Oracle® Communications EAGLE LNP Application Processor

APPD Install/Upgrade Guide



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Oracle Communications EAGLE LNP Application Processor APPD Install/Upgrade Guide, Release 11.1

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B ISO IMAGE COPY FROM USB MEDIA

C VALIDATE ISO IMAGE

D DISCONNECT NPAC FROM LSMS

E CONNECT NPAC TO LSMS

F MY ORACLE SUPPORT

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What’s New in this Guide

This section introduces the documentation updates for Release 11.1 in Oracle Communications EAGLE LNP Application Processor APPD Install/Upgrade Guide.

Release 11.1 - G63055-01, October 2026

This is a new document in the EAGLE LNP Application Processor 11.1 release.

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1 INTRODUCTION

1.1 Purpose and Scope

This document is designed to detail the steps necessary for full upgrade of the ELAP 10.2.x to ELAP 11.1.x on the APPD cards.

This work is intended to be non-intrusive to the signaling network traffic and is to be performed within the limits of a normally scheduled maintenance window unless otherwise stated.

It will be necessary to halt the provisioning activity during the execution of the procedures outlined herein while a full database backup is being taken. Normal provisioning can resume once the Full upgrade has completed. For any issues incurred in executing any part of this document, follow the contact/escalation list.

The individual executing this procedure must be experienced and well proficient with the following platforms and technologies.

- Unix/Linux Admin
- VI Editor
- IP Networking

  If you do not have these skills or if you are not completely comfortable working in a Unix or Linux system environment



STOP - DO NOT PROCEED

1.2 References

1. *Formal Peer Review, PD001866, latest version*
2. *Work Instruction Template, TM005023, latest version*
3. *TPD Initial Product Manufacture User's Guide, 909-2229-001, Latest revision, Tekelec* [4] *ELAP on E5-APP-B Network Interconnect Technical Reference*

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1.3 Acronyms

Table 1-1 Acronyms

Acronym	Description
BIOS	Basic Input Output System
DB	Database
E5-APP-B/E5APPB	Eagle5 Application Card class B cpu/board
E5-APP-D/E5APPD/APPD	Eagle5 Application Card class D cpu/board
IPM	Initial Product Manufacture
MPS	Multi-Purpose Server
OCELAP	Oracle communication EAGLE LNP Application Processor
RIDB	Range Indexed Database
SM	Service Module (i.e. DSM and/or SMXG)
SMXG	Service Module 4 or 8 GB (Eagle card)
TPD	Tekelec Platform Distribution

1.4 Log Files

Upgrade commands executed during an installation are logged in `/var/TKLC/log/upgrade/upgrade.log`. This log file is automatically initiated when upgrade software is invoked. This log file is rolled every time an upgrade is initiated. A total of up to five upgrade log files are stored on the server.

The upgrade wrapper script, ugwrap, logs its actions also to `/var/TKLC/log/upgrade/ugwrap.log`. This log file is rolled every time ugwrap is initiated. A total of up to five ugwrap log files are stored on the server.

The technician running the procedure is responsible for enabling screen logging within the chosen connectivity application.

1.5 Definitions

Table 1-2 Definitions

Term	Definition
Active ELAP	The ELAP site that is currently used for provisioning through HSOP.
Standby ELAP	The ELAP site that is NOT currently used for provisioning through HSOP.
System health Check	Procedure used to determine the health and status of the ELAP server, typically performed using the TPD syscheck utility.

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1.6 Terminology

Multiple servers 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:

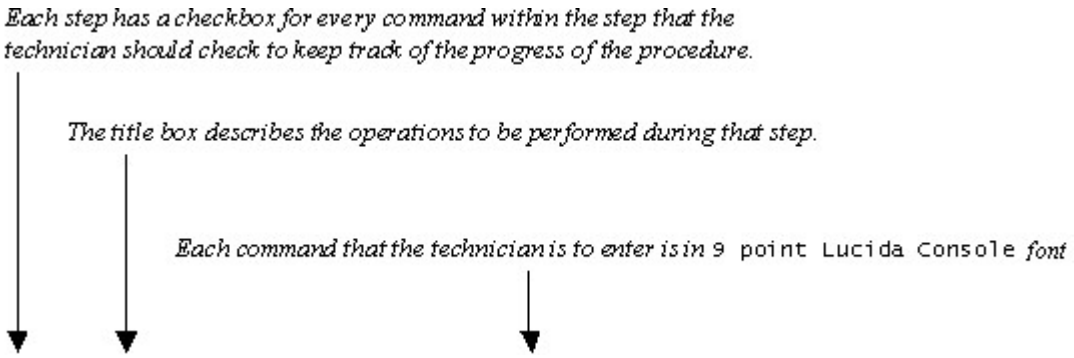


Table 1-3 Example of a step that indicates the server on which it needs to be executed.

