iLO in IE using password provided by application: http:// <management_server_ilo_ip> Click in the Remote Console tab and launch the Integrated Remote Console on the server. Click Yes if the Security Alert pops up.</management_server_ilo_ip>	
		If not already done so, login as root.	

2	Management server: setup	Before executing the step, make sure the switch is set to default. (refer to step 13 of this procedure on how to reset a switch back to default state).
	conserver serial access to the switches	Configure the conserver service to enable serial access to the switches if you haven't already done so in the previous procedure:
		For switch1A:
		<pre># conserverAdmaddConsolename=switch1A_console device=/dev/ttyS4</pre>
		For switch1B:
		<pre># conserverAdmaddConsolename=switch1B_console device=/dev/ttyS5</pre>
		Note: if the name above was incorrectly entered, the console should be deleted using the following command and added again using the command above:
		<pre># conserverAdmdelConsolename=<console_name></console_name></pre>
		Once the console is added, you should be returned to the command line prompt. If so, continue to the next step; if not, contact Customer Care Center for assistance.
		Open the conserver port on the firewall of the TVOE management server:
		<pre># iptables -I INPUT -s <pmac_mgmtvlan_ip_address>/255.255.255.255 -p all -j ACCEPT</pmac_mgmtvlan_ip_address></pre>
		# service iptables save
3	Management	Verify virtual PM&C installation by issuing the following commands as root on the
Π	server: Login to the	management server:
	console of the virtual PM&C	<pre># virsh listall</pre>
		Id Name State
		6 vm-pmaclA running
		Connect to the pmac VM name listed above using the following command, and login as root.
		<pre># virsh console vm-pmac1A</pre>
		Connected to domain vm-pmac1A Escape character is ^] < Press ENTER key> CentOS release 6.2 (Final)
		Kernel 2.6.32-220.7.1.el6prerel6.0.0_80.13.0.x86_64 on an x86_64 vm-pmac1A login: root Password:
		Last login: Fri May 25 16:39:04 on ttyS4
4	Virtual PM&C: Get	Connect to switch1A, check the IOS version.
	information on the	Connect serially to switch1A by issuing the following command.
	switches	<pre># /usr/bin/console -M <tvoe_server_mgmtvlan_ip_address> -1 platcfg switch1A console</tvoe_server_mgmtvlan_ip_address></pre>
		Enter platcfg@pmac5000101's password: <platcfg_password></platcfg_password> [Enter `^Ec?' for help] Press Enter

		<pre>Switch> show version include image System image file is "bootflash:cat4500-ipbasek9-mz.122- 53.SG2.bin" Note the image version for comparison in a following step. To exit from the console, enter <ctrl-e><c><.> and you will be returned to the server prompt. Connect to switch1B, check the IOS version. Connect serially to switch1B by issuing the following command: # /usr/bin/console -M <tvoe_server_mgmtvlan_ip_address> -1 platcfg switch1B_console Enter platcfg@pmac5000101's password: <platcfg_password> [Enter `^Ec?' for help] Press Enter Switch> show version include image System image file is "bootflash:cat4500-ipbasek9-mz.122- 53.SG2.bin" Note the image version for comparison in a following step. To exit from the console, enter <ctrl-e><c><.> and you will be returned to the server prompt.</c></ctrl-e></platcfg_password></tvoe_server_mgmtvlan_ip_address></c></ctrl-e></pre>
5	Virtual PM&C: Determine if switch IOS upgrade is required	 For each switch, compare the IOS version from previous step with the IOS version specified in the Firmware Upgrade Pack Release Notes [1] for the switch model being used. If the version from previous step is equal the version from the release notes and it has "k9" in the name, denoting it has crypto support, then there is no upgrade necessary for this switch, instead skip to step 13 to erase any existing switch configuration. If only switch1B requires upgrade, skip to step 14. Otherwise, (upgrading only switch1A or upgrading both switch1A & switch1B), continue to step 6.
6	Virtual PM&C: Prepare the Virtual PM&C for tftp transfer of IOS file	<pre>Ensure that the tftp service is not running. A zero is expected. # tpdProvdclientnoxmlns=Xinetd getXinetdService service tftp Login on Remote: platcfg Password of platcfg: 1 # If it returns a 1, need to stop it first by executing this command. # tpdProvdclientnoxmlns=Xinetd stopXinetdService service tftp force yes Login on Remote: platcfg Password of platcfg: 1 # This should return a 1. Edit the /etc/xinetd.d/tftp file for the values in bold so that tftp will work appropriately: # vim /etc/xinetd.d/tftp</pre>

<pre>ure that the tftp service is now running. A "1" is expected. pdProvdclientnoxmlns=Xinetd getXinetdService vice tftp in on Remote: platcfg sword of platcfg: ne output is "0" then, execute the commands that enable tftp transfer. pdProvdclientnoxmlns=Xinetd startXinetdService vice tftp in on Remote: platcfg sword of platcfg: <platcfg_password></platcfg_password></pre>
<pre>from the virtual pmac console, by entering < ctrl-] > and you will be returned he server prompt. opgrading the IOS on switch1A: ure that the interface of the server connected to switch1A is the only interface up obtain the IP address of the management server management interface by forming the following commands: fdown <ethernet_interface_2> fup <ethernet_interface_1> p addr show <management_server_mgmtinterface> grep inet command output should contain the IP address of the variable anagement_server_mgmtVLAN_ip_address>, note it down. bgrading the IOS on switch1B: ure that the interface of the server connected to switch1B is the only interface up obtain the IP address of the management server management interface by forming the following commands: fdown <ethernet_interface_1> fup <ethernet_interface_1> fup <ethernet_interface_1> fup <ethernet_interface_1> fup <ethernet_interface_2> p addr show <management_server_mgmtinterface> grep inet command output should contain the IP address of the variable anagement_server_mgmtVLAN_ip_address>, note it down. incet to the Virtual PMAC by logging into the console of the virtual pmac</management_server_mgmtinterface></ethernet_interface_2></ethernet_interface_1></ethernet_interface_1></ethernet_interface_1></ethernet_interface_1></management_server_mgmtinterface></ethernet_interface_1></ethernet_interface_2></pre>

		<pre># virsh console vm-pmac1A</pre>
8	Virtual PM&C: Attach to switch console	If upgrading the firmware on switch1A, connect serially to switch1A by issuing the following command as root on management server1A:
		<pre># /usr/bin/console -M <tvoe_server_mgmtvlan_ip_address> -l platcfg switch1A_console</tvoe_server_mgmtvlan_ip_address></pre>
		Enter platcfg@pmac5000101's password: <platcfg_password></platcfg_password>
		Press RETURN to get started. Press Enter
		If the switch is not already in enable mode ("switch#" prompt) then issue the " enable " command, otherwise continue with the next step.
		Switch> enable Switch#
		If upgrading the firmware on switch1B, connect serially to switch1A by issuing the following command as root on management server1B:
		<pre># /usr/bin/console -M <tvoe_server_mgmtvlan_ip_address> -l platcfg switch1B_console</tvoe_server_mgmtvlan_ip_address></pre>
		Enter platcfg@pmac5000101's password: <platcfg_password></platcfg_password>
		Press RETURN to get started. Press Enter
		If the switch is not already in enable mode ("switch#" prompt) then issue the " enable " command, otherwise continue with the next step.
		Switch> enable Switch#
9	Virtual PM&C:	Platform version specific to be on the management vlan:
	Configure port on the switch to be upgraded. To ensure	Switch# conf t
		Switch(config)# vlan <switch_mgmtvlan_id></switch_mgmtvlan_id>
		Switch(config)# int vlan <switch_mgmtvlan_id></switch_mgmtvlan_id>
	connectivity, ping the	If configuring switch1A, use this command:
	management server's management vlan ip address from the switch.	Switch(config-if)# ip address <switch1a_mgmtvlan_ip_address> <netmask></netmask></switch1a_mgmtvlan_ip_address>
		If configuring switch1B, use this command:
		<pre>Switch(config-if)# ip address <switch1b_mgmtvlan_ip_address> <netmask></netmask></switch1b_mgmtvlan_ip_address></pre>
		If configuring either switch1A or switch1B, execute these commands:
		Switch(config-if)# no shut
		Switch(config-if)# int gi1/40
		<pre>Switch(config-if) # switchport mode trunk</pre>

		Switch(config-if)# spanning-tree portfast trunk
		Switch(config-if) # write mem
		Switch(config-if)# end
		Now issue ping command:
		Switch# ping <pm&c_mgmtvlan_ip_address></pm&c_mgmtvlan_ip_address>
		Type escape sequence to abort.
		<pre>Sending 5, 100-byte ICMP Echos to <management_server_mgmtvlan_ip_address>, timeout is 2 seconds:</management_server_mgmtvlan_ip_address></pre>
		11111
		Success rate is 100 percent (5/5), round trip min/avg/max = 1/1/4 ms
		If ping is not successful, doublecheck that the procedure was completed correctly by repeating all steps up to this point. If after repeating those steps, ping is still unsuccessful, contact Tekelec Customer Service.
10	Virtual PM&C (switch console	On the switch, copy the IOS file over to the switch by issuing the following command sequence:
	session): Upload the IOS to the switch and	Switch> en
	set it to be the active	Switch# copy tftp: bootflash:
	IOS and delete the previous IOS verison	Address or name of remote host []? <pmac_mgmtvlan_ip_address></pmac_mgmtvlan_ip_address>
		Source filename []? <ios_image_file></ios_image_file>
		Destination filename [<ios_image_file>]? Enter</ios_image_file>
		Press Enter here, you do NOT want to change the filename
		Accessing tftp:// <pmac_mgmtvlan_ip_address>/<ios_image_file></ios_image_file></pmac_mgmtvlan_ip_address>
		Loading <ios_image_file> from < pmac_mgmtVLAN_ip_address> (via Vlan2): !!!!!! [OK - 45606 bytes]</ios_image_file>
		45606 bytes copied in 3.240 secs (140759 bytes/sec)
		Switch# dir bootflash:
		Directory of bootflash:/
		1 -rwx 17779888 May 11 2011 02:25:23 -05:00
		cat4500-entservicesk9-mz.122-53.SG.bin
		2 -rwx 17779888 May 11 2011 02:25:23 -05:00
		cat4500-ipbasek9-mz.122-53.SG2.bin
		60817408 bytes total (43037392 bytes free)
11	Virtual PM&C	Set the active IOS image:
	(switch console session): Set the active IOS image and	Switch# conf t
		Switch(config)# boot system flash bootflash: <ios_image_file></ios_image_file>
	config-register from the switch console	<pre>Switch(config)# no boot system flash bootflash:< OLD_IOS_image_file></pre>
	session that was	Switch(config)# config-register 0x2102

	established.	Switch(config)# end
		Switch# write memory Switch#
		Verify the changes:
		Switch# show run include boot
		boot-start-marker boot system flash bootflash: <ios_image_file> boot-end-marker</ios_image_file>
		Switch# show version include register
		Configuration register is 0xxxxx (will be 0x2102 at next reload)
		Switch# reload
		Proceed with reload? [confirm]
		Wait until the switch reloads, then issue the following command to ensure the switch is at the appropriate IOS version:
		Switch> show version include image
		System image file is "bootflash:cat4500-ipbasek9-mz.122- 53.SG2.bin"
		If the switch is not at the appropriate version, stop here and contact Customer Care Center. If it is, move on to the next step.
12	Virtual PM&C	Switch> en
	(switch console session): Delete any other IOS images if there are multiple IOS images on the	Switch# show bootflash:
		-#lengthdate/time path 1 25771102 Jan 20 2012 08:20:08 <ios_image_file> 2 16332568 Jan 24 2012 18:54:44 <old_ios_image></old_ios_image></ios_image_file>
	switch delete the	
	switch, delete the unused images.	Switch# delete /force /recursive bootflash: <old_ios_image></old_ios_image>
	switch, delete the unused images.	Switch# delete /force /recursive bootflash: <old_ios_image> Repeat this step until the only image on the switch is <ios_image_file></ios_image_file></old_ios_image>
13	Virtual PM&C	Switch# delete /force /recursive bootflash: <old_ios_image> Repeat this step until the only image on the switch is <ios_image_file> Switch# conf t</ios_image_file></old_ios_image>
13	Virtual PM&C (switch console session): Reset the	<pre>Switch# delete /force /recursive bootflash:<old_ios_image> Repeat this step until the only image on the switch is <ios_image_file> Switch# conf t Switch(config)# config-register 0x2101</ios_image_file></old_ios_image></pre>
13	Virtual PM&C (switch console session): Reset the switch to factory	<pre>Switch# delete /force /recursive bootflash:<old_ios_image> Repeat this step until the only image on the switch is <ios_image_file> Switch# conf t Switch(config)# config-register 0x2101 Switch(config)# no vlan 2-4094</ios_image_file></old_ios_image></pre>
13	Virtual PM&C (switch console session): Reset the switch to factory defaults	<pre>Switch# delete /force /recursive bootflash:<old_ios_image> Repeat this step until the only image on the switch is <ios_image_file> Switch# conf t Switch(config)# config-register 0x2101 Switch(config)# no vlan 2-4094 Switch(config)# end</ios_image_file></old_ios_image></pre>
13	Virtual PM&C (switch console session): Reset the switch to factory defaults	<pre>Switch# delete /force /recursive bootflash:<old_ios_image> Repeat this step until the only image on the switch is <ios_image_file> Switch# conf t Switch(config)# config-register 0x2101 Switch(config)# no vlan 2-4094 Switch(config)# end Switch# write erase</ios_image_file></old_ios_image></pre>
13	Virtual PM&C (switch console session): Reset the switch to factory defaults	<pre>Switch# delete /force /recursive bootflash:<old_ios_image> Repeat this step until the only image on the switch is <ios_image_file> Switch# conf t Switch(config)# config-register 0x2101 Switch(config)# no vlan 2-4094 Switch(config)# end Switch# write erase Switch# reload</ios_image_file></old_ios_image></pre>
13	Virtual PM&C (switch console session): Reset the switch to factory defaults	<pre>Switch# delete /force /recursive bootflash:<old_ios_image> Repeat this step until the only image on the switch is <ios_image_file> Switch# conf t Switch(config)# config-register 0x2101 Switch(config)# no vlan 2-4094 Switch(config)# end Switch# write erase Switch# reload Wait until the switch reloads, then exit from console, enter <ctrl-e><c><.> and you will be returned to the server prompt.</c></ctrl-e></ios_image_file></old_ios_image></pre>
13	Virtual PM&C (switch console session): Reset the switch to factory defaults	<pre>Switch# delete /force /recursive bootflash:<old_ios_image> Repeat this step until the only image on the switch is <ios_image_file> Switch# conf t Switch(config)# config-register 0x2101 Switch(config)# no vlan 2-4094 Switch(config)# end Switch# write erase Switch# reload Wait until the switch reloads, then exit from console, enter <ctrl-e><c><.> and you will be returned to the server prompt. Repeat steps 7-13 for switch1B, the continue to the next step.</c></ctrl-e></ios_image_file></old_ios_image></pre>

15	Virtual PM&C: Turn off the tftp service of the virtual PM&C.	<pre>Issue the following command to stop the tftp service: # tpdProvdclientnoxmlns=Xinetd stopXinetdService service tftp Login on Remote: platcfg Password of platcfg: <platcfg_password></platcfg_password></pre>
	Virtual PM&C: Setup netConfig repository with necessary console information	Use netConfig to create a repository entry that will use the conserver service that was configured in the previous steps. This command will give the user several prompts. The prompts with <variables> as the answers are site specific that the user MUST modify. Other prompts that don't have a <variable> as an answer must be entered EXACTLY as they are shown here. # netConfigrepo addService name=console_service Service type? (tftp, ssh, conserver, oa) conserver Service host? <tvoe_server_mgmtvlan_ip_address> Enter an option name (q to cancel): user Enter a value for user: platcfg Enter an option name(q to cancel): password Enter a value for password: <platcfg_password> Enter an option name(q to cancel): q Add service for console_service successful To check that you entered the information correctly, use the following command: # netConfigrepo showService name=console_service and check the output, which will be similar to the one shown below: [root@pmac5000101 ~]# netConfigrepo showServices name=console_service Services: Service Name: console_service Type: conserver Host: 10.240.8.47 Options: password: D8396824B3B2B9EE user: platcfg [root@pmac5000101 ~]#</platcfg_password></tvoe_server_mgmtvlan_ip_address></variable></variables>

17	Virtual PM&C: Setup netConfig repository with necessary tftp information	Use netConfig to create a repository entry that will use the tftp service. This command will give the user several prompts. The prompts with <variables> as the answers are site specific that the user MUST modify. Other prompts that don't have a <variable> as an answer must be entered EXACTLY as they are shown here.</variable></variables>
	information	<pre># netConfigrepo addService name=tftp_service Service type? (tftp, ssh, conserver, oa) tftp Service host? <pm&c_mgmtvlan_ip_address> Enter an option name (q to cancel): dir Enter a value for user: /var/TKLC/smac/image Enter an option name(q to cancel): q Add service for tftp_service successful To check that you entered the information correctly, use the following command: # netConfigrepo showService name=tftp_service and check the output, which will be similar to the one shown below: Services: Service Name: tftp_service Type: tftpr Host: 10.240.8.4 Options:</pm&c_mgmtvlan_ip_address></pre>
		[root@pmac5000101 ~]#

18	Virtual PM&C:	Use netConfig to create a repository entry that will use the ssh service. This
	Setup netConfig	command will the user several prompts. The prompts with <variables> as the</variables>
	repository with	answers are site specific that the user MUST modify. Other prompts that don't have
	necessary ssh	a <variable> as answer must be entered EXACTLY as they are shown here.</variable>
	information.	
		Note that the switch backup user password below is not the same as the switch
		password (for c-Class it is the password of the PMAC).
		<pre># netConfigrepo addService name=ssh_service</pre>
		Service type? (tftp, ssh, conserver, oa) ssh
		Service host? <pm&c_mgmtvlan_ip_address></pm&c_mgmtvlan_ip_address>
		Enter an option name (q to cancel): user
		Enter a value for user: <switch_backup_user></switch_backup_user>
		Enter an option name(q to cancel): password
		Enter a value for password: <switch_backup_user_password></switch_backup_user_password>
		Enter an option name(q to cancel): q
		Add service for console_service successful
		To check that you entered the information correctly, use the following command:
		<pre># netConfigrepo showService name=ssh_service</pre>
		and check the output, which will be similar to the one shown below:
		[root@pmac5000101 ~]# netConfigrepo showServices name=ssh_service
		Services:
		Service Name: ssh service
		Type: ssh
		Host: 10.240.8.4
		Options:
		password: D8396824B3B2B9EE
		user: root
		[root@pmac5000101 ~]#

19	Virtual PM&C:	Use netConfig to create a repository entry for switch1A. This command will give the			
	Setup netConfig	user several prompts. The prompts with <variables> as the answers are site specific</variables>			
	repository with	that the user MUST modify.			
	switch1A information	Other prompts that don't have a <variable> as an answer must be entered</variable>			
		EXACTLY as they are shown here.			
		<pre># netConfigrepo addDevice name=switch1AreuseCredentials</pre>			
		Device Vendor? Cisco			
		Device Model? 4948E			
		Should the init oob adapter be added (y/n)? y			
		Adding consoleInit protocol for switch1A using oob What is the name of the service used for OOB access? console_service what is the name of the console for OOB access?			
		switch1A console			
		What is the device console password? <switch console="" password?<="" th=""></switch>			
		Verify Password <switch console="" password=""></switch>			
		what is the platform access username?			
		<switch_platform_username></switch_platform_username>			
		<pre>what is the platform user password? <switch_platform_password></switch_platform_password></pre>			
		Verify Password <switch_platform_password></switch_platform_password>			
		What is the device privileged mode password?			
		<pre><switch_enable_password> Vorify_Password_comitab_enable_password></switch_enable_password></pre>			
		Should the live network adapter be added (v/n)?			
		Adding cli protocol for switch1A using network			
		What is the address used for network device access?			
		<switch1a address="" ip="" mgmtvlan=""></switch1a>			
		Should the live oob adapter be added $(y/n)?$ y			
		Adding cli protocol for switch1A using oob			
		OOB device access already set: console service			
		Device named switch1A successfully added.			
		To check that you entered the information correctly, use the following command:			
		<pre># netConfigrepo listDevices</pre>			
		and check the output, which will be similar to the one shown below.			
		Note: Only switch 1A info has been shown in this example.			
		[root@pmac5000101 ~]# netConfigrepo listDevices Devices:			
		Device: switch14			
		Vendor: Cisco			
		Model: 4948			
		Access: Network: 10.240.8.2			
		Access: OOB:			
		Service: console_service			
		Console: switch1A_console			
		Init Protocol Configured			
		LIVE Protocol Contigured			
	1				

20	Virtual PM&C:	Use netConfig to create a repository entry for switch1B. This command will give the user several prompts. The prompts with <variables> as the answers are site specific.</variables>		
	repository with	that the user MUST modify		
	switch1B information	Other prompts that don't have a $\langle variable \rangle$ as an answer must be entered		
	switchild information	EXACTLY as they are shown here		
		<pre># netConfigrepo addDevice name=switch1BreuseCredentials</pre>		
		Device Vendor? Cisco		
		Device Model? 4948E		
		Should the init oob adapter be added $(y/n)?$ y		
		Adding consoleInit protocol for switch1B using oob		
		What is the name of the service used for OOB access?		
		console_service		
		what is the name of the console for OOB access? switch1B console		
		What is the device console password? <switch_console_password></switch_console_password>		
		Verify Password <switch_console_password></switch_console_password>		
		What is the platform access username?		
		<pre></pre>		
		Windt is the platform user password?		
		What is the device privileged mode password?		
		<pre>switch enable password></pre>		
		Verify Password <switch enable="" password=""></switch>		
		Should the live network adapter be added (v/n) ?		
		Adding cli protocol for switch14 using network		
		What is the address used for network device access?		
		<pre><switch1b address="" ip="" momtvlan=""></switch1b></pre>		
		Should the live oob adapter be added (v/n) ? v		
		Adding cli protocol for switch1B using oob		
		OOB device access already set: console service		
		Device named switch1B successfully added.		
		To check that you entered the information correctly, use the following command:		
		<pre># netConfigrepo listDevices</pre>		
		and check the output, which will be similar to the one shown below.		
		Note: Only the switch1B info has been shown in this example. If the previous step		
		and this step were done correctly, both switch1A and switch1B entries would show up.		
		[root@pmac5000101 ~]# netConfigrepo listDevices		
		Devices:		
		Dovico: switch18		
		Vendor: Cisco		
		Model: 4948		
		Access: Network: 10.240.8.3		
		Access: 00B:		
		Service: console_service		
		Console: switch1B_console		
		Init Protocol Configured		
		Live Protocol Configured		
		[root@pmac5000101 ~]#		

21	Virtual PM&C: Modify configure	Note that the files that are created in this step can be prepared ahead of time using the NAPD.			
	xml file with	Extract the configuration files from the ter file conied in precedure 5			
	initialize the switch.	Extract the configuration files from the tar file copied in procedure 5			
		# cd /usr/TKLC/smac/etc			
		<pre># tar xvzf DSR4.0_NetConfig_templates*</pre>			
		This will create a directory called templates which contains the configuration files for all the supported deployments. Copy the necessary init file from init/Aggregation and the necessary config files from config/TopoX (where X refers to the appropriate topology) using the following commands			
		<pre># cp init/Aggregation/* . # cp config/TopoX/* . (Make sure to replace X with the appropriate Topology number)</pre>			
		Update the 4948E init and configure xml files to match your network parameters. Values to be modified by the user will be notated in this step by a preceding dollar sign. So a value that has \$<some_variable_name></some_variable_name> will need to be modified, removing the dollar sign and the less than, greater than sign.			
		<pre># vi /usr/TKLC/smac/etc/switch1A_4948_E_E- F_cClass_template_init.xml</pre>			
		<pre># vi /usr/TKLC/smac/etc/switch1B_4948_E_E- F_cClass_template_init.xml</pre>			
		<pre># vi /usr/TKLC/smac/etc/4948E-F_L3_configure.xml</pre>			
22 Virtual PM&C: Initialize switch1A by issuing the following command:		Initialize switch1A by issuing the following command:			
	Initialize switch1A	<pre># netConfig file=/usr/TKLC/smac/etc/switch1A_4948_4948E_init.xml</pre>			
		Processing file: /usr/TKLC/smac/etc/switch1A_4948_4948E_init.xml #			
		Note: This step takes about 2-3 minutes to complete. Check the output of this command for any errors. If this fails for any reason, stop this procedure and contact Customer Care Center. A successful completion of netConfig will return the user to the prompt.			
23	Virtual PM&C:	Initialize switch1B by issuing the following command:			
	Initialize switch1B	<pre># netConfig file=/usr/TKLC/smac/etc/switch1B_4948_4948E_init.xml</pre>			
		Processing file: /usr/TKLC/smac/etc/switch1B_4948_4948E_init.xml #			
		Note: This step takes about 2-3 minutes to complete. Check the output of this command for any errors. If this fails for any reason, stop this procedure and contact Customer Care Center. A successful completion of netConfig will return the user to the prompt.			

24	24Virtual PM&C:Configure both switches by issuing the following command:				
	Configure the	<pre># netConfigfile=/usr/TKLC/smac/etc/4948_4948E_configure.xml</pre>			
	switches	Processing file: /usr/TKLC/smac/etc/4948_4948E_configure.xml			
		Note: This step takes about 2-3 minutes to complete.			
		Check the output of this command for any errors. If this fails for any reason, stop this procedure and contact Customer Care Center.			
25	Virtual PM&C:	Ping each of the interfaces to verify switch configuration			
	Verify switch configuration	<pre># ping <switch1a_mgmtvlanip></switch1a_mgmtvlanip></pre>			
		<pre># ping <switch1b_mgmtvlanip></switch1b_mgmtvlanip></pre>			
26	Cabinet: Connect	Attach switch1A customer uplink cables. Refer to application documentation for			
	Uplinks of Switch1A	which ports are uplink ports.			
		Note: If the customer is using standard 802.1D spanning-tree, the links may take up to 50 seconds to become active.			
27	Virtual PM&C•	Verify connectivity to the customer network by issuing the following command			
	Verify access to	verify connectivity to the customer network by issuing the following commune			
	customer network	<pre># ping <customer_supplied_ntp_server_address></customer_supplied_ntp_server_address></pre>			
28	Cabinet: Connect	Attach switch1B customer uplink cables and detach switch1A customer uplink			
	Uplinks of Switch1B	cables. Refer to application documentation for which ports are uplink ports.			
		to 50 seconds to become active.			
29	Virtual PM&C:	Verify connectivity to the customer network by issuing the following command			
	Verify access to				
	customer network	<pre># ping <customer_supplied_ntp_server_address></customer_supplied_ntp_server_address></pre>			
30	Virtual PM&C: Re-	Re-attach switch1A customer uplink cables. Refer to application documentation for			
	attach uplinks of	which ports are uplink ports.			
	SWITCHIA	to 50 seconds to become active			
31	Management	Exit from the virtual pmac console, by entering $\langle ctrl_{-} \rangle$ and you will be returned to			
	server: Restore the	the server prompt.			
	TVOE host back to	Restore the server networking back to original state:			
	its original state.	<pre># service network restart</pre>			
	1				

32	Management server: Backup Switch Configuration	Ensure the directory where the backups will be stored exists using the following command:
		<pre># ls /usr/TKLC/smac/etc/switch/backup</pre>
		If an error is returned saying "No such file or directory", then create the directory using the following command
		<pre># mkdir /usr/TKLC/smac/etc/switch/backup</pre>
		Change the currect path to the newly created directory using the following command
		<pre># cd /usr/TKLC/smac/etc/switch/backup</pre>
		Execute the backup command to backup switch 1A
		<pre># netConfigdevice=switch1A backupConfiguration service=ssh_service filename=switch1A-backup</pre>
Execute the backup command to backup switch 1B		Execute the backup command to backup switch 1B
		<pre># netConfigdevice=switch1B backupConfiguration service=ssh_service filename=switch1B-backup</pre>
		Verify switch configuration was backed up by cat <switch_name>-backup and inspect its contents to ensure it reflects the latest knwon good switch configurations.</switch_name>

4.5 Configure PM&C Server

S	This procedure will provide PM&C configuration using the web interface.						
Т							
Ε	Prerequisite: <i>Procedure 4. PM&C Deployment Procedure</i> has been completed.						
Р							
#	Note: The installer f	ust be knowledgeable of the network. If you make mistake, click Cancel and					
	try again. The finish	step may take longer time because it reconfigures the network and attempts					
	to connect may fail.						
	Check off ($$) each step as it i	is completed. Boxes have been provided for this purpose under each step number.					
	(,,	I I I I I I I I I I I I I I I I I I I					
	IF THIS PROCEDURE FAIL	S, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.					
1	PM&C GUI: Load	Open web browser and enter: http:// <management_network_ip>/gui</management_network_ip>					
	GUI initialization	Login as pmacadmin user.					
	wizard						
		TEKELEC					
		Platform Management & Configuration Login					
		Evisting Llogra					
		Enter your ID and password to log in					
		Username: pmacadmin					
		Password:					
		Log In					
		Unauthorized access is prohibited. The Tekelec Platform Management & Configuration web GUI formally supports Microsoftic Internet Explorer 6.0 or newer. Firefox 1.5 or newer should work though not formally.					
		supported. JavaScript and Cookies are also required.					
		Takeler and long are registered service marks of Takeler. Inc. Used with permission					
		Copyright © 2004 <u>Tekelec, Inc.</u> All Rights Reserved.					

2	PM&C GUI: Select	The first screen will be similar to image below.				
	a profile					
		Profiles				
		File Name TVOE	Name PM&C TVOE Guest	Comment Manage systems from a TVOE hosted PM&C	Version 6.0.0	
			1	nitialize		
		Select the TVOE profile and click on Initialize , then set the role for SERVER IPM				
		are set to Control while the roles for all other features is set to Management .				
		Also make sure that the enabled checkbox is checked for the following:				
		DEVICE.NETWORK.NETBOOT				
		PMAC REMOTE BACKLIP				
		SERVER:IPM				
		PMAC.NETBACKUP (only if NetBackup is used)				
		And click on Next.				
			Car	ncel Next		
		X X 111 1 2 1 0 1				
3	PM&C GUI: Natwork	You will see this defaul	t screen similai	r to: Jockup potwork was provisi	onad and addad	
	Description	Note: In the example below the NetBackup network was provisioned and added.				
	-	Network ID Network Mask				
		Network IP Network Mask				
		169.254.135.0 255.255.255.0				
		10.240.17.0		255.255.255.0		
		192.168.253.0		255.255.255.0		
			Add	Delete		
		Enter the Network IPs and Netmasks for the control and Management				
		Networks.				
		Click Next.				
4	PM&C GUI:	You will see this defaul	t screen simila	r to:		
	Network Roles	Note: In the example be	elow the NetBa	ockun network was provisi	oned and added	
				ienup network was provisi		
		Network IP	Netw	vork Mask	Role	
		169.254.135.0	255.2	255.255.0	control	
		10.240.17.0	255.2	255.255.0	management	
		192.168.253.0	255.2	255.255.0	netbackup	
			Add	Delete		
		Verify the Roles and update if necessary.				
		Click Next.				

5	PM&C GUI: Network Interface	You will see this default screen similar to:					
		Note: In the example below the NetBackup network was provisioned and added					
Device IP Address Description							
		control	169.254.135.1	Control network for managed servers			
		management	10.240.17.97	Management of system devices			
		netbackup	192.168.253.2	netbackup			
		Verify the IP addre	Add Dele	pdate if necessary.			

6	PM&C GUI:	You will see a screen similar to:					
	Network Route						
		Device	Destination IP	Network Mask	Gateway IP		
				Add Delete			
		Click Add	to create new routes. Fo	or the default route, sele	ct the "management"		
		Device, ent	er "0.0.0.0" for both De	estination Address and I	Destination Mask, and		
		enter the gateway IP under Gateway as shown below					
			Device: management	-			
		Destination	Address: 0.0.0.0				
		Destination	on Mask: 0.0.0.0				
		Desunau	Ont Mask. 0.0.0.0				
			Gateway: 10.240.9.131				
		For default re	outes, use the unspecified a	address (0.0.0.0) for both dea	stination address and mask		
					Cancel Add Route		
		If NotDools	is defined add a correct	nonding NotPoolsun Do	vuto		
		NOTE: If t	he NetBackup network	in non-routed. a host r	oute should be used		
		instead of a	network route. (A host	route has the following	y values:		
		Netmask=2	55.255.255.255 and Ga	teway IP = Netbackup	IP)		
		D.1		1 NT (1 - 1	1		
		Below is an	example of default and	i Netbackup routes. In t	this example, a host route		
			ie Neibaekup Neiwork				
		Device	Destination IP	Network Mask	Gateway IP		
		management	0.0.0.0	0.0.0.0	10.240.17.1		
		netbackup	192.168.253.1	255.255.255.255	192.168.253.1		
				Add Delete			
		Click Add	Pourte Depent to def	no moro routo			
		Click Nev+	when done	ne more route.			
		CHCK MEX	when done.				