1 ☐	**MPS A:** Verify all materials required are present	Materials are listed in Material List (Section 3.7)

Table 1-4 Example of a step that needs to be executed on both MPS A and MPS B servers.

1.	A ☐	B ☐	**MPS X:** Insert USB.	Insert media in USB drive.

1.7 Required Materials

> **Note**
>
> Make sure that the LSMS is already migrated to LSMS 14.0 before performing the ELAP migration from ELAP 10.2 to 11.x.

- Two (2) target-release TPD USBs.
- Two (2) target-release ELAP USBs or a target release ELAP ISO file.
- A terminal and null modem cable to establish a serial connection.
- Identify if the ELAP pair is connected to the DSM Cards, or a mixture of DSM and SMXG Cards.

  Write down the Eagle Cards type.

  Type of Eagle Cards: _____

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- System configuration information like NTP Server IP, Provisional IPs etc.

  Write down the system configuration information.

  Provisionable IPs: _____

  VIP: _____

  Provisionable Gateway: _____

  NTP Server IPs: _____ Other IPs required: _____

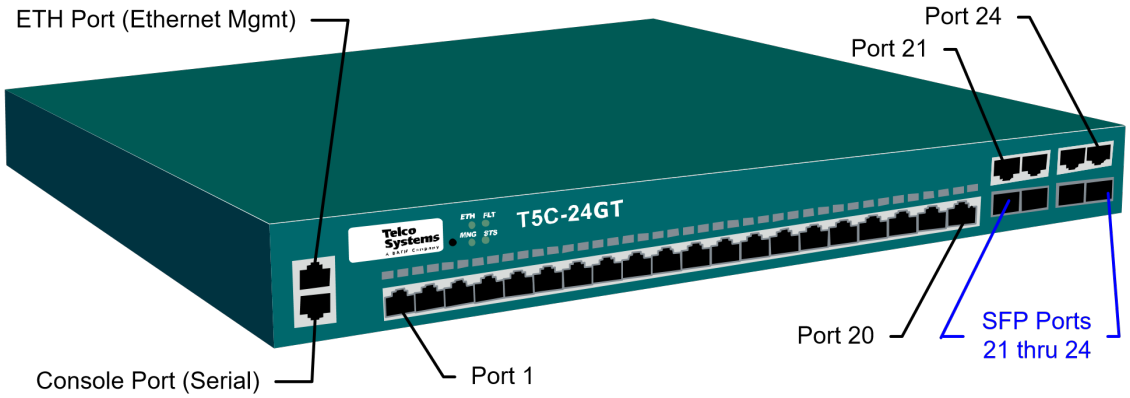
- Passwords for users on the local system:

Table 1-5 User Password Table

ELAP USERS		
login	**MPS A password**	**MPS B password**
elapconfig		
elapdev		
syscheck		
root		
elapall (needed for GUI access)		
mysql(EuiDB) root user		
admusr		

1.8 Telco T5C-24GT Switch (Front)

Figure 1-1 Telco Switch



> **Note**
>
> If any additional detail about network connectivity information is required, refer to the Interconnect Diagram [4].

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1.9 Fallback

If for any reason a fallback to the original configuration is required, the procedure will be to re-IPM the server and install the old ELAP version.

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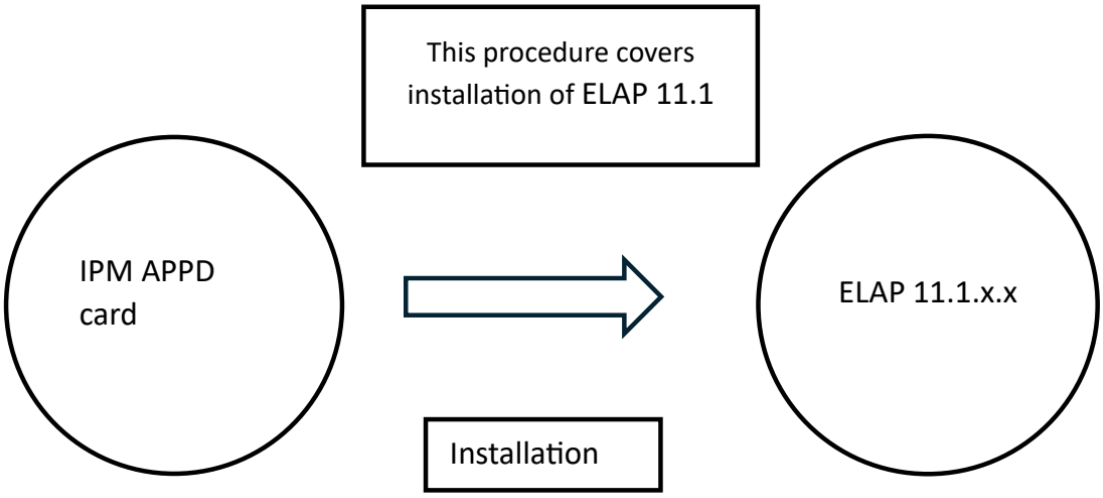
2
INSTALL PROCEDURES

This document defines the step-by-step actions performed to execute the initial installation of the ELAP application on the new APPD card.

The ELAP application can be installed with the TPD release based on the table below.

Table 2-1 Install paths

TPD Release for IPM	ELAP Initial Installation Release
8.10.1.16.0_150.39.0	11.1.0.0.0



2.1 Required Materials

1. A target-release TPD ISO (In case IPM is required) and ELAP ISO (for ELAP install/ incremental upgrade).
2. Optical media – USB flash drive.
3. A terminal and null modem cable to establish a serial connection.
4. Since **RTDB backups of ELAP 10.2 release are not compatible with ELAP 11.X release**, in case of fresh installation, SERVDI backup file from LSMS 14.X is required to initialize the RTDB. Copy the backup file to a remote machine.
5. Eagle STP login IP, user, and password
6. Write down the system configuration information.

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Table 2-2 System Configuration Information

Description	Information
Provisioning IPs and their netmasks	
VIP	
NTP1 IP	
NTP2 IP	
NTP3 IP	
Provisionable Gateway	
Time Zone	
Other IPs required and their netmasks	

7. Passwords for users on the local system:

Table 2-3 User Password Table

ELAP USERS		
login	**MPS A password**	**MPS B password**
elapconfig		
elapdev		
root		
elapall (needed for GUI access)		
MySQL (EuiDB) root user		
admusr		

2.2 Installation Phases

The general installation strategy is to perform IPM on the APPD server and then install the application.

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 Table 6are to be executed in the order they are listed.

Table 2-4 Installation Phases

Phase	Elapsed Time (Minutes)		Activity	Procedure
	This Step	Cum.		
Connectivity setup	15	15	Set up connectivity to the MPS Servers.	Procedure 1
Verify install	5	20	Verify this should be an install.	Procedure 23

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Table 2-4 (Cont.) Installation Phases

Phase	Elapsed Time (Minutes)		Activity	Procedure
	This Step	Cum.		
Requirements check	15	35	Verify requirements for install are met.	Procedure 24
IPM both servers	90	125	IPM both ELAP servers with TPD 8.10	Procedure 7
Pre-install health check	5	130	Run the syscheck utility to verify that all servers are operationally sound.	Procedure 21
Configure both servers	10	140	Set hostname, designation, function, time zone and time on both servers	Procedure 8
Install Servers	30	170	Install software on sides 1A and 1B	Procedure 9
Configure Switches	30	200	Configure the Switches	**For Telco Switches-** Procedure 11 **For Cisco Switches-** Procedure A.1 Procedure A.2
Post-install application processing	30	230	Perform first time configuration.	Procedure 12 Procedure 13
Post-incremental upgrade health check	5	235	Run the syscheck utility to verify all servers are operationally sound.	Procedure 21
LSMS SSH Key Exchange	10	245	Perform SSH key exchange with the LSMS.	Procedure 17
Accept the upgrade after successful installation	10	255	Accept the upgrade on both MPS-A and MPS-B	Procedure 22
Post-incremental upgrade health check	10	265	Run the syscheck utility to verify all servers are operationally sound.	Procedure 21

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3

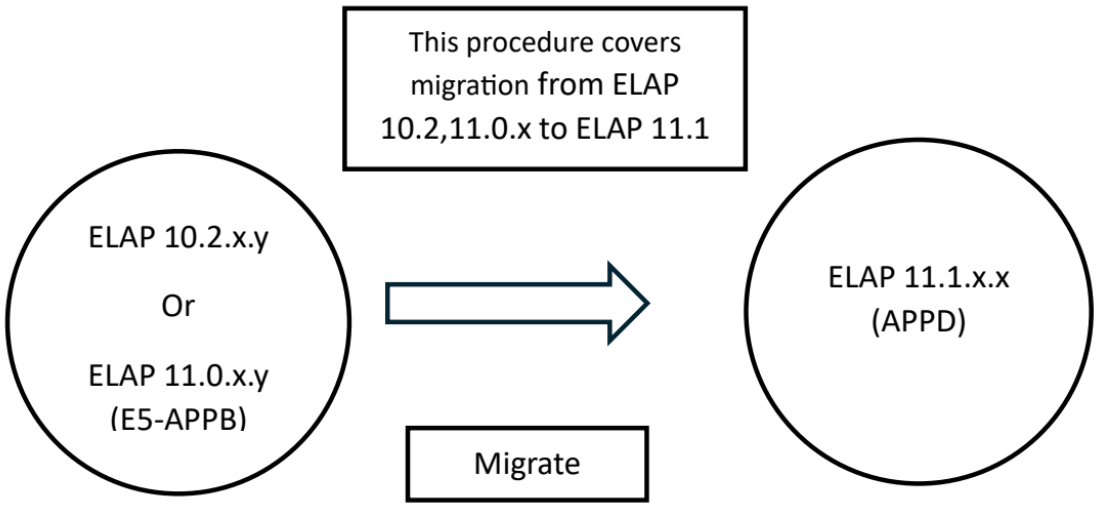
FULL UPGRADE PROCEDURES

This document defines the step-by-step actions performed to run a software Full upgrade to ELAP 11.1.x.