7	PM&C GUI: DHCP Ranges	You will see this	default scr	een similar	to:			
	Difer Ranges	DHCP Rang	ges					
		Start DHCP	-		En	d DHCP		
		192 168 3 1			10	2 168 3 254		
		102.100.0.1						
				4	Add De	lete		
				Canc	el N	ext		
		If you need to dea	fine additio	onal DHCP	ranges,	press Ad	ld (most deploy	yments DO
		NOT require add	itional DH	CP Ranges,	, Otherv	wise, clicl	(Next.	
8	PM&C GUI:	The following su	mmary scr	een will be	display	red.		
	Settings summary							
		Configuration Summ	ary				We	d Oct 10 14:54:38 2012 UTC
		✓ Network Description						
			Network IP		Netwo	ork Mask		
			169.254.135.0		255.25	55.255.0		
			10.240.17.0		255.25	55.255.0		
			192.168.253.0		255.25	55.255.0		
		 Network and Roles Description 	n					
		Netw	ork IP	Network M	lask	Role		
		169.2	54.135.0 .0.17.0	255.255.25	55.0 55.0	contro	aement	
		192.1	68.253.0	255.255.25	55.0	netba	ckup	
		▼ Network Interface Description	L.					
		Device		IP Address		Description		
		control		169.254.135.1		Control networ	k for managed servers	
		manageme	nt	10.240.17.97		Management o	of system devices	
				192.100.233.2		пераскир		
		Device	Destination IP	۱ ۱	Network Mask		Gateway IP	
		netbackup	192.168.253.1	2	255.255.255.25	55	192.168.253.1	
		→ DHCP Configuration						
			Start DHCD		End D	нср		
			169.254.135.2		169.25	54.135.254		
		Varifie the set 1	and all all a					
		verify the values	and click	rinish.				
		1						

9	PM&C GUI:	The following summ	nary screen will	be displayed,	, click on Tasks t	to view th	e
	Complete the	Initialization Progress.					
	configuration						
	ł	PM&C Initialization					Mon Jul 02
	I	Info Tasks T					
	ł	Tasks ID Task	Target	Status		Start Time	Progress
	I	1 Initialize	PM&C	Initializin	ng PM&C server	2012-07-02	33%
	ł		ind s		y made of the	16:07:20	
	l						
	ł						
	I						
	I						
	ł	Click Tack Monit	tor sta	tue of this tas	l,		
	l	CHICK LASK MONILU	OFTING IOI Sta	tus of tills tasi	ς.		
	ł	ID Task 1	Target	Status	Running Tir	ne Start Time	Progress
	ł	2 Initialize PM&C	urget	PM&C initialized	0:00:39	2011-09-1	9 100%
	ł					14:19:30	
	ł	Wait till the Progress	s bar turns gree	n that signific	es that the PMA	7 Initializ	ation was
	I	successful.	, bui tuins gree	II, unu signi	20 that the 1 1.1	J 111111111	ution
10	PM&C Command	Execute the followin	ig commands:				
	Line: Perform a		-				
	system healthcheck	# alarmMgra	larmStatus	1			
	ł	This command shou	ld return no out	tout on a healt	hv system.		
	ł		lu lotuin no ca.	put on a near	ny system.		
	ł	<pre># sentry statu</pre>	IS				
	ł	411 D	•• ••••	1 • • • •		C 11 .	
	I	All Processes should	i be running, ai	splaying outpi	ut similar to the	tollowing	•
	I	PM&C Sentry Sta	tus				
	I	,					
	I	sentryd started	: Mon Jul 23	3 17:50:49	2012		
	ł	Process	PID Stat	lve us	StartTS	1	NumR
	I						
	I	smacTalk	9039 runn:	ing Tue Jul	L 24 12:50:29) 2012 2	2
	ł	smacMon hpiPortAudit	9094 runn. 9137 runn	ing Tue Jul	L 24 IZ:50:25 1 24 12:50:29) 2012 2) 2012 2	2
	ł	snmpEventHandle	r 9176 runn:	ing Tue Jul	1 24 12:50:29) 2012 2	2
	ł	eclipseHelp	9196 runn:	ing Tue Jul	1 24 12:50:30) 2012 2	2
	l	Eri Aug 3 13.16	• 25 2012				
	I	Command Complet	e.				
		-					

PM&C Command Line: Install NetBackup (Optional)	 1. If the NetBackup client installation will rely on the TPD "nbAutoInstall" process to configure the PM&C NetBackup client perform the following at the PM&C Command Line, otherwise continue to sub bullet 2 below. # mkdir -p /usr/openv/netbackup/bin/ # ln -s /usr/TKLC/smac/sbin/bpstart_notify /usr/openv/netbackup/bin/ # ln -s /usr/TKLC/smac/sbin/bpend_notify /usr/openv/netbackup/bin/ Use TPD platcfg utility to add the NetBackup Server's alias and IP to the "/etc/hosts" file. 2. Refer to [4] Platform 6.x Configuration Procedure Reference, procedure 3.8.14 for instructions on installing the NetBackup client on the Management Server.
PM&C Command Line: Perform a backup	<pre>Perform PM&C application backup using the following command: # pmacadm backup PM&C backup been successfully initiated as task ID 7 [root@PMACDev3 ~]# Note: The backup runs as a background task. To check that status of the background task use the PM&C GUI Task Monitor page, or issue the command " pmaccli getBgTasks ". The result should eventually be "PM&C Backup successful" and the background task should indicate "COMPLETE". Note: The "pmacadm backup" command uses a naming convention which includes a date/time stamp in the file name (Example file name: backupPmac_20111025_100251.pef). In the example provided, the backup file name indicates that it was created on 10/25/2011 at 10:02:51 am server time. Next Verify that the backup was successful using the following command: # pmaccli getBgTasks 2: Backup PM&C COMPLETE - PM&C Backup successful Step 2: of 2 Started: 2012-07-05 16:53:10 running: 4 sinceUpdate: 2 taskRecordNum: Once the backup has been verified that it was successful, copy the backup file to a remote location.</pre>

4.6 HP C-7000 Enclosure Configuration

Procedure 8. Configure initial OA IP

S	This procedure will set initial OA IP address using the front panel display.				
Т Е Р #	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	Configure OA's IP	Configure OA's IP address using insight display on the front side of the enclosure.			
		You will see following:			
		Main Menu Health Summary Enclosure Settings Enclosure Info Blade or Port Info Turn Enclosure UID on			
		View User Note Chat Mode USB Menu Main Menu Help			
		Navigate to Enclosure Settings, press OK. 1. Go to the OA1 IP v4 and press OK.			
		2. Go to OA1 IP v4 and press OK .			
		On the OA1 Network Mode screen choose static and press Accept.			
		On the OA1 IP address screen fill in IP, mask and gateway. Press Accept, then press Accept All, and finally press Accept All.			
		Note that the OA IP address should belong to the Plat Management Network			

Procedure 9. Configure the OA (OA Configuration Wizard)

1	OA GUI: Login	Open your web browser and navigate to the OA IP address You will see following:		
		Login to HP OA as Administrator. Original password is on paper card attached to		
		each OA.		
2	OA GUI: Run First	You will see the main wizard window:		
	Time Setup wizard	1 HP Onboard Administrator		
		First Time Setup Wizard 2		
		Welcome		
		Welcome This wizard will assist you in setting up your enclosures. It is run automatically the first time the Onboard Administrator is started.		
		Configuration Management Steps may be skipped when accompanied by a Skip button. The settings for each step will be applied when the Next button is clicked.		
		Administration Account Setup Local User Accounts Enclosure Bay IP Addressing Directory Groups Directory Settings Onboard Administrator Network Settings SNMP Settings Power Management		
		Finish Cancel		
		Click on Next to choose enclosure you want to configure.		

3	OA GUI: Select	Choose enclosure:
3	OA GUI: Select enclosure	Choose enclosure:
4	OA GUI: Skip Configuration Management	Click on Next. You will see Configuration Management. Skip this step. Click Next.

Procedure 9. Configure the OA (OA Configuration Wizard)

Drogoduro ()	Configure th		Configuration	Wigord)
1 Toceutie 9.	Comigure u	ie OA (OA	Comiguration	vv izai u)

5	OA GUI: Rack and	You should see this screen:			
	Enclosure Settings	HP Onboard Administrator			
		First Time Setup Waard			
		The decide endows active version and the back set of the set of th			
		House Touris out Proteins the baselyse common and annuals of annuals for all the baselyse to put Configuration Management Configuration Management			
		Robit and Electronic temporal Please only in the and and and the setting according append tem 1 4 11% in trading of a group o			
		Distance Date P Addressing Distance Date P Addressing Distance Patients Distance Patients			
		Orace of Alexandrative Sealars Telephone Deals and The Sealars Telephone Deals and The Sealars Telephone Deals and The Sealars Telephone			
		Team Destination of the team security Destination of			
		Total 128 Beneficipal MP Bower Total Dear 127 P P P P P P P P P P P P P P P P P P P			
		Exclusion 391 (2011) Systema for Statistical			
		Austing			
		Fill in Rack Name in format xxx_xx, where xxx_xx might refer to the lab			
		name and rack position, e.g. 500_09			
		Fill in Enclosure name in format <rack name="">_<position></position></rack>			
		Example:			
		Rack Name: 500_03			
		Enclosure Name: 500_03_03			
		Note: Enclosure positions are numbered from 1 at the bottom of the rack to 4 at the			
		top.			
		Check Set time using an NTP server item and fill in Primary NTP			
		server (Should be the NTP Server provided by the customer).			
		Set Poll interval to 720.			
		Set Time Zone to UTC or appropriate time zone value.			
		Click on Next.			
6	OA GUI: Change	You can see Administrator Account Setup:			
	administrator				
	password	East Tees Salue Maard			
		Fitts Little Setup Vezaldu			
		Step 4 of 12 Administrator Account Setup Visions The Administrator Account is the instant administration account for the endourse. The account			
		Environment Relevation On Statistic approaches provincipant en de environ en the environment Theore account addings will be applied to the turb in Administratory account for each environment Configuration Neuropeanet Relevation Description of the turb in Administratory account for each environment Description of the turb in Administratory account for each environment Description of the turb in Administratory account for each environment Description of the turb in Administratory account for each environment Description of the turb in Administratory account for each environment Description of the turb in Administratory account for each environment Description of the turb in the turb in the turb in the turb environment Description of turb envi			
		Next, and this bound belowing Advanceduring Journey Texture Logical Low Accounty			
		Inclusion Bay Photomary Constant Groups Constant Groups			
		Overtrey General Coduct Administrate Helicola Setting of Conduct Administrate Helicola			
		VMP halogs Outer Mangement Contex			
		this adding PMI protection with requires a PMI cade to be entired before samp the enclosure's require Coupley. The PMI is applied example, and have a langth from any local cade takes.			
		Divideo PRIV Protection			
		PM Exits PM Code Contex			
		«Pareless New > Skip Cannel			
		Change Administrator's password and click on Next.			

7	OA GUI: Create	On the Local User Accounts screen click on New to add pmacadmin user.
	pmacadmin and root user	You will see User Settings screen. Fill in User Name and Password . Privilege Level set to Administrator . You will need to create the user: pmacadmin . Note that the password of the pmacadmin user defined on the OA is not the same as the pmacadmin password of PM&C GUI.
		Check the checkbox for Onboard Administrator Bays under the User Permissions section.
		Then click on Add User.
		In the same way create root user.
		Then click on Next.

8	OA GUI: EBIPA settings	On the EBIPA Settings (Enclosure Bay IP Addressing) screen click on Next to continue or Skip if you have already did it. If you pressed Skip go to the Step 9 of this procedure.					
		Note: Setting up the EBIPA addresses is required.					
		First Time Setup Wizard					
		Fill in ILO's IPs, Subnet Masks and Gateways in the Device list. Note that those IPs need to belong to the Plat Mgmt Network. You can use autofill button which will sequentially fill in IP addresses below the current entry. Click Enabled to endote the start of the sequence of the start of the sequence					
		By clicking Next you will apply those settings. System will restart devices such as interconnect devices or iLOs to apply new addresses. After finishing press Previous and then Next to check the IP addresses and ensure that apply was successful, if they were successfully applied, press Skip .					
9	OA GUI: Skip Directory Groups step	To skip Directory Groups step, click Next.					
10 □	OA GUI: Skip Directory Settings step	To skip Directory Settings step, click Next.					

11		On the Ophoard Administrator	Notwork Sottings tab change the IP
	network settings	address and the network settings of the	e second OA.
		Active Onboard Administrator Network Settings	Standby Onboard Administrator Network Settings
		Use DHCP for all Active Onboard Administrators	O Use DHCP for all Standby Onboard Administrators
		Enable Dynamic DNS	Enable Dynamic DNS
		Use static IP settings for each Active Onboard Administrator	Use static IP settings for each Standby Onboard Administrator
		Required Field *	Required Field *
		Enclosure: 500_05_01	Enclosure: 500_05_01
		DNS Host Name:* OA-0026551C1E7B	DNS Host Name:* OA-D8D385DD8E4F
		IP Address:* 10.240.17.51	IP Address:* 10.240.17.56
		Subnet Mask:* 255.255.255.0	Subnet Mask:* 255.255.0
		Gateway: 10.240.17.1	Gateway: 10.240.17.1
		DNS Server 1:	DNS Server 1:
		Unis server 2:	UNS Server 2.
			< Previous Next > Skip Cancel
		Click on Next.	
		Note: If you will change IP address of	f the OA though which you are signed on you
		will be disconnected. Then you have to	close browser and sign in again using the
		new IP address	s crosse proviser and sign in again using the
		new n address.	
L			

D	C e	4	(\mathbf{n})	C C	XX/!I)
Procedure 9.	Configure	the OA	(UA	Configuration	wizara)

12	OA GUI: SNMP	Mark Enable SNMP.				
	Settings					
		MP BladeSystem Onboard Administrator				
		First Time Setup Wizard Set up initial enclosure and server settings				
		Step 10 of 12 SNMP Settings				
		Welcome This function forwards alerts from the enclosure (power supplies, fans, the Onboard Administrator, enclosure thermas, etc.) to the specified alert destinations.				
		Configuration Management Note: Individual server blades must be configured separately using LO and Server Agents. Alert destinations will be added to and removed from all selected inked enclosures. Administratir Account Setup				
		Local User Accounts Enclosure: 103_03_03 SNMP Alert Destinations				
		Directory Groups Directory Settings Directory Settings (ex. 61 206.115.3, 2002:1 or host example.com)				
		Onbard Administrator Number Settings SIMP Settings Add				
		Power Management Finish Read Community: Write Community:				
		Fill in System Location that is equal to Enclosure name you have filled in Step 5.				
		Do not set Read Community and Write Community.				
		Click on Next.				
13	OA GUI: Power Management	The Power Mode setting on the Power Management screen must be configured for power supply redundancy. The first available setting on the Power Management screen will be either "AC Redundant" or "Redundant" depending on whether the Enclosure is powered by AC or DC. In either case, select the second radio button, "Power Supply Redundant".				
		For all other settings on the Power Management screen, leave the default settings unchanged.				
		Click on Next.				
14	OA GUI: Finish First Time Setup Wizard	Click on Finish.				
15	OA GUI: Set Link Loss Failover	Navigate to Enclosure Inf	formation ->	Enclosure Settings -> Link I	loss Failove	er
----	--	--	--	--	--	----------------------
		IP Onboard Administ	rator		User: root <u>Home</u> S	t <u>Sign Out</u>
		System Status 📃	Wizards 👻 Opti	ons 🗸 Help 🕇		
		View Legend Updated Wed Jun 16 2010, 14:54:16	Enclosure	Settings - 500_04_1	📕 Print	? Help
		System Status 1 0 0 0 0 Systems and Devices	Link Loss Failove	er -		E
			Link Loss Failover of the Active modul has reported a goo before an automatic	will enable the Standby Onboard Administrator to monitor e. If the Active module looses its network link for a period d link during the same time span, an automatic OA failove s failover is performed can be defined below.	the network link status 3 of time and the Stand r will occur. The interv	by al
		Rack Overview Rack Firmware	Note: Link Loss Fi redundancy. The s	ailover settings can be configured even if the enclosure ettings will not take effect unless a redundant Onboard A	has no management Administrator is presei	nt.
		Primary: 500_04_1	Enable Link L	oss Failover		
			Failover Intervat	180 seconds	Apply	
		Check the Enable Link Lo seconds.	oss Failover	and specify Failover Interval	to be 180	
		CIICK APPLY.				

Procedure 9. Configure the OA (OA Configuration Wizard)

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Procedure 9. Configure the OA (OA Configuration Wizard)

16	OA GUI: Set SNMP	Navigate to Enclosure Information ➤ Enclosure Settings ➤ SNMP Settings.		
		Type the host destination information into the 'Host box' (red arrow in the figure below) of the Customer's NMS Server as defined in the NAPD. Additionally, type the community string to the 'Community String' box (indicated by the green arrow in the following figure) and click Add.		
		Additionally, enter the SO VIP (if 3 tier deployment) or NO VIP (if 2 tier deployment) into the 'Host box' and the community string to the 'Community String' and click Add again.		
		P BladeSystem Onboard Administrator		
		System Sutures Witards + Options + Help + Vere Legend _ Enclosure Settings - 500_04_02	frint 🕐 Help	
		Wystern Data Image: Construction of the		
		The SNMP trap destination has now been added to the configuration and should show up in the list of configured destinations. Click Apply to activate the configuration. A progress meter may appear, when it disappears, the configurat has been applied.	d tion	

Procedure 10. OA Security Configuration

S	This procedure will disable telnet access to OA.			
Т	<i>Prerequisite:</i> Configure the OA procedure <i>has been completed</i> .			
E P				
#	Check off ($\sqrt{2}$ 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	OA GUI: Login	Login to HP Onboard Administrator as Administrator.		
2	OA GUI: Disable	Navigate to Enclosure Information -> Enclosure Settings ->		
	telnet	Network Access		
		🔁 HP Onteoard Administrator		
		Version Read		
		Appendixed Sector Secto		
		Constant Inclinent I		
		Prompt 66 (1) 0 B transe temps B transe temps werk werk werk werk werk werk werk werk		
		Disant Net of State o		
		Reservations Devices Breve Sumption Profession Automation Reservations		
		III Colvis Issue III Statussee Kars III Ansee of Taena III Ansee Anterna III III Ansee Anterna III		
		Then uncheck the Enable Telnet		
		HP BladeSystem Onboard Administrator		
		System Surfus Witzward Copulors Contemport View Legend Enclosure Settings - 500_04_02 Image: Print Contemport		
		Updated Mon Mar 15 2010, 14:39:52 O V A O O Protocols Trusted Hosts Anonymous Data		
		System Status 0 0 0 Protocol Restrictions: These protocol settings can be used to deny or allow access to the enclosure. Front View Front View		
		Rack Overview Image: Secure Shell		
		Primary: 500_04_02		
1		Apply		
1		Date and Time Enclosure TCP/IP Settings Network Access		
1		Link Loss Falover SNMP Settings Enclosure Bay /P Adressir		
1		Configuration Scripts Reset Factory Defaults V K un A		
1		Click on Apply.		

4.7 Enclosure Switches Firmware Update

If the enclosure switches used are Cisco 3020, execute the procedure in section 4.7.1. If the switches used are HP 6120XG, execute the procedure in section 4.7.2.

4.7.1 Cisco 3020 Switch Update

S	This procedure will describe the steps how to upgrade firmware for the 3020 switches.		
T E	Needed material:		
P	- HP Misc Firmware DVD		
#	- HP Solutions Firmware Upgrade Pack Release Notes [1]		
	Check off (1) each stop as it i	is completed. Bayes have been provided for this purpose under each stap number	
	Check off (v) each step as it is completed. Boxes have been provided for this purpose under each step number.		
	IF THIS FROCEDURE FAIL	5, CONTACT TEXELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.	
1	OA GUI: Run OA	Log into the active OA as Administrator.	
		Navigate to Home page.	
		You should see the Front View and Rear View of the enclosure.	
		Wizards 🗸 Options 🖌 Help 🗸	
		Back Oversiew, 500,00	
		Rack Overview - 500_03	
		Rack Topology Rack Power and Thermal	
	Enclosure: 500_03_03		
		Front View	
2	OA GUI: Run Catalyst Blade	Note: Repeat the following steps for all 3020 switches in the enclosure.	
	Switch 3020 Device	Click on interconnect bay 1 on the Rear View image of the middle pane.	
	Manager	click 1. Cisco Catalyst Blade Switch.	
		Then click on Management Console.	

	IP BladeSystem Onb	oard Administrator
	System Status	Wizards 🔻 Options 👻 Help 👻
	View Legend	Interconnect Bay Information - Bay 2
	Updated Thu Mar 18 2010, 08:43:23	Interconnect Bay Information Bay 2
	System Status 0 0 0 0 0	Status Information Virtual Buttons
	Systems and Devices	Interconnect Module Management
		Management Console
	Rack Overview Rack Firmware	Port Mapping information
	Primary: 500_01_01	
	 Enclosure Information Enclosure Settings Active Onboard Administrator 	Status Status OK
	Device Bays	Thermal Status OK
	1. Cisco Catalyst Blade Switch	roweled
	2. Cisco Catalyst Blade Switch	Diagnostic Information
	Management Console	Device Identification Data OK
	A new page will be opened. If you username blank and for password The server 10.240.4.26 at level_15_acce username and password. Warning: This server is requesting that you password be sent in an insecure manner (without a secure connection). User name: Password: Remember my p	bu are asked for a username and password, leave the d use "cisco". Then click OK .
	ок If you get an Express Setup page and proceed to the main switch s If you are prompted with "Do yo No.	Cancel , click on Refresh to skip past the Express setup creen. u want a secured session with the switch?", click on

		10.240.4.70
		Do you want a secured session with the switch? Yes No Don't ask me anymore Then a new Catalyst Blade Switch 3020 Device Manager will be opened.
3	OA GUI: Upgrade	Navigate to Maintenance -> Software Upgrade.
	switch IOS	 The switch is running Cisco IOS software release: 12.2(50)SE3 Go to http://www.cisco.com/public/sw-center/ to find the latest Cisco IOS software (in tar file format) for the switch. Download the tar file to your PC or to a network drive. Select the tar file to upgrade using the Browse button. Click Upgrade. Check IOS software release (circled above). If the software release is at or above the expected level based on the <i>Firmware Upgrade Pack Release Notes [1]</i> then the current switch firmware does not need to be updated, Skip the rest of this procedure.
4	Copy switch firmware tar file	If you haven't done so, copy the Cisco 3020 firmware tar file onto your machine from the firmware upgrade disk.
5	OA GUI: Upgrade switch IOS	In the OA GUI, Navigate to Maintenance -> Software Upgrade.
		The switch is running Cisco IOS software release: 2.2(50)SE3
		click Browse and navigate to the tar image you copied to your PC in step 4.

		The upgrade process will take approximately 10 minutes. In approximately 10 minutes, click the Refresh button to verify the new image has loaded successfully.		
		Image File Name: C:\Documents and Setti Browse		
		Stage Status		
		1. Loading the tar file to the switch 🖉		
		2. Verifying the tar file		
		> 3. Extracting the software files from the tar file 98%		
		4. Restarting the switch		
		Upgrade		
6	Repeat for remaining	Go back to Step 2 and repeat for the remamining 3020 switches.		
	switch			
7	Remove the tar file	The tar file from step 1 may now be deleted from your computer.		

4.7.2 HP 6120XG Switch Firmware Update

Procedure 12. Update HP 6120XG Switch Firmware

S This procedure provides the steps neccesary to upgrade firmware for the 6120XG switches. Т Prerequisites: Configure initial OA IP and Configure the OA procedures must be completed. Е Ρ Needed material: # HP Misc. Firmware DVD HP Solutions Firmware Upgrade Pack Release Notes [1] _ WinSCP SSH client (eg. PuTTY) _ Check off ($\sqrt{1}$) 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	Manaement Server:	Using the OA GUI, check the Rack FW levels shown below to determine the current FW and if at the desired level skip the rest of the procedure		
		Harris I. Barris Martin		
		Interconnect Firmware Internation	Comment Manada	
		Bay Device Model HD PacPure St20VC Blade Switch	7 14 32 10	
		2 HP ProCurve 6120XG Blade Switch	Z.14.32.10	
		5 HP ProCurve 6120XG Blade Switch	Z.14.32 10	
		6 HP ProCurve 6120XG Blade Switch	Z.14.32 10	
		7 HP 1Gb Ethernet Pass-Thru Module for c-Class BladeSystem	Not Available	
		8 HP 1Gb Ethernet Pass-Thru Module for c-Class BladeSystem	Not Available	
		<pre>Verify that the appropriate version of HP 6120XG firmware, as specifi Solutions Firmware Upgrade Pack Release Notes [1] from the Misc F. DVD, exists under /var/TKLC/smac/image. If it doesn't exist, Insert th Firmware CD media into the CD drive of the management server and d image called out by the release notes [1]. # mount /dev/sr0 /media/cdrom Execute the following commands to copy the required files. Note that to Management_IP Address> is the one used to deploy PM&C in proc 3 # scp -p /media/cdrom/files/<6120_IOS_image_fil root@<pmac address="" management_ip="">:/var/TKLC/sma Unmount the media using the following command: # umount /media/cdrom Remove the Misc. Firmware CD media from the CD drive.</pmac></pre>	ted by the <i>HP</i> <i>irmware</i> e <i>Misc</i> . copy the IOS the <pmac< b=""> cedure 4, step ename> c/image</pmac<>	
2	6120XG Switch: Login	Login to the switch as <i>manager</i> via ssh.(accepting switch's key if pron	npted)	
		login as: manager		
		Press any key to continue as prompted by the switch.		
		Switch#		
		Note that if logging with "manager" is unsuccessful, hold the "Clear" b 6120 switch for greater than 30 seconds to clear the password.	button on the	
3	6120XG Switch:	Re-login to the switch via ssh as done in step 2 above.		
	Enter global configuration.	Next enter config mode by running the following:		
	-	Switch# config		

4	6120XG Switch: Find current firmware version and compart to release notes.	Switch(config)# Image stamp: Boot Image:	<pre>show version /sw/code/build/vern(Z_14_zin_t4b) Jun 23 2010 16:48:29 Z.14.12 31 Secondary</pre>
		Record the firmware ve location being used (Se currently being used to <i>Upgrade Pack Release</i> Whatever Boot Image since the Secondary Bo upgraded.	ersion (z.14.12 in this case) and the current Boot Image econdary in this case). Compare the firmware version o the latest version specified in the <i>HP Solutions Firmware</i> <i>e Notes</i> . Continue with this upgrade procedure if necessary. is being used the opposite one will be upgrade. So in this case oot Image is being used the Primary Boot image will be
5	6120XG Switch: Record current firmware version of Boot Image to be upgraded.	Record the current vers compare after upgradin case) Switch (config) # Image	sion of the Boot Image to be upgraded. This will be used to ng to check for sucess of the upgrade. (Primary Image in this show flash Size (Bytes) Date Version
		Primary Image Secondary Image Boot Rom Version Default Boot	: 7595562 02/17/10 Z.14.09 : 7193633 06/23/10 Z.14.12 n: Z.14.09 : Secondary
6	6120XG Switch:	Enter the following con	mmand:
	Make sure Secure Copy is enbled	Switch (config) # SSH Enabled : Y TCP Port Number : Host Key Type : Ciphers : MACs : Ses Type So + 1 console Look at the output of s then continue to the ne the command below. Switch (config) #	show ip ssh Yes Secure Copy Enabled : Yes 22 Timeout (sec) : 120 RSA Host Key Size : 2048 Durce IP Port show ip ssh. If Secure Copy Enabled = Yes ext step. If Secure Copy Enabled = No then perform ip ssh filetransfer
		Tftp and auto-t: Switch (config) # Enter show ip ssh	ftp have been disabled. again to make sure Secure Copy has been enabled.

7	6120XG Switch:	Go into the switch's menu interface and type "y" to save the configuration.		
	Open the event log.	Switch(config)# menu Do you want to save current configuration $[y/n/^C]$? y		
		Select: 4. Event Log		
		Then Select:		
		End		
		Keep this terminal window open.		
8	Management	Execute the following command to copy the firmware file onto the switch:		
	Copy firmeware file to switch	Note: If updating the secondary image instead of primary, replace primary with secondary in the command below.		
		<pre># scp /var/TKLC/smac/image/<6120_IOS_image_filename manager@<6120XG IP>:/os/primary</pre>		
9	6120XG Switch:	Go Back to the switch ssh window where you have the <i>Event Log</i> open. If the		
	Go back to the Event Log on the SSH session with	connection has timed out redo Steps 2,3, and 6. Watch for the following log event (it can take a few minutes) :		
	the switch.			
		Secondary Image it would say "Secondary" instead of "Primary".		
10	6120XG Switch:	Now that you have seen the "updated" message select:		
	Get Back to the Back			
	Interface (CLI).	Then select:		
		5. Command Line (CLI)		
		Switch(config)#		
11	6120XG Switch:	Run the show flash command to make sure the Image you were updating has the		
	Check the firmware version.	correct firmware version. (in this example Primary Image has changed to Z.14.22)		
		Switch(config)# show flash Image Size(Bytes) Date Version		
		Primary Image : 7732899 10/21/10 Z.14.22 Secondary Image : 7193633 06/23/10 Z.14.12 Boot Rom Version: Z.14.09 Default Boot : Secondary		

12	6120XG Switch:	Now you will reboot the switch into the new Boot Image. (<i>primary</i> in this example).	
	Reboot into the new firmware.	If you have updated the <i>Secondary Image</i> replace "primary" with "secondary" in the command below.	
		Switch(config) # boot system flash primary	
		Device will be rebooted, do you want to continue $[y/n]$? y	
13	6120XG Switch:	Once the switch has rebooted, login back into the switch as <i>manager</i> via ssh.	
	Log back in.	login as: manager	
		Press any key to continue as prompted by the switch.	
		the start of the s	
		Switch#	
14	6120XG Switch:	Switch# config	
	Re-enter global configuration.		
15	6120XG Switch:	Run the show version . Make sure the new firmware version is displayed.	
	Make sure the switch has booted properly into the new firmware image.	<pre>Switch(config)# show version Image stamp: /sw/code/build/vern(Z_14_zin_t4b)</pre>	
16	6120XG Switch:	Run the show flash command, checking to make sure the image you upgraded	
	Verify the "Default Boot" has changed.	has been set as the "Default Boot". (Primary in this example)	
		Switch(config)# show flash Image Size(Bytes) Date Version	
		Primary Image : 7732899 10/21/10 Z.14.22 Secondary Image : 7193633 06/23/10 Z.14.12 Boot Rom Version: Z.14.09 Default Boot : Primary	

4.8 OA Firmware Update

Procedure 13. Upgrade OA Firmware

S	This procedure will upgrade the firmware on the OA						
Т							
E	Needed material:						
P							
#	- HP Misc. Firmware DVD HP Solutions Firmware Upgrade Pack Release Notes [1]						
	- HP Solutions Firmware Opgrade Pack Release Notes [1].						
	Note: This procedure should be used to upgrade firmware or to ensure both OA's have same						
	firmware in a system with redundant OA. When the firmware update is initiated, the standby OA						
	is automatically flas	hed first.					
	,						
	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	6, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.					
1		Login to HP OA as Administrator, Original password is on paper card attached to					
	Login to HP OA as Administrator. Original password is on paper card attached to each OA						
2	2 OA GUI: Determine In the left navigation area, click on Active Onboard Administrator if firmware upgrade is required Examine the Firmware Version shown in the Firmware Informati table. Verify the version meets the minimum requirement specified by Release						
		Notes [1] and that the firmware versions match for both OA's. If it is so the					
	firmware does not need to be upgraded. Skip the rest of this procedure.						
3	Make the image Insert the OA firmware disc as specified in HP Solutions firmware upgrade pack						
	available to PM&C	into the removable media drive of the management server.					
4	PM&C GUI: Login	Open a new web browser window and enter:					
		Login as pmacadmin user					
5	PM&C GUI:	If the image is on a CD or USB device. In the PM&C GUL nevigate to Main Menu					
	Navigate to Manage	► VM Managmenet In the "VM Entities" list, select the PM&C guest. On the					
	Software Images	resulting "View VM Guest" page, select the "Media" tab.					
1		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.					
1							

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Procedure 13. Upgrade OA Firmware

6	PM&C GUI: Add	Press Add Image button. Use the dropdown to select the image you just				
	image	transferred.				
		Note: optical media device appears as device://dev/scd0				
		Add appropriate image description and press Add New Image button.				
		http://10.250.86.145/gui/index.php - Windows Internet Explorer				
		Image: Second				
		Image: Single				
		TEKELEC Platform Management & Configuration				
		Main Menu Manage Software Images Fri Mar 6 15:25:28 2009				
		Image Software Inventory Note: Image Software Configuration Images may be added from the specified local directories, from the top level Image Software Inventory Images may be added from the specified local directories, from the top level Image Software Inventory Images may be added from the specified local directories, from the top level Image Software Inventory Images may be added from the specified local directories, from the top level Image Software Inventory Image Software Inventory Image Software				
		System Alarms Mark Search Path: /var/TKLC/upgrade/*.iso /mar/auto/usb-a-ro/*.iso /mart/auto/usb-o-ro/*.iso /var/TKLC/usac/image/isoimages/home/smacftpusr/*.iso				
		/var/TKLC/upgrade/872-1818-01-2.2.0_22.5.0-i386.iso /var/TKLC/upgrade/872-1818-01-2.2.0_22.5.0-i386.iso /var/TKLC/upgrade/TPD_install-3.1.3_61.21_0-CentOS4.6-i386.iso /var/TKLC/upgrade/TPD_install-3.2.0_62.4.0-CentOS4.6-i386.iso device://dev/hda				
		Add New Image				
		TEKELEC PLATFORMMANAGEMENT & CONFIGURATION 55 TEKELEC				
		2000 € Internet € 100% ▼				
		You may check the progress using the Task Monitoring link. Observe the green bar indicating success.				
		Once the green bar is displayed, remove the Misc. Firmware CD from the optical drive of the management server.				
7	OA GUI: Upgrade	Switch back to the OA, click on Firmware Update in the left navigation area.				
	OA firmware	Enter the appropriate URL in the bottom text box labeled "Image URL". The syntax is: http:// <pm&c_ _ip="" _network="" management="">/TPD/<hpfw_mount_point>/files/<oa_firmware_version>.bin</oa_firmware_version></hpfw_mount_point></pm&c_>				
		For example: http://10.240.4.198/TPD/HPFW2.1.1-10.1.0872-2161-101 i386/files/hpoa300.bin				
		Click Apply				
		Click OK				
		Note: The upgrade may take few minutes in a system with one OA and about 25 minutes on a system with redundant OA present.				

Procedure 13. Upgrade OA Firmware

8	OA GUI: Observe	You shoould observe the following updates during the upgrade.
	upgrade progress	Flashing the Standby Onboard Administrator 2% complete
		Please wait while the Active Onboard Administrator flash is initialized
		Flashing the Active Onboard Administrator 2% complete
		The firmware update has completed, and the Active Onboard Administrator is being reset. The application will be reloaded in 81 seconds
9	OA GUI: Reload	The upgrade is complete when the following is displayed:
	the HP OA application	It is recommended that you clear your browser's cache before continuing to use this application. If the browser's cache is not cleared after a firmware update, the application may not function properly.
		Click here to reload the application.
		Clear your browser's cache and click to reload the application. The login page should appear momentarily.
10	OA GUI: Verify the firmware upgrade	Login to the OA again. It may take few minutes before the OA is fully functinal and accepts the credentials.
		In the left navigation area, navigate to Enclosure Information -> Active Onboard Administrator -> Firmware Update
		Examine the Firmware Version shown in the Firmware Information table. Verify the firmware version information is correct.

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4.9 Enclosure and Blades setup

Procedure 14. Add Cabinet and enclosure to the PM&C System

S T	This procedure provides instructions to add a cabinet and an enclosure to the PM&C system						
Ē	inventory.						
P #	Prerequisite: Procedi	ure 7. Configure the PM&C Server has been completed.					
	Note: The installer n	nust be knowledgeable of the network. If you make mistake, hit cancel and try					
	again. The finish ster connect may fail.	may take longer time because it reconfigures the network and attempts to					
	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.					
1	PM&C GUI: Login	Open web browser and enter: http:// <management_network_ip>/gui Login as pmacadmin user.</management_network_ip>					
2	PM&C GUI: Configure Cabinets	Navigate to Main Menu -> Hardware -> System Configuration -> Configure Cabinets.					
		🖃 💻 Main Menu					
		📄 🚗 Hardware					
		Configure Cabinets					
		🛄 🚰 Configure Enclosures					
		🖬 🧰 Software					
3	PM&C GUI: Add Cabinet	On the Configure Cabinets panel click on Add Cabinet					
		Provisioned Cabinets					
		There are no provisioned					
		cabinets					
		Add Cabinet Delete Cabinet					
4	PM&C GUI: Enter Cabinet ID	Enter CabinetID and press Add Cabinet.					
		Add Cabinet					
		Cabinet ID: Cabinet ID must be from 1 to 654.					