The ELAP application can be installed, or full upgraded based on the table below.

Table 3-1 Full upgrade paths for APPD

TPD Release for IPM	ELAP Initial Installation Release
8.10.1.16.0_150.39.0	11.1.0.0.0.0
Upgrade Source Release	**Upgrade Destination Release**
10.2	11.1.x



The following table illustrates the progression of the Full upgrade 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 i and ii are to be executed in the order they are listed.

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3.1 Upgrade Timeline for ELAP Procedure Execution Order

3.1.1 i. Preparation phase

Table 3-2 Timeline table for Full upgrade preparation

ELAP A				ELAP B		
Procedure	**Task**	**A**	**Task Start time (min)**	**B**	**Task**	**Procedure**
	Download the alter table script from OSDC, from					
	where the TPD and ELAP ISO are downloaded.					
	Before Maintenance Window					
Procedure 1	Setting Up Upgrade Environment	10	0			
			10	10	Setting Up Upgrade Environment	Procedure 1
Procedure 2	Capture E5APPB Current Configuration	20	20			
Procedure 3	Pre-upgrade health check	10	40			
			50	10	Pre-upgrade health check	Procedure 3

3.1.2 ii. Maintenance Window Tasks

Table 3-3 Timeline table for Full upgrade of ELAP

	LSMS		
Procedure	**Task**	**Time**	**Task Start time (min)**
3.7, Appendix D	Disconnect NPAC fromLSMS	5	0
Procedure 4	*LSMS Servdi Backup	170	175

*LSMS Servdi backup time will vary according to the data on LSMS. This has to be done simultaneously while IPMing the ELAP servers.

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Table 3-4 Maintenance Window Tasks

ELAP A					ELAP B	
Procedure	**Task**	**A**	**Task Start time (min)**	**B**	**Task**	**Procedure**
Procedure 5	Backup EuiDB with MyISAM engine and InnoDB engine	15	15			
Procedure 6	Disconnect ELAP from LSMS	5	20			
			50	30	E5APPB to APPD card Replacement	Procedure A.3
			95	45	IPM MPS server with TPD 8.10.x	Procedure 7
			105	10	Pre-install configuration	Procedure 8
			135	30	ELAP installation steps	Procedure 9
			145	10	Configure Network for Backup transfer	Procedure 10
Procedure 15	Transfer backup to local B	5	150			
Procedure A.3	E5APPB to APPD card Replacement	30	180			
Procedure 7	IPM MPS server with TPD 8..x	45	225			
Procedure 8	Pre-install configuration	10	235			
Procedure 9	ELAP installation steps	30	265			
For Telco Switches:Procedure 11 For Cisco Switches- Procedure A.1 Procedure A.2	Switch Configuration	30	295			
Procedure 12	Configure NTP server	5	300			
Procedure 13	Initial Network Configuration	10	310			
Procedure 14	Verify Configurations	5	315			

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Table 3-4 (Cont.) Maintenance Window Tasks

ELAP A					ELAP B	
Procedure	**Task**	**A**	**Task Start time (min)**	**B**	**Task**	**Procedure**
			320	5	Transfer backup to local A	Procedure 15
Procedure 16	Restore EuiDB	5	325			
Procedure 17	SSH key exchange between ELAP and LSMS	5	330			
Procedure 18	Repoint LSMS to ELAP VIP	15	345			
Procedure 19	Transfer Servdi Image To ELAP	5	350			
Procedure 20	Restore Servdi	15	365			
3.7, Appendix E	Connect NPAC to LSMS	5	370			
Procedure 21	Post Upgrade Syscheck	5	375	5	Post Upgrade Syscheck	Procedure 21
Procedure 22	Accept The Upgrade	5	380	5	Accept The Upgrade	Procedure 22

* After ELAP installation, switch configuration is done before configuring NTP server and initial configuration, it will take an extra 30 minutes to configure the switches. Follow Procedure A.1 and A.2 for Cisco switch configuration steps and Procedure 11 for Telco switch configuration.

> **Note**
>
> After accepting upgrade on ELAP, the SCCP cards at EAGLE should be initialized to load the

For ELAP DB, follow Procedure 25

3.2 Pre-Full Upgrade Steps

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

Should this procedure fail, Contact My Oracle Support and ask for **FULL UPGRADE ASSISTANCE.**

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3.2.1 Procedure 1 SETTING UP UPGRADE ENVIRONMENT

Table 3-5 Procedure 1 SETTING UP UPGRADE ENVIRONMENT

STEP #	A	B	This procedure sets up the Full upgrade environment. Estimated time: 5 minutes	
1.	☐	☐	**MPS X:** Ensure that all the console/PuTTY Sessions are logged in a text file.	**On all the console/PuTTY sessions, make sure that the logging in enabled and logs are written to a file.** For example, on a PuTTY session, follow the below steps: 1. Right click the top bar in the PuTTY and select “Change Setting”. 2. Click on “Logging”. 3. Select “Printable output”. 4. Click “Browse” and choose where you want the logs to be written to collect those logs later, when needed. Assign a name which will be easy to identify later. For example, name of the log file can be. `<Server name>_active_pdba_A_server_puttylog_ddmmyyyy.` 5. Click “Save”. 6. Type “Putty Logging starts” in the PuTTY session and check whether the text is logged in the PuTTY log file. Repeat the above six steps on every console/PuTTY session that will be used to enter commands or run a procedure in this document.

2.	☐	☐	**MPS X:**
			Login as root to MPS
				`SSH to MPS IP:`
				`login: root`
				`password: <root_password>`

3.	☐	☐	**MPS X:** Start capture file.	Start a capture file using IsoConsole, or by starting a local screen session and capturing its output.
4.	☐	☐	**MPS X:** Access mate MPS via serial console	`# minicom mate`
5.	☐	☐	**mate MPS:** Login as root.	`Console login: root` `password: <root_password>`

This procedure is complete!

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3.2.2 Procedure 2 CAPTURING E5-APP-B CURRENT CONFIGURATIONS

Table 3-6 Procedure 2 CAPTURING E5-APP-B CURRENT CONFIGURATIONS

STEP #	This procedure captures the existing configuration on the server that runs on the source release. Estimated time: 5 minutes	
1. 	**MPS A:** Log in as elapconfig.	`# su – elapconfig`

2.
 	
	MPS A:
	A successful configuration file setup results in the display of the ELAP Configuration Menu and its associated header information.
	Select option 1 to display the ELAP configuration.
		`/-----ELAP Configuration Menu----------\`
		`/----------------------------------------\`
		`|  1 | Display Configuration             |`
		`|  2 | Configure Network Interfaces Menu |`
		`|--- | Set Time Zone                      |`
		`|----|-Exchange Secure Shell Keys        |`
		`|----|----nge Password                    |`
		`|----|-------rm Menu                      |`
		`|----|---------- NTP Server              |`
		`|----|-------------r Recovery            |`
		`|----|----------------                    |`
		`\----------------------------------------/`
		`Enter Choice: 1`

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Table 3-6 (Cont.) Procedure 2 CAPTURING E5-APP-B CURRENT CONFIGURATIONS

STEP #	This procedure captures the existing configuration on the server that runs on the source release. Estimated time: 5 minutes	
3. 	**MPS A:** Configuration information is displayed. Capture and record all information displayed in this output	ELAP A Provisioning Network IP Address = 10.248.15.17 ELAP B Provisioning Network IP Address = 10.248.15.18 Provisioning Network Netmask = 255.255.255.0 Provisioning Network Default Router = 248.15.1 Provisioning VIP = 10.248.15.19 ELAP A Sync Network Address = 169.254.1.100 ELAP B Sync Network Address = 169.254.1.200 ELAP A Main DSM Network Address = 192.168.120.100 ELAP B Main DSM Network Address = 192.168.120.200 ELAP A Backup DSM Network Address = 192.168.121.100 ELAP B Backup DSM Network Address = 192.168. ELAP A HTTP Port = 80 ELAP B HTTP Port = 80 ELAP A HTTP SuExec Port = 8001 ELAP B HTTP SuExec Port = 8001 ELAP A Banner Connection Port = 8473 ELAP B Banner Connection Port = 8473 ELAP A Static NAT Address = Not configured 10.248.15.17 121.200 10.248.15.18 10.248.15.1 ELAP B Static NAT Address = Not configured ELAP A LSMS Connection Port = Not configured ELAP B LSMS Connection Port = Not configured ELAP A EBDA Connection Port = Not configured ELAP B EBDA Connection Port = Not configured Time Zone = America/New_York
4. 	**MPS A:** Record the configuration data.	Record the configuration, data paying particular attention to the highlighted items in the sample output above.
5. 	**MPS A:** Press Return to continue.	Press return to continue...<return>