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Procedure 14. Add Cabinet and enclosure to the PM&C System

5	PM&C GUI: Check	If no error is reported to the user you will see the following:			
	errors	Configure Cabinets			
		Provisioned Cabinets			
		101			
		Add Cabinet Delete Cabinet			
		Or you will see an error message:			
		Add Cabinet			
		Cabinet ID 900 is invalid: must be between 1 and 654			
		000			
6	PM&C GUI: Go to Configure HPC Enclosures	Navigate to Main Menu -> Hardware -> System Configuration -> Configure Enclosures.			
7	PM&C GUI: Go to	On the Configure Enclosures panel click on Add Enclosure			
	Add Enclosure	Provisioned Enclosures			
		There are no provisioned enclosures			
		Add Enclosure Edit Enclosure Delete Enclosure			

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Procedure 14. Add Cabinet and enclosure to the PM&C System

0	PM&C GUI: Add	In the Add Enclosure panel enter Cabinet ID, Location ID and Bay 1 OA					
	Enclosure	IP and Bay 2 OA IP.					
		Then click on Add Enclosure.					
		Location ID: 1 Location ID must be from 1 to 4.					
		Bay 1 OA IP: 10.240.237.134					
		Bay 2 OA IP: 10.240.237.135					
		Add Enclosure					
		Notes:					
		Location ID is used to uniquely identify the enclosure within the cabinet. It can have					
		a value of 1, 2, 5 of 4. The cabinet id and location id will be combined to create a globally unique id for the enclosure (for example, an enclosure in cabinet 502 at					
		location 1, will have an enclosure id of 50201).					
9	PM&C GUI:	When the task is complete, the text will change to green and the Progress bar will					
	Monitor the	indicate "100%".					
	Enclosure discovery	Configure Enclosures					
	status	Thu May 26 15:12:04 2011 UTC					
		Enclosure 50501 has been successfully added to the system					
		000					
		Provisioned Enclosures					
		50501					
		Add Enclosure Edit Enclosure Delete Enclosure					
		o⇔o ID Task Target Status Running Time Update Time Progress					
		otoo ID Task Target Status Running Time Update Time Progress 3 Add Enclosure Enc:50501 OpenHpi Deamon Started 0:00:17 0:00:44 92%					
10	DM&C CUL	D Task Target Status Running Time Update Time Progress 3 Add Enclosure Enc:50501 OpenHpi Deamon Started 0:00:17 0:00:44 92%					
10	PM&C GUI: Background Task						
10 □	PM&C GUI: Background Task monitoring	D Task Target Status Running Time Update Time Progress Add Enclosure Enc:50501 OpenHpi Deamon Started 0:00:17 0:00:44 92% This page allows the user to monitor status updates: Add Enclosure Enc:50202 Enclosure added - starting 0:01:13 2011-10-08 100%					
	PM&C GUI: Background Task monitoring						
	PM&C GUI: Background Task monitoring						
	PM&C GUI: Background Task monitoring	oreo D Task Target Status Running Time Update Time Progress 3 Add Enclosure Enc:50501 OpenHpi Deamon Started 0:00:17 0:00:44 92% This page allows the user to monitor status updates: 3 Add Enclosure Enc:50202 Enclosure added - starting monitoring 0:01:13 2011-10-08 (02:20:32) 100% NOTE: DO NOT click the Solution as this will delete the selected task from the Background Task Monitoring status screen.					
	PM&C GUI: Background Task monitoring PM&C GUI: Wait						
10 □ 11 □	PM&C GUI: Background Task monitoring PM&C GUI: Wait until the Add Enclosure task	000 10 Task Target Status Running Time Update Time Progress 3 Add Enclosure Enc:50501 OpenHpl Deamon Started 0:00:17 0:00:44 92% This page allows the user to monitor status updates: 3 Add Enclosure Enc:50202 Enclosure added - starting monitoring 0:01:13 2011-10-08 02:20:32 100% NOTE: DO NOT click the X button as this will delete the selected task from the Background Task Monitoring status screen. The color of the progress bar will change to green when complete:					
	PM&C GUI: Background Task monitoring PM&C GUI: Wait until the Add Enclosure task finishes	•••• ID Task Target Status Running Time Update Time Progress 3 Add Enclosure Enc:50501 OpenHpi Deamon Started 0:00:17 0:00:44 92% This page allows the user to monitor status updates: 3 Add Enclosure Enc:50202 Enclosure added - starting 0:01:13 2011-10-08 02:20:32 100% NOTE: DO NOT click the 🔀 button as this will delete the selected task from the Background Task Monitoring status screen. The color of the progress bar will change to green when complete: 3 Add Enclosure Enc:50202 Enclosure added - starting 0:01:13 2011-10-08 0:2:0:32 100% 10 3 Add Enclosure Enc:50202 Enclosure added - starting 0:01:13 2011-10-08 0:2:0:32 100%					
10 □ 11 □	PM&C GUI: Background Task monitoring PM&C GUI: Wait until the Add Enclosure task finishes						
	PM&C GUI: Background Task monitoring PM&C GUI: Wait until the Add Enclosure task finishes	oreo ID Task Target Status 3 Add Enclosure Enc:50501 OpenHpl Deamon Started 0:00:17 0:00:44 92% This page allows the user to monitor status updates: 3 Add Enclosure Enc:50202 Enclosure added - starting 0:01:13 2011-10-08 00% NOTE: DO NOT click the X button as this will delete the selected task from the Background Task Monitoring status screen. The color of the progress bar will change to green when complete: 3 Add Enclosure Enc:50202 Enclosure added - starting 0:01:13 2011-10-08 0:2:0:32 100% If the Add Enclosure task fails the Status will display information concerning the failed sten and the color of the Progress bar will change to red					

Procedure 15. Configure iLO password for Blades'Administrator account

S	This procedure will	This procedure will set iLO passwords for Administrator and root accounts on all blades.						
T E	Prerequisite: Proced	<i>Prerequisite</i> : Procedure 8. Configure initial OA IP <i>has been completed</i> .						
Р #	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 TERELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.						
1	Management server: Edit xml file	Edit the following file by running: # chmod 664 /usr/TKLC/smac/etc/change_ilo_admin_passwd.xml						
		<pre># vi /usr/TKLC/smac/etc/change_ilo_admin_passwd.xml</pre>						
		Update the <root password="">, <ilo password="" root=""> and <ilo Administrator password> fields.</ilo </ilo></root>						
		Now copy the xml file to /usr/TKLC/smac/html/public-configs/ by running the following command:						
		<pre># cp /usr/TKLC/smac/etc/change_ilo_admin_passwd.xml /usr/TKLC/smac/html/public-configs/</pre>						
2	OA shell: Run	Connect to the active OA via ssh as root.						
	nponerg	Run the following command:						
		<pre>> hponcfg all http://<management_server_ip>/public- configs/change_ilo_admin_passwd.xml</management_server_ip></pre>						
3	OA shell: Check for	After the command is done executing, Scroll up and check for any errors that						
	error	might've occured						
4	OA shell: Logout	After the command is done executing, Logout from the OA						
		> exit						

4.10 Configure Enclosure Switches

If the enclosure switches used are Cisco 3020, execute the procedure in section 4.10.1. If the switches used are HP 6120XG, execute the procedure in section 4.10.2.

4.10.1 Configure Cisco 3020 Enclosure Switches

S T F	This procedure will configure up to 3 Cisco 3020 switch pairs with an appropriate IOS and configuration specified by Platform Engineering and Application requirements.					
P	Needed material:					
#	- Switch Configuration files in an application ISO on an application CD					
	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	Virtual PM&C:	login to the management server, then run:				
	configuration	<pre># ping <switch_mgmtvlan_vip></switch_mgmtvlan_vip></pre>				
		If aggregation switches are present				
		<pre># ping <switch1a_mgmtvlan_address></switch1a_mgmtvlan_address></pre>				
		<pre># ping <switch1b_mgmtvlan_address></switch1b_mgmtvlan_address></pre>				
		Repeat for other expected application VLANs. If all IP addresses respond positively, then the aggregation switches have been configured.				
		For each 3020 switch, verify network reachability # ping <enclosure_switch_ip></enclosure_switch_ip>				
2	Virtual PM&C: Check TFTP Service Configuration	Check the TFTP configuration file to verify it is configured properly. If the /etc/xinetd.d/tftp file matches the output below, skip to step 4. Otherwise move on to step 3.				
		<pre># cat /etc/xinetd.d/tftp</pre>				
		service tftp				
		<pre>{ socket_type = dgram protocol = udp wait = yes user = root server = /usr/sbin/in.tftpd server_args = -s /var/TKLC/smac/image disable = no per_source = 11 cps = 100 2 flags = IPv4 }</pre>				

Procedure	16.	Configure	Cisco	3020	Switch	Pair(s)	using	NetConfig
I I Occuui e	10.	coninguit	Clifto	0040	Switten	I u II (5)	using	itteeteening

3	Virtual PM&C: Configure tftp service	<pre>Ensure that the tftp service is not running. A zero is expected. # tpdProvdclientnoxmlns=Xinetd getXinetdService service tftp Login on Remote: platcfg Password of platcfg: 0 # If 1 is returned, need to stop it first by executing the following command. # tpdProvdclientnoxmlns=Xinetd stopXinetdService service tftp force yes Login on Remote: platcfg Password of platcfg: 0 # This should return a 0. Edit the /etc/xinetd.d/tftp file for the values in bold so that tftp will work appropriately: # vi /etc/xinetd.d/tftp service tftp { service tftp service tf</pre>
		per_source = 11 cps = 100 2 flags = IPv4 }
4	Virtual PM&C: Modify PM&C Feature to allow TFTP	Enable the DEVICE.NETWORK.NETBOOT feature with the management role to allow tftp traffic by running the following commands: # pmacadm editFeaturefeatureName=DEVICE.NETWORK.NETBOOT enable=1role=management # pmacadm resetFeatures

5	Virtual PM&C:	Verify that the netConfig tftp_service has been configured. If the service is
	Verify netConfig	configured the output will look similar to below:
	Services	<pre># netConfigrepo showService name=tftp_service</pre>
		and check the output, which will be similar to the one shown below
		Services: Service Name: tftp service
		Type: tftp
		Host: 10.240.8.4
		Options: dir: /var/TKLC/smac/image
		[root@pmac5000101 ~]#
		If tftp_service is already configured, skip to step 7. Otherwise, continue on to step 6.
6	Virtual PM&C: Setup netConfig repository with necessary tftp information	Use netConfig to create a repository entry that will use the tftp service. This command will give the user several prompts. The prompts with <variables> as the answers are site specific that the user MUST modify. Other prompts that don't have a <variable> as an answer must be entered EXACTLY as they are shown here.</variable></variables>
	mormation	<pre># netConfigrepo addService name=tftp service</pre>
		Service type? (tftp, ssh, conserver, oa) tftp
		Enter an option name (g to cancel): dir
		Enter a value for user: /var/TKLC/smac/image
		Enter an option name(q to cancel): q
		Add service for tftp_service successful
		To check that you entered the information correctly, use the following command:
		<pre># netConfigrepo showService name=tftp_service</pre>
		and check the output, which will be similar to the one shown below:
		Services: Service Name: tftp_service Type: tftpr Host: 10.240.8.4 Options: dir: /var/TKLC/smac/image [root@pmac5000101 ~]#

7	Virtual PM&C:	check that the ssh_service is present by running the following command:
	repository with	<pre># netConfigrepo showService name=ssh service</pre>
	necessary ssh information	and check the output, which will be similar to the one shown below:
		[root@pmac5000101 ~]# netConfigrepo showServices name=ssh_service
		<pre>name=ssh_service Services: Service Name: ssh_service Type: ssh Host: 10.240.8.4 Options: password: D8396824B3B2B9EE user: root [root@pmac5000101 ~]# If the output returns that the service isn't present. Run the following command to add it. Note that prompts with <variables> as the answers are site specific that the user MUST modify. Other prompts that don't have a <variable> as answer must be entered EXACTLY as they are shown here. Note that <switch_backup_user_password> is not the same as the switch password (for c-Class it is the password of the PMAC). # netConfigrepo addService name=ssh_service Service type? (tftp, ssh, conserver, oa) ssh Service host? <pmac_mgmtvlan_ip_address> Enter an option name (q to cancel): user Enter a value for user: root Enter an option name(q to cancel): q Add service for console_service successful Run the following command again to check that the service was added successfully # netConfig command again to check that the service was added successfully </pmac_mgmtvlan_ip_address></switch_backup_user_password></variable></variables></pre>
		# netconingrepo snowservice name=ssn_service

8	Virtual PM&C: Setup NetConfig	Use netConfig to create a repository entry for each 3020. This command will give the user several prompts. The prompts with <variables> as the answers are site</variables>
	repository with switch information	specific that the user MUST modify. Other prompts that don't have a <variable> as an answer must be entered EXACTLY as they are shown here. If you do not know, stop now and context Customer Core Context</variable>
		stop now and contact Customer Care Center.
		NOTE: Switch Name must not exceed 20 characters.
		<pre># netConfigrepo addDevice name=C3020_IOBAY1 reuseCredentials</pre>
		Device Vendor? Cisco Device Model? 3020
		Should the init network adapter be added (y/n)? y Adding netBootInit protocol for C3020_IOBAY1 using network
		What is the address used for network device access? <enclosure_switch_ip></enclosure_switch_ip>
		What is the platform access username? <switch_platform_username></switch_platform_username>
		What is the platform user password? <switch_platform_password> Verify password <switch_platform_password></switch_platform_password></switch_platform_password>
		What is the device privileged mode password?
		Verify password <switch_enable_password></switch_enable_password>
		Should the init file adapter be added (y/n)? y Adding netBootInit protocol for C3020_IOBAY1 using file
		What is the name of the service used for TFTP access? tftp service
		Should the live network adapter be added (y/n) ? y
		Adding cli protocol for C3020_IOBAY1 using network
		Network device access already set: 10.240.8.7 Device named C3020_IOBAY1 successfully added."
		To check that you entered the information correctly, use the following command
		<pre># netConfigrepo listDevices</pre>
		and check the output, which will be similar to the one shown below
		Device: C3020_IOBAY1 Vendor: Cisco Model: 3020 Access: Network: 10.240.8.7 Init Protocol Configured Live Protocol Configured [root@pmac5000101 ~]#
		Repeat for each 3020, using appropriate values for those 3020s.

9	Virtual PM&C:	Execute the following command to turn on tftp:
	Prepare the system	<pre># tpdProvdclientnoxmlns=Xinetd</pre>
	loi utp	<pre>startXinetdService service tftp</pre>
		Login on Remote: platcfg
		Password of platcfg: <platcfg_password></platcfg_password>
		Ensure the firewall on the virtual pmac allows for tftp access.
		<pre># service iptables status grep 69</pre>
		1 ACCEPT udp 10.240.8.0/26 0.0.0.0/0 udp dpt:69 #
		If the output is not similiar to the one shown above, with site specific network information in it, then issue the following commands:
		<pre># iptables -I INPUT -s <management_network_subnet_id>/<netmask> -p udpdport 69 -j ACCEPT</netmask></management_network_subnet_id></pre>
		# service iptables save
		Otherwise, continue to the next step.
10	Virtual PM&C:	Update the 3020_init.xml and 3020_configure.xml files for the values noted in the
	Modify	next sentence. Values to be modified by the user will be notated in this step by a
	3020_configure.xml	preceding dollar sign. So a value that has \$ <some_variable_name> will need to be</some_variable_name>
	file for information	modified, removing the dollar sign and the less than, greater than sign. Optionally,
	the switch	these mes can be updated anead of time vis the IVAF D.
		<pre># vi /usr/TKLC/smac/etc/3020_init.xml</pre>
		<pre># vi /usr/TKLC/smac/etc/3020_configure.xml</pre>

11	Virtual PM&C/OA GUI: Reset Switch to factory defaults	If the 3020 switch has been previously configured, it needs to be reset to manufacturer default to enable GUI access using the following command, otherwise skip to the next step. # netConfigdevice= <switchname> setFactoryDefault</switchname>			
		<pre># netConfigdevice=<switchname> setFactoryDefault</switchname></pre>			
		Otherwise continue.			
		Log onto the OA GUI and click on interconnect bay 1 on the Rear View image of the middle pane. Alternatively, on the left pane, one could expand Interconnect Bays, then click 1. Cisco Catalyst Blade Switch . Then click on Management Console as shown below.			
		MP BladeSystem Onboard Administrator			
		System Status 🛛 🖓 Wizards 👻 Options 👻 Help 👻			
		View Legend Updated Thu Mar 18 2010, 08:43:23			
		System Status 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			
		Systems and Devices			
		Rack Overview Port Mapping Information Rack Firmware			
		Primary: 500_01_01 Enclosure Information Enclosure Settings Active Onboard Administrator Device Bays Interconnect Bays Diagnostic Information Port Mapping Management Console			
		A new page will be opened. If you are asked for a username and password, leave the username blank and use the appropriate password provided by the application documentation. Then click OK .			
		The server 10.240.4.26 at level_15_access requires a username and password.			
		Warning: This server is requesting that your username and password be sent in an insecure manner (basic authentication without a secure connection).			
		User name:			
		Password:			
		Remember my password			
		OK Cancel			

		If you are prompted with the "Express Setup" screen, click Refresh.
		Catalyst Blade Switch 3020 Express Setup
		Refresh 😓 Print 2 Help
		Network Settings Management Interface (VLAN ID): IP Address: , , , , , Subnet Mask: Default Gateway: 10 , 240 , 8 , 1 Switch Password: Confirm Switch Password:
		Optional Settings Host Name: Switch
		Telnet Access: O Enable O Disable Telnet Password: Confirm Telnet Password: SNMP: O Enable O Disable
		SNMP Read Community: SNMP Write Community: System Contact: System Location:
		Submit Cancel
		If you are prompted with "Do you want a secured session with the switch?", click on No.
		10.240.4.70
		Do you want a secured session with the switch?
		Don't ask me anymore
		Then a new Catalyst Blade Switch 3020 Device Manager will be opened.
12	OA GUI: Restore	Navigate to Configure > Restart/Reset :
	switch to factory defaults	Click the circle that says "Reset the switch to factory defaults, and then restart the switch". Then click the " Submit " button.
		A pop-up window will appear that looks like this:
		Windows Internet Explorer
		The device will reset to its factory default settings and will delete its current IP address. Do you want to continue?
		OK Cancel
		Click OK and the switch will be reset to factory defaults and reloaded.
		Continue to the next step, do not wait for the switch to finish rebooting.

13	Virtual PM&C: Initialize the Switch	Note: This command must be entered at most 5 minutes after step 8 is completed. If it is not, repeat step 12
		Execute the following commands:
		<pre># netConfigfile=/usr/TKLC/smac/etc/3020_init.xml Processing file: /usr/TKLC/smac/etc/3020_init.xml</pre>
		Note: This step takes about 4-5 minutes to complete, it is imperative that you wait until returned to the command prompt. DO NOT PROCEED UNLESS RETURNED TO THE COMMAND PROMPT
		Check the output of this command for any errors. If this fails for any reason, stop this procedure and contact Customer Care Center. A successful completion of netConfig will return the user to the prompt.
		Go back to Step 9 and repeat steps 11 through 13 for the remaining 3020 switches.
14	Virtual PM&C:	Configure both switches by issuing the following command.
	Configure the switches	<pre># netConfigfile=/usr/TKLC/smac/etc/3020_configure.xml Processing file: /usr/TKLC/smac/etc/3020_configure.xml</pre>
		Note: This step takes about 2-3 minutes to complete
		Check the output of this command for any errors. If this fails for any reason, stop this procedure and contact Customer Care Center.
		A successful completion of netConfig will return the user to the prompt.
15	Virtual PM&C: Verify switch	To verify the configuration was completed successfully, ssh to each switch and attempt to log in. If log in is successful, execute the following:
	Configuration	Switch# show run
		Inspect the output of "show run", and ensure that it is configured as per site requirements.
16	Virtual PM&C:	Execute the commands that disable tftp transfer.
	i urn off titp	<pre># tparrovaclientnoxm1ns=Xineta stopXinetdService service tftp</pre>
		Login on Remote: platcfg
		<pre>Password of platcfg: <platcfg_password></platcfg_password></pre>

17	Management	Ensure the directory where the backups will be stored exists using the following
	Switch	command.
	Configuration	<pre># ls /usr/TKLC/smac/etc/switch/backup</pre>
		If an error is returned saying "No such file or directory", then create the directory using the following command
		<pre># mkdir /usr/TKLC/smac/etc/switch/backup</pre>
		Change the currect path to the newly created directory using the following command
		<pre># cd /usr/TKLC/smac/etc/switch/backup</pre>
		Execute the backup command to backup switch 1A
		<pre># netConfig devicedevice=<switch_name> backupConfigurationservice=ssh_service filename=<switch_name>-backup</switch_name></switch_name></pre>
		Repeat the command above for the remaining switches.
		Verify switch configuration was backed up by cat <switch_name>-backup and inspect its contents to ensure it reflects the latest knwon good switch configurations.</switch_name>

4.10.2 Configure HP6120XG Enclosure Switches

Procedure 17. Configure HP 6120XG Switch Pair(s) using NetConfig

S This procedure will configure up to 3 HP 6120XGswitch pairs with an appropriate IOS and configuration specified by Platform Engineering and Application requirements.
 E Needed material:

 Application 6120 configuration file in an application ISO on an application CD 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	Management	If the aggregation switches are provided by Tekelec, login to the management
	server: Prepare for	server, then run:
	switch configuration	<pre># ping <switch1a address="" mgmtvlan=""></switch1a></pre>
	0	<pre># ping <switch1b address="" mgmtvlan=""></switch1b></pre>
		<pre># ping <switch mgmtvlan="" vip=""></switch></pre>
		If the aggregation switches are provided by the customer, login to the management
		server, then run:
		<pre># ping <customer_switch1a_mgmtvlan_address></customer_switch1a_mgmtvlan_address></pre>
		<pre># ping <customer_switch1b_mgmtvlan_address></customer_switch1b_mgmtvlan_address></pre>
		<pre># ping <customer_switch_mgmtvlan_vip></customer_switch_mgmtvlan_vip></pre>
		check that the ssh_service is present by running the following command:
		<pre># netConfigrepo showService name=ssh service</pre>
		and check the output, which will be similar to the one shown below:
		[root@pmac5000101 ~]# netConfigrepo showServices
		name=ssh_service
		Services:
		Service Name: ssh_service
		Type: ssh
		Host: 10.240.8.4
		Options:
		password: D8396824B3B2B9EE
		user: root
		[root@pmac5000101 ~]#
		If the output returns that the service isn't present. But the following command to
		add it. Note that prompts with <variables> as the answers are site specific that the</variables>
		user MUST modify. Other prompts that don't have a <variable> as answer must be</variable>
		entered EXACTLY as they are shown here
		Note that the <switch backup="" password="" user=""> below is not the same as the switch</switch>
		password (for c-Class it is the password of the PMAC).
		<pre># netConfigrepo addService name=ssh_service</pre>
		Service type? (tftp, ssh, conserver, oa) ssh
		Service host? <management_server_mgmtvlan_ip_address></management_server_mgmtvlan_ip_address>
		Enter an option name (q to cancel): user
		Enter a value for user: root
		Enter an option name(q to cancel): password
		Enter a value for password: < switch_backup_user_password>
		Enter an option name(q to cancel): q
		Add service for console_service successful
		Run the following command again to check that the service was added sucessfully
		<pre># netConfigrepo showService name=ssh_service</pre>

2	Management	Log in to the switch using SSH
	server: Reset the switch to factory	<pre># ssh manager@<enclosure_switch_ip></enclosure_switch_ip></pre>
	derauns	Switch# config
		Switch(config) # no password all
		Password protection for all will be deleted, continue [y/n]? ${\bf y}$
		Switch(config)# no include-credentials
		Switch(config)# end
		Switch# erase startup-config
		Configuration will be deleted and device rebooted, continue [y/n]? ${\bf y}$
		The switch will automatically reboot, reboot takes about 120-180 seconds. Note: Upon switch reboot, it is likely the user will be returned to the PMAC command prompt. This is not normally a "clean" exit back to the command prompt. If the user does get an error message, the user should execute the telent session below, as a secondary measure to ensure the switch gets reset to factory defaults.
		If the above procedures fails, log in via telnet and reset the switch to manufacturing defaults. If the above ssh procedures fails, log in via telnet and reset the switch to manufacturing defaults
		<pre># telnet enclosure_switch_IP></pre>
		Switch# config
		<pre>Switch(config) # no password all (answer yes to question) Password protection for all will be deleted, continue [y/n]? y Switch(config) # end</pre>
		Switch# erase startup-config
		(switch will automatically reboot, reboot takes about 120-180 seconds) Note: Upon switch reboot, the user will be returned back to the PM&C command prompt.
3	Management server: Edit the switch configuration file template for site specific information	Edit the switch initialization file and switch configuration file template for site specific addresses, VLAN IDs, and other site specific content. Values to be modified by the user will be notated in this step by a preceding dollar sign. So a value that has \$ <some_variable_name> will need to be modified, removing the dollar sign and the less than, greater than sign.</some_variable_name>
		<pre># vi /usr/TKLC/smac/etc/6120XG_init.xml # vi /usr/TKLC/smac/etc/6120XG_[single,LAG]Uplink_configure.xml</pre>

4	Management	Use netConfig to create a repository entry for each 6120XG and/or 3020. This
	server: setup	command will give the user several prompts. The prompts with <variables> as the</variables>
	netconfig repository	answers are site specific that the user MUST modify. Other prompts that don't have
		a <variable> as an answer must be entered EXACTLY as they are shown here. If</variable>
		you do not know, stop now and contact Customer Care Center.
		Note that the "name= <switchtype_location>" variable in the addDevice command</switchtype_location>
		needs to match the hostname of the switch (" <device>\$swname</device> " in the
		xml file created in Step 2).
		Also the name parameter below should be switchType_Location, for example:
		name=3020_IOBAY1
		name=6120XG_IOBAY3
		<pre># netConfigrepo addDevice</pre>
		<pre>name=<switchtype_location_name>reuseCredentials</switchtype_location_name></pre>
		Device Vender? UD
		Device Vendol? HP
		Device Model: 6120
		Shourd the first network adapter be added (y/n)? y
		Adding cli protocol for 6120XGC3020_IOBAYI using network
		What is the address used for network device access?
		What is the platform access yearname?
		<pre>switch platform username></pre>
		What is the platform user password? <switch password="" platform=""></switch>
		Verify password <switch password="" platform=""></switch>
		What is the device privileged mode password?
		<pre><switch enable="" password=""></switch></pre>
		Verify password <switch enable="" password=""></switch>
		Should the live oob adapter be added (y/n) ? n
		Should the live network adapter be added (v/n) ? v
		Adding sshInit protocol for 6120XG IOBAY1 using network
		Network device access already set: 10.240.8.7
		Device named 6120XG TOBAY1 successfully added.
		To check that you entered the information correctly, use the following command
		<pre># netConfigrepo listDevices</pre>
		and check the output, which will be similar to the one shown below
		Device: 6120XG_IOBAY1
		Vendor: HP
		Model: 6120
		Access: Network: 10.240.8.10
		Init Protocol Configured
		Live Protocol Configured
		[root@pmac5000101 ~]#

5	Management server: Apply include-credentials command to the switch	Log in to the switch using SSH # ssh manager@ <enclosure_switch_ip> Switch# config Switch(config)# include-credentials If prompted, answer yes to both questions. Log out of the switch, by running the following command. Answer yes to both questions when prompted. Switch(config)# logout Do you want to log out [y/n]? y Do you want to log out [y/n]? y</enclosure_switch_ip>
6	Management server: Initialize the switch	Run the following command to initialize the switch # netConfigfile=/usr/TKLC/smac/etc/6120XG_init.xml This should take about 2-3 minutes.
7	Management server: Configure the switch	Run the following command to configure the switch # netConfigfile= /usr/TKLC/smac/etc/6120XG_[single,LAG]Uplink_configure.xml This should take about 2-3 minutes.
8	Management server: Apply QoS Settings	Apply the QoS traffic template settings. # netConfig file=/usr/TKLC/smac/etc/switch/xml/addQOS_trafficTemplate_6120X G_BAY1.xml Note: The switch will reboot after this command. This step will take 2-5 minutes.
9	Management server: Repeat for remaining 6120XG switches	For each HP 6120XG, repeat steps 2-8.

10	Management server: Verify	For each HP 6120XG, verify network reachability and configuration.
	proper configuration of HP 6120XG	<pre># ping -w3 <enclosure_switch_ip></enclosure_switch_ip></pre>
	switches	<pre># ssh manager@<enclosure_switch_ip></enclosure_switch_ip></pre>
		<pre>manager@10.240.8.10's password: <manager_password></manager_password></pre>
		Switch# show run
		Inspect the output of "show run", and ensure that it is configured as per site requirements.
11	Management server: Backup	Ensure the directory where the backups will be stored exists using the following command:
	Switch Configuration	<pre># ls /usr/TKLC/smac/etc/switch/backup</pre>
		If an error is returned saying "No such file or directory", then create the directory using the following command
		<pre># mkdir /usr/TKLC/smac/etc/switch/backup</pre>
		Change the currect path to the newly created directory using the following command
		<pre># cd /usr/TKLC/smac/etc/switch/backup</pre>
		Execute the following commands to backup the switch
		<pre># netConfigdevice=<switch_name> backupConfiguration service=ssh_service filename=<switch_name>- backup.orignet</switch_name></switch_name></pre>
		Repeat the 2 commands above for the remaining switches.
		Verify switch configuration was backed up by cat <switch_name>-backup and inspect its contents to ensure it reflects the latest knwon good switch configurations.</switch_name>

4.11 Server Blades Installation Preparation

Procedure 18. Upgrade Blade server Firmware

S	This procedure will	provide	e the steps to up	grade the firmware on the	Blade servers.		
T E D	Prerequisite: Proced	lure 16 d	and 17 has been	completed.			
Р #	Needed material:	eded material:					
"	HP Smart UpdaHP Solutions Fi	nte Firm rmware	ware DVD e Upgrade Pack	Release Notes [1]			
	Check off ($$) each step as it i	s complete	d. Boxes have been pro	vided for this purpose under each ste	ep number.		
	IF THIS PROCEDURE FAILS	5, CONTAG	LI TEKELEC TECHNI	CAL SERVICES AND ASK FOR ASS.	ISTANCE.		
	Firmware upgrade is needed	blades	ted with the overv down the view the in the enclosure.	view of all components in the blades firmware. Check the	e enclosure as shown below. ROM Version for all the		
		Device F	irmware Information				
		Device F Bay	irmware Information	Firmware Component	Current Version		
		Device F Bay 1	irmware Information Device Model ProLiant BL460c G6	Firmware Component System ROM	Current Version 24 05/20/2010		
		Device F Bay 1	irmware Information Device Model ProLiant BL460c G6	Firmware Component System ROM iLO2	Current Version 24 05/20/2010 ILO2 2.00 Jun 2, 2010		
		Device F Bay 1	irmware Information Device Model ProLiant BL460c G6	Firmware Component System ROM iLO2 Power Management Controller	Current Vexsion 24 05/20/2010 iLO2 2.00 Jun 2 2010 3.4		
		Device F Bay 1	irmware Information Device Model ProLiant BL460c G6 ProLiant BL460c G6	Firmware Component System ROM iLO2 Power Management Controller System ROM	Current Vexsion 24 05/20/2010 iLO2 2.00 Jun 2 2010 3.4 124 05/20/2010		
		Device F Bay 1	irmware Information Device Model ProLiant BL460c G6 ProLiant BL460c G6	Firmware Component System ROM ILO2 Power Management Controller System ROM ILO2	Current Version 24 05/20/2010 iLO2 2.00 Jun 2 2010 3.4 124 05/20/2010 iLO2 2.00 Jun 21 2010		
		Device F Bay 1 2	irmware Information Device Model ProLiant BL460c G6 ProLiant BL460c G6	Firmware Component System ROM ILO2 Power Management Controller System ROM ILO2 Power Management Controller	Current Version 24 05/20/2010 iLO2 2.00 Jun 2 2010 3.4 i24 05/20/2010 iLO2 2.00 Jun 21 2010 3.4		
		Device F Bay 1 2 3	Imware Information Device Model ProLiant BL460c G6 ProLiant BL460c G6 ProLiant BL460c G6	Firmware Component System ROM LO2 Power Management Controller System ROM LO2 Power Management Controller System ROM	Current Version 24 05/20/2010 ILO2 2.00 Jun 2 2010 3.4 124 05/20/2010 ILO2 2.00 Jun 21 2010 3.4 124 05/20/2010 ILO2 2.00 Jun 21 2010 3.4 124 05/20/2010		
		Device F Bay 1 2 3	Imware Information Device Model ProLiant BL460c G6 ProLiant BL460c G6 ProLiant BL460c G6	Firmware Component System ROM LO2 Power Management Controller System ROM LO2 Power Management Controller System ROM LO2 Power Management Controller System ROM LO2	Current Vession 24 05/20/2010 ILO2 2.00 Jun 2 2010 3.4 124 05/20/2010 ILO2 2.00 Jun 21 2010 3.4 124 05/20/2010 ILO2 2.00 Jun 21 2010 3.4 ILO2 2.00 Jun 21 2010 ILO2 2.00 Jun 21 2010 ILO2 2.00 Jun 21 2010		
		Device F Bay 1 2 3	Imware Information Device Model ProLiant BL460c G6 ProLiant BL460c G6 ProLiant BL460c G6	Firmware Component System ROM LO2 Power Management Controller	Current Vexsion 24 05/20/2010 ILO2 2.00 Jun 2 2010 3.4 124 05/20/2010 ILO2 2.00 Jun 21 2010 3.4 124 05/20/2010 ILO2 2.00 Jun 21 2010 3.4 124 05/20/2010 ILO2 2.00 Jun 21 2010 3.4 124 05/20/2010 ILO2 2.00 Jun 21/2010 3.4		
		Device F Bay 1 2 3 4	ProLiant BL460c G6	Firmware Component System ROM LO2 Power Management Controller System ROM	Current Vexsion 24 05/20/2010 ILO2 2.00 Jun 2 2010 3.4 124 05/20/2010 ILO2 2.00 Jun 21 2010 3.4 124 05/20/2010 ILO2 2.00 Jun 21 2010 3.4 124 05/20/2010 ILO2 2.00 Jun 21 2010 3.4 124 05/20/2010 ILO2 2.00 Jun 21/2010 3.4 124 05/20/2010		
		Device F Bay 1 2 3 3 4	ProLiant BL460c G6 ProLiant BL460c G6 ProLiant BL460c G6 ProLiant BL460c G6	Firmware Component System ROM LO2 Power Management Controller System ROM LO2	Current Version 24 05/20/2010 iLO2 2.00 Jun 21 2010 3.4 124 05/20/2010		
		Device F Bay 1 2 3 3	ProLiant BL460c G6 ProLiant BL460c G6 ProLiant BL460c G6 ProLiant BL460c G6	Firmware Component System ROM iLO2 Power Management Controller	Current Version 24 05/20/2010 iL02 2.00 Jun 21 2010 3.4 124 05/20/2010 iL02 2.00 Jun 21 2010 3.4		
	Local Workstation: Import HP Firmware Maintenance CD	Insert the HP Smart Update Firmware DVD into the removable media drive of your local workstation. Use HP Solutions Firmware Upgrade Pack Release Notes [1] to select the proper part number. If your local workstation is a Linux machine, extract the iso image using the following commands, otherwise skip to the next step. Use the correct iso image part number from HP Solutions Firmware Upgrade Pack Release Notes [1]. # getCDROM # dd if=/dev/scd0 of=/tmp/ <image_part_number>.iso Verify checksum of the extracted with the value listed in HP Solutions Firmware Upgrade Pack Release Notes [1]. # /usr/bin/md5sum /tmp/<image_part_number>.iso 422275a25353030fb5338876761eelca /tmp/872-XXXX-XXX- firmware.iso Note: The actual iso image in the output is for illustrative purposes only</image_part_number></image_part_number>					
---	--	--					
3	Local Workstation: Create ISO file	If your local workstation is a windows machine, use an ISO creation tool such as "ImgBurn" to create an iso from the inserted disk. Use the correct iso image part number from HP Solutions Firmware Upgrade Pack Release Notes [1].					
4	Local Workstation: Copy ISO to USB Media	Take the ISO you just mounted/created and copy it to USB media.					
5	c7000 Enclosure Insert USB Flash Drive	Insert the USB Flash Drive with the <i>HP Smart Update Firmware</i> ISO into the USB port of the Active OA Module.					
6	Local Workstation: Access the Active OA	Access the Active OA Login Page from an Internet Explorer ® session using the following URL: https:// <oa_ip>/</oa_ip>					
7	OA Web GUI: Log in to the Active OA Log in as an administrator user.	User Name = <oa_admin_user> Password = <oa_admin_password></oa_admin_password></oa_admin_user>					