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Table 3-6 (Cont.) Procedure 2 CAPTURING E5-APP-B CURRENT CONFIGURATIONS

STEP #	This procedure captures the existing configuration on the server that runs on the source release. Estimated time: 5 minutes	
6. 	**MPS A:** The ELAP Configuration Menu is displayed. Select option 7 to configure the NTP Server.	/-----ELAP Configuration Menu----------\ /--\ | 1 | Display Configuration | |----|----------| | 2 | Configure Network Interfaces Menu | |----|----------| | 3 | Set Time Zone | |----|----------| | 4 | Exchange Secure Shell Keys | |----|----------| | 5 | Change Password | |----|----------| | 6 | Platform Menu | |----|----------| | 7 | Configure NTP Server | |----|----------| | 8 | Mate Disaster Recovery | |----|----------| | e | Exit | \----------| Enter Choice: 7
7. 	**MPS A:** The ELAP NTP Server Menu is displayed. Select option 1 to display the External NTP Server (if configured).	/-----ELAP Configure NTP Server Menu-\ /----------| | 1 | Display External NTP Server | |----|----------| | 2 | Add External NTP Server | |----|----------| | 3 | Remove External NTP Server | |----|----------| | e | Exit | \----------| Enter Choice: 1
8. 	**MPS A:** Record the NTP server information (if configured).	chronyserver1 <**Ipaddress 1**> chronyserver2 <**Ipaddress 2**> Press return to continue...<**return**> If no NTP server is configured, the output will be as below: There are no External NTP Servers. Press return to continue...<**return**> **Note:** NTP is mandatory for ELAP 10.1 and higher releases so if no NTP is configured; it is required to get an NTP server IP ready before proceeding for full upgrade.

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Table 3-6 (Cont.) Procedure 2 CAPTURING E5-APP-B CURRENT CONFIGURATIONS

STEP #	This procedure captures the existing configuration on the server that runs on the source release. Estimated time: 5 minutes	
9. 	**MPS A:** Select e to exit	/-----ELAP Configure NTP Server Menu-\ /---------------------------------------\ | 1 | Display External NTP Server | |----|---------------------------------| | 2 | Add External NTP Server | |----|---------------------------------| | 3 | Remove External NTP Server | |----|---------------------------------| | e | Exit | \---------------------------------------/ Enter Choice: e
10. 	**MPS A:** Select e to exit	/-----ELAP Configuration Menu----------\ /---\ | 1 | Display Configuration | |----|---------------------------------| | 2 | Configure Network Interfaces Menu | |----|---------------------------------| | 3 | Set Time Zone | |----|---------------------------------| | 4 | Exchange Secure Shell Keys | |----|---------------------------------| | 5 | Change Password | |----|---------------------------------| | 6 | Platform Menu | |----|---------------------------------| | 7 | Configure NTP Server | |----|---------------------------------| | 8 | Mate Disaster Recovery | |----|---------------------------------| | e | Exit | \---/ Enter Choice: e
11. 	**MPS A:** Write down the current ELAP release	# rpm -qi TKLCelap Release : 10.1.5.0.0_101.20.0 # uiEdit | grep ELAP_RELEASE "ELAP_RELEASE" is set to " 10.1.5"

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Table 3-6 (Cont.) Procedure 2 CAPTURING E5-APP-B CURRENT CONFIGURATIONS

STEP #	This procedure captures the existing configuration on the server that runs on the source release. Estimated time: 5 minutes	
12. 	**MPS A:** Capture the ELAP_PRETTY_ N“ME on ELAP 1”.1 if configured.	” uiEdit | grep PRETTY_NAME "ELAP_A_PRETTY_NAME" is set to "ELAP_A_NAME" "ELAP_B_PRETTY_NAME" is set to "ELAP_B_NAME"

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Table 3-6 (Cont.) Procedure 2 CAPTURING E5-APP-B CURRENT CONFIGURATIONS