8	OA Web GUI:	M HP BladeSystem Onbo	pard Administrator	
	Access the Device	System Status	Wizards - Options - Help -	
	Summary page	View Legend Updated Thu Jul 8 2010, 12:51:53	Device Bay Summary	
	On the left pane.		Device List	
	expand the Device	System Status 0 0 0 0 0	UID State 👻 Virtual Power 👻 One Time Bo	ot - DVD -
	Bays node to	Systems and Devices	Bay Status UID Power State	e iLO IP Address iLO Name iLO DVD Status
	Bays note to		🔲 1 🛇 ОК 🥥 _{Blink} Ол	10.240.17.31 ILOUSE941SWFS Disconnected
	display the Device	Rack Overview Rack Firmware	2 OK Off On	10.240.17.32 ILOUSE941SWFT Disconnected
	Bay Summary	Primary: 500_05_01	3 🛛 0K 🜑 Off On	10.240.17.33 ILOUSE941SWH9 Disconnected
	window.	Enclosure Information	4 🛇 OK 🥥 Blink On	10.240.17.34 ILOUSE941SWH3 Disconnected
		Active Onboard Administrator	5 OK Off On	10.240.17.35 ILOUSE941SWFJ Disconnected
	Select the individual	Standby Onboard Administrator	6 OK Off On	10.240.17.36 ILOUSE941SWHD Disconnected
	blades to be	1. ESXi-host-joslin	7 Ook Ooff Off	10.240.17.37 ILOUSE941SWFV Disconnected
	upgraded by clicking	2. ESXi-en501bay2.localdomai	S OK Off On	10.240.17.38 ILCUSE941SWFN Disconnected
	and enabling the	4. en50501bay4F		10.240.17.42 ILOUSE0000321 Disconnected
		5. en50501bay5F		10.240.17.45 IE003E5413WIB Disconnected
	checkbox.	 C. Exclosed contained and a constrained (269427367) R. hostname (269427367) R. hostname (277757464) L. hostname (277758366) I.S. BLADE ISF Interconnect Bays 		Refresh
		 Pover and Thermal Users/Authentication insight Display 		
		Note: <u>A maximum of</u> the c7000 enclosure h	<u>8 blades</u> should be upg as more than 8 blades t	raded concurrently at one time. If hey will need to be ungraded to
		multiple sessions		ney win need to be appraided to
0		multiple sessions.		
9	Connect to USB Drive	Once the blades are sel selecting the Connect	lected, connect them to the to usb item from the I	ne ISO on the USB Drive, by DVD menu.
		MP BladeSystem Onbo	oard Administrator	
		System Status 📃	Wizards	
		View Legend 	Device Bay Summary	
			Device List	
		System Status 0 0 0 0 0	UID State - Virtual Power - One Time Bo	
		Systems and Devices	Disconnect Blade from DVD/iso	Address ILO Name ILO DVD Status
			1 OK Blink On	10.240.17.31 ILOUSE941SWFS Disconnected
		Rack Overview Rack Firmware	□ 2 ♥ 0К ● 0ff Оп	10.240.17.32 ILOUSE941SWFT Disconnected
		Primary: 500 05 01	□ 3 ⊘ OK ● Off On	10.240.17.33 ILOUSE941SWH9 Disconnected
		Enclosure Information	🔲 4 🛇 ОК 🌑 _{Вlink} Оп	10.240.17.34 ILOUSE941SWH3 Disconnected
		Enclosure Settings Active Ophnard Administrator	🔲 5 🥝 ОК 🕚 Оff Оп	10.240.17.35 ILOUSE941SWFJ Disconnected
		Standby Onboard Administrator	🖸 6 🛇 ОК 🜑 Оff Оп	10.240.17.36 ILOUSE941SWHD Disconnected
		Device Bays	П 7 Ок Off Off	10.240.17.37 ILOUSE941SWFV Disconnected
		2. ESXi-en501bay2.localdomai	□ 8 ♥ОК ● Off On	10.240.17.38 ILOUSE941SWFN Disconnected
		 3. hostname1278553083 4. en50501bav4F 	✓ 12 ○ OK ● Off On	10.240.17.42 ILOUSE8068S2T Disconnected
		5. en50501bay5F	✓ 13 ○ 0K ● Off On	10.240.17.43 ILCOSE941SWHB Disconnected
		 6. ESXI-50106.localdomain 7. hostname1269427367 8. hostname1277757464 		Refresh

10	OA Web GUI:	01	nce	each	hlade	has	mo	unted the IS	O media the	Device List t	ble should indica	ite
	Verify Drive	an	iL(O D'	VD St	atus	as (Connected f	for each blade	that was prev	iously selected.	æ
\Box	Connection						, u.s .			that mas pro-		
		٥	Device	e List								
	l		UID S	tate 🔻	Virtual	Powe	er 🔻	One Time Boot	▼ DVD ▼			
				Bay	Status	UID		Power State	iLO IP Address	iLO Name	iLO DVD Status	
				1	🛇 ок	٩	Blink	On	10.240.17.31	ILOUSE941SWFS	Disconnected	
				2	🛇 ок	۲	Off	On	10.240.17.32	ILOUSE941SWFT	Disconnected	
				3	🛇 ок	۲	Off	On	10.240.17.33	ILOUSE941SWH9	Disconnected	
				4	🛇 ок	۹	Blink	On	10.240.17.34	ILOUSE941SWH3	Disconnected	
				5	🛇 ок	۹	Off	On	10.240.17.35	ILOUSE941SWFJ	Disconnected	
				6	🛇 ок	۹	Off	On	10.240.17.36	ILOUSE941SWHD	Disconnected	
				7	🛇 ок	۹	Off	Off	10.240.17.37	ILOUSE941SWFV	Disconnected	
				8	🛇 ок	٩	Off	On	10.240.17.38	ILOUSE941SWFN	Disconnected	
				12	🛇 ок	٩	Off	On	10.240.17.42	ILOUSE8068S2T	Connected	
				13	🛇 ок	•	Off	On	10.240.17.43	ILOUSE941SWHB	Connected	
11	OA Web GUI: Power Down Blades	If the	nee e M	ded, ome	resele	ct th Pre	ne U ess o	ID checkbo ption under	x for each bla the Virtual I	de to be upgra Power menu.	aded and then sele	ect
		r i			Mon	nentary	y Press	One Time Boot	▼ UVU ▼			
				Bay	Pres	s and	Hold	ower State	ILO IP Address	ILO Name	ILO DVD Status	
				1	Res	et		n	10.240.17.31	ILOUSE941SWFS	Disconnected	
				2	OUK	-	011		10.240.17.32	ILOUSE941SWFT	Disconnected	
				3	OK OK		Off	On	10.240.17.33	ILOUSE941SWH9	Disconnected	
				4	Ock	0	Blink	On On	10.240.17.34	ILOUSE941SWH3	Disconnected	
				5	OK	-	Off	On On	10.240.17.35	ILOUSE941SWFJ	Disconnected	
				6	Ock	0	Off	On Off	10.240.17.36	ILOUSE941SWHD	Disconnected	
	1			/	OK	-	Off	0	10.240.17.37	ILOUSE941SWFV	Disconnected	
	1						Off	Un	10.240.17.30	ILOUSE9415WFN	Disconnected	
1				8	Oor	0		0-	40.040.47.40	IL OLICEROSSEST	Connected	
				8 12	Ок	0	Off	On On	10.240.17.42	ILOUSE8068S2T	Connected	
				8 12 13	⊘ок ⊘ок		Off Off	On On	10.240.17.42 10.240.17.43	ILOUSE8068S2T ILOUSE941SWHB	Connected Connected	

12	OA Web GUI:	The power down sequence can take several minutes to complete When it compl	latas
	Verify Power Down	the Device List table will indicate the Power State of each select blade to be <i>Of</i>	ff.
		Device List	
		UID State 👻 Virtual Power 👻 One Time Boot 👻 DVD 👻	
		Bay Status UID Power State iLO IP Address iLO Name iLO DVD Status	
		1 OK Blink On 10.240.17.31 ILOUSE941SWFS Disconnected	
		2 OK On 10.240.17.32 ILOUSE941SWFT Disconnected	
		3 OK On 10.240.17.33 ILOUSE941SWH9 Disconnected	
		4 OK Blink On 10.240.17.34 ILOUSE941SWH3 Disconnected	
		5 OK On 10.240.17.35 ILOUSE941SWFJ Disconnected	
		6 OK Off On 10.240.17.36 ILOUSE941SWHD Disconnected	
		7 OK Off 0ff 10.240.17.37 ILOUSE941SWFV Disconnected	
		8 OK Off On 10.240.17.38 ILOUSE941SWFN Disconnected	
		□ 12 OK Off Off 10.240.17.42 ILOUSE8068S2T Connected	
		□ 13 OK Off Off 10.240.17.43 ILOUSE941SWHB Connected	
		Refresh Note: The Refresh button may need to be clicked in order to see the current stat of all blades.	tus
13	OA Web GUI: Initiate Firmware Upgrade	To power the blades back on and begin the automated firmware upgrade process repeat Steps 11 and 12 this time being sure the Power State indicates <i>On</i> for each selected blade.	s, ch
14	OA Web GUI: Monitor Firmwore	From this point on each blade will boot into an automated firmware upgrade pro	ocess
	Ungrade	that will last between 20 to 25 minutes.	
	opgrade	Device List	
		UID State Virtual Power Vone Time Boot VDV	
		Bay Status UID Power State iLO IP Address iLO Name iLO DVD Status	
		1 VOK Blink On 10.240.17.31 LOUSE941SWFS Disconnected	
		3 OK On 10.240.17.32 ILCOSE941SWH9 Disconnected	
		4 Q OK Blink On 10.240.17.34 ILOUSE941SWH3 Disconnected	
		5 OK O Off On 10.240.17.35 ILOUSE941SWFJ Disconnected	
		6 OK On 10.240.17.36 ILOUSE941SWHD Disconnected	
		T Off 0ff 10.240.17.37 LOUSE941SWFV Disconnected	
		8 OK Off On 10.240.17.38 ILOUSE941SWFN Disconnected	
		□ 12 OK Off On 10.240.17.42 ILOUSE8068S2T Disconnected	
		□ 13 OK O Off On 10.240.17.43 ILOUSE941SWHB Disconnected	
		Refresh Upon a successful firmware upgrade, the Device List table will list each blade w a Status of <i>OK</i> , UID of <i>Off</i> and the iLO DVD Status as <i>Disconnected</i> . At this t the blades will automatically be rebooted. If the status does not update to disconnected, you can verify completion by opening an iLo window (via the OA each blade and watching the console for indication of firmware upgrade progres and successful completion If necessary, repeat Steps 8 through 14 for the remaining blades in the enclosure be upgraded. Proceed to the next step.	with time A) for ss e to

15 □	c7000 Enclosure Remove USB Flash Drive	The USB flash drive may now safely be removed from the Active OA module.
16	Remove temporary file	After all blade servers have been upgraded, the file copied to laptop in Step 3 may be removed.

Procedure 19. Confirm/Update Blade server BIOS Settings

S	This procedure will provide the steps to confirm and update the BIOS boot order on the Blade					
т	servers	1 1 1				
F	berverb.					
P	Prerequisite: Proced	lure 18. Upgrade Blade server Firmware has been completed.				
#	Check off (\mathbf{v}) each step as it i	s completed. Boxes have been provided for this purpose under each step number.				
	(,	· · · · · · · · · · · · · · · · · · ·				
	IF THIS PROCEDURE FAILS	S, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.				
1	OA GUI: Login	Open your web browser and navigate to the OA IP address You will see following:				
		HP Onboard Administrator				
		Login to HP OA as Administrator. Original password is on paper card attached to each OA.				

2	OA: Navigate to device Bay Settings	Navigate to Enclos	<pre>sure Information -> Device Bays -> <blade 1=""></blade></pre>					
		Click on Boot Opt	Click on Boot Options Tab					
		HP BladeSystem Onb	oard Administrator					
		System Status	Wizards + Options + Help +					
		View Legend Updated Tue Jun 8 2010, 20:21:33	Device Bay Information - ProLiant BL460c G6 (Bay 1)					
		S V A 0 0	Status Information Virtual Device: Boot Options IML Log					
		System status 0 0 0 0 0 0 Systems and Devices	One Time Boot: You may specify one time boot settings for the server. After the server has booted using these settings, it will return to usir the default settings shown below.					
		Rack Overview	One Time Boot from: Select					
		Primary: 9080702	Apply					
		Enclosure Information Enclosure Settings Active Onboard Administrator	The boot method that the servers will use permanently.					
		Standby Onboard Administrator Standby Onboard Administrator Device Bays 1. biade01 2. biade02 3. biade05 5. biade05 5. biade05 6. biade06 7. biade07 8. biade07 8. biade07 8. biade07 9. biad07 9. biad07 9. bi	PL Device: (Boot order) USB Drive (A:) USB Drive (C:) Hard Drive C:() PXE NIC 1 (**) V					
		 9. hostname1275662422 10. hostname1275662420 	Apply					
		Power and Thermal Leare/Authentication	* See Boot Controller Order on Server's ROM-Based Setup Utility ** See Embedded Nics under System Onlions section on Server's ROM-Based Setup Utility					
3	OA: Verify/update	Verify that the Boot	order is as follows. If it is not, use the up and down arrows to					
	Boot device Order	adjust the order to m	atch the picture below, then click on Apply					
]		Note that for servers	that do not have a CD-ROM, set USB to be on top.					
		IPL Device: CD-ROM (Boot order) Diskette USB Dri Hard Dr PXE NIC	M P Drive (A:) iveKey (C:) ive C: (*) : 1 (**)					

Procedure 19. Confirm/Update Blade server BIOS Settings





Procedure 19. Confirm/Update Blade server BIOS Settings



Procedure 19. Confirm/Update Blade server BIOS Settings

7	OA: Repeat for the	Repeat Steps 2 through 6 for the remaining blades. Once done, exit out of the OA
	remaining blades	GUI.

Procedure 20. Disable SNMP on iLO Interface

S	This procedure will	provide the steps to disable SNMP on the iLO interfaces of both rack mount								
Ť	servers and blades									
Ε										
P #	Prerequisite: Procedure 18. Upgrade Blade server Firmware has been completed.									
#	Check off (\checkmark) each step as it is	Check off ($m \psi$ 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	OA GUI: Login	This procedure needs to be repeated for every Rack Mount Server and blade in								
	on our zogin	the system.								
		Open your web browser and navigate to the Blade iLO IP address You will see one of the following depending on the iLO Version								
		Integrated Lights-Out 2 Integrated Lights-Out 3 Integrated Lights-Out 3 HP ProLiont Integrated Lights-Out 2 Integrated Lights-Out 3 Login to the GUI using an Administrator account name and password.								
	Blade iLO: Navigate SNMP Management Page	If using iLO2, then select the Administration tab on the top navigation bar, then select the Management menu item on the left navigation bar to display the SNMP Settings page.								
		If using iLO3 or iLO4, then expand the Administration menu item in the left hand navigation pane and select the Management sub-menu item to display the Management configuration page.								
3	Blade iLO: Disable SNMP	Select option Disabled for each of the 3 SNMP settings as shown below, then click Apply Settings to save the change. The web page will refresh but no specific indication will be given that settings have been saved.								

Procedure 20. Disable SNMP on iLO Interface

4	Blade iLO: Verify	To verify the setting change navigate away from the SNMP/Insight Manager
	the Changes	Settings page and then go back to it to verify the SNMP settings are disabled.
		Click the Log Out link in upper right corner of page to log out of the iLO Web UI.
5	Complete for remaining iLO devices	Repeat this procedure all remaining iLO 2 Servers.

4.12 Install TVOE on Rack Mounted Servers

NOTE: IF THIS INSTALLATION DOES NOT HAVE NOAMP servers running on RMSes, then skip this entire section and continue with section 4.13

S T E P	This procedure will install the TVOE operating system on the additional Rack Mounted Servers. Recall that TVOE has already been installed on the First RMS server which is running the PMAC software.							
#	Prerequisite: PMAC (virtualized) has been installed on the First RMS Server.							
	Check off (\checkmark) each step as it i	is completed. Boxes have been provided for this purpose under each step number.						
	IF THIS PROCEDURE FAIL	S, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.						
1	PM&C GUI:	Open web browser and Login to PMAC GUI as pmacadmin user.						
	Login							
	PM&C GUI: Configure Cabinets if Needed	Navigate to Main Menu -> Hardware -> System Configuration -> Configure Cabinets. Main Menu Hardware System Configuration Configure Cabinets Configure Enclosures Software If you see this message: Provisioned Cabinets There are no provisioned cabinets Add Cabinet Delete Cabinet Then press Add Cabinet, Enter a cabinet id for your RMS systems, then press Add Cabinet again. If there are already cabinets listed on this screen, then proceed ahead.						

3	PM&C GUI: Configure RMS on PMAC Server	Navigate to Mai Configure R B A Main M B A Haro B S	.n Menu -> Hardwa MS. enu dware system Configuration	are -> System Configuration ->	>		
			Configure Cabinet Configure Enclosu	res			
		Click Add RMS					
		RMS IP		RMS Name			
			There are no pro	ovisioned RMS			
		Add RMS	Edit RMS Delete R	MS Find RMS Found RMS			
		Enter Informatio cabinet ID, and f IP: Name: Cabinet ID: User: Password:	In about the RMS serve finally enter the iLO use 10.194.19.204 NOAM-A 104 Administrator	er: It's iLO IP address, name, pick the ername and password.			
		Click Add RMS					
		The iLO IP addr	ress and name of the new	w RMS should now display:			
		RMS IP		RMS Name			
		10.194.19.204		NOAM-A			
		REPEAT THIS PMAC TO CO	STEP FOR ANY AD NFIGURE.	DITIONAL RMSes YOU WISH THE			

4	TVOE Host:	Add the TVOE ISO image to the PM&C, this can be done in one of three ways:					
	Load TVOE 2.0 ISO	1. Insert the TVOE 2.0 64 bit CD required by the application into the removable media drive.					
		2. Attach the USB device containing the ISO image to a USB port.					
		3. Using a TVOE 64 bit iso file					
		cd into the directory where your ISO image is located on the $\underline{\text{TVOE Host}}$ (not on the PM&C server)					
		Using scp, copy the ISO file to the PM&C					
		<pre># scp <tvoe_image>.iso root@<pmac_management_network_ip>:/var/TKLC/smac/image/i soimages/home/smacftpusr/</pmac_management_network_ip></tvoe_image></pre>					
5	PM&C GUI: Attach the software	If in Step 4 the ISO image was transferred directly to the PM&C guest via sftp, skip the rest of this step and continue with step 6. If the image is on a CD or USB device, continue with this step.					
	Guest	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					
		View VM Guest Name: vm-pmacdev6 Host: fe80::461e:a1ff:fe06:484 Current Power State: Running Change to On					
		View VM Guest Name: vm-pmacdev6 Current Power State: Running Host: fe80::461e:a1ff:fe06:484 Change to VM Info Software Network					
		View VM Guest Name: vm-pmacdev6 Host: fe80::461e:a1ff:fe06:484 VM Info Software Network Media Attached Media Attached Image Path					
		View VM Guest Name: vm-pmacdev6 Host: fe80::461e:a1ff:fe06:484 Change to On VM Info Software Network Media Attached Media Attached Image Path Detach /var/TKLC/tvoe/mapping-isos/vm-pmacdev6.iso					
		View VM Guest Name: vm-pmacdev6 Host: fe80::461e:a1ff:fe06:484 Change to On • 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					
		View VM Guest Name: vm-pmacdev6 Current Power State: Running Host: fe80::461e:a1ff:fe06:484 On VM Info Software Network Media Attached Image Path On Detach /var/TKLC/tvoe/mapping-isos/vm-pmacdev6.iso On Detach /media/sdb1/000-0000-60.0_80.16.0-CentOS-6.2-x86_64.iso Available Media Mage Path Attach Label Image Path					
		View VM Guest Name: vm-pmacdev6 Current Power State: Running Host: fe80::461e:a1ff:fe06:484 Change to On VM Info Software Network Media Attached Image Path Image Path Image Path Detach /var/TKLC/tvoe/mapping-isos/vm-pmacdev6.iso Detach /media/sdb1/000-0000-000-6.0.0_80.16.0-CentOS-6.2-x86_64.iso Available Media Mage Path Image Path Attach Label Image Path Image Path Attach Label Image Path Image Path					
		View VM Guest Name: vm-pmacdev6 Current Power State: Running Host: fe80:461e:a1ff:fe06:484 Change to VM Info Software Network Attached Image Path Detach /var/TKLC/tvoe/mapping-isos/vm-pmacdev6.iso Detach /media/sdb1/000-0000-000-6.0.0_80.16.0-CentOS-6.2-x86_64.iso Available Media Attach Label Image Path Attach					
		View VM Guest Name: vm-pmacdev6 Current Power State: Running Host: fe80::461e:a1ff:fe06:484 Change to On VM Info Software Network Media Attached Mage Path On Image Path Detach /var/TKLC/twoe/mapping-isos/vm-pmacdev6.iso Detach /media/sdb1/000-0000-000-6.0.0_80.16.0-CentOS-6.2-x86_64.iso Available Media Image Path Image Path Attach Label Image Path Attach tkic_000-0000-000_Rev_A_80.16 (media/sdb1/000-0000-000-6.0.0_80.16.0-CentOS-6.2-x86_64.iso Attach tkic_000-0000-000_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					
		View VM Guest Name: vm-pmacdev6 Current Power State: Running Host: fe80:461e:a1ff:fe06:484 Change to VM Info Software Network Media Attached Media Attached Image Path Detach /var/TKLC/tvoe/mapping-isos/vm-pmacdev6.iso Detach /war/TKLC/tvoe/mapping-isos/vm-pmacdev6.iso Detach /media/sdb1/000-0000-000-6.0.0_80.16.0-CentOS-6.2-x86_64.iso Attach Label Image Path Image Path Attach Label Image Path Attach Ixic_0000-0000-Rev_A_80.16 //media/sdb1/000-0000-000-6.0.0_80.16.0-CentOS-6.0_80.17.0-CentOS6.2-x86_64.iso Edit Delete Install OS Clone Guest Upgrade Accept Upgrade Reject Upgrade					

6	PM&C GUI:	Navigate to Main Menu -> Software -> Manage Software Images		
	Add TVOE 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 4 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 Aug 08 13:51:34 2012 010		
		Images may be added from any of these sources:		
		Takeloo provided media in the PMSC beet'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 wedia tab of the PM&C guest's view vM Guest page.		
Path: /var/TKLC/smac/image/isoimages/home/smacftpusr/872-2290-104-2 /var/TKLC/smac/image/isoimages/home/smacftpusr/872-2290-104-2 0.0 80.14.0-TVOE /var/TKLC/smac/image/isoimages/home/smacftpusr/872-2441-101-5 0.0 50.6 0-PIMAC-3 Description: /var/TKLC/smac/image/isoimages/home/smacftpusr/872-2464-101-5 0.0 50.10.0-ALEX/ device://dev/sr0 device://dev/sr1 device://dev/sr3		Path: /var/TKLC/smac/image/isoimages/home/smacftpusr/872-2290-104-2 /var/TKLC/smac/image/isoimages/home/smacftpusr/872-2290-104-2.0.0 80.14.0-TV/OE-x86_64.iso /var/TKLC/smac/image/isoimages/home/smacftpusr/872-2441-101-5.0.0_50.60-PIMAC-x86_64.iso /var/TKLC/smac/image/isoimages/home/smacftpusr/872-2464-101-5.0.0_50.10.0-ALEXA-x86_64.iso device://dev/sr0 device://dev/sr1 device://dev/sr2 device://dev/sr3		
		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.		



9	PM&C GUI:	Navi	gate to Main	Menu > Task	Monitoring to r	nonitor th	e progress	of the
Monitor OS Install TVOE Installation background								
		task. A separate task will appear for each blade affected.						
		ID	Task	Target	Status	Running Tim	e 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%
	Wh wil	When will i	n the installat ndicate "1009 Install 05	ion is complete _. %". ^{RMS: <u>NOAM-B</u>}	, the task will change Done: 872-2442-103-2.0.0_80.20.0- TVOE-x86_64	to green <i>a</i>	and the Pro	gress bar

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					
P	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				
	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	Determine Bridge names and interfaces for XMI and IMI, and Netbackup (if used) networks.	Determine the bridge names and physical bridge interfaces to be used on the TVOE server 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 also 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: <tvoe_xmi_bridge_interface_bond> Interface Name (will be same as interface bond if not using tagging): <tvoe_xmi_bridge_interface></tvoe_xmi_bridge_interface></tvoe_xmi_bridge_interface_bond>	
		imi	imi	Interface Bond: <tvoe_imi_bridge_interface_bond> Interface Name (will be same as interface bond if not using tagging): <tvoe_imi_bridge_interface></tvoe_imi_bridge_interface></tvoe_imi_bridge_interface_bond>	
		netbackup	netbackup	: Interface Name	
	First RMS Server: Login	Log in to the T Use either the i	VOE prompt of the first LO facility, or the TVC	t RMS server (the one running the PMAC). DE's IP address on the management network.	

3	First RMS Server:	Verify the xmi bridge interface bond by running the following command:
	Configure XMI	
	Bridge Interface	Note: The output below is for illustrative purposes only. The example output below
	Bond	shows the control bridge configured.
		# netAdm query -device= <tvoe bond="" bridge="" xmi=""></tvoe>
		" nearan query actice=(iton_min_bitage_bona)
		Protocol: none
		On Boot: yes
		Persistent: yes
		Bonded Mode: active-backup
		Enslaving: eth01 eth02
		If the bond has already been configured you will see output similar to what you see above. If this is so, 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=vestype=Bondingmode=active-backupmiimon=100</tvoe_xmi_bridge_bond></pre>
		Interface <tvoe_xmi_bridge_bond> added</tvoe_xmi_bridge_bond>
		<pre># netAdm setdevice=<tvoe_xmi_bridge_bond_ethernet1> type=Ethernet</tvoe_xmi_bridge_bond_ethernet1></pre>
		master= <tvoe_xmi_bridge_bond>slave=yesonboot=yes</tvoe_xmi_bridge_bond>
		Interface <tvoe_xmi_bridge_bond_ethernet1> updated</tvoe_xmi_bridge_bond_ethernet1>
		<pre># netAdm setdevice=<tvoe_xmi_bridge_bond_ethernet2> type=Ethernet</tvoe_xmi_bridge_bond_ethernet2></pre>
		master= <tvoe_xmi_bridge_bond>slave=yesonboot=yes</tvoe_xmi_bridge_bond>
		Interface <tvoe_xmi_bridge_bond_ethernet2> updated</tvoe_xmi_bridge_bond_ethernet2>
1	First DMS Sorvor	Perform the following command if you are using VI AN tagging
- -	Create XMI Bridge	If not, skip to the next command:
	create min bridge	
		<pre># netAdm add -device=<tvoe_xmi_bridge_interface>onboot=yes</tvoe_xmi_bridge_interface></pre>
		Interface <tvoe_xmi_bridge_interface> created.</tvoe_xmi_bridge_interface>
		<pre># netAdm addtype=Bridgename=xmionboot=yesbridgeInterfaces=<tvoe bridge="" interface="" xmi=""></tvoe></pre>
		Interface <tvoe_xmi_bridge_interface> updated. Bridge xmi created.</tvoe_xmi_bridge_interface>

5	First RMS Server:	Verify the imi bridge interface bond by running the following command:	
	Configure IMI Bridge Interface	Note: The output below is for illustrative purposes only. The example output below shows the control bridge configured	
	Dond	shows the control bridge configured.	
		<pre># netAdm query -device=<tvoe_imi_bridge_bond></tvoe_imi_bridge_bond></pre>	
		Protocol: none	
		On Boot: yes Porsistant: 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:	
		<pre># netAdm adddevice=<tvoe_imi_bridge_bond></tvoe_imi_bridge_bond></pre>	
		onboot=yestype=Bondingmode=active-backupmiimon=100 Interface <tvoe bond="" bridge="" imi=""> added</tvoe>	
		# netAdm setdevice= <tvoe bond="" bridge="" ethernet1="" imi=""></tvoe>	
		type=Ethernet	
		master= <tvoe_imi_bridge_bond>slave=yesonboot=yes Interface <tvoe bond="" bridge="" ethernet1="" imi=""> updated</tvoe></tvoe_imi_bridge_bond>	
		# netAdm setdevice= <tvoe bond="" bridge="" ethernet2="" imi=""></tvoe>	
		type=Ethernet	
		master= <tvoe_imi_bridge_bond>slave=yesonboot=yes Interface <tvoe_imi_bridge_bond_ethernet2> updated</tvoe_imi_bridge_bond_ethernet2></tvoe_imi_bridge_bond>	
6	First RMS Server:	Perform the following command if you are using VLAN tagging.	
	Create INII Bridge	If not, skip to the next command:	
		<pre># netAdm adddevice=<tvoe_imi_bridge_interface>onboot=yes Interface <tvoe_imi_bridge_interface> croated</tvoe_imi_bridge_interface></tvoe_imi_bridge_interface></pre>	
		Interface (IVOE_IMI_DITUge_Interface/ Cleated.	
		<pre># netAdm addtype=Bridgename=imionboot=yes</pre>	
		bridgeInterfaces= <tvoe_imi_bridge_interface></tvoe_imi_bridge_interface>	
		<pre>Interface <tvoe_imi_bridge_interface> updated. Bridge imi created.</tvoe_imi_bridge_interface></pre>	

7	RMS Server iLO:	
_	Set Hostname	# su - platcfg
		Distance Cartingentian Heility 2 05 (0) 2002 - 2011 Makalan Ten
		Hostname: hostname1322587482
		Main Menu
		Maintenance -
		Diagnostics 0 Server Configuration
		Network Configuration 📕 Exit
		Use arrow keys to move between options <enter> selects <f12> Main Menu</f12></enter>
		Navigate to Sever Configuration->Hostname-> Edit and enter a
		new hostname for your server.
		Edit Hostname
		Hestneme, der WAE blade 11
		HOSCHAME: dsilvor-pladell
		OK Cancel
		Press OK and select and continue to press Exit until you are at
		the platcig 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

8	RMS Server iLO:	From the platcfg main menu, navigate to Network Configuration -> SNMP		
	Configure SNMP	Configuration -> NMS Configuration		
		Iondon : root 🛛 😒 😒		
		File Edit View Bookmarks Settings Help Platform Configuration Utility 3.04 (C) 2003 - 2011 Tekelec, Inc Options ^		
		Hostname: hostname1305723774 NMS Servers		
		NMS Server Port Community String		
		Press Edit. Choose Add a New NMS Server		
		Choose Add a New NNIS Server		
		Image: Settings Icondom: root Image: Settings File Edit View Bookmarks Settings		
		Platform Configuration Utility 3.04 (C) 2003 - 2011 Tekelec, Inc.		
		Hostname or IP:		
		Port: SNMP Community String:		
		OK Cancel		
		Use arrow keys to move between options <enter> selects</enter>		
		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.		
		Press Exit .		
		Select Yes when prompted to restart the Alarm Routing Service.		
		Optionally, additional NMS Servers can be specified by repeating the steps above		
		such as NOAMP VIP, SOAM VIP, etc.		
		Once Done, proce Frit to quit to the platofe main many		
		Once Done, press Exit to quit to the platerg main menu.		
		Once Done, press Exit to quit to the platcfg main menu.		

9	RMS Server iLO:	Navigate to Network Configuration
	Configure NTP	Main Menu Maintenance Diagnostics Server Configuration Remote Consoles Network Configuration Exit
		<pre>Navigate to Configuration->NTP Click Edit Edit Time Servers Intpserver1: 10.250.32.10 Intpserver2: Intpserver3: IntppeerB: Int</pre>
10	First RMS Server: Create Netbackup bridge (Optional)	<pre>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) # 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	First RMS Server	This step backs up the TVOE files to a customer provided backup server.	
	and Customer provided Backup Server: Backup	<u>If NetBackup is being used, then this step should be skipped. Select 'Exit' to exit out of platcfg.</u>	
	TVOE files	If Netback isn't used, execute the following:	
		 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 already been installed and is running PMAC.
 E P
 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
 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	Determine Bridge names and interfaces for XMI and IMI, and Netbackup (if used) networks.	Determine the bridge names and physical bridge interfaces to be used on the TVOE server for the Management , 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 also the actual Ethernet interfaces that will make up those bonds. Fill in the appropriate values in the table below:			
		NOAM&P Guest Interface Name	TVOE Bridge Name	TVOE Bridge Interface	
		xmi	xmi	Interface Bond: <tvoe_xmi_bridge_interface_bond> Interface Name (will be same as interface name if not using tagging): <tvoe_xmi_bridge_interface></tvoe_xmi_bridge_interface></tvoe_xmi_bridge_interface_bond>	
		imi	imi	Interface Bond: <tvoe_imi_bridge_interface_bond> Interface Name (will be same as interface name if not using tagging): <tvoe_imi_bridge_interface></tvoe_imi_bridge_interface></tvoe_imi_bridge_interface_bond>	
		netbackup	netbackup	<pre>: Interface Name</pre> <pre></pre> <pre></pre> <pre></pre> <pre></pre> <pre>/// Comparison of the second seco</pre>	
		management	management	Interface Name	

2	RMS Server iLO: Login	Log in to the TVOE prompt of the RMS Server using the iLO facility.				
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=Bridge -name=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 Note: The shows the # netAdd # netAdd Protocco On Boot Persist Bonded Enslavi If the bond above. If Create bon # # netAdd * netAdd * netAdd If the bond above. If Create bon # netAdd * netAdd * netAdd * netAdd type=Eth master Interfact # * netAdd * netAdd type=Eth master Interfact # * netAdd * netAdd		<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 query -device=<tvoe_xmi_bridge_bond> Protocol: none On Boot: yes Persistent: yes Bonded Mode: active-backup Enslaving: eth01 eth02 If the bond has already been configured you will see output similar to what you see above. If this is so, skip to the next step. Otherwise, continue with this step. Create bonding interface and associate subordinate interfaces with bond: # netAdm adddevice=<tvoe_xmi_bridge_bond> onboot=yestype=Bondingmode=active-backupmiimon=100 Interface <tvoe_xmi_bridge_bond> added # netAdm setdevice=<tvoe_xmi_bridge_bond_ethernet1> type=Ethernet master=<tvoe_xmi_bridge_bond_ethernet1> updated # netAdm setdevice=<tvoe_xmi_bridge_bond_ethernet2> type=Ethernet master=<tvoe_xmi_bridge_bond>slave=yesonboot=yes Interface <tvoe_xmi_bridge_bond>slave=yesonboot=yes Interface <tvoe_xmi_bridge_bond>slave=yesonboot=yes Interface <tvoe_xmi_bridge_bond>slave=yesonboot=yes Interface <tvoe_xmi_bridge_bond>slave=yesonboot=yes Interface <tvoe_xmi_bridge_bond>slave=yesonboot=yes Interface <tvoe_xmi_bridge_bond>slave=yesonboot=yes Interface <tvoe_xmi_bridge_bond>slave=yesonboot=yes Interface <tvoe_xmi_bridge_bond>slave=yesonboot=yes</tvoe_xmi_bridge_bond></tvoe_xmi_bridge_bond></tvoe_xmi_bridge_bond></tvoe_xmi_bridge_bond></tvoe_xmi_bridge_bond></tvoe_xmi_bridge_bond></tvoe_xmi_bridge_bond></tvoe_xmi_bridge_bond></tvoe_xmi_bridge_bond></tvoe_xmi_bridge_bond_ethernet2></tvoe_xmi_bridge_bond_ethernet1></tvoe_xmi_bridge_bond_ethernet1></tvoe_xmi_bridge_bond></tvoe_xmi_bridge_bond></tvoe_xmi_bridge_bond></pre>				

5	RMS Server iLO:	Perform the following command if you are using VLAN tagging.					
	Create XMI Bridge	If not, skip to the next command:					
	and add default route						
	to XMI network	<pre># netAdm add -device=<tvoe_xmi_bridge_interface>onboot=yes</tvoe_xmi_bridge_interface></pre>					
		<pre>Interface <tvoe_xmi_bridge_interface> created.</tvoe_xmi_bridge_interface></pre>					
		+ netAdm addtype=bridgename=xmronboot=yes					
		Interface (TVOE XMI Bridge Interface) undated					
		Bridge vmi created					
		bildge Anti eledted.					
6	RMS Server iI O:	Varify the imi bridge interface bond by running the following command:					
0	Configure IMI	verify the finit offage interface bond by fullining the following command.					
	Bridge Interface	Note: The output below is for illustrative purposes only. The example output below					
	Druge Interface	shows the control bridge configured					
	Dolla	shows the control of dge configured.					
		# netldm query -device=< TVOF IMI Bridge Bond>					
		# nethom query device=(IVOE_IMI_BIIdge_bonds					
		Protocol: dhen					
		On Boot: ves					
		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 bond="" bridge="" imi=""></tvoe></pre>					
		onboot=yestype=Bondingmode=active-backupmiimon=100					
		Interface <tvoe_imi_bridge_bond> added</tvoe_imi_bridge_bond>					
		<pre># netAdm setdevice=<tvoe_imi_bridge_bond_ethernet1></tvoe_imi_bridge_bond_ethernet1></pre>					
		type=Ethernet					
		Interface (TVOE IMI Bridge Bond Ethernet1) undated					
		Interface (1005_1M1_bffage_bond_benefneef) apaatea					
		<pre># netAdm setdevice=<tvoe_imi_bridge_bond_ethernet2> type=Ethernet</tvoe_imi_bridge_bond_ethernet2></pre>					
		master= <tvoe bond="" bridge="" imi="">slave=yesonboot=yes</tvoe>					
		Interface <tvoe_imi_bridge_bond_ethernet2> updated</tvoe_imi_bridge_bond_ethernet2>					
I							

7	RMS Server iLO:	
	Create IMI Bridge	Perform the following command if you are using VLAN tagging. If not, skip to the next command:
		<pre># netAdm adddevice=<tvoe_imi_bridge_interface>onboot=yes Interface <tvoe_imi_bridge_interface> created.</tvoe_imi_bridge_interface></tvoe_imi_bridge_interface></pre>
		<pre># netAdm addtype=Bridgename=imionboot=yesbridgeInterfaces=<tvoe_imi_bridge_interface></tvoe_imi_bridge_interface></pre>
		Interface <tvoe_imi_bridge_interface> updated. Bridge imi created.</tvoe_imi_bridge_interface>

8	Management	
	server iLO: Create management bridge and assign TVOE Management IP and default route	Note: The output below is for illustrative purposes only. The site information for this system will determine the network interfaces, (network devices, bonds, and bond enslaved devices), to configure.
		If <tvoe_management_bridge_interface> or the bond it is based on (if using tagged interface) has not yet been created, then execute the nex 3 commands. Otherwise, skip to the "EXAMPLE" section:</tvoe_management_bridge_interface>
		<pre># netAdm adddevice=<tvoe_management_bridge_interface_bond>onboot=yestype=Bondingmode=active-backupmiimon=100 Interface <tvoe_management_bridge_interface> added</tvoe_management_bridge_interface></tvoe_management_bridge_interface_bond></pre>
		<pre># netAdm setdevice=<mgmt_ethernet_interface1> type=Ethernetmaster=<tvoe_management_bridge_interface_bond>slave=yes onboot=yes</tvoe_management_bridge_interface_bond></mgmt_ethernet_interface1></pre>
		<pre>Interface <mgmt_ethernet_interface1> updated</mgmt_ethernet_interface1></pre>
		<pre># netAdm setdevice=<mgmt_ethernet_interface2> type=Ethernetmaster-<tvoe bond="" bridge="" interface="" management="">slave=ves</tvoe></mgmt_ethernet_interface2></pre>
		onboot=yes Interface <mgmt_ethernet_interface2> updated</mgmt_ethernet_interface2>
		EXAMPLE 1: Create Management bridge using untagged interfaces (<tvoe_management_bridge>). # netAdm addtype=Bridgename=management</tvoe_management_bridge>
		bootproto=noneonboot=yes
		<pre>address=<tvoe_rmsx_mgmt_ip_address> netmask=<tvoe_rms mgmt="" netmask=""></tvoe_rms></tvoe_rmsx_mgmt_ip_address></pre>
		bridgeInterfaces= <tvoe_management_bridge_interface></tvoe_management_bridge_interface>
		EXAMPLE 2: Create Management bridge using tagged interfaces # netAdm adddevice= <tvoe_management_bridge_interface> # netAdm addtype=Bridgename=management address=<tvoe_rmsx_mgmt_ip_address> netmask=<tvoe_rms_mgmt_netmask>onboot=yes bridgeInterfaces=<tvoe_management_bridge_interface></tvoe_management_bridge_interface></tvoe_rms_mgmt_netmask></tvoe_rmsx_mgmt_ip_address></tvoe_management_bridge_interface>
		Cretate default route (execute regardless of which example is chosen): # netAdm addroute=default -gateway= <mgmt_gateway_address> device=management Route to management created.</mgmt_gateway_address>

9	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	RMS Server iLO:	From the platcfg main menu, navigate to Network Configuration -> SNMP				
	Configure SNMP	Configuration -> NMS Configuration				
		Indon : root I I I I I I I I I I I I I I I I I I				
		Platform Configuration Utility 3.04 (C) 2003 - 2011 Tekelec, Inc. Options				
		NMS Servers				
		NMS Server Port Community String				
		Press Edit.				
		Choose Add a New NMS Server				
		File Edit View Bookmarks Settings Help				
		Platform Configuration Utility 3.04 (C) 2003 - 2011 Tekelec, Inc. A Hostname: hostname1305723774				
		Add an NMS Server				
		Hostname or IP: Port:				
		Siver Community String:				
		OK				
		Use arrow keys to move between options <enter> selects</enter>				
		Enter the Hostname/IP of the NO VIP, for port enter 162, and for Community String				
		enter the value provided by the customer in the NAPD document.				
		Press Exit.				
		Select Yes when prompted to restart the Alarm Routing Service.				
		Optionally, add any customer provided NMS Servers by repeating the step above.				
		Once Done, press Exit to quit to the platcfg main menu.				

12	RMS Server iLO: Configure NTP	Navigate to Network Configuration					
	6						
		Main Menu Maintenance Diagnostics Server Configuration Remote Consoles Network Configuration Exit					
		Navigate to Configuration-NUTD					
		Navigate to Configuration->NTP Click Edit					
		Edit Time Servers					
		Enter the customer provided NTP server IP address(es) Press OK Continue to press Exit until you are out of the platcfg menu.					

13 □	RMS Server: 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>					
14	RMS Server and	This step backs up the TVOE files to a customer provided backup server.					
	Customer provided Backup Server: Backup TVOE files	If NetBackup is being used, then this step should be skipped. Select 'Exit' to exit out of platcfg.					
		If Netback isn't used, execute the following:					
		 Select the following menu options sequentially: Maintenance ➤ Backup and Restore ➤ Backup Platform (CD/DVD). The 'Backup TekServer Menu' page will now be shown. 					
		2. 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'.					
		 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.					
15	RMS Server iLO: Repeate Procedure for other RMS Servers	TVOE Configuration of this RMS server is complete. Repeat this procedure from the beginning for other RMSs that need to be configured.					

4.13 Install TVOE On Server Blades

Procedure 24. Install TVOE on Server Blades

S T P #	 This procedure will provide the steps to install TVOE on the Blade servers which will host DSR SOAM Applications and if applicable at this site, DSR NOAMP Applications. 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: Enclosures containing the blade servers targeted for IPM that have been configured. Needed material: TVOE Media (64-bits) 					
	Check off (\checkmark) each step as it i	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.				
	TVOE Host: Load TVOE ISO	If the TVOE ISO has already been loaded on the PM&C server in a previous procedure, skip to step 5, otherwise Add the TVOE ISO image to the PM&C, this can be done in one of three ways: Insert the TVOE 2.0 64 bit CD required by the application into the removable media drive. Attach the USB device containing the ISO image to a USB port. Copy the TVOE 64 bit 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 TVOE Host (not on the PM&C server) Using sftp, connect to the PM&C management server # sftp pmacftpusr@<pmac_management_network_ip></pmac_management_network_ip> # put <image/>.iso After the image transfer is 100% complete, close the connection 				
2	PM&C GUI: Login	Open web browser and enter: http:// <management_server_ip> Login as pmacadmin user.</management_server_ip>				

Procedure 24. Install TVOE on Server Blades

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. 			
		Select the Media tab. Under the Media tab, find the ISO image in the "Availa "Attach" button. After a pause, the image will appear in # System Invertory # System Invertory # System Configuration # System Configuration # Software Invertory # Manage Software Invertory #		e image in the "Available Media" e image will appear in the "Attach gement View VM Guest Name: minitabPIAC Host tello://ae/Taffiteec:5540 Windo Software Network Media Attached Media Attached Media Attached Media Attached Media Attached Media	list, and click its red Media" list. Wekene pmacadmin Le Mon New 05 11:00:39 2012 Current Power State: Running Change to Ton T
				Available Media Attach Label Image Path Attach Mic_S72-2438- 100, Rec_A-40.12.1 /dev/sr0	
4	PM&C GUI:	Navigate to Main Menu -> Software -> Manage Software Images			
---	----------------	--			
	Add TVOE 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" (even though it was mounted as "device://dev/sr0" in the previous step 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			
		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 Var/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 Var/TKLC/smac/image/isoimages/home/smacftpusr/872-2464-101-5.0.0_50.10.0-ALEXA-x86_64.iso device://dev/sr0 device://dev/sr1 device://dev/sr3			
		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			
		Once the green her is displayed remove the TVOE 2.0 Madia from the articlusive			
		once the green bar is displayed, remove the 1 VOE 2.0 Media from the optical drive of the management server.			

5	PM&C GUI: SelectServers for TVOE install	If you are not logged into the PM&C GUI, Open web browser and enter: http:// <pmac_mgmt_ip> and login as pmacadmin user. Otherwise,</pmac_mgmt_ip>								
		Navigate to Software -> Software Inventory.								
		 Main Men Main Men Mardw Mardw Sys Main Men Sys Softwa Soft Main Men 	u vare Enclosure 1 FRU Info otem Config are tware Inve nage Softw	ory 0101 uration ntory are Images						
		Select the servers you want to IPM. If you want to install the same TVOE image to more than one server, you may select multiple servers by clicking multiple rows individually. Selected rows will be highlighted in green.								
		Ident	IP Address	Hostname	Plat Name	Plat Version	App Name	App Version	Design	Function
		Enc:10101 Bay:2F								
		Enc: <u>10101</u> Bay: <u>7F</u>								
		Enc: <u>10101</u> Bay: <u>8F</u>								
		Enc: <u>10101</u> Bay: <u>13F</u>								
		Enc: <u>10101</u> Bay: <u>15F</u>	100 100 1 1		TOD (1999)	5 0 0 7 0 00 0	514.0	100.00110		
		Click on Inst	all OS	e Refresh						
6	PM&C GUI:	The left side of	this screen	n shows the se	rvers to b	be affected	d by thi	is OS inst	allati	on.
	Initiate OS Install	From the list of	f available	bootable imag	es on the	e right side	e of the	e screen, s	elect	one
		OS image to in	stall to all	of the selected	servers.					
		Targets	Status		Select an	ISO to Install o	n the listed	d Entities		
		Enc:50202 Bay:7F	otutuo	Image Name		Туре	Architecture	Description		
		Enc: <u>50202</u> Bay: <u>9F</u>		TPD5.0.0_72.36.0x86	_64	Bootable	x86_64	New 72.36 TPD 1	lor DSR 3	0.20.
		Enc: <u>50202</u> Bay: <u>10F</u>	and the second	TPD-5.0.0_72.28.0-x86	_64	Bootable	x86_64	Official TPD 72.2	8 release	
		Enc:50202 Bay:12F		TPD-5.0.0 72.33.0x96	2-2290-103x86_ 64	_64 Bootable Bootable	x86_64	official TPD 72.3	33 3 Relleas	0
		Click on Star proceed with th Start Install	r t Insta ne install.	11, a confirma	ation wir	ndow will	pop up	o, click on	Ok (to
			_							

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7	PM&C GUI:	Navi	gate to Main	Menu-> Ta	sk Monitoring to	monitor th	ne progres	s of the
	Monitor OS Install	OS I	istallation ba	ckground				
	and wait until	task.	A separate ta	ask will appear f	for each blade affected	•		
	complete	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%
	i i W Wi	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%
		When the installation is complete, the task will change to green and the Progress bar will indicate "100%".						
		159	8 Install OS	Enc: <u>9001</u> Bay: <u>11F</u>	Done: TVOE1.0.0_72.28.0872- 2290-101x86_64	0:16:06	2011-11-0 10:53:19	3 100%
		Wait	until all TVO	OE OS Installs a	are 100% complete and	l the proce	dure is fir	nished.

Procedure 24. Install TVOE on Server Blades

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 in the previous procedure. Prerequisite: TVOE OS has been installed on the target server blade, and configuration files created. 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. 		
	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, 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 root@ <tvoe addr="" blade="" control="" ip="" net=""> Note: If the key exchange fails, remove blank lines from "/root/.ssh/known_hosts"</tvoe>	
2	TVOE Server: Login and Copy Configuration Scripts from PMAC	Login as root on the TVOE server using the ILO facility. Execute the following commands: # scp root@ <management_server control_ip_<br="">addr>:/usr/TKLC/smac/etc/TVOE* /root/ # chmod 777 /root/TVOE*</management_server>	

3	TVOE Server: Run	Next, you will execute ONLY ONE of the following commands. Read carefully
	Configuration Script	to determine which command you should run.
	Based on Server	
	Blade NIC Configuration	If your I VOE server blade DOES have mezzanine cards (Typical deployments, applicable in most cases), execute the following command:
	Configuration	applicable in most cases), execute the following command:
		# /root/TVOEcfg.shxmivlan= <xmi id="" vlan=""></xmi>
		imivlan= <imi id="" vlan=""> mezz</imi>
		If your TVOE server blade DOES NOT have mezzanine cards, execute the
		following command (Very uncommon, applicable only in certain lab
		deployments):
		# /root/TVOEcfg.shxmivlan= <xmi id="" vlan=""></xmi>
		imivlan= <imi_vlan_id></imi_vlan_id>
		Labert server VML VLAN D's de VLAN ID (sede VML set al. 1. d.).
		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.
		Opon executing the proper version of the TVOEcig.sn 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 ×mi added!
		Setting up the bridge and unsetting network info
		Interface bond0.4 was updated.
		Bridge imi added!
		The propert will actum
		NOTE . If for any reason, you can the wrong version of the TVOE of a sh command
		vou can execute: /root/TVOEclean.sh to reset the networking configuration
		so you can repeat this step.

4	TVOE Server: Configure XMI IP and Default Route	<pre>Configure IP address on the XMI network.: # netAdm settype=Bridgename=xmi address=<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=xmi gateway=<xmi_network_gateway> ERROR: xmi is of type Bridge (Ignore this message) Route to xmi added. If this installation does not require NetBackup to use a dedicated ethernet</xmi_network_gateway></xmi_netmask></tvoe_xmi_ip_address></pre>
		interface, then skip the next step and proceed to step 6.
5	(Optional) TVOE Server: Configure NetBackup Dedicated Interface and Bridge	In these examples, < <i>interface</i> > 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</interface>
		[OPTIONAL] If this installation is using jumbo frames, set the ethernet interface MTU to the desired jumbo frame size:
		<pre># netAdm setdevice=<interface>MTU=<netbackup_mtu_size></netbackup_mtu_size></interface></pre>
		Create NetBackup VM Bridge Interface:
		<pre># netAdm addtype=Bridgename=netbackup bridgeInterfaces=<interface>onboot=yes</interface></pre>

6	TVOE Server: Set Hostname	# 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</f12></enter>
		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 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 platcfg main menu, navigate to Network Configuration -> SNMP
	Configure SNMP	Configuration -> NMS Configuration
		File Edit View Bookmarks Settings Help
		Platform Configuration Utility 3.04 (C) 2003 - 2011 Tekelec, Inc. Hostname: hostname1305723774 NMS Servers NMS Server Port Community String
		Press Edit.
		Choose Add a New NMS Server
		Image: Section of the section of t
		File Edit View Bookmarks Settings Help Platform Configuration Utility 3.04 (C) 2003 - 2011 Tekelec, Inc. Hostname: hostnamel305723774 Image: Hostnamel305723774
		Enter the <i>Hostname/IP</i> of the NO VIP, for <i>port</i> enter 162, and for <i>Community String</i> enter the value provided by the customer in the NAPD document.
		Press Exit . Select Yes when prompted to restart the Alarm Routing Service.
		Optionally, add any customer provided NMS Servers by repeating the step above.
		Once Done, press Exit to quit to the platcfg main menu.

8	TVOE server: Configure NTP	Navigate to Network Configuration
	Comiguerer	Main Menu Maintenance Diagnostics Server Configuration Remote Consoles Network Configuration Exit
9	TVOE server-	Navigate to Configuration->NTP Click Edit Image: constraint of the servers Image: constraint of the server is constraint.
9	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.

4.14 Create Virtual Machines for Applications

Procedure 26. Load Application ISO onto PM&C Server

S	This procedure will	load the DSR Application ISO into the PM&C Server			
E P #	Needed material: - Application Media				
	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 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 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 $\underline{\text{TVOE Host}}$ (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:// <management_server_ip> Login as pmacadmin user.</management_server_ip>			

Procedure 26. Load Application ISO onto PM&C Server

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 /war/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

Procedure 26. Load Application ISO onto PM&C Server

4	PM&C GUI:	Navigate to Main Menu -> Software -> Manage Software Images						
	Add Application 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						
		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 Aar/TKLC/smac/image/isoimages/home/smacftpusr/872-2290-104-2.0.80.14.0-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://dev/sr0 device://dev/sr1 device://dev/sr3						
	Add New Image							
		Select the appropriate path and Press Add New Image button.						
		green bar indicating success.						
		Once the green bar is displayed, remove the TVOE 2.0 Media from the optical drive of the management server.						

Procedure 27. Create NOAMP Guest VMs

 (referred to as a "guest") on a TVOE server blade or TVOE RMS. It must be repeated for every NOAMP server you wish to install. Prerequisite: TVOE has been installed and configured on the target blade server or RMS Check of (0 each step as it is completed. Boxes have been provided for this purpose under each step number. ITTIS PROCEDURE FALS: CONTACT TIRELEC TECHNICAL SERVICES AND ASK FOR ASSTANCE. PM&C GUI: Department of the integration of the integra	STEP	This procedure will provide the steps needed to create a DSR NOAMP virtual machine										
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Click Create Guest			Create Guest									
			Click Create Guest									

Procedure 27. Create NOAMP Guest VMs

3	PM&C GUI:	Press Import Profile
_	Configure VM	
	Guest	
	Parameters	Import Profile
	i ulumeters	
		Import Profile 🛛
		ISO/Profile: DSR4.0.0_40.8.2872-2438-107x86_64 => DSR_NOAMP -
		Num CPUs;4 Memory (MBs):6144
		Virtual Disks: Drim Size (MB) Dool TDD Dev
		102400 voquests
		V 102400 Vgguolo
		NIC
		NICS: Bridge TPD Dev
		control control
		imi imi 🗄
		xmi xmi T
		Select Profile
		From the "ISO/Profile" drop-down box, select the entry that matches:
		• <application iso="" name="">→DSR NOAMP - If your NOAMP DOES</application>
		NOT require a dedicated ethernet port for NetBackup
		• <application iso="" name="">→DSR NOAMP NBD - If your NOAMP</application>
		DOES require a dedicated ethernet port for NetBackup
		Where 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 CDUs Memory and NICs: should all change for their default
		values to the profile values
		values to the prome values
		Vou con adit the name if you wish Eastingtoness "DCD NOAMD A" or
		DSDNOAMD D" (This will not become the ultimete bectnome. It is just on
		internal tag for the VM host manager)
		Dress Cross a ba
		Create

Procedure 27. 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 Pro							
		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	Navigate to Main	Menu -> VM	Management		omotod			
	Running	Look at the list of guests present on the blade and verify that you see a guest that mataches the name you configured and that its status is "Running".							
			Guest	S					
			Name	Status					
			DSR_NC	AMP Running					
		VM Creation for NOAMP VMs (fo	this guest is con r instance, the s	plete. Repeat from tandby NOAMP) th	Step 2 for at must be	any rem created.	aining		

Procedure 28. Create SOAMP Guest VMs

S	This procedure will provide the steps needed to create a DSR SOAMP virtual machine (refered to									
Т	as a "guest") on a TVOE server blade. It must be repeated for every SOAMP server you wish to install.									
E	install.									
Р #										
π	Prerequisite: IVOE	has been installed and configured on the target blade server								
	Check of (\mathbf{v}) each step as it is completed. Boxes have been provided for this purpose under each step number									
	IF THIS PROCEDURE FAILS	Check ott (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										
1	PM&C GUI: Login Open web browser and enter: http:// <management_server_ip></management_server_ip>									
		Login as phiacaunin user.								
2	PM&C GUI:	Navigate to Main Menu -> VM Management								
	Navigate to VM	🖃 🚨 Main Menu								
	Management of the	🖬 🧰 Hardware								
	Target Server Blade	Software								
		Manage Software Images								
		- MANA Management								
		🚡 🧰 Storage								
		Administration								
		- Groups								
		- E GUI Sessions								
		GUI Site Settings								
		PM&C Application								
		PM&C Initialization								
		Task Monitoring								
		Select the TVOE server blade from the "VM Entities" listing on the left side of the								
		screen. This blade's guest machine configuration will then be displayed in the								
		remaining area of the window.								
		Victual Marking Management								
		Virtual Machine Management								
		Wit Entities Q ⊕ View VM Host								
		VM Infe Software Network Network								
		Guests Name Status								
		Storage Pools								
		Name Capacity Allocation Available MB MB								
		Bridges								
		Device control								
		arri								
		Create Guest								
		Create Guest								
		Click Create Guest								

Procedure 28. 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 (MBs):6144						
		Virtual Disks: Prim Size (MB) Pool TPD Dev						
		✓ 102400 vaguests						
		NICs: Bridge TPD Dev						
		control <u>^</u>						
		imi imi 🗏						
		xmi xmi T						
		Select Profile						
		From the "ISO/Profile" drop-down box, select the entry that matches						
		<application iso="" name="">→DSR_SOAM</application>						
		Where Application_ISO_NAME is the name of the DSR Application ISO to be						
		installed on this SOAMP.						
		Press Select Profile.						
		Values from the profile should now populate the VM configuration corresp. Disk						
		Size Number of CPUs Memory and NICs: should all change for their default						
		values to the profile values						
		You can edit the name, if you wish. For instance: "DSR_SOAM_A," or						
		DSR_SOAM_B". (This will not become the ultimate hostname. It is just an						
		internal tag for the VM host manager.)						
		Press Create						
		Create						

Procedure 28. Create SOAMP 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	Navigate to Main	Menu -> VM	Management					
	Running	Select the TVOE se	erver blade on w	hich the guest machine	e was just (created.			
		Look at the list of g mataches the name	guests present on you configured	the blade and verify the and that its status is "F	hat you see Running".	e a guest t	hat		
			Guests						
			Name	Status					
		VM Creation for this guest is complete. Repeat from Step 2 for any remaining SOAMP VMs (for instance, the standby SOAMP) that must be created.							

4.15 Install Application Software on Servers

S	This procedure will provide the steps to install TPD on Blade servers and Blade server guest VMs								
Т	-								
E P	Prerequisite : Enclosures containing the blade servers targeted for IPM that have been configured.								
 Prerequisite: TVOE has been installed and configured on Blade servers that will host DSR NOAMP VMs. 									
	Prerequisite: DSR NOAMP 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), 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 pe								
		 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 $\underline{\text{TVOE Host}}$ (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:// <management_server_ip> Login as pmacadmin user.</management_server_ip>							

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.
		"Attached Media Attached Media Attached 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 Attache Label
		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 /war/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 Reject Upgrade

4	PM&C GUI:	Navigate to Main Menu -> Software -> Manage Software Images						
	Add Application	Press Add Trace button Use the drop down to select the image						
	image	These field thinge 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 4 the image was transferred to PM&C via sftp it will appear in the list as a local file "/var/TKLC/".						
	Add Software Image Wed Aug 08 13:51:34 20:							
		Impage may be added from any of these courses:						
		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:						
		Nar/TKLC/upgrade/*.iso Nar/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: /var/TKLC/smac/image/isoimages/home/smacftpusr/872-2290-104-2 /var/TKLC/smac/image/isoimages/home/smacftpusr/872-2290-104-2.0.0 80.14.0-TVOE-x86_64.iso /var/TKLC/smac/image/isoimages/home/smacftpusr/872-2441-101-5.0.0_50.6.0-PIMAC-x86_64.iso /var/TKLC/smac/image/isoimages/home/smacftpusr/872-2464-101-5.0.0_50.10.0-ALEXA-x86_64.iso device://dev/sr0 device://dev/sr2 device://dev/sr3						
		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.						
		of the management server.						

5	PM&C GUI: Select	Navigate to Sc	Navigate to Software -> Software Inventory.								
	Servers for OS install	Main Menu Main Menu Hardware System Inventory FRU Info System Configuration Software Software 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	ID Addross	Voctnamo	Diat Namo	Dist Version	Ann Namo	App Vorsion	Docian	Function	
		Enc:10101 Bay:1F Enc:10101 Bay:2F Enc:10101 Bay:2F Enc:10101 Bay:8F Enc:10101 Bay:13F Enc:10101 Bay:15F	192.168.1.1	pmac-mrsvnc-1	TPD (i686)	5.0.0-72.20.0	App Name	4.0.0_40.11.0	1A	PMAC	
		Click on Inst	all OS	le Refresh	1						
6	PM&C GUI: Initiate OS Install	The left side of From the list of	f this scree f available	n shows the se bootable imag	ervers to ges on the	be affecte e right sid	d by th e of the	is OS inst e screen, s	allat elect	ion. t one	
		OS image to in	stall to all	of the selected	l servers. _{Sele}	ect an ISO to Ins	stall on the	listed Entities			
		Enc:10101 Bay:1F	314143	Image Name		Туре	Architectu	re Description			
		Enc:10101 Bay:2E Enc:10101 Bay:7E Enc:10101 Bay:8E Enc:10101 Bay:15E		TPD5.0.0_72.20.0x86	_64	Bootable	x86_64				
		Click on Start Install , a confirmation window will pop up, click on Ok to proceed with the install. Start Install									

7	PM&C GUI:	Navig	Navigate to Main Menu > Task Monitoring to monitor the progress of the OS							
	Monitor OS Install	OS Install Installation background								
		task. A separate task will appear for each blade affected.								
		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%		
		When will in	the installat ndicate "1009	ion is complete, %".	the task will change to	o green an	d the Prog	gress bar		

Procedure 30. Install the Application Software on Blades

S	This procedure will provide the steps to install Diameter Signaling Router 4.X on the Blade						
Т	servers.						
E P #	Prerequisite: Procedure 29. 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, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.						
1	PM&C GUI: Login	Open web browser and enter: http:// <management_network_ip> Login as pmacadmin user.</management_network_ip>					

Procedure 30. Install the Application Software on Blades



4								1			
4	PM&C GUI:	Nav1g	ate to Main	Menu >	> Task	Monitori	ng to moni	tor the p	rogress of	the	
	Monitor the	Appli	cation Install:	ation.							
	installation status	task. A	A separate tas	sk will ar	ppear for	r each blade	affected.				
		ID	Task	Target		Status		Running Time	Start Time	Prog	gress
		25	Upgrade	Enc: <u>10101</u> B	ay: <u>15F</u>	Task ID assigned		0:00:00	2011-09-20 14:36:08	40	0%
		24	Upgrade	Enc: <u>10101</u> B	Jay: <u>8F</u>	Task ID assigned		0:00:00	2011-09-20 14:36:08	40	J%
		23	Upgrade	Enc: <u>10101</u> B	Jay: <u>7F</u>	Task ID assigned		0:00:01	2011-09-20 14:36:07	40	J%
		22	Upgrade	Enc: <u>10101</u> B	Jay: <u>2F</u>	Task ID assigned		0:00:00	2011-09-20 14:36:07	40	J%
		21	Upgrade	Enc: <u>10101</u> B	Jay: <u>1F</u>	Task ID assigned		0:00:00	2011-09-20 14:36:07	40	3%
		20	Add Image			Done: 872-2329-101 DSR-x86_64	-3.0.0_30.8.0-	0:00:06	2011-09-20 14:24:41	10	0%
		When will ir	the installation the installation of the	on is cor %".	nplete, tl	he task will o	change to g	reen and	the Progr	ess t)ar
5	PM&C GUI:	Navig	ate to Soft	ware > {	Softwa	re Inven	tory to ac	cept the	software		
	Accnet Ungrade	install	lation Select	all the se	ervers or	which the a	polication	has been	installed	in th	e.
	neeper opprace	nrovic	atton. Science	aliak on	"A coon	• Unorodo"	ppilcation i	alow	motanea	111 111	C
		previo	Jus steps and	click on	Accep	t Upgrade	as shown o	elow.			
						<u>.</u>					
		Note	that on som	e RMS	and Bla	de servers,	the GUI n	nay not	provide t	he	
	I	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:									
		1. To accept: /var/TKLC/backout/accept									
	I	:	2. To rejec	t: /var/T	KLC/ba	ckout/rejec	t				
			,	••••							
		Softw	vare Inventory							٨	⊔eln
		301100						F	ri Aug 10 17:45:1	15 2012	UTC
	I	Filter	•								
	l I	Ident	IP	Address	Hostname	Plat Name	Plat Version	App Name	App Version	Desig	Fun
		Enc: <u>50</u>	202 Bay: <u>1F</u> 19	2.168.1.4	RDU02-NO	TPD (x86_	64) 6.0.0-80.16.0	DSR	4.0.0-0.40333		-
		Enc: <u>50</u>	202 Bay:2F 19	2.168.1.167	RDU02-MP	TPD (x86_	64) 6.0.0-80.16.0	DSR	Pending Acc/Rej		
							-				
			Install OS	Upgra	ade	Accept Upgrad	e Reject	Upgrade	Refre	sh	
	I							-10			
	I	Note t	that once the	ungrade	has beer	accepted, th	ne App vers	sion will	change fr	om	
	I	"Pend	ling Acc/Rei"	' to the v	version n	umber of the	application	n	······	0	
	1	1 0110			••••••		appirounioi				

Procedure 30. Install the Application Software on Blades

4.16 Application Configuration

S	This procedure will provide the steps to configure the First NOAMP blade server.					
T E	Check off (v) 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	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 4.0 Network Element file be found on the management server at:				
		/usr/TKLC/smac/etc/SAMPLE-NetworkElement.xml				
		A sample XML file can also be found in Appendix A. Note that the following limitations apply when specifying a Network Element name: "A 1-32-character string. Valid characters are alphanumeric and underscore. Must contain at least one alpha and must not start with a digit".				
2	Exchange SSH keys between PMAC and first NOAMP	Use the PMAC GUI to determine the Control Network IP address of the blade server that is to be the first NOAMP server. From the PMAC GUI, navigate to Main Menu → Software →Software Inventory.				
	server	Note the IP address for the first NOAMP server.				
		From a terminal window connection on the PMAC, exchange SSH keys 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 NOAMP server.				
		<pre># keyexchange root@<noamp addr="" blade="" control="" ip="" net=""></noamp></pre>				
		Note: if keyexchange fails, edit "/root/.ssh/known_hosts" and remove blank lines, and retry the keyexchange commands.				
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 4.18Appendix G. (for using Putty) or 4.18Appendix H (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	Login to the NOAMP GUI as the guiadmin user.				