STEP #	This procedure captures the existing configuration on the server that runs on the source release. Estimated time: 5 minutes	
13. 	**MPS A:** Capture the entire uiEdit output for reference if required later. The example output to the right has been truncated to fit this page.	[elapdev@Andros-A ~]$ uiEdit "LNP_ENABLED" is set to "TRUE" "Alarms_Purged_Nb_Days" is set to "30" "new_user_default_gro“ps" is set ”o "readonly“ "ma”_“asswd_age" is set to ”180" "EBDAD“LS”S“PORT" is set to "1030" ”max_concurr“nt_user_”o“ins" is set to”"1" "ELAP_A“DSM”L“BK_NETWORK_ADDR”SS" is set “o "1”2“168.123.100" "max_concurre”t_logins" i“ ”e“ to "20" "ELAP_A_NAME" is set t” "Andros- A""ELAP_RELEASE" ”s“set to "10.1.5" "ELAP”LOGGING_REM“TE”U“ERNAME" is ”et to "" "E“AP_A_SYN”H“NETWORK_ADDR”SS" is set “o "169”2“4.1.100" "AUTO_RTDB_BKUP_FIL”PATH" is se“”t“ "/var/TKLC/elap/free/backup”" "HTTP_ENA“LED" is set t” “No" "ELAP_A_PRETTY_NAME” is set to “ELAP_A_NAME" "AUTO_RTDB_BKU”_“ILES_TO_MANT”IN" is set “o ”5“ "session_idle_tim”out" is set“to "10" "EL”P“B_PROV_NETWORK_IP_ADDRESS" is s”t to "10.75“1”1“24" "EXINIT_DEBUG_LE”EL" is set “o ”O“F" "SNAPPER_ROLLBACK_INTERVAL""is set to ""00" "EBDAD_D”B“G_LEVEL" is set to""OFF" "MAIN“_DE”U“_NUM_LOGS" is set to "5" ”RIDB_LV_PAT“" i” “et to "/dev/vgdrb”0" "PROV_DE“UG_”U“_LOGS" is set to "5""LNPTRANS_L“G”D“YS" is set t” "7" "EXINI“_DEBUG_NUM_L”G“" is set to "5" "EL”P_A_HTTP_PO“T” “s set to "80" "EX”NIT_ERROR_N“M”L“GS" is set to "5" "lo”on_msg" is “e” “o "NOTICE: This ”s a private“co”p“ter system. Unauthor”zed access “r”u“e may lea” to prosecu“ion." "ELAP_B_HTTPS_PORT" is set to "443" "ELAP_B_NAME" is set to "Andros-B" "AUTO_RTDB_BKUP_TI”E“ is set to "6:00""EBDAD_GS_P“RT""i“ set to "96”2" "LNP_LRN“QTY" is ”e“ to "200000" "BACKU”_FILE_DIR" “s se” “o "/var/TKLC/”lap/free/ba“kup"""“LAP_LOGGING”EXPORT" is “et to ”D“SABLED" "AUTO_R”DB_BKUP_FRE“UENCY" is set to "1"

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Table 3-6 (Cont.) Procedure 2 CAPTURING E5-APP-B CURRENT CONFIGURATIONS

STEP #	This procedure captures the existing configuration on the server that runs on the source release. Estimated time: 5 minutes	
		"PROV”S“ONING_NETWORK_NETMA”K" is set t“ "255.25”. “55.0" "ELAP_LOGGING_REMO”E_SFTP_PATH“ ”s“set to "" "ELAP_B_SYNCH_NETW”RK_ADDRESS""is set to "16”. “54.1.200" "ELAP_A_HTTPS_PORT""is set to ""”3“ "ELAP_A_DSM_MAIN_NETWORK_AD”RESS" is se“ to "192.168.”2“.100" "ELAP_A_SUE”EC_HTTPS_PO“T" ”s“set to "8002" "ELAP_A_GS_BANNER”PORT" is se“ to "8473" "ELA”_“_DSM_BACKUP_NETWORK_ADDR”SS" is set “o "1”2“168.121.200" "MAINT_D”BUG_LEVEL" “s se” “o "OFF" "DOWNLOAD_FILE_DIR" is se” to "/var/T“LC/elap/free/ ba”k“p" "euidb_version” is set to “3" ”L“P_NPANXX_QTY" is ”et to "3500“0" "LSMS_PROVISIONING" is ”e“ to "OFF" "EL”P_LOGGING_T“M”_“ORMAT" is set ”o "UTC" "MA“NT_ERR”R“NUM_LOGS" is set ”o "5" "UI_I“_AU”H“RIZATION_ENABLED" is set”to "FALSE" “ELA”_“OGGING_REMOTE_IP_ADD”ESS" is set“t” “" "AUTO_RTDB_BKUP_DELETE_OP”ION" is set“to "y” “HSOPD_ERROR_NUM_LOGS" is set t” "5" "TRPD_“”R“R_NUM_LOGS" is set to "5" "a”ache_403_er“o”_“essage" is set to "N”TICE: This “o”k“tation is not autho”ized to acc“s” “he GUI." "EBDAD_ERROR_NU”_LOGS" is s“t to "5" "max_account_inactivity" is set to "0" "HSOPD_DEBUG_”E“EL" is set to "OFF" ”TRPD_DEBUG_“U”_“OGS" is set to "5" "EL”P_LOGGING_R“M”T“_PASSWORD" is set”to "" "ELAP“B_H”T“_PORT" is set to "8”" "MATE_MPS“H”T“S_PORT" is set to "443" "EBD”D_DEBUG_NUM“”O“S" is set to "5"""ELAP_B_PRE“TY”N“ME" is set to "ELAP”B_NAME" "HS“PD_”S“S_PROVISIONING_PORT""is set to ""4”3“ "ELAP_RIDB_RELEAS”" is set to“"10.0.0" "S”A“PER_LOG_LEVEL" is set to "0"""AUTO_RTDB_“KUP_”Y“E" is set to "loc”l_mate" "PR“V_ERRO”_“UM_LOGS" is set t” "5" "ELAP_“_”R“V_NETWORK_IP_ADDRES”" is set to“"10.75.141”2“" "CNF_QTY_THRESHOL”_PERC" is s“t”t“ "90" "MATE_MPS_HTTP_PORT" is ”et to "80" “passwd_reuse”l“mit" is set to "12" "a”ache_403_er“or”m“ssage_default" is ”et to "NOTI“E:”T“is workstation is ”ot