5	Create the NOAMP Network Element	Navigate to	Navigate to Main Menu->Configuration->Network Elements						
	File	file.	ile.						
		Select the "U Network Ele	Select the "Upload File" button to upload the XML file and configure the NOAMP Network Element.						
		Once the data has been uploaded, you should see a folder appear with the name of your network element. Click on this folder and you will get a drop-down which describes the individual networks that are now configured:							
			Network El	ement					
			SO0000 🔁	05					
			Network Name	Network Address	Netmask	VLAN ID	Gateway IP Address		
			INTERNALXMI	10.240.10.32	255.255.255.22	43	10.240.10.35		
			INTERNALIMI	10.240.10.0	255.255.255.22	4 4	10.240.10.3		
6	Map Services to Networks	Navigate to	Main Mer	u → Con	figuratio	on → Se	rvices.		
		Select the "Edit" button and set the Services as shown in the table below:							
		Name Intra-NE Network Inter-NE Network				ork			
		OAM		<	<imi network=""></imi>		<xmi network=""></xmi>		
		Replication	1	<	<imi network=""></imi>		< <u><xmi network=""></xmi></u>		
		Signaling	1		Unspecified		Unspecified		
		HA_Secon	aary		Unspecified	1	Unspecified		
		Replication	n MP		IMI Networ	k>	Unspecified		
		ComAgent	<u></u>	<	IMI Networ	k>	Unspecified		
		For example "XMI", then Name OAM Replication Signaling HA_Secondary HA_MP_Secondary	, if your IM 1 your servic	I network is ces should c	named "IN onfig should INI • Unspecified • Unspecified •	1I" and yo I look like	ur XMI network is the following: Inter-NE Netw XMI XMI Unspecified Unspecified	named	
		Replication_MP			IMI 👻		Unspecified	d 🔻	
		Replication_MP ComAgent		Replication_MP IMI Unspecified ComAgent IMI Unspecified . .					

7	Insert the 1st	Navigate to M	ain Menu → Configu	ration \rightarrow Serv	ers.			
	NOAMI Server	Select the "Insert" button to insert the new NOAMP server into servers table (the						
		IIIST OF A SERVER).						
		Attribute	Value		Description			
		Host Name	NO-Server1 *		characters are alphanumeric ar and end with an alphanumeric.]			
		Role	NETWORK OAM&P 💌 *		Select the function of the server			
		Hardware Profile	DSR TVOE Guest	~	Hardware profile of the server			
		Network Element Name	NO_5020801 💌 *		Select the network element			
		Location			Location description [Default = ' any text string.]			
		Fill in the fiel	ds as follows:					
		Host	tname: <ho< th=""><th>stname></th><th></th></ho<>	stname>				
		Role	E NET	WORK OAM&P				
		Har	dware Profile: DSI	R TVOE Guest				
		Netv	vork Element Name: [Ch	oose NE from	Drop Down Box]			
		The network i on the chosen	interface fields will now be hardware profile and netw	come available with ork element	n selection choices based			
		Interfaces:		ID Addross	Interface			
		INTERNALXMI (10.2	40.84.128/25)	10.240.84.155	xmi VI AN (3)			
		INTERNALIMI (10.24	40.85.0/26)	10.240.85.10	imi 🗸 🗌 VLAN (4)			
				Ok Apply Cancel				
		Fill in the service Leave the ''V	ver IP addresses for the XM 'LAN'' checkbox uncheck	II network. Select ced .	"xmi" for the interface.			
		Fill in the service Leave the ''V	ver IP addresses for the IM /LAN'' checkbox uncheck	I network. Select " ked .	imi" for the interface.			
		For DSR 4.1	.X installations ONLY: ac	ld the following NT	P servers:			
			NTP Server	Pr	eferred?			
		<n01-1< th=""><th>VOE-XMI-IP-Address></th><th></th><th>Yes</th></n01-1<>	VOE-XMI-IP-Address>		Yes			
		Select the "O	k" button when you have c	ompleted entering th	ne server data.			
8	Export the Initial	Navigate to M	ain Menu → Configu	ration \rightarrow Serv	ers.			
		From the GU button to gene	I screen, select the NOAMI erate the initial configuratio	P server and then se on data for that serve	lect "Export" action er.			

9	Copy Configuration File to 1 st NOAMP Server	From a terminal window connection on the 1 st NOAMP VM (see 4.18Appendix F for instructions on how to access the NOAMP from iLO), 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. <hostname>.sh. The following is an example: # cp /var/TKLC/db/filemgmt/TKLCConfigData.blade01.sh /var/tmp/TKLCConfigData.sh</hostname>
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.
	Zone	<pre>rion the command the prompt, execute set_ini_iz.pl. This will set the system the 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 4.18Appendix K. # /usr/TKLC/appworks/bin/set_ini_tz.pl "Etc/UTC" >/dev/null 2>&1</pre>
12	Reboot the Server	# init 6
	(Optional) Configure Networking for Dedicated NetBackup Interface	NOTE: You will only execute this step if your NO is using a dedicated Ethernet interface for NetBackup. From a root login session 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_id> gateway=<netbackup_network_gateway_ip></netbackup_network_gateway_ip></netbackup_network_id></netbackup_network_id></netbackup_netmask></no1_netbackup_ip>

Procedure 32. Configure the NOAMP Server Group

S	This procedure will p	provide the steps	s 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.								
P	IF THIS PROCEDURE FAILS,	CONTACT TEKELEC	TECHNICAL SERVICES AND ASK FOR ASSIS	STANCE.					
1	NOAMP GUI: Login	Establish a GUI the first NOAM http:// <fir< th=""><th colspan="6">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></th></fir<>	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 gui this Website" to	admin user. If prompted by a security proceed.	y warming, select "Continue to					
2	Enter NOAMP Server Group Data	Using the GUI s Main Menu \rightarrow (fields:	session on the first NOAMP server, § Configuration→Server Groups, sele	go to the GUI ect Insert and fill the following					
		• Server	Group Name → [Enter Server Gro	up Name]					
		Level Parent	→ A · None						
		 Functi 	on: DSR (Active/Standby Pair)						
		Select "OK" wh	Select "OK" when all fields are filled in.						
3	Edit the NOAMP	From the GUI N	Iain Menu→Configuration→Server	Groups, select the new server					
	Server Group	Select the Netw	ork Element that represents the NOA	MP.					
		NO 90006010	3						
		Server	SG Inclusion	Preferred HA Role					
		HPC6NO Include in SG Preferred Spare							
		In the portion of the screen that lists the servers for the server group, find the NOAMP server being configured. Click the "Include in SG" checkbox.							
		Leave other box	xes blank.						
		Press OK							

Procedure 32. Configure the NOAMP Server Group

4	Verify NOAMP blade server role	From terminal win ha.mystate cor "resourceId" colum	From terminal window to the iLO of the first NOAMP blade server, execute the ha.mystate command to verify that the "DbReplication" and VIP item under the "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 exi	it						
		Example:							
		<pre>state="color: background-color: background-</pre>	~]# ~]# ~]# ha.m role Active Active	nystate node A0878,188 A0878,188	subResources 0 0	lastUpdate 1110:055822 1110:055822			
		pSbrBBaseRepl pSbrBindingRes pSbrSBaseRepl pSbrSessionRes CacdProcessRes DA MP Leader	00S 00S 00S Active 00S	A0878.188 A0878.188 A0878.188 A0878.188 A0878.188 A0878.188		1110:055815 1110:055815 1110:055815 1110:055815 1110:055822 1110:055815			
		DSR_SLDB VIP_DA_MP EXGSTACK_Process DSR_Process CAPM_HELP_Proc DSROAM_RL_Proc DSROAM_PN_Proc DSROAM_IC_Proc	005 005 005 005 005 005 005 005	A0878.188 A0878.188 A0878.188 A0878.188 A0878.188 A0878.188 A0878.188 A0878.188	0-63 0-63 0-63 0-63 0 0 0 0 0	1110:055815 1110:055815 1110:055815 1110:055815 1110:055815 1110:055815 1110:055815 1110:055815			
		DSROAM_TC_Proc DSROAM_CA_Proc [root@labFe2b2dsrnoa	oos Active ~]#∏	10878.188 10878.188	0	1110:055815 1110:055822	~		
5	Restart 1 st NOAMP blade server	From the NOAMP Select the first NO confirmation popu	GUI, se AMP se p. Wait	elect the Ma erver. Select for restart to	in menu \rightarrow Stat the Restart complete.	t us & Manage→S button. Answer Ok	e rver menu. K to the		

Procedure 33. Configure the Second NOAMP Server

S	This procedure will provide the steps to configure the Second NOAMP server.							
T	Check off ($\sqrt{2}$) each step as it is completed. Boxes have been provided for this purpose under each step number.							
E P	IE THIS PROCEDINE FAILS CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE							
	IF THIST ROCEDORE FAILS, CONTACT TEREFECTECTINICAL SERVICES AND ASKTOR ASSISTANCE.							
1	Exchange SSH keys	ange SSH keys Use the PMAC GUI to determine the Control Network IP address of the blade server						
	between PMAC	that is to be the second NOAMP server. From the PMAC GUI, navigate to Main Menu \rightarrow Software- \rightarrow Software Inventory Note the IP address for the second						
	NOAMP server	NOAMP server, usually the second blade in the first enclosure.						
		From a terminal window connection on the PMAC, exchange SSH keys between the PMAC and the second 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 NOAMP server.						
		<pre># keyexchange root@<noamp bl;<="" pre=""></noamp></pre>	ade Control Net IP addr>					
2	NOAMP GUI: Login	If not already done, establish a GUI sessio XMI IP address of the first NOAMP serve	n on the first NOAMP server by using the r. Open the web browser and enter a URL					
	Dogin	of: http:// <first ip<="" noamp="" th="" xmi=""><th>address></th></first>	address>					
		Login as the guiadmin user.	Login as the guiadmin user.					
	. 14							
3	Insert the 2 nd	Navigate to Main Menu → Configuration	\rightarrow Servers.					
	NOAMI Server	Click on Insert to insert the new second NOAMP server into servers table ("B"						
		This server role should be the "NETWORK OAM&P".						
		Select the Network Element Name (should first NOAMP)	l be the same used when configuring the					
		Choose "DSR TVOE Guest" for the hardw	vare profile.					
		Eill in the series ID addresses for the VMI	-					
		Leave the "VLAN" checkbox unchecked	d.					
		Fill in the server IP addresses for the IMI Leave the "VLAN" checkbox unchecked	network. Select "imi" for the interface. d.					
		For DSR 4.1.X installations ONLY: add	the following NTP servers:					
		NTP Server	Preferred?					
		<no2-tvoe-xmi-ip-address> Yes</no2-tvoe-xmi-ip-address>						
		Select the Ok button when you have comp	leted entering the server data.					
4	Export the initial	From the GUI screen, select the second ser	rver and then select Export action					
	configuration	button to generate the initial configuration	data for that server.					

5	Copy Configuration File to 2 nd NOAMP Server	From a terminal window connection on the 1 st NOAMP iLO, 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. <hostname>.sh. # awpushcfg 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, </hostname>
6	Set the timezone and Reboot the Server	Obtain a terminal window connection on the 2 nd NOAMP iLO from the OA (Use the procedure in 4.18Appendix F). 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 # cat /var/TKLC/appw/logs/Process/install.log 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 4.18Appendix K. # /usr/TKLC/appworks/bin/set_ini_tz.pl "Etc/UTC" >/dev/null 2>&1 Now Reboot the Server: # init 6 Wait for the server to reboot
7	(Optional) Configure Networking for Dedicated NetBackup Interface	NOTE: You will only execute this step if your NO is using a dedicated Ethernet interface for NetBackup. From a root login session on the 2 nd NO, execute the following commands: # netAdm setdevice=netbackuptype=Ethernet onboot=yesaddress= <no2_netbackup_ip> netmask=<netbackup_netmask> # netAdm addroute=netdevice=netbackup address=<netbackup_network_id> netmask=<netbackup_network_id> gateway=<netbackup_network_gateway_ip></netbackup_network_gateway_ip></netbackup_network_id></netbackup_network_id></netbackup_netmask></no2_netbackup_ip>

Procedure 34. Complete Configuring the NOAMP Server Group

S	This procedure will	provide the step	os to finish configuring th NOAM	P Server Group.
T E	Check off ($$) each step as it is	s completed. Boxes hav	ve been provided for this purpose under each ste	ep number.
P	IF THIS PROCEDURE FAILS	CONTACT TEKELE	C TECHNICAL SERVICES AND ASK FOR ASS	ISTANCE
#		, continer izizzz		
1	Edit the NOAMP	From the GUI s	ession on the first NOAMP server, g	o to the GUI
	Server Group Data	Main Menu->	Configuration->Server Gr	oups.
		Select the NOA	MP Server group and click on Edit	and add the second NOAMP
		server to the Ser	rver Group by clicking the "Include i	n SG" checkbox for the second
		NOAMP server	Click Apply.	
		RMSNO_90006	50102	
		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 VIE	P Address and press Ok as
			VIP Address	Add
				Remove
				Ok Apply Cancel
2	Wait for	After replication	n, which will initially take up to 5 mi	nutes, the HA status should be
	Replication	active (Main m	henu->Status & Manage->HA). Note: This may take up to 5
		minutes while u	le WOAWI servers ligure out master	slave relationship.
		Log out of GUI	from the first NOAMP XMI address	
3	Establish GUI	Establish a GUI	session on the NOAMP by using the	XMI VIP address. Login as
	Session on the NOAMP VIP	user guladmin		
4	Wait for Remote	Wait for the ala	rm "Remote Database re-initialization	on in progress" to be cleared
	Database Alarm to Clear	before proceedi	ng. (Main menu->Alarms & Events	s->View Active)
	Citur .			

Procedure 34. Complete Configuring the NOAMP Server Group

5	Verify HA Role for 2 nd NOAMP server	In the Main menu->Status & Manage->HA menu, verify that the "Max Allowed HA Role" for the 2 nd NOAMP 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 Press OK.		
6	Restart 2 nd NOAMP blade server	In the Main menu->Status & Manage->Server menu, select the second NOAMP server. Select the "Restart" button. Answer OK to the confirmation popup. Wait approximately 3-5 minutes before proceeding to allow the system to stabilize indicated by having the "Appl State" as "Enabled".		
7	SDS can now be installed (Optional)	If this deployement contains SDS, SDS can now be installed.		

Procedure 35. 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			
	IF THIS PROCEDURE FAILS	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 J.2 Netbackup Client Install with nbAutoInstall</i> . This is not common. If the answer to the previous question is not known then use <i>Appendix J.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 36. NO Configuration for DR Site (Optional)

S T E	This procedure will provide the steps to configure the First DR NOAMP blade server.						
	Check off (ψ) each step as it is completed. Boxes have been provided for this purpose under each step number.						
P #	Prerequisite: Application software already installed.						
#	Needed material:						
	 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.						
1	Primary NOAMP VIP GUI : Login	Using a web browser, navigate to the XMI Virtual IP Address (VIP) of the Primary NO Site.					
		Login using the guiadmin user.					
2	Primary NOAMP VIP GUI: Insert Network Element for DR Site	Refer to appendix A for a sample network element xml file (contains direction on setting the NTP servers).					
		Using the GUI menu, Navigate to Configuration -> Network Elements as shown below					
		 Administration Configuration <i>Network Elements</i> 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.					
3	Primary NOAMP	Using the GUI menu, Navigate to Configuration -> Servers as shown below					
---	-----------------	---	---	---	--	--	--
	VIP GUI: Insert			4-1-1			
	Servers		= <u>_</u> N	nain Menu			
		📮 🧰 Administration					
				Configuration			
				🗝 📑 Network Elements			
				Services			
				Servers			
		Click the	"Insert" button (botto	m left corner of screen). An "A	Adding a new server"		
		screen wil	l be displayed up as si	hown below			
		Adding a	new server				
		Attribute	Value	Description			
		Host Name	*	Valid characters are alphanumeric and minus alphanumeric and end with an alphanumeric;	nge = A 20-character string. sign. Must start with an 		
		Role	- Select Role - 💌 *	Select the function of the server			
		Hardware Profile	TVOE Guest	Hardware profile of the server			
		Element Name	- Unassigned - 💌 *	Select the network element			
		Location		Location description [Default = ". Range = A 1 is any text string.]	5-character string. Valid value		
				Ok Apply Cancel			
		Fill in the following Values:					
		Polo: Select the NETWORK OAMSD					
		KOIE: Select the NETWORK OAM&P					
		Hardware Profile: Select DSR TVOE Guest					
		<u>Network element Name</u> : Select the network Element Name for the DSR DR Site (the one inserted in step 2 above)					
			Server in step 2 above	- <i>j</i> .			
		Location: Fill in the server geographical location (optional).					
		The netwo	ork interface fields wil	ll now become available with s	election choices based		
		on the cho	osen hardware profile	and network element			
		Interfaces:					
		Network	(10.040.04.400/05)	IP Address	Interface		
			(10.240.84.128/25)	10.240.64.155	Xmi VLAN (3)		
		INTERNALIMI	(10.240.85.0/26)	10.240.85.10	Imi 🞽 🗌 VLAN (4)		
				Ok Apply Cancel			
		Fill in the Leave the	server IP addresses fo "VLAN" checkbox	or the XMI network. Select "x unchecked.	mi" for the interface.		
		Fill in the	server IP addresses fo	or the IMI network. Select "in	i" for the interface.		
		Leave the	V LAIN CHECKDOX	UIICIICUNCU.			
		(Continue	d in the next step)				

4	Primary NOAMP	For DSR 4.1.X installations ONLY: add the following NTP servers:				
	Servers - Cont.	If inserting the DR-NO "A" Server:				
		NTP Server	Preferred?			
		<dr-no1-tvoe-xmi-ip-< th=""><th>Yes</th></dr-no1-tvoe-xmi-ip-<>	Yes			
		Address>				
		If inserting the DR-NO "B" Server:				
		NTP Server	Preferred?			
		<dr-no2-tvoe-xmi-ip- Address></dr-no2-tvoe-xmi-ip- 	Yes			
		Select the "Ok" button when you have com	ppleted entering the server data.			
5	Primary NOAMP	Navigate to Main Menu -> Configu	ration -> Servers			
	the Initial Configuration	From the GUI screen, select the DR NO se the " Export " button to generate the initial	rver added in the previous step and click 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				
6	Exchange SSH kevs	From a terminal window connection on the	NOAMP VIP, exchange SSH keys			
	between NOAMP	between the NOAMP and the DR NO's PMAC using the keyexchange utility.				
	and PMAC at the DR site	When prompted for the password, enter the root password for the PMAC				
		<pre># keyexchange root@<dr_no_site_pmac_management_ip></dr_no_site_pmac_management_ip></pre>				
7	Сору	SSH to the NOAMP VIP and use the awpu	ashcfg utility to copy the configuration			
	Configuration File to 1 st DR NO Server	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 II address for the first DR NOAMP server. The configuration file will have a filenam				
		# encode for	511.			
		# awpusncig				
		 The 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, 				

8	DR NO Server A: Verify awpushcfg	Access the machine hosting the DR NO Server A using the iLO Connection and log in as root.				
	was successful	• Access the DR NO Server A VM console by running the following commands				
		<pre># virsh listall</pre>				
		Id Name State				
		6 vm-pmac running				
		7 DSR-NO running				
		The connect to DR NO Server A VM using the following command, and login as root.				
		# virsh console DSR-NO				
		Connected to domain vm-DSR-NO Escape character is ^] <press enter="" key=""></press> CentOS release 6.2 (Final) Kernel 2.6.32-220.7.1.el6prerel6.0.0_80.13.0.x86_64 on an x86_64 DSR-NO login: root Password: Last login: Fri May 25 16:39:04 on ttyS4				
		• Verify awpushcfg was called by checking the following file				
		<pre># cat /var/TKLC/appw/logs/Process/install.log</pre>				
9	DR NO Server A VM: Wait for Configuration to Complete	e automatic configuration daemon will look for the file named KLCConfigData.sh" in the /var/tmp directory, implement the configuration in the e, 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				
10	DR NO Server A VM: Configure Time Zone	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 4.18Appendix K.				
		<pre># /usr/TKLC/appworks/bin/set_ini_tz.pl "Etc/UTC" >/dev/null 2>&1</pre>				
11	DR NO Server A	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 root login session 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_id> netmask=<netbackup_network_netmask> gateway=<netbackup_network_gateway_ip></netbackup_network_gateway_ip></netbackup_network_netmask></netbackup_network_id></netbackup_network_id></netbackup_netmask></no1_netbackup_ip>
	DR NO Server A VM: Verify Server Health	Execute the following command and make sure that no errors are returned: # syscheck Running modules in class hardware Running modules in class disk Running modules in class net Running modules in class system OK Running modules in class proc LOG LOCATION: /var/TKLC/log/syscheck/fail_log
14	Repeat for DR NO Server B	Repeat Steps 3 through 13 to configure DR NO Server B.

S	This procedure will provide the steps to configure the First DR NOAMP blade server.					
T E	Check off ($$) each step as it is completed. Boxes have been provided for this purpose under each step number.					
P #	Prerequisite: Procedure 36. NO Installation for DR Site complete					
#	IF THIS PROCEDURE FAILS	IS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.				
1	Primary NOAMP Using a web browser, navigate to the XMI Virtual IP Address (VIP) of the					
	VIP GUI: Login Primary NO Site.					
		Login using the guiadmin user.				

2	Primary NOAMP GUI: Navigate to Server Group	Using the GUI menu, Navigate to Configuration -> Server Groups as shown below Main Menu Main Menu Administration Network Elements Services Servers Server Groups Alarms & Events
3	Primary NOAMP GUI: Insert Server Group	The Server Groups screen will display, click on Insert to add a new Server Group Insert Edit Delete Report The following will be displayed Main Menu: Configuration -> Server Groups [Insert] Filed Value Description Server Group Official t = n/a. Range = A 1-32-character string. Valid characters are alphanumeric and underscore. Must contain at least one alpha and must not start with a digit] Velwork Element · Select Network Element · Select the Network Element for this Server Group Name · Select Network Element · Select the Network Element for this Server Group contain NOAMP and Ouery servers. Level B groups are optional and contain SOAM servers. Level C groups Contain MP servers] Fill in the following values: Server Group Name: Name of DSR DR NO Site Network Element Name: Select the DSR DR Site Level: Select A Parent: Select None Eunction: Select DSR Then press "Apply", make sure the validation is successful

4	Primary NOAMP	Select the Server Group that was created in the previous step, and click on "Edit".				
	GUI: Update Server Group					
	1					
		The user will t	be presented with the "Server Grou	ps [Edit]" screen		
		Check the chec	ckbox labeled "Include in SG" for t	the "A" and "B" DR Servers as		
		shown below a	and click on "Apply"			
		deaDR_CSLA	B_ATT SG Inclusion	Droforred UA Polo		
		deaNO-				
		ChaNC-A	Include in SG	Preferred Spare		
		deaNO- ChaNC-B	✓ Include in SG	Preferred Spare		
5	Primary NOAMP	Click the "Ad	d " dialogue button for the VIP Addr	ess and enter an IP Address for		
	GUI: Add VIP	the VIP as sho	wn below			
			VIP Address	Add		
		10.250.55.1	63	Remove		
		Then click the " Apply " dialogue button. Verify that the banner information mes				
		OK Appry Cancer				
6	Drimowy NOAMD	Now that the s	enver(s) have been paired within a S	arver Group they must establish a		
0	GUI: Wait for 5	master/slave relationship for High Availability (HA). It may take several minutes for				
	minutes	this process to	be completed.			
		Allow a minimum of 5 minutes before continuing to the next Step.				
7	Primary NOAMP	Using the GUI	main menu, Navigate to Status &	Manage -> HA		
	GUI: Verify/Change HA Status	Verify that the "Active" .	"Max Allowed HA Role" for DR	NO Servers 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 ret Role" for DR	turned to the previous screen, verify NO Servers A and B now shows "A	that the " Max Allowed HA Active".		

8	Primary NOAMP	Using the G	Using the GUI main menu, Navigate to Status & Manage -> Server					
	GUI: Verify Server Status	The "A" and "B" DR NO servers should now appear in the right panel. Verify that the "DB" status shows "Norm" and the "Proc" status shows "Man" for both servers before proceeding to the next Step.						
				DB	HA	Proc		
				Norm	Err	Man		
				Norm	Err	Man		
9	Primary NOAMP GUI: Restart	Using the mo in GREEN .	ouse, selec	t DR NO Se	erver A. The	line entry sh	ould now	be highlighted
	Application on DR NO A	Click the "R	.estart" bu	itton from the	e bottom left	corner of th	e screen.	
			Stop Restart Reboot					
		Click the "O	K" button	on the confi	irmation dial	ogue box.		
		The user sho DR NO Serv	uld be pres ver A stati	sented with a ng: "Succes	a confirmation sfully restar	on message (: ted applicat	in the bann tion".	ner area) for
10	Primary NOAMP	Using the GUI main menu, Navigate to Status & Manage -> Server						
	Application State on DR NO Server A	Verify that the "Appl State" now shows "Enabled" and that the "Alm, Repl, Coll, DB, HA & Proc" status columns all show "Norm" for DR NO Server A before proceeding to the next Step.						
		Appl State	Alm	Repl	Coll	DB	HA	Proc
		Enabled	Err	Norm	Norm	Norm	Norm	Norm
		NOTE: If us setting (15-3 → Server"	ser chooses 0 sec.). Th option from	s to refresh t his may be d n the Main n	he Server sta one by simpl nenu on the l	ttus screen ir y reselecting eft.	n advance the "Stat	of the default us & Manage
11	Primary NOAMP GUI: Restart the application on DR NO Server B	Repeat Steps	s 8 − 10, bu	it this time s	electing DR	NO Server E	3 instead o	f A

Procedure 38. Configure the SOAM NE

S	This procedure will provide the steps to configure the SOAM Network Element							
T E	Check off ($$) each step as it is completed. Boxes have been provided for this purpose under each step number.							
P #	IF THIS PROCEDURE FAILS	5, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.						
π								
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	t running the web browser. The SOAM Network Element XML file is similar to what						
	using an XML File	was created and used in Procedure 31, but defines the SOAM "Network Element".						
		Refer to Appendix A for a sample Network Element xml file (and instructions on what NTP server to choose)						
		Navigate to Main Menu->Configuration->Network Elements						
		Select the "Browse" button, and enter the path and name of the SOAM network XML file.						
		Select the "Upload File" button to upload the XML file and configure the SOAM Network Element.						

Procedure 39. Configure the SOAM Servers

S T P #	This procedure will provide the steps to configure the SOAM Servers Check off (♦) each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.					
1	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. From a terminal window connection on the SOAM site's PMAC, exchange SSH keys between the PMAC and the SOAM server using the keyexchange utility, using the Control network IP address for the SOAM server. # keyexchange root@ <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, exchange SSH keys between the NOAMP and the PMAC for this SOAM site using the keyexchange utility.				

Procedure 39. Configure the SOAM Servers

		When pr	When prompted for the password, enter the root password for the PMAC server.				
		# keye	<pre># keyexchange root@<soam_site_pmac_management_ip></soam_site_pmac_management_ip></pre>				
3	Establish GUI	If needed	If needed, establish a GUI session on the NOAMP by using the OAM VIP address.				
	Session on the NOAMP VIP	Login as	Login as user "guiadmin".				
4	Insert the SOAM	Navigate	to Main Menu->Confi	guration-	>Servers		
	"A" server	Select the	e "Insert" button to insert th	ne new SOAM	["A" corver int	o servers table	
		Sciect the	e msert button to msert ti	ic new SOAM		o servers table.	
		Attribute	Value		Description		
		Attribute	value		Unique name fo		
		Hostname	SOAM-A *		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></hostname>	>		
			Role:	SYSTEM OA	м		
			Hardware Profile:	DSR TVOE	Guest		
			Network Element Name: [Choose NE from Drop Down Box]				
			Letter Letter [encode in Letter prop beam box]				
		The network interface fields will now become available with selection choices based on the chosen hardware profile and network element					
		Interfaces:	Interfaces:				
			11 (10 040 04 100/05)	IP Address		Interface	
			II (10.240.64.126/25)	10.240.04.1	0	VLAN (3)	
			n (10.240.00.020)	Ok Ann		1111 • U VLAN (4)	
		T '11 ' (1.)					
		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 .					
		For DSR 4.1.X installations ONLY: add the following NTP servers:					
		NTP Server Preferred?					
		<s0< th=""><th>01-TVOE-XMI-IP-Addres</th><th>s></th><th>Yes</th><th></th></s0<>	01-TVOE-XMI-IP-Addres	s>	Yes		
		Select the	e "Ok" button when you ha	ve completed	entering the ser	rver data.	

Procedure 39. Configure the SOAM Servers

5	Export the initial configuration	From the GUI screen, select the desired server and then select "Export" action button to generate the initial configuration data for that server.				
6	5 Copy Configuration From a terminal window connection on the Active NOAMP, use the awpus 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 suing the Control network IP address for the SOAM server. The configuration have a filename like TKLCConfigData.					
		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). 				
		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 Configured Server	Obtain a terminal window connection on the SOAM "A" server console. 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 4.18Appendix K.				
		<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				

Procedure 39. Configure the SOAM Servers

8	Insert and Configure the SOAM "B" server	Repeat this procedure to insert and configure the SOAM "B" server. Instead of data for the "A" Server, insert the network data for the "B" server. For DSR 4.1.X installations ONLY: add the following NTP servers:	
		NTP Server	Preferred?
		<so2-tvoe-xmi-ip-address></so2-tvoe-xmi-ip-address>	Yes
		Transfer the TKLCConfigData file to the prompted at a terminal window. Make sur	"B" server, and reboot the "B" server when e to set the timezone as well.
9	(OPTIONAL)	If your site has SOs in Active/Standby/Spare configuration such as PDRA, then	
	Insert and Configure the SOAM Spare server	repeat this procedure to insert and configure the SOAM spare server. Instead of data for the "A" Server, insert the network data for the spare server, transfer the TKLCConfigData file to the spare server, and reboot the spare server when prompted at a terminal window. Make sure to set the timezone as well.	
10	(OPTIONAL)	If you are using Netbackup at this site, the	en execute Procedure 35 again to install the
	Install Netbackup	Netbackup Client on all SOAM servers.	
]	on SOAMs		

Procedure 40. Configure the SOAM Server Group

S	This procedure w	This procedure will provide the steps to configure the SOAM Server Group		
T	I I I I I I I I I I I I I I I I I I I			
I				
E	Check off (\mathbf{v}) each step as it is completed. Boxes have been provided for this purpose under each step number.			
Б				
P	IF THIS PROCEDURE FA	AILS, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.		
#				
1	Enter SOAM	After a approximately 5 minutes for the SOAM "B" server to reboot, from the GUI		
	Server Croup	session on the NOAMP VIP address go to the GUI Main Menu-Configuration-Server		
	Server Group	session on the Working vir address, go to the GOT Main Menu->Configuration->Server		
	Data	Groups, select Insert and add the SOAM Server Group name along with the values for the		
		following fields:		
		Tonowing fields.		
		 Name → [Enter Server Group Name] 		
		• Level $\rightarrow \mathbf{R}$		
		Parent [Select the NOAMP Server Group]		
		Europian DSD (Active/Standby Dain)		
		• Function: DSK (Active/Stanuby Fair)		
		Select "OK" when all fields are filled.		
I				

Procedure 40. Configure the SOAM Server Group

2	2 Edit the SOAM From the GUI Main Menu->Configuration->Server Groups, Server Group SOAM server group, and then select "Edit".			>Server Groups, select the new
	and add VIP	SO 900060102		
		Server S	G Inclusion	Preferred HA Role
		RMSSOA	✓ Include in SG	Preferred Spare
		RMSSOB	Include in SG	Preferred Spare
		Select the SOAM	Server group and click on Edit	
		Add both SOAM a If you are adding a checkbox next to t	servers to the Server Group by clic a SOAM spare sever to this server the spare server and also check the	king the "Include in SG" checkbox group, then click the "Include in SG" "Preferred Spare" checkbox.
		Server	SG Inclusion	Preferred HA Role
		HUBTONES-SO1	Include in SG	Preferred Spare
		Click Apply.		
		Add a SOAM VIF below	by click on Add. Fill in the VIP	Address and press Ok as shown
		V	IP Address	bbA
				Remove
		-		Ok Apply Cancel
2	XX7- *4 6	A fter mentions		
<i>5</i>	Replication	active (Main menu minutes while the	1->Status & Manage->Replication)). Note: This may take up to 5 ationship.
		Look for the alarn	n "Remote Database re-initialization menu->Alarms->View Active)	in in progress" to be cleared before
		proceeding. (intuit		
4	Verify HA Role for 2 nd SOAMP	In the Main menu Role" for the 2^{nd} S	I->Status & Manage->HA menu, SOAMP server is "Active".	verify that the "Max Allowed HA
		If it is not , press t server's "Max Al	the Edit button and in the resulti lowed HA Role" to "Active" using	ng screen, change the 2 nd NOAMPs the dropdown box.
		Hostname	Max Allowed HA Role	
		HPC6NO	Active 💌	
		Press OK.		
5	Restart 1 st	From the NOAM	GUI. select the Main menu->Stat	us & Manage->Server menu. Select
	SOAM server	the "A" SOAM se popup. Wait for re	rver. Select the "Restart" button. A estart to complete.	Answer OK to the confirmation

Procedure 40. Configure the SOAM Server Group

6	Restart 2 nd	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.

Procedure 41. Post NOAMP & SOAM Setup Operations

S	This procedure w	rill provide the steps to optimize the NO and SO databases and run other	
Т	operations that sh	nould happen once the NOAMP and all SOAM sites have been configured.	
Ε			
P	Check off (\checkmark) each step a	s it is completed. Boxes have been provided for this purpose under each step number.	
#	IF THIS PROCEDURE F.	AILS, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.	
1	Log into all NO	Obtain a terminal window connection to the (NO/SO) server console via SSH or iLO. If	
	and SU servers	using SSH, use the actual IP of the server, not the vIP address.	
	run database	Execute the following on the command line. Wait until the script completes and you are	
	optimization	returned to the command line:	
	script		
		# /usr/TKLC/dsr/bin/optimizeComcolIdbRamUsage	
		# sleep 20	
		# pm.sanity	
	Sanity check OK: 01/23/13 11:42:20 within 15 secs		
	Verify that the script finished successfully by checking the exit status:		
	# echo \$?		
	If anything other than "0" is printed out, halt this procedure and contact Tekelec		
		Support	
		Repeat this step for the standby NO. D.R. NO (if applicable) servers, and every SO	
	server at every site.		
2	(PDRA Only)	If you are installing PDRA, execute the instructions in [9] 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 41. Post NOAMP & SOAM Setup Operations

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

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

3	Insert the MP	Navigate to Main Menu->C	Configuration-	>Servers	
	server				
		Select the "Insert" button to following values:	insert the new	MP server into serve	ers table. Fill out the
		Hostname: <host< th=""><th>name of th</th><th>ne MP></th><th></th></host<>	name of th	ne MP>	
		Network Element: [Choose	se Network	Elementl	
			Se Network	Liemenc]	
		Hardware Profile: Select	the profile that	matches your MP pl	nysical hardware and
		enclosure networking enviro	onment.	.f:1	-1
		mezzannine cards and Ether	gn the process	of the network prior s	und blade(s) used
		before selecting the profile.	net interfaces (in the network prior t	life blace(3) used
		Profile	Blade	Multinle	Bonded
		Name	Size	Pairs of Enc.	Signaling
				Switches?	Interfaces?
		BL460 HP c-Class Blade	Half	No	Yes
		BL620 HP c-Class Blade	Full	No	Yes
		L2D3 BL460 HP c-Class	Half	Yes	Yes
		Blade	EII	V	V
		L2D3 BL620 HP C-Class Blade	Full	res	res
		L2D3 BL620 HP c-Class	Full	Yes	No
		blade (Unbonded Sig)			
		DSR TVOE Guest	N/A (Virtual)	N/A	N/A
		NOTE: If none of the above then you will have to create and copy it into the <i>/var/TP</i> NOAMP server. Then com	re profiles pro e your own in KLC/appworks ne back and re	perly describe your a text editor (See 4 <i>/profiles/</i> directory o epeat this step.	MP server blade, .18Appendix A) of the active
		Location: <enter an="" optiona<="" th=""><th>l location desc</th><th>ription></th><th></th></enter>	l location desc	ription>	
		The interface configuration	form will now	appear.	
		Interfaces: Network	IP Address	Interface	
		INTERNALXMI (10.240.84.128/25)	10.240.84.1	77 bond0	VLAN (3)
				pply Cancel	
		For the XMI network, enter mandatory for MP servers your XMI network uses VLA	the MP's XMI in DSR 4.0) AN tagging, th	IP address. (Note: a Select the correct bor en select the VLAN	n XMI address is nd or interface. If checkbox. If your
		XMI network does NOT use	e VLAN taggir	ig, then do NOT sele	ect the vian checkbox.
		For the IMI network, enter the interface, and select the VL.	he MP's IMI I AN checkbox .	P address. Select the	proper bond or
		Continue to the next step f	or MP NTP so	erver configuration	•••

4	Insert the MP	For DSR 4.1.X installations ONLY: add the following NTP servers:		
	server - Part 2	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	
		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 initia	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 t	he MP server iLO from the OA.	
7	Copy Configuration File to MP server	From a terminal window connection on the active NOAMP, use the awpushcfg utility to copy the configuration file created in the previous step from the /var/TKLC/db/filemgmt directory on the active NOAMP to the MP blade server, using the Control network IP address for the MP blade server. The configuration file will have a filename like TKLCConfigData. <hostname>.sh.</hostname>		
		# awpushcfg		
		 The awpushcfg utility is interactive, so the prompted for the management II where the target blade is located. the blade inventory will be preser prompted for the Control network case, the MP server). prompted for the hostname of the 	user will be P address of the PMAC server at the site ated, a IP address for the target server (in this target server,	
		The automatic configuration daemon will i "TKLCConfigData.sh" in the /var/tmp dire file, and then prompt the user to reboot the	look for the file named ectory, implement the configuration in the server.	

8	Set the Timezone	From the MP server iLO terminal, wait for the message ro reboot the server.	
	and Reboot the Configured Server	d Reboot the onfigured 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 4.18Appendix K.	
		<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	(OPTIONAL) Delete Auto- Configured Default Route on MP and Replace it with a Network Route via the XMI Network	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 in to the active NO as the "root" user. Execute the following commands on the active NO:	
		<pre># /usr/TKLC/appworks/sbin/deleteDefaultRoute <mp-hostname> change status to Delete Pending for RouteId 6 === changed 1 records ===</mp-hostname></pre>	
		<pre># syncApplConfig <mp-hostname> NOTE: performing sync for IPFE1 NOTE: Network configuration sync for IPFE1 is complete.</mp-hostname></pre>	
		Now, using the iLO facility, log into the MP as the "root" user. The remaining commands in this step will be executed on the MP.	
		Verify that the default route has been removed by executing the following command on the MP. There should be no output returned:	
		<pre># netstat -r grep default #</pre>	
		Note: If your NO XMI network is exactly the same as your MP XMI network, then you can skip this command and go right to the ping test afterwards.	
		Determine <xmi_gateway_ip> from your SO site network element info and <no_xmi_network_address>,<no_xmi_network_netmask> from your NO site network element info. You can either consult the XML files you imported earlier, or go to the NO GUI and view these values from the <i>Main Menu>Configuration>Network Elements</i> screen.</no_xmi_network_netmask></no_xmi_network_address></xmi_gateway_ip>	
		[MP console] Create network route 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] Ping active NO XMI IP address to verify connectivity:	
		<pre># ping <active_no_xmi_ip_address></active_no_xmi_ip_address></pre>	
		PING 10.240.108.6 (10.240.108.6) 56(84) bytes of data. 64 bytes from 10.240.108.6: icmp_seq=1 ttl=64 time=0.342 ms 64 bytes from 10.240.108.6: icmp_seq=2 ttl=64 time=0.247 ms	
		If you do not get a response, then verify your network configuration. If you continue to get failures then halt the installation and contact Tekelec customer support.	

10	Repeat for	Repeat this entire procedure for all remaining MP blades at all sites.
	remaining MP at	
	all sites	

Procedure 43. Configure Places and Assign MP Servers to Places (PDRA Installations ONLY)

S T	This procedure will Check off (\checkmark) each step as it i	provide the step s completed. Boxes hav	s/reference to a e been provided for th	idd "Places is purpose und	" in the PDRA Network. er each step number.		
E P #	IF THIS PROCEDURE FAILS	5, CONTACT TEKELEO	C TECHNICAL SERVI	CES AND ASK	FOR ASSISTANCE.		
		I					
1	(PDRA Only)	Establish a GUI sess	sion on the NOAMP b	by using the XM	AI VIP address. Login as user "guiadmin".		
	NOAMP VIP:	Navigata to Main	Monu -> Cor	fimmati	ion -> Places		
	Configure Places	Navigale to Marin	Menu -> cor	IIIgulat.	ton -> Fraces		
	0	Screen.					
		Main Man		tion & D			
		main menu	i: Configura	uon $-> P$	haces [Insert]		
		lofo 💌					
		Inserting	a new Place				
		Disco					
		Field	Value		Description		
		Diago Marros			Unione identification data labella Disca (D		
		Place Name	μτριαρυ	*	Unique identilier used to label a Place. [D		
		Parent	NONE	*	The Parent of this Place		
		Place Type Site * The Type of this Place					
		Place Name: Choose "N	DSE THE SITE NAME				
		Place Type: Choos	se "Site"				
		Repeat this step	o for all Places y	ou wish to o	define.		

Procedure 43. Configure Places and Assign MP Servers to Places (PDRA Installations ONLY)

2	(PDRA Only)	Click on Insert	in the lower left corner and enter the information to create the place association for			
	NOAMP VIP:	mated pairs, click Ok.				
	Configure Place	Place Association				
	Associations	rielu	value			
		Place Associatio Name	on rtpLabMatedPair1 *			
		Place Associatio Type	Policy DRA Mated Sites 🔹 *			
		Places				
		Places	✓ rtpLabC			
			Μημαρμ			
3	(PDRA Only) NOAMP VIP:	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 A Repeat this step for all place associations you wish to define. For each place you have defined, choose the set of MP servers that will to those places				
		Place				
	Assign MP Servers	Field V	alue			
	10114005	Place Name	tpLabC *			
		Parent	NONE 💉 *			
		Place Type	Site 💉 *			
		Servers				
		LABCSONE [labCe1b04pdra1			
		Check all the cher place.	ck boxes for PDRA and pSBR servers that will be assigned to this			
		Repeat this step places.	for all other PDRA or pSBR servers you wish to assign to			

Procedure 44. Configure the MP Server Group(s) and Profiles

S	This procedure will provide the steps to configure MP Server Groups							
Т								
E	Check off (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 S	SERVICES AND ASK FOR ASSISTA	NCE.				
1	Enter MP Server	From the GUI session on the	NOAMP VIP address, go t	to the GUI Main				
	Group Data	Menu→Configuration→Se fields:	erver Groups, select Inser	et and fill out the following				
		Server Group Name: [Serve	Server Group Name: [Server Group Name]					
		Level: C						
		Parent: [Select the SOAMP Server Group That is Parent To this MP]						
		Function: Select the Proper Function for this MP Server Group:						
		Server Group Function	MPs Will Run	Redundancy Model				
		DSR (multi-active	Diameter Relay and	Multiple MPs active				
		cluster)	Application Services					
		DSR (active-standby	Diameter Relay and	1 Active MP and 1				
		pair)	Application Services	Standby MP				
		Session Binding	Session Binding	1 Active MP and 1				
		Repository	Repository Function	Standby MP				
		IP Load Balancer	IPFE application	1 Active MP				
		Policy SBR	Policy Session and/or Policy Binding	1 Active MP				
			Application					
		Select OK when all fields are filled in.						
2	Donost For	Danaat Stan 1 for any rama	ning MD sorver groups you	wish to graata For				
2	Addional Server	instance if you are installing	<i>IPFE</i> you will need to create	te an IP Load Balancer				
	Groups	server group. If you are insta	alling the CPA, you will nee	d a Session Binding				
	or only .	Repository server group. Fo	r PDRA, you will need at le	ast one Policy SBR server				
		group.	, ,	· · · · · · · · · · · · · · · · · · ·				

Procedure 44. Configure the MP Server Group(s) and	Profiles
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6	Edit the MP Server Groups to include MP blades.	From the GUI Main Menu->Configuration->Server Groups, select a server that you just created and then select Edit. Select the Network Element that represents the MP server group you wish to e Click the "Include in SG" box for every MP server that you wish to include ir server group. Leave other checkboxes blank.						a server group vish to edit. nclude in <i>this</i>	
		HPC6_90006							
		Server	SG Inclusion			Prefer	red HA R	ole	
		MP-1	🗹 Include in SG			🗌 Pre	eferred Sp	pare	
		MP-2	Include in SG			🗆 Pre	eferred Sp	pare	
7	Wait for Replication to complete on all MP blades	Select Ok . Repeat for any to a server grou Browse to Mai Identify all the l corresponding <i>I</i> may take up to 2	Select Ok. Repeat for any remaining MP server groups until all MPs have been assigned o a server group. Browse to Main menu->Status&Manage->Server. dentify all the MP servers in the Server Hostname column. Now, wait for the corresponding DB and Reporting Status columns of those MPs to say "Norm". This may take up to 5 or 10 minutes.						
		Server Hostname	Server Hostname Appl State Alm DB Reporting Status						
		HPC6-NO		Enabled	Norm		Norm	Norm	
		HPC6-SO		Enabled	W	arn	Norm	Norm	
		HPC6-MP1		Enabled	w	arn	Norm	Norm	
0			#10200 D						
8	Wait for Remote	Wait for the ala	rm "10200: Remote menu->Alarms &	e Database re Events->A	e-initial	ization	in progre	ess" to be	
	Clear	This should happen shortly after you have verified the "Norm" DB status in the previous step.							

Procedure 44. Configure the MP Server Group(s) and Profiles

9	Assign Profiles to	Log onto	Log onto the GUI of the active SOAM server.							
	MPs from SOAM	From the	SO GUI, select N	AainMenu->Diameter->Configuration->DA-MPs-						
	GUI.	>Profiles	s Assignments							
		Main Mer	nu: Diameter -> Co	onfiguration -> DA-MPs -> Profile Assignments						
		DA-MP	MP Profile	current value The current MP Profile is G6:Relay.						
		MP-2	G6:Relay •	G6 DA-MP half height blade running the relay application						
		MP-1	G6:Relay ▼ *	G6 DA-MP half height blade running the relay application						
			Assign Cancel							
			MD coloct the m	was a model a cosi anno ant haard an tha MD's handroons to						
		For each	MP, select the pr	ve:	pe					
			unction it will serv	vc.						
		Pı	Profile Name Description							
			G6:Relay	G6 DA-MP half height blade running relay						
				application						
		G	6:Database	G6 DA-MP half height blade running a						
				database application (e.g FABR, RBAR)						
			36:Session	Go DA-MP half height blade running a						
			C9.Dalari	session application (e.g CPA, PDRA)						
			Go:Relay	relay application						
		G	8·Database	G8 DA-MP half height blade running a						
			0.Database	database application (e.g. FABR, RBAR)						
		(G8:Session	G8 DA-MP half height blade running a session application (e.g. CPA, PDRA)						
			G7:Relay	G7 DA-MP Full height blade running the						
				relay application						
		G	7:Database	G7 DA-MP Full height blade running a						
				database application (e.g. FABR, RBAR)						
			37:Session	G/DA-MP Full height blade running a						
				session application (e.g. CPA, PDKA)						
		When finished, press the Assign button								
10	Update DpiOption	Log on to	the active SOAM	A console via the XMI address or iLO.						
	table from the active SOAM	Execute t	he following com	amand (advise cut and paste to prevent errors):						
		<pre># iset "name='</pre>	-fvalue="50" MpEngIngressM	DpiOption where MpsPercentile'"						
		=== char	nged 1 records ==	==						

Procedure 44. Configure the MP Server Group(s) and Profiles

11	Optimize Comcol memory usage	SSH to each DA-MP and execute the following command. Note that this command SHOULD NOT be executed on SBR blades. # /usr/TKLC/dsr/bin/optimizeComcolldbRamUsageforce
	Restart MP blade servers	 From the NOAMP GUI, select the Main menu->Status & Manage->Server menu For each 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.

4.17 Signaling Network Configuration

Procedure 45. Configure the Signaling Networks

S	This procedure will	provide	he steps to configure the Sig	naling Networks.				
T F	Check off (\checkmark) each step as it is	the eck off ($$) each step as it is completed. Boxes have been provided for this purpose under each step number.						
P	IF THIS PROCEDURE FAILS	, CONTACI	TEKELEC TECHNICAL SERVICES AN	D ASK FOR ASSISTANCE.				
1	Establish GUI Session on the NOAMP VIP	Establis user "gu	h a GUI session on the NOAMI iadmin".	P by using the XMI VIP address. Login as				
2	NOAMP VIP: Navigate to Signaling Network Configuration Screen	Navigat	Navigate to Main Menu -> Configuration -> Network Click on Insert in the lower left corner.					
3	NOAMP VIP: Add First Signaling Network	You wil Insert N	l see a screen similar to: etwork					
		Field	Value	Description				
		Network Name	×	The name of this VLAN. [Default = n/a. Range = Alphanumeric string up to 31 chars, starting with a letter.]				
		VLAN ID	β*	The VLAN ID to use for this VLAN. [Default = network dependent. Range = 4-4094 (VLAN 1-3 reserved for Management, XMI and IMI).]				
		Network Address	10.240.71.128	The network address of this VLAN. [Default = n/a. Range = Valid Network Address of the network in dotted decimal (IPv4) or colon hex (IPv6) format.]				
		Netmask	255.255.255.192 *	Subnetting to apply to servers within this VLAN. [Default = n/a. Range = Valid Netmask for the network in prefix length (IPv4 or IPv6) or dotted decimal (IPv4) format.]				
Ck Apply Cancel Enter the Network Name, VLAN ID, Network Address a that matches the first Internal Signaling network configuration at you Ok								
4	NOAMP VIP: Add Second Signaling Network	Click or Name, second l this step	Insert in the lower left corn VLAN ID, Network Add: nternal Signaling network conf to configure any additional sig	er again and enter Enter the Network ress and Netmask that matches the iguration at your site and press Ok. Repeat naling networks.				

S T	This procedure will p	provide the ste	wide the steps to configure the Signaling Devices.				
Ε	Note: The site specifi	c HW configu	ration will aff	ect which	n steps need to b	e executed	1
Р	Questions:	How many	pairs of switche	es are in	Will the MP us	e a	
		tl	ne enclosure?		bonded interfac	ce?	
	Possible Execution		Single		N/A		
	Scenarios:		Multiple		Yes		
			Multiple		No		
	Check off (√) each step as it is IF THIS PROCEDURE FAILS,	completed. Boxes h CONTACT TEKEL	ave been provided f EC TECHNICAL SF	or this purpo	ose under each step nu D ASK FOR ASSISTA	mber. NCE.	
1	NOAMP VIP: Configure the Signaling Interfaces of the first MPNavigate to Main Menu -> Configuration -> Network -> DevicesVou 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						
			\sim	_	000		
		blade07 bl	ade08 (blade09				
		Device Name	Device Type	Device Options			IP Inter
		bond0	Bonding	onboot = yes bootProto = (baseDevice = miimon = 10	: dhcp = ["eth01","eth02"] 0		
		bond0.3	Vlan	onboot = yes bootProto = ; baseDevice	s none = ["bond0"]		10.240
		bond0.4	Vlan	onboot = yea bootProto = . baseDevice	s none = ["bond0"]		10.240
		eth01	Ethernet	onboot = yes bootProto = i	none		
		Insert E Refer to the for number of end	Edit Delete	Repo determin airs and w	rt e which steps to o hether Bonded Ir	execute nex aterfaces are	t based on the e used
							<u> </u>
		Nb of Er	nclosure	Bonded	Interface	Steps	to Execute
		Switch			Ν/λ	<u>ں</u>	and 5
		2 0	r 3		IN/A Voc	2	and 5
		2 0	r 3		NO	З _/	and 5
		2 0	_ J		INO	4	

2	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	Insert Device on blade09							
	of the MP (1 pair of	Insert Device (on(blade09)						
	enclosure switches)	General Options	MII Monitoring Optio	ns ARP Monitoring Options IP Interfaces					
		Field	Value	Description					
		Device Type	AN as	Select the device type. [Default = N/A]					
		Device Monitoring	Choose a monitoring style to use with a bonded device. Disabled for non-bonded devices. [Default = MII]						
		Start On Boot	Start the device, and also start on boot. [Default = enabled]						
			Select the boot protocol. [Delault = None, Range = [None, DHCP]						
		Base Device bo (s) eth Deth	nd0.4 h01 h02	Select the base device(s); VLAN and Alias device require a single base device and bond devices require two base devices. [Default = None]					
		For Device	Type, select	I VLAN.					
		rify that the checkbox is selected.							
		For Boot Pr	cotocol, ve	rify that it is set to None					
		For Base De	the TP Tpt	erfaces tables shown below					
	Insert Device on blade09								
		Insere be							
		General Opti	ID Addross Lis	nitoring Options ARP Monitoring Options Platerfaces					
			IF AUULESS LIS	Add Row					
		Now Click on	Add Row, t	he following will be displayed					
		IP Address List:	Add Row]					
				XSI1 Remove					
		Select the first	t Signaling N	etwork from the drop down menu.					
		If configuring an IPv4, then enter the IPv4 address.							
		If configuring an IPv6 address and IPv6 auto-configuration is enabled on your signaling network, and the MPs are in active/standby configuration, then there's no need to enter an IP address, it will be assigned automatically.							
		If configuring in multi-active	an IPv6 add e mode:	ress and IPv6 auto-configured is disabled, or the MPs are					
		• 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.					
		of the screen.							
		Ok Apply	Cancel						
		To add addition otherwise cont	onal Signaling	g Interfaces, click on Insert again and repeat this step, e next step.					
		Skip the next 2 steps and continue to step 5							

3	NOAMP VIP:	Click on Insert. The following screen should be displayed. Verify that the blade					
	Configure the Signaling Interfaces	name on the top corresponds to the MP.					
	of the MP (multiple	General Options MII Monitoring Options ARP Monitoring Options IP Interfaces					
	pairs of enclosure	Field Value Description					
	switches with bonded interfaces)	Device Type Centernet Over the device type, It cannot be changed after device is created. [Default = N/A. Range = Bonding, Vlan, Over the device type, It cannot be changed after device is created. [Default = N/A. Range = Bonding, Vlan, Over the device type, It cannot be changed after device is created. [Default = N/A. Range = Bonding, Vlan, Over the device type, It cannot be changed after device is created. [Default = N/A. Range = Bonding, Vlan, Over the device type, It cannot be changed after device is created. [Default = N/A. Range = Bonding, Vlan, Over the device type, It cannot be changed after device is created. [Default = N/A. Range = Bonding, Vlan, Over the device type, It cannot be changed after device is created. [Default = N/A. Range = Bonding, Vlan, Over the device type, It cannot be changed after device is created. [Default = N/A. Range = Bonding, Vlan, Over the device type, It cannot be changed after device is created. [Default = N/A. Range = Bonding, Vlan, Over the device type, It cannot be changed after device is created. [Default = N/A. Range = Bonding, Vlan, Over the device type, It cannot be changed after device is created. [Default = N/A. Range = Bonding, Vlan, Over the device type, It cannot be changed after device is created. [Default = N/A. Range = Bonding, Vlan, Over the device type, It cannot be changed after device is created. [Default = N/A. Range = Bonding, Vlan, Over the device type, It cannot be changed after device is created. [Default = N/A. Range = Bonding, Vlan, Over the device type, It cannot be changed after device is created. [Default = N/A. Range = Bonding, Vlan, Over the device type, It cannot be changed after device is created. [Default = N/A. Range = Bonding, Vlan, Over the device type, It cannot be changed after device is created. [Default = N/A. Range = Bonding, Vlan, I = Default = Bonding, Vlan, I = Default =					
		Device Mill Choose a monitoring style to use with a bonded device. Disabled for non-bonded devices. [Default = Mil. Options = Mil. ARP.]					
		Start On Boot ZEnable 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 leth01 eth02 (s) The base device(s) for Bonding, Alias and Vlan device types. Alias and Vlan devices require 1 selection; Base Device (s) Hond weth03 Bonding devices require 2 selections. It cannot be changed after device is created. [Default = N/A. Range = available base devices per device type.] weth22 eth22 eth23 eth24					
		For Device Type, select Bonding.					
		For Device Monitoring, select MII.					
		For Start on Boot, verify that the checkbox is selected.					
		For Boot Protocol, verify that it is set to None					
		For Base Device, select the ports that correspond to the signaling enclosure switches. (e.g. if the signaling switches are in Slots 3 and 4, you would select eth11 and eth12)					
		Click on Ok at the bottom of the screen.					
		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.					
		Insert Device on blade09					
		General Options MII Monitoring Options ARP Monitoring Options IP Interfaces IP Address List: Add Row					
		Now Click on Add Row, the following will be displayed					
		IP Address List: Add Row					
		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 a	t the bottom of	f the screen					
		Ok Apply Cancel							
		To add addition otherwise con	onal Signaling tinue with the	Interfaces, next step.	click on Insert ag	gain and re	epeat this step,	,	
		Skip the next	step and contin	nue to step	5				
4	NOAMP VIP:	Select eth21	and click on	Edit.					
	Signaling Interfaces of the MP (multiple pairs of enclosure switches without bonded interfaces)	eth04	Ethernet	onboot = no bootProto = none monitorType = none					
		eth21	Ethernet	onboot = no bootProto = monitorType	none e = none				
		eth22	Ethernet	onboot = no bootProto = monitorType	none = none				
		eth23	Ethernet	onboot = no bootProto = monitorType	oot = no Proto = none itorType = 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 Ether	net device	e eth21 c	n dsrMP-A				
		General Opti	ions MII Moni	itoring Option:	ARP Monitoring	Options	IP Interfaces		
		Field	Value				Des	sc	
		Device Type	Ethernet Bonding Vlan Alias	Se Ali	Select the device type. It cannot be changed after de Alias.]			ric	
		Device Monitoring	Monitoring T	ype- V Op	Choose a monitoring style to use with a bonded device Options = MII, ARP.]			ic	
		Start On Boot	Enable	Sta	Start the device, and also start on boot. [Default = e		oot. [Default = ena	at	
		Boot Protocol	None 💌	Se	lect the boot protoco	l. [Default = I	None, Range = [N	10	
		Roco Dovico	bond0 bond0.4 eth01 eth02 eth03	Th	e base device(s) for	Bonding, Alia	as and Vian dovis		
		(s)	eth04 eth21 eth22 eth23 eth23 eth24	Bo av:	nding devices requir ailable base devices	e 2 selectior per device ty	ns. It cannot be ch pe.]	ha	

		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 Interfaces 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.			
		Ok Apply Cancel			
		Now repeat this step to configure the second signaling interface (eth22).			
		Skip the next step and continue to step 6			
5	NOAMP VIP:	Repeat this procedu	re to configure the sign	aling devices of all other M	MPs.
	Configure the Interfaces of the				
	other MPs.				

Procedure 47. Configure the Signaling Network Routes

S	This procedure will provide the steps to configure the Signaling Network Routes					
T	Check off (\mathbf{v}) each step as it is completed. Boxes have been provided for this purpose under each step number.					
E		siect on (Weach step as it is completed, boxes have been provided for this purpose under each step number.				
r	IF THIS PROCEDURE FAILS	IF THIS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.				
1	Establish GUI	GUI Establish a GUI session on the NOAMP by using the XMI VIP address. Login as				
	Session on the	user "gui	user "guiadmin".			
	NOAMP VIP					
2	NOAMP VIP:	Navigate	Navigate to Main Menu -> Configuration -> Network -> Routes			
	Navigate to Server	Select the first MP Server Tab as shown. Initially no routes should be present.				
	Screen	blade07	blade08 blade09			
	Route Type Destination Netmask Gateway Device Name Conf				Device Name Configuratio	
3	NOAMP VIP: Add					
	Route	Click on	Insert at the	bottom of the screen to add addition	onal routes.	
		Insert	Edit C	elete Report		
4	NOAMP VIP: Add	A similar	r screen will be	displayed:		
4	NOAMP VIP: Add Route for XSI-1	A similar	r screen will be	displayed:		
4	NOAMP VIP: Add Route for XSI-1	A similar	r screen will be nue Net Default	displayed: Description Select a route type.		
4	NOAMP VIP: Add Route for XSI-1	A similar	r screen will be lue ^{Net Default} Host	displayed: Description Select a route type.		
4	NOAMP VIP: Add Route for XSI-1	A similar	r screen will be alue Default Host ond0.5	displayed: Description Select a route type. Enter the network device name through which traffic is being rou server.	uted. This must be an existing device on the	
4	NOAMP VIP: Add Route for XSI-1	A similar	r screen will be	displayed: Description Select a route type. Enter the network device name through which traffic is being rou server. A valid netmask for the destination network or host. Must be in d	uted. This must be an existing device on the lotted quad format	
4	NOAMP VIP: Add Route for XSI-1	A similar	r screen will be	displayed: Description Select a route type. Enter the network device name through which traffic is being rou server. A valid netmask for the destination network or host. Must be in d A valid netmask for the destination network or host. Must be in d	uted. This must be an existing device on the lotted quad format lotted quad format	
4	NOAMP VIP: Add Route for XSI-1	A similar Field Val Route Type Device be Destination 100 Netmask 255 Gateway IP 100	r screen will be	displayed: Description Select a route type. Enter the network device name through which traffic is being rou server. A valid netmask for the destination network or host. Must be in d A valid netmask for the destination network or host. Must be in d A valid netmask for the destination network or host. Must be in d A valid IP address of the gateway. Must be in dotted quad format [Ok] [Apply] [Cancel]	uted. This must be an existing device on the lotted quad format lotted quad format t	
4	NOAMP VIP: Add Route for XSI-1	A similar Field Val Route Type O Device br Destination 110 Netmask 225 Gateway IP 110	r screen will be	Description Select a route type. Enter the network device name through which traffic is being rou server. A valid netmask for the destination network or host. Must be in d A valid netmask for the destination network or host. Must be in d A valid IP address of the gateway. Must be in dotted quad format Ock Apply Cancel	uted. This must be an existing device on the lotted quad format lotted quad format t	
4	NOAMP VIP: Add Route for XSI-1	A similar Field Val Route Type Device ba Destination 110 Netmask 25 Gateway IP 10	r screen will be	displayed: Description Select a route type. Enter the network device name through which traffic is being rou server. A valid netmask for the destination network or host. Must be in d A valid netmask for the destination network or host. Must be in d A valid IP address of the gateway. Must be in dotted quad format Ok Apply Cancel	uted. This must be an existing device on the lotted quad format lotted quad format t	
4	NOAMP VIP: Add Route for XSI-1	A similar	r screen will be	displayed: Description Select a route type. Enter the network device name through which traffic is being rou server. A valid netmask for the destination network or host. Must be in d A valid netmask for the destination network or host. Must be in d A valid IP address of the gateway. Must be in dotted quad format Ock Apply Cancel Ct Net,	uted. This must be an existing device on the lotted quad format lotted quad format t	
4	NOAMP VIP: Add Route for XSI-1	A similar Field Val Route Type O Device be Destination 100 Netmask 225 Gateway IP 100 For Routh for Devi	r screen will be	displayed: Description Select a route type. Enter the network device name through which traffic is being rou server. A valid netmask for the destination network or host. Must be in d A valid netmask for the destination network or host. Must be in d A valid netmask for the destination network or host. Must be in d A valid IP address of the gateway. Must be in dotted quad format Ok Apply Cancel Ct Net, .d0.5 (or bond 1.5, based on the o	uted. This must be an existing device on the lotted quad format lotted quad format t t	
4	NOAMP VIP: Add Route for XSI-1	A similar	r screen will be	displayed: Description Select a route type. Enter the network device name through which traffic is being rou server. A valid netmask for the destination network or host. Must be in d A valid netmask for the destination network or host. Must be in d A valid netmask for the destination network or host. Must be in d A valid netmask for the destination network or host. Must be in d A valid netmask for the destination network or host. Must be in d A valid netmask for the destination network or host. Must be in d A valid IP address of the gateway. Must be in dotted quad format Ok Apply Cancel Ct Net, .d0.5 (or bond 1.5, based on the of er the Network ID of the route dest	uted. This must be an existing device on the lotted quad format lotted quad format t t chosen bond) cination (if rhis is an L3	
4	NOAMP VIP: Add Route for XSI-1	A similar	r screen will be	displayed: Description Select a route type. Enter the network device name through which traffic is being rou server. A valid netmask for the destination network or host. Must be in d A valid netmask for the destination network or host. Must be in d A valid netmask for the destination network or host. Must be in d A valid netmask for the destination network or host. Must be in d A valid netmask for the destination network or host. Must be in d A valid netmask for the destination network or host. Must be in d A valid netmask for the destination network or host. Must be in d A valid netmask for the destination network or host. Must be in d A valid netmask for the destination network or host. Must be in d A valid netmask for the destination network or host. Must be in d A valid netmask for the destination network or host. Must be in d A valid netmask for the destination network or host. Must be in d A valid netmask for the destination network or host. Must be in d A valid netmask for the destination network or host. Must be in d A valid netmask for the destination network or host. Must be in d A valid netmask for the destination network or host. Must be in d A valid netmask for the destination network or host. Must be in d CK Apply Cancel Ct Net , add 0 . 5 (or bond 1.5, based on the of the network ID of the route destination be be Ext-XSI1). network of the network is a Nature of the network of the ne	uted. This must be an existing device on the lotted quad format lotted quad format t chosen bond) cination (if rhis is an L3	
4	NOAMP VIP: Add Route for XSI-1	A similar Field Val Route Type Device be Destination 100 Netmask 225 Gateway IP 100 For Routh for Devi For Destination Controls For Neth For Neth	r screen will be	displayed: Description Select a route type. Enter the network device name through which traffic is being rou server. A valid netmask for the destination network or host. Must be in d A valid netmask for the destination network or host. Must be in d A valid netmask for the destination network or host. Must be in d A valid IP address of the gateway. Must be in dotted quad format Ok Apply Cancel Ct Net, .d0.5 (or bond 1.5, based on the of the Network ID of the route destination betwork ID of the route destination be Ext-XSI1). corresponding Netmask.	uted. This must be an existing device on the lotted quad format lotted quad format t chosen bond) cination (if rhis is an L3	
4	NOAMP VIP: Add Route for XSI-1	A similar	r screen will be	displayed: Description Select a route type. Enter the network device name through which traffic is being rous server. A valid netmask for the destination network or host. Must be in d A valid netmask for the destination network or host. Must be in d A valid IP address of the gateway. Must be in dotted quad format Ok Apply Cancel Ct Net, .d0.5 (or bond 1.5, based on the of the Network ID of the route destination be Ext-XSI1). corresponding Netmask. the Int-XSI1 switch VIP.	uted. This must be an existing device on the lotted quad format lotted quad format t t chosen bond) cination (if rhis is an L3	

Procedure 47. Configure the Signaling Network Routes

5	NOAMP VIP: Add	Click on Insert again			
	Route for XSI-2				
		Field Value	Description		
		Route Type ODefault	Select a route type.		
		Device bond0.6	Enter the network device name through which traffic is being routed. This must be an existing device on the		
		Destination 10 250 58 0	server. A valid netmask for the destination network or host. Must be in dotted guad format		
		Netmask 255,255,255,0	A valid netmask for the destination network or host. Must be in dotted guad format		
		Gateway IP 10.240.70.131	A valid IP address of the gateway. Must be in dotted quad format		
			Ok Apply Cancel		
		ect Net, nd0.6, (or bond 1.6, based on the chosen bond) ther the Network ID of the route destination (if rhis is an L3 be Ext-XSI2). e corresponding Netmask. er the Int-XSI2 switch VIP.			
6	NOAMP VIP: Add	If the peers are on a dif	ferent Network than the Signaling Networks. Additional		
	Additional Routes	Routes need to be adde	d to point to those networks.		
		Click on Add again	- · · F · · · · · · · · · · · · · · · ·		
		0			
		Field Value	Description		
		Route Type ODefault	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 same		
		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		
	<pre>For Route Type Select Net, for Device select the appropriate interface that will b network (bond0.5 or bond0.6), For Destination enter the Network ID of Network connected to. For Netmask enter the corresponding Netmask. For Gateway IP enter the Int-XSI switch VIP of the int-XSI-1 or of int-XSI2). Press Ok. Note that if Aggregation switches are used, it may be n above to the aggregation switches as well. This can be 4948E_configure.xml file and adding the routes to it, at</pre>		ect Net, appropriate interface that will be used to connect to that ond0.6), atter the Network ID of Network to which the peer node is e corresponding Netmask. er the Int-XSI switch VIP of the chosen Network (either of 2). n switches are used, it may be necessary to add the routes n switches as well. This can be done by editing the ile and adding the routes to it, and re-running netconfig.		
7	Repeat for additional	Repeat Steps 2 through	6 for any additional MPs.		
	MPs.				