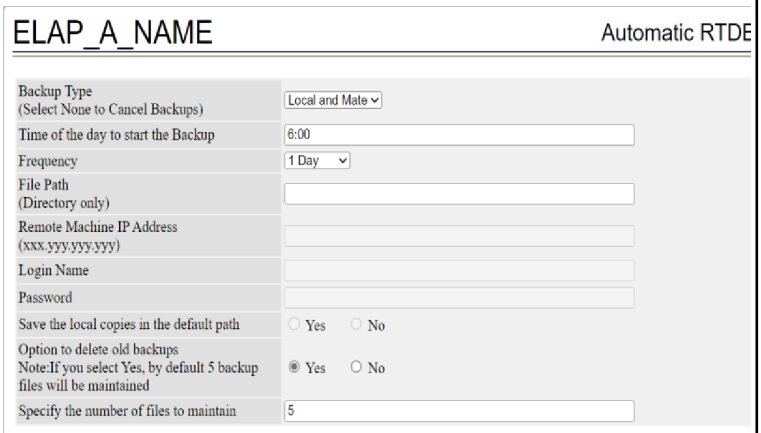
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Table 3-6 (Cont.) Procedure 2 CAPTURING E5-APP-B CURRENT CONFIGURATIONS

STEP #	This procedure captures the existing configuration on the server that runs on the source release. Estimated time: 5 minutes	
		authoriz“d ”o“access the GUI." "HTTPS_ENABLED""is set to ""es" "HSOPD_DEBUG_NUM_LOGS" is set to "5" "ELAP_B_DSM_MAIN_NET”O“K_ADDRESS" is”set to "192“168”1“0.200" "LOCAL_PROVIS”ONING_VIP" “s”s“t to "10.75.141.25" "TRPD_DEBUG”LEVEL" is s“t to "OFF" "RTD”_“UDIT" is set to "ON" ""NP_TN_QTY" “s set to "50”0“0000" "ELAP_B_GS”BANNER_PORT“ is”s“t to "8473” "PROV_DEBU“_L”V“L" is set ”o "OFF" "RE“OAD_FLOW_”O“TROL_TIME" is set to ”200" "passw“_com”l“xity_checking" i” set to "on“ "L”P“MR_QTY" is set to "20000”0" "RTDBA_N“M_L”G“" is set to "5" "PROVISION”NG_NETWORK_“EF”U“T_ROUTER" ”s set to "1“.75.141”1“ "RIDB_LV_NAME” is set to “l”p“b" "ELAP_A_SUEXEC_HTTP_PORT" is set”to "8001" ""LAP_B_SUEXE”_“TTPS_PORT" i” set to "80“2" "L”P“LRNMR_QTY" is set to "2”00000" "ELA“_LOG”I“G_ENHANCEMENTS_FEATURE" ”s set to "O“F" ""L“P_A_DSM_BACKU”_NETWORK_AD“RESS" i” “et to "192.168.121.100" "HSOPD_GS”PORT" is se“ to”""691" "ELAP_B_SUEXEC_HTTP_PORT" is”set to "800“" "ELAP_B_DSM_L”B“_NETWORK_ADDR”SS" is set “o "1”2“168.123.200" "max_faile”_logins" is“set ”o“"3" "BULK_DOWNLOAD" is set to ""N"
13. **Error define**	**MPS”A“** Note down the timestamp **!** in output.	Run the following command: # date

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Table 3-6 (Cont.) Procedure 2 CAPTURING E5-APP-B CURRENT CONFIGURATIONS

STEP #	This procedure captures the existing configuration on the server that runs on the source release. Estimated time: 5 minutes	
14. □	**MPS A:** Login to ELAP GUI via uiadmin user **MPS 1A:** Navigate to the main Maintenance menu selection and select “Automatic RTDB Backup” and note down the configuration details	

This procedure is complete!

3.2.3 Procedure 3 PRE-UPGRADE HEALTH CHECK

Table 3-7 Procedure 3 PRE-UPGRADE