	-				
S T	This procedure will provide the steps to configure the VIPs for the signaling networks on the MPs.				
I E	Check off (\mathbf{v}) 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	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				
		From the GUI Main Menu->Configuration->Server Groups select the MP server			
	(ONLY FOR 1+1)	aroun and then select Edit			
		group, and then select Bur c.			
		Click on Add to add the VIP for XSII			
		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			
		Ok Apply Cancel			

Procedure 48. Add VIP for Signaling Networks (Active/Standby Configurations ONLY)

Procedure 49. Configure SNMP Trap Receiver(s) (OPTIONAL)

S	This procedure will provide the steps to configure forwarding of SNMP Traps from each				
Т	individual server.				
Ε					
P	Check off ($\sqrt{2}$ each step as it is completed. Boxes have been provided for this purpose under each step number.				
Ŧ	IF THIS PROCEDURE FAILS, 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	rap			
	Receiver(s)	Connected using INTERNAL XMI t			
		Connected using INTERNALXMI t			
		🖃 🚊 Main Menu			
		🚊 🤿 Administration			
		- 🖕 Users			
		🗁 🎁 Groups			
		🚽 📑 Sessions			
		🧧 📥 Single Sign-On			
		LDAP Servers			
		Zones			
		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 trans to This IP should be reachable from the the NO AMP's			
		wish to forward traps to. This IP should be reachable from the the NOAMP's "XMI" network			
		AMI network.			
		Continue to fill in additional secondary, tertiary, etc manager IPs in the			
	corresponding slots if desired.				
	Zariable Value				
	Manager 1 10.10.55.88				
		Enter the SNMP community name:			
		CNIMD: Co.			
		SNMPV2c Community compoublic			
		Name			
		Leave all other fields at their default values			
	Press OK				

Procedure 49. Configure SNMP Trap Receiver(s) (OPTIONAL)

	Enable Traps from Individual Servers (OPTIONAL)	NOTE: By de at the active N traps directly This procedur interface on w Using a web bro Administration	Active NOAMP. If instead, you wish for every server to send its ow 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 Administration Administration Sessions Sessions Single Sign-On LDAP Servers Authorized IPs Options SNMP Make sure the checkbox next to "Enabled" is checked, if not, check it as shown below	
		below	· · · · · · · · · · · · · · · · · · ·	
				[Default: enabled.]
		Traps from Individual Servers	✓ Enabled	Enable or disable SNMP traps fro sent from individual servers, othe OAM&P server. [Default: disabled
				Configured Community Name (SI
		Then click on A	pply and verify that the data is committed	red.
Procedure 50:PDRA Resource Domain Configuration

S	This procedure configu	res the Reso	irce Domain		
Т	This procedure comigu				
1	Check off $()$ each step as it	s completed. Boxes have been provided for this purpose under each step number.			
E				CEDUICE	
Р		FAIL, CONTAC	T TEKELEC TECHNICAL	SERVICE	SAND ASK FOR <u>EAGLE XG TAC</u> .
#	ASSUMITION, TO		FEATORE 15 ALK		ACTIVATED USING WI000055.
1	Establish GUI Session on the NOAMP VIP	Establish a GU	JI session on the NOAMP	by using	the XMI VIP address. Login as user "guiadmin".
2	NOAMP VIP: Navigate	Navigate to M	ain Menu -> Co	nfigu	ration -> Resource Domains
	to Resource Domain	6		-	
	Screen	Screen.			
4	NOAMP VIP: Add	Click on Ins	sert in the lower left co	orner.	
	Binding Resource Domain		a screen similar to:		
		Nain Man			Demains [Incert]
		Main Ment	1: Configuration -> R	esource	Tue Jul 03 12:03:54 2012 UTC
		Info 👻			
		Inserting	a new Resource Don	nain	
		Resource Doma	ain		
		Field	Value		Description
		Resource Domain Name	pSbrBindingRes *		Unique identifier used to label a Resource Domain. [Default = n/a. Range = A 1-32-character string. Valid characters are alphanumeric and underscore.]
		Resource Domain Profile	Policy Binding	*	The Profile of this Resource Domain
		Server Groups			
		Server Groups	NOServerGroup ✓Site1BindingPsbrMpSg Site1DsrMp1Sg Site1DsrMp2Sg Site1SessionPsbrMpSg Site1SessionPsbrMpSg		Server Groups associated with this Resource Domain
				Ok App	Dly Cancel
		Enter the Bir Profile and s	iding Resource Domain elect the Server Groups	Name, s associat	elect "Policy Binding" as the Resource Domain ted with the Resource Domain and Press Ok.

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NOAMP VIP: Add Policy DRA Resource	Click on Ins	sert in the lower left corne	er.	
Domain	You will see a screen similar to:			
	Main Menu: (Configuration -> Resource D	omain	s [Insert] Tue Sep 04 05:45
	Info 🔻			
	Inserting a r	new Resource Domain		
	Resource Domain			
	Field Resource Domain	Value Policy/DBABD *	Descript Unique	tion identifier used to label a Resource Domain. [Default = n/a. Range = A 1-32-character
	Name Resource Domain	PolicyDBA	string. \	falid characters are alphanumeric and underscore.) file of this Resource Domain
	Profile Server Groups		1	
	Server Groups	BindingPsbr1MpSg □pr1ServerGroup LabCSOAMSG2 LabDDSRMSG LabDSOAMSG NOAMP_SG ₩PORASG SOAM_SG BooAM_SG BessionPsbr1MpSg	Server (Broups associated with this Resource Domain
			Ok	Apply Cancel
NOAMP VIP: Add Session Resource Domain	Enter the Reselect the Select the	source Domain Name, sele erver Groups associated wit d Pair DSR, create of DA-MP Server Group e Domain. mated pair DSRs an e Domain per Site. sert in the lower left corne a screen similar to: u: Configuration -> Resc a new Resource Domai	nt "Poc h the only ps fr ad st r.	blicy DRA" as the Resource Domain Profile and Resource Domain and Press Ok. one PDRA Resource Domain and rom both sites into this PDRA andalone DSR: Create a PDRA Domains [Insert]
	inserting			
	Resource Doma	ain		
	Field	Value		Description
	Resource Domain Name	pSbrSessionRes *		Unique identifier used to label a Resource Domain. [Default = n/a. Range = A 1-32-character string. Valid characters are alphanumeric and underscore.]
	Resource Domain Profile	Policy Session	*	The Profile of this Resource Domain
	Server Groups	NOServerGroup Site 1BindingPsbrMpSg Site 1DsrMp1Sg Site 1DsrMp2Sg ✓Site 1SessionPsbrMpSg Site 1SoServerGroup	< App	Server Groups associated with this Resource Domain
	Enter the Set Profile and set	ssion Resource Domain Na elect the Server Groups as:	me, s sociat	elect "Policy Session" as the Resource Domain ed with the Resource Domain and Press Ok.

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.

4.18 Post-Install Activities

Procedure 51. Activate Optional Features

S T P #	This procedure will j installation is comple Prerequisite: All prev Check off (v) each step as it is IF THIS PROCEDURE FAILS	provide instruction on how to install DSR optional components once regular ete. vious DSR installation steps have been completed. s completed. Boxes have been provided for this purpose under each step number. c, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.
1	Refer to Activation Guides for Optional Features	Refer to 3.3 Optional Features for a list of feature activation documents whose procedures are to be executed at this moment.

Procedure 52. 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 ($$) 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.

The NTP server in the NOAM NE should point to the platmgmt or XMI IP of the TVOE host for best results. It is then assumed that the TVOE host's NTP points to an external (customer) source.

Example Network Element XML file:

```
<?xml version="1.0"?>
<networkelement>
    <name>NE</name>
    <ntpservers>
        <ntpserver>192.168.58.247</ntpserver>
        <ntpserver>1.1.1.1</ntpserver>
    </ntpservers>
    <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>
```

PDRA installs will have a separate network defined for pSBR replication. The following example should be added to the <networks><//networks> section.for PDRA SO site NE XML files:

```
<network>
<name>PSBRREPLICATION</name>
<vlanId>9</vlanId>
<ip>10.2.5.0</ip>
<mask>255.255.255.0</mask>
<gateway>10.5.0.1</gateway>
<isDefault>false</isDefault>
</network>
```

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 4.0 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>
```

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```
<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	
Iaptop network interface card's TCP/IP "Properties" screen. NOTE: For this step follow the instruction specific to the Iaptop'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 Second Advanced General Advanced Connect using: Broadcom NetXtreme Gigabit Etheme Configure This connection uses the following items: Second Advanced Second Advanced 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 OK Cancel	Local Area Connection Properties Networking Connect using: NVIDIA nForce Networking Controller This connection uses the following items: Client for Microsoft Networks Client for Microsoft Networks Configure Themet Protocol Version 6 (TCP/IPv6) Internet Protocol Version 4 (TCP/IPv4) Chinest Protocol/Version 4 (TCP/IPv4) Internet Protocol/Version 4 (TCP/IPv4) Internet Protocol/Version 4 (TCP/IPv4) Internet Protocol/Version 4 (TCP/IPv4) Internet Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks. OK	

Procedure B.1 Connecting to the EAGLE XG TVOE iLO

DSR 4.X HP C-Class Installation

Procedure B.1 Connecting to the EAGLE XG TVOE iLO

 2. 1) 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". 2) Click "Close" from the network interface card's main "Properties" screen. 	Internet Protocol (TCP/IP) Properties Image: Comparison of the set of the s	Local Area Connection Properties
3. Connect the laptop's Ethernet port directly to the TVOE iLO port using a standard Cat-5 cross-over cable.		tect the laptop's Ethernet 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: connected - SecureCRT File Edit View Connect Image: connected - SecureCRT Image: connected - SecureCRT </td <td></td>	
		Show dialog on startup	
		Ready 5, 1 24 Rows, 80 Cols VT100 NUM	U //
			24

Procedure C.1 Accessing the TVOE iLO



Procedure C.1 Accessing the TVOE iLO

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

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 well. 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



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 using the instructions in	Integrated Lights-Out 2 HP ProLiant System Status Remote Console Virtual Media Power Management Administration	iLO 2 Name: ILOUSE019ND08 Current User: root <u>Lon out</u>	
	Appendix D	Status Summary	2	
		SummaryServer Name:pmac; ProLiant DL360 G6System Information Information ILO 2 LogSerial Number / Product ID:USE019ND08 / 484184-B21 UUID:UUID:31343834-3438-5355-4530-31394E443038ILO 2 LogSystem ROM:P64 03/30/2010; backup system ROM: 03/30/2010MuSystem Health:© OkDiagnosticsServer Power:Momentary Press© ONILO 2 User TipsUID Light:Turn UID On© OFFLast Used Remote Console:LaunchRemote ConsoleLatest IML Entry:System Power Supply: General Failure (Power Supply 1)ILO 2 Name:ILOUSE019ND08License Type:ILO 2 AdvancedILO 2 Firmware Version:1.82 03/31/2010IP address:192.168.100.5Active Sessions:ILO 2 ser:rootLatest ILO 2 Event Log Entry:Browser login: root - 10.25.170.106(DNS name not found).ILO 2 Date/Time:10/21/2010 17:48:22		
2.	Click the "Administration" tab. Under "Settings" in the left column click on	Integrated Lights-Out 2 HP ProLiant System Status Remote Console Virtual Media Power Management Administration Network Settings	ILO 2 Name: ILOUSE019ND08 Current User: root Log out	
	"Network".	ILO 2 Network DHCP/DNS Firmware		
		Licensing NIC: Enabled Disabled Shared Network Port Juser DHCP: Enabled Disabled Settings VLAN: Enabled Disabled Administration PAddress: Enabled Disabled Access VLAN tag: Security IP Address: 10240240.15 Management Subnet Mask: 255.255.20 Management LOUSE019ND08 Domain Name: Link: Automatic 100Mb/FD 10Mb/FD 10Mb/FD 10Mb/HD NOTE: The Lights-Out subsystem must be restarted before any changes you make on this screen will take effect. Pre Apply button above terminates your browser connection and restarts Integrated Lights-Out 2. You must wait at least before attempting to reestablish a connection.	Apply sing the 30 seconds	

Step	Instruction	Result
3.	Change the IP Address, Subnet	Integrated Lights-Out 2 HP Proliant
	Mask and	System Status Remote Console Virtual Media Power Management Administration
	Gateway IP	Network Settings
	Address to the	iLO 2 Network DHCP/DNS
	values supplied in	Firmware
	the IP Site Survey	User DUCP O Stabled O Disabled O Shared Network Port
	for the TVOE ILO.	Administration VIAN: C Enabled © Disabled
	Hit Apply	Access VLAN tag:
		Security IP Address: 10.240.240.15
	NOTE: You will	Management Subnet Mask: 255.255.255.0
	lose access after	Gateway IP Address: 10.240.240.1
	you hit the Apply	Domain Name:
	button.	Link: Automatic 100Mb/FD 100Mb/FD 10Mb/FD 10
		Аррју
		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	Internet Protocol (TCP/IP) Properties
	instructions found	General
	in Appendix B,	You can get IP settings assigned automatically if your network supports
	reset the PC's	this capability. Otherwise, you need to ask your network administrator for the approximate IP strategy of the
	network connection	une appropriate in security.
	replacing the	Obtain an IP address automatically
	Gateway with	Use the following IP address:
	those just used for	Subset made: 255, 255, 0
	the TVOF il O	Default asternary 192, 169, 100, 1
	Use an appropriate	
	IP address for this	Obtain DNS server address automatically
	subnet. Call	○ Use the following DNS server addresses:
	Customer Support	Preterred DNS server:
	if needed.	Alternate DNS server:
		Advanced
5.	Connect to the	Integrated Lights-Out 2
	TVOE iLO GUI	HP Proliant
	instructions in	System Status Remote Console Virtual Media Power Management Administration
	Appendix D	Status Summary
		Summary Server Name: pmac; ProLiant DL360 G6 System Serial Number / Product ID: USE019ND08 / 484184-821
	Note: Use the IP	Information UUID: 31343834-3438-5355-4530-31394E443038
	address entered in	IND 2 Log System ROM: P64 03/30/2010; backup system ROM: 03/30/2010 IML System Health: © Ok
	Step 3 and not the	Diagnostics Server Power: Momentary Press © ON
	192.168.100.5.	ILO 2 User UID Light: Ium 00 On Ø OFF Tips Last Used Remote Console: Launch Remote Console
		Insight Agent Latest IML Entry: System Power Supply: General Failure (Power Supply 1)
		ILO 2 Name: ILOUSE019ND08 License Type: iLO 2 Advanced
		iLO 2 Firmware Version: 1.82 03/31/2010
		IP address: 192.108.100.5 Active Sessions: iLO 2 user:root
		Latest iLO 2 Event Log Entry: Browser login: root - 10.25.170.106(DNS name not found).
		ILO Z DATE/ IIME: 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: dsrTV0E-blade11: Bay 11 in USE0324F16 in USE0324F1H - HP iLO 2 Integrated Remote Console - Windows Internet Explorer	→ □ 🛛
1.	the IVOE server	https://10.240.9.151/HRemCons.htm?tullscreen=08restart=0 // 0.2 dsrTV0Eblade11 dd U 2 dsrTV0Eblade11 dd U X	Y Certificate Error
	using either ILO or	CentOS release 5.6 (Final)	
	SSH to the TVOE	Kernel 2.6.18-238.19.1.el5prerel5.0.0 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.	
		ExceptOlow THOP bladedd "14 winch list	
		LTOOLUASTIVUL-DIAACII J# VITSA IISt	
		T DSA_HOHILE TAIHIING	
		[root0dsrTIDE-blade11 ~]#	
		Find the VM name for your DSR NOAMP and note it's ID number in the first colur	nn.
		NOTE : If the VM state is not listed as "running" or you do not find a VM you conf	igured 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 NOAMP GUI USING SSH TUNNELING WITH PUTTY

S T	NOTE: This procedul IPM'ed with the DSF	rre assumes that the NOAMP server you wish to create a tunnel to has been application ISO
E P	NOTE: This procedu first NOAMP server.	ire 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".



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APPENDIX H. 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				
E P	NOTE : This procedure assumes that you have exchanged SSH keys between the PMAC and the first NOAMP server.				
	NOTE: This procedu NOAMP server. You will be refered to as	TE: This procedure assumes that you have obtained the control network IP address for the first AMP server. You can get this from the PMAC GUI's <i>Software Inventory</i> screen. That variable be referred to as <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 ZID file, then run the installar 			
	Install openssh for	• Extract the installed on your PC			
	Windows	openssit is now instance on you i e.			
2	Create SSH Tunnel	Open up a Command Prompt shell			
	Through the PMAC	• Within the command shell, enter the following to create the SSH tunnel to the 1st NO, through the PMAC:			
		ule 1st NO, ullough ule FIVIAC.			
		<pre>>ssh -L 443:<1st_NO_Control_IP_Address>:443</pre>			
		root@ <pmac_management_ip_address></pmac_management_ip_address>			
		(Answer "yes" if it asks if you want to continue connecting)			
		G:\>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	Home - Windows Internet Ex Solution - Mindows Internet Ex Home - Windows Internet Ex Home - Windows Internet Ex			
		You should arrive at the login screen for the NOAMP GUI.			
		This procedure is now complete			

APPENDIX I. MANUAL TIMEZONE SETTING PROCEDURE

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 NOAMP Console	Login as "root" to the Active NO-AMP console.		
2	Active NOAMP Console: Execute time zone configuration script and verify successful result	<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 K 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 contact Tekelec Customer Support.		

Procedure H.1 Timezome Setting

APPENDIX J. CONFIGURING A DSR SERVER FOR 2-TIER OAM

S	This procedure configures a single server to operate in 2-tier OAM mode			
T E	Check off ($$) each step as it is completed. Boxes have been provided for this purpose under each step number.			
Р #	Should this procedure fail, co	ontact the Tekelec Customer Care Center and ask for assistance.		
1	IPM the server with the proper TPD image.	Execute Procedure 29 ("IPM Blades and VMs") of <i>909-2228-001</i> for the server. Use 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 or the control IP address as root and check for	1. Login as root to the server using either		
	existence of 2-tier flag.	 iLO 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 ssh 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 Application ISO IPM.	The server is now configured for 2-tier OAM. Proceed with installing the Application ISO (Procedure 30 of <i>909-2228-001</i>) and further tasks.		

APPENDIX K. LIST OF FREQUENTLY USED TIME ZONES

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

Table 1	3.1	List	of S	elected	Time	Zone	Values
I GOIC	••••			ciccica		20110	,

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

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

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

APPENDIX L. 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 4.0 are 7.1 and 7.5.

APPENDIX J.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 root using the management network for the PM&C or XMI network for the NOAMP.

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

- # su platcfg
- Navigate to **NetBackup Configuration**



3. Application server iLO: Enable Push of NetBackup Client

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• 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

latiorm	Configuration Utility 3.05 (C) 2003 - 2011 Tekelec, Inc.
Hostname	: 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 Ton 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 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.

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

Install NetBackup Client
Do you wish to install the NetBackup Client?
Yes No

- 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:	
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/plat/sbin
- **12. Application server iLO**: NetBackup Client software installation complete.

APPENDIX J.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 M. DATA DEFINITION AND INSTALLATION VARIABLE MAP

Data Definition Table

Data is required to execute the procedures in 909-2228-001 DSR R4.0 SW Installation This is a list of:

- text/variable names in the document (where the data needs to be substituted)
- Description of the data

Note: there are multiple text/variable names for some of the data

Table 4. Data Definition Table

ref#	Text/Variables where data is substituted	# Occ	Data Description	
1	<switch1a_mgmtvlan_ip></switch1a_mgmtvlan_ip>	3		
	<switch1a_ mgmtvlan_ip_address=""></switch1a_>	1	The IP address in the Platform Management (iLo) subnet that is	
	<switch1a_mgmtvlan_address></switch1a_mgmtvlan_address>	4	assigned to the first aggregation switch (switch1A)	
	<switch1a_mgmtvlan_ip></switch1a_mgmtvlan_ip>	3		
2	<switch1b_ mgmtvlan_ip_address=""></switch1b_>	1	The IP address in the Platform Management (iLo) subnet that is	
	<switch1b_mgmtvlan_address></switch1b_mgmtvlan_address>	4	assigned to the second aggregation switch (switch1B)	
	<management_network_ip></management_network_ip>	9	-	
	<management_server_platmgmt_ip></management_server_platmgmt_ip>	4		
	<management_server_mgmtvlan_ip_address></management_server_mgmtvlan_ip_address>	20		
	<management_server_bond0.2_ip_address></management_server_bond0.2_ip_address>	4	The IP address in the Platform Management (iLo) subnet that is	
	<management_server_mgmtvlan_ip address=""></management_server_mgmtvlan_ip>	3	assigned to the PMAC (aka Management) Server. This IP is	
3	<pm&c_ _ip="" _network="" management=""></pm&c_>	1	but the name can change to reflect	
	<pmac_manangement_network_ip></pmac_manangement_network_ip>	3	a customer choice of VLAN ID for PlatMgmt (iLo). [2 is the TKLC	
	PMAC's management address	1	defaultj	
	IP Address, Subnet Mask and Gateway IP Address PMAC	1		
	<management_server_ip></management_server_ip>	1		

ref#	Text/Variables where data is substituted	# Occ	Data Description			
4	<management_server_ilo_ip></management_server_ilo_ip>	4	The IP address (usually) in the Ext XMI subnet that is reserved for access to the iLo of the PMAC (aka Management) Server. This is a direct connection from the PMAC iLo port to the customer network.			
5	<platcfg_password></platcfg_password>	13	A standard Tekelec password that specific TPD configuration commands prompt for.			
6	<4948E_IOS_image_filename>	2	The file name of the appropriate version of IOS for the 4948E			
	<ios_image_file></ios_image_file>	4	switches			
7	<3020(6120)_IOS_image_filename>	4	The file name of the appropriate version of IOS for the 3020			
	"iosimage"	2	switches			
8	<3020(6120)_IOS_image_filename>	4	The file name of the appropriate version of IOS for the 6120			
	version of HP 6120XG firmware AKA firmware file	2	switches			
9	<prom_upgrade_file></prom_upgrade_file>	21	The file name of the appropriate version of PROM for the 4948E switches			
	<switch1a_mgmtvlan_ip_address> <netmask></netmask></switch1a_mgmtvlan_ip_address>	3	The netmask of the Platform Management (iLo) subnet			
	<switch1b_mgmtvlan_ip_address> <netmask></netmask></switch1b_mgmtvlan_ip_address>	3				
10	<mgmtvlan_netmask></mgmtvlan_netmask>	4				
10	Subnet Masks	1				
	mask	1				
	IP Address, Subnet Mask and Gateway IP Address PMAC	1				
11	<switch_mgmtvlan_id></switch_mgmtvlan_id>	4	The VLAN number that is assigned to the Platform			
	<plat id="" mgmt="" vlan=""></plat>	10	Management (iLo) subnet			
12	<mgmtvlan_switch_vip_address></mgmtvlan_switch_vip_address>	4	The IP address in the Platform Management (iLo) subnet that is assigned to float (as a VIP)			
	<switch_mgmtvlan_vip></switch_mgmtvlan_vip>	4	between the two switches. Only in Layer 3 (with the use of Internal			

ref#	Text/Variables where data is substituted	# Occ	Data Description		
	IP Address, Subnet Mask and Gateway IP Address PMAC	1	signaling subnets) is this address on the 4948 aggregation switches. For Layer 2, this IP address is on the customer switches.		
13	<switch_console_password></switch_console_password>	4	A standard Tekelec password that controls access to the 4948E aggregation switches.		
14	<switch_platform_username></switch_platform_username>	4	A standard Tekelec username that controls access to the platform		
15	<switch_platform_password></switch_platform_password>	8	A standard Tekelec password that validates the platform access.		
16	<switch_enable_password></switch_enable_password>	8	A standard Tekelec password that controls enable privileges to the 4948E switches.		
17	<pre><enclosure_switch_ip> 3020 - repeat for bay2</enclosure_switch_ip></pre>	1	The IP addresses in the Platform Management (iLo) subnet that are assigned to the 3020 enclosure switches - aka EBIPA *Enclosure Bay IP addressing		
18	<pre><enclosure_switch_ip> 3020 - repeat for bay4, bay5, bay6 (for additional pairs of enclosure switches)</enclosure_switch_ip></pre>	2 or 4	The IP addresses in the Platform Management (iLo) subnet that are assigned to the 3020 enclosure switches beyond bay1 and bay2 aka EBIPA *Enclosure Bay IP addressing		
19	<pre><enclosure_switch_ip> 6120 - repeat for bay2</enclosure_switch_ip></pre>	14	The IP addresses in the Platform Management (iLo) subnet that are assigned to the 3020 enclosure switches aka EBIPA *Enclosure Bay IP addressing		
20	<pre><enclosure_switch_ip> 6120XG repeat for bay4, bay5, bay6 - (for additional pairs of enclosure switches)</enclosure_switch_ip></pre>	14	The IP address in the Platform Management (iLo) subnet that is assigned to the 6120 enclosure switch in bay3 aka EBIPA *Enclosure Bay IP addressing		
21	<manager_password></manager_password>	2	Password to login to an enclosure switch		

ref#	Text/Variables where data is substituted	# Data Description				
22	<ethernet_interface_1> 4948E-A</ethernet_interface_1>	3	The name of the first ethernet interface on the PMAC (aka Management) Server - which defines the NIC port connected to the first aggregation switch (switch1A)			
23	<ethernet_interface_2> 4948E-B</ethernet_interface_2>	3	The name of the second ethernet interface on the PMAC (aka Management) Server - which defines the NIC port connected to the second aggregation switch (switch1B)			
24	<management_server_mgmtinterface></management_server_mgmtinterface>	2	The name of the interface which, when given as an argument to ifconfig, will return the IP address for use in configuring the console.			
25	<customer_supplied_ntp_server_address></customer_supplied_ntp_server_address>	2	The IP address supplied by the customer for an NTP server in			
	Primary NTP server	1	their network.			
26	<noamp addr="" blade="" control="" ip="" net=""></noamp>	4	Control IP addresses are assigned to blades by the PMAC. Use the PMAC GUI as described to learn			
	<noamp-control-ip>:443</noamp-control-ip>	1	the IP address for each NO server			
27	<first address="" ip="" noamp="" xmi=""></first>	2	The IP address in the XMI (OAM) subnet that is assigned to the first NOAMP blade server.			
28	server IP addresses for the IMI network	1	The IP addresses in the IMI subnet that are assigned to the first and second NOAMP blade servers.			
29	server IP addresses for the XMI network	1	The IP addresses in the XMI (OAM) subnet that are assigned to the first and second NOAMP blade servers.			
30	vlanID provided by the customer	2	The VLAN number that is assigned by the customer to the Platform Management (iLo) subnet			
31	<rack name=""></rack>	1	A name supplied by the customer to be assigned to the cabinet			
32	CabinetID AKA Cabinet ID	3 A numeric value between 1 and 654.				

ref#	# Text/Variables where data is substituted # Data Description				
33	<position></position>	1	A name supplied by the customer to be assigned to the enclosure		
34	ILO's Ips	The IP address in the Platform Management (iLo) subnet that is assigned to each server - aka EBIPA "Enclosure Bay IP Addressing"			
	IP addresses, Subnet Masks, Gateways	1			
35	<mgmtvlan_gateway_address></mgmtvlan_gateway_address>	2	The gateway of the Platform Management (iLo) subnet		
	gateway	1			
36	System Location	1	A name supplied by the customer to be assigned to the enclosure		
37	NO VIP IP	1	The IP address in the XMI (OAM) subnet that is assigned to float (as a VIP) between the two NOAM servers.		
38	firmware version 3020		An alphanumeric string that indicates an IOS version for 3020		
39	firmware version 6120		An alphanumeric string that indicates a firmware version for 6120		
40	firmware version OA	9	An alphanumeric string that indicates a firmware version for		
	<oa_firmware_version></oa_firmware_version>	1	OA		
41	<hpfw_mount_ point=""></hpfw_mount_>	1	Directory on the management server (PMAC) where the HP firmware solutions CD is mounted.		
42	Location ID	1	A numeric value between 1 and 4 used to uniquely identify the enclosure.		
	Bay 1 OA IP	1			
43	<0A_IP>	1	The IP addresses in the Platform		
	OA IP address	4	Management (iLo) subnet that are assigned to the QA's		
	IP addresses,	1			
	Bay 2 OA IP	1			

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ref#	Text/Variables where data is substituted	# Occ	Data Description		
	OA1 IP address	1			
	<root password="">,</root>	1	Standardized Tekelec passwords		
44	<ilo password="" root=""></ilo>	1	for use in editing the iLo password		
	<ilo administrator="" password=""></ilo>		Aivil life		
45	password provided by the application documentation.	1			
46	5 <hp_blade_type> 5 <hp_blade_type> 6 FW version</hp_blade_type></hp_blade_type>				
47	<image_part_number></image_part_number>	3	An alphanumeric string that indicates a firmware (fw) version for HP Blade servers		
48	<oa_admin_user></oa_admin_user>	1	An alphanumeric string that is the username for administrative account on the OA's		
49 <oa_admin_password></oa_admin_password>		1	An alphanumeric string that controls access to the Administrator user on the OA's.		
50	50 <iso_filename> 3 The fiversion</iso_filename>		The file name of the appropriate version of ISO for TVOE		
51	<iso_filename></iso_filename>		The file name of the appropriate version of ISO for the DSR application		
	<application iso="" name=""></application>	3			
52	<iso_filename></iso_filename>	3	The file name of the appropriate version of ISO for the TPD to be installed on the blades		
53	Control IP addresses are to blade Control Net IP addresses 1 PMAC GUI to learn the for the first TVOE server		Control IP addresses are assigned to blades by the PMAC. Use the PMAC GUI to learn the IP address for the first TVOE server.		
54	54 <management_server addr="" control_ip_=""> 1 Control IP addre to blades by the PMAC GUI to la for the management</management_server>		Control IP addresses are assigned to blades by the PMAC. Use the PMAC GUI to learn the IP address for the management server.		
55	55 <xmi_vlan_id> 2 The VLA assigned to subnet</xmi_vlan_id>		The VLAN number that is assigned to the XMI (OAM) subnet		

ref#	Text/Variables where data is substituted	# Occ	Data Description		
56	<imi_vlan_id></imi_vlan_id>	2 The VLAN number that is assigned to the IMI subnet			
57	7 <interface></interface>		<u>Quote from doc</u> : In these examples, <i><interface></interface></i> should be replaced with the actual eterhnet interface that will be used as the dedicated NetBackup port. For instance, "eth01", or "eth22".		
58	58 hostname for your server TVOE 1 A name that is asset the TVOE host (see the TVOE host (
59	<imi network=""></imi>	2	An alphanumeric string that is assigned to be the name of the IMI subnet		
60	<hostname> NO-A</hostname>	1	An alphanumeric string that is assigned to be the host name of the first NOAM server (aka NO-A)		
61	<hostname> NO-B</hostname>	An alphanumeric string that is assigned to be the host name of t second NOAM server (aka NO-F			
62	<hostname>SO-A</hostname>		An alphanumeric string that is assigned to be the host name of the first SOAM server (aka SO-A)		
63	<hostname> SO-B</hostname>		An alphanumeric string that is assigned to be the host name of the second SOAM server (aka SO-B)		
64	4 <hostname> MP-A</hostname>		An alphanumeric string that is assigned to be the host name of the first MP server (aka MP-A)		
65	<hostname> MP-A</hostname>	1	An alphanumeric string that is assigned to be the host name of the second MP server (aka MP-B)		
66	Network Element NOAM - Proc 28, step 2		An alphanumeric name supplied by the customer to be assigned as the name of the NOAM Network Element. Note: limited to alphanumeric and underscore only		
67	hostname , role, hardware profile, network element, and location SOAM	1	An alphanumeric name supplied by the customer to be assigned as the name of the SOAM Host. Note: limited to alphanumeric and hyphen only		

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ref#	Text/Variables where data is substituted	# Data Description				
68	hostname, role , hardware profile, network element, and location SOAM	1				
69	hostname, role, hardware profile, network element, and location SOAM	1				
70	hostname, role, hardware profile, network element, and location SOAM	1				
71	hostname, role, hardware profile, network element, and location SOAM	1				
72	IP address SOAM	1				
73	VLAN-Tagged SOAM	1				
74	<soam addr="" blade="" control="" ip="" net=""></soam>	2				
75	NOAMP VIP address SOAM	2				
76	SOAM Server Group Name	1				
77	Network Name, VLAN ID, Network Address and Netmask	2	XSI-1 or XSI-2 are default names for the first or second signaling network. The customer can specify a name. Note: IP SS will need to be updated to collect the name			
78	Network Name, VLAN ID, Network Address and Netmask	2	The VLAN number that is assigned to the first or second signaling subnet			
79	Network Name, VLAN ID, Network Address and Netmask	2	The network address of the first or			
	Network ID of Ext-XSI1	2				
80	Network Name, VLAN ID, Network Address and Netmask	2	The netmask of the first or second			
00	corresponding Netmask	3	signaling subnet			
81	the IP address that corresponds to the IPv4 interface.	2	The IP addresses in the signaling subnets that are assigned to the MP blade servers			
	Int-XSI1 switch VIP	1	The IP addresses in each signaling subnet that are assigned to float (as			
82	Int-XSI2 switch VIP	1	a VIP) between the two switches. Only in Layer 3 (with the use of			
	gateway IP for the network	1	internal signaling subnets)			

ref#	Text/Variables where data is substituted	# Occ	Data Description		
	VIP for XSI1	1	When using aggregation switches, then VIP refers to the internal		
	VIP of int-XSI-1		XSI1or internal XSI2 gateway		
	VIP for XSI2	1			
	VIP of int-XSI-2	1	For installations without		
	corresponding VIP addresses	1	this gateway is supplied by the customer. This may or may not be a VIP, but it will serve as the next- hop gateway regardless.		
83	time zone you have selected for this installation 1 The Time Zone needs to be specified by the customer – Specific or UTC				
84	<application ip=""> netbackup</application>	1	-		
85	NetBackup server alias.	2	-		
86	NetBackup servers hostname	2	-		
87	87 <path> 2</path>		-		
88	88 <no1_netbackup_ip></no1_netbackup_ip>		When using a dedicated network for Netbackup, this is the IP address on the Netbackup network of the 1st NO.		
89	89 <no2_netbackup_ip></no2_netbackup_ip> 1 When using a dedit for Netbackup, this address on the Net of the 2nd NO.		When using a dedicated network for Netbackup, this is the IP address on the Netbackup network of the 2nd NO.		
90	<netbackup_netmask></netbackup_netmask>	2	When using a dedicated network for Netbackup, this is the netmask of that network		
91	<netbackup_network_id></netbackup_network_id>	twork_ID> 2 When using a dedicated network for Netbackup, this is the Network. ID of that network. 10 10			
92	<netbackup_network_netmask></netbackup_network_netmask>	2	When using a dedicated network for Netbackup, this is the netmask of that network		
93	<netbackup_network_gateway_ip></netbackup_network_gateway_ip>	2	When using a dedicated network for Netbackup, this is the gateway IP on the netbackup network.		

APPENDIX N. SWOPS SIGN OFF.

Date	Test Case	Description of Failures and/or Issues. Any CSR's / RMA's issued during Acceptance. Discrepancy	Resolution and SWOPS Engineer Responsible	Resolution Date:

Discrepancy List

APPENDIX O. CUSTOMER SIGN OFF

Sign-Off Record

*** Please review This is to certify that all steps required for	v this entire document . *** the upgrade successfully completed without failure.
Sign your name, showing approval of this procedure, FAX	, 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: C	Completion Date:
This procedure has been approved by the undersigned. Tekelec and the customer representative. A copy of thi SWOPS supervisor will also maintain a signed copy of	Any deviations from this procedure must be approved by both is page should be given to the customer for their records. The this completion for future reference.
Tekelec Signature:	Date:
Customer Signature:	Date:

APPENDIX P. ACCESSING TEKELEC'S CUSTOMER SUPPORT SITE

Access to the Tekelec's Customer Support site is restricted to current Tekelec customers. This section describes how to log into Tekelec's Customer Support site and how to locate upgrade procedures. Viewing these files requires Adobe Acrobat Reader.

- 1. Go to Tekelec's Customer Support login page at https://support.tekelec.com/index.asp
- 2. Enter your assigned username and chosen password and click Login.

Or, if you do not have access to the Customer Support site, click **Need an Account?** Follow instructions on the screen.

Note: After 20 minutes of inactivity, you will be logged off, and you must repeat this step to regain access.

- 3. After successful login, select a product from the Product Support drop-down menu.
- 4. Select a release number from the Product Support Release drop-down menu.
- 5. Locate the Upgrade Procedures section.
- 6. To open the procedure in the same window, click the procedure name. To open the procedure in a new window, right-click the procedure name and select **Open in New Window**.
- 7. To download the procedure, right-click the procedure name and select **Save Target As**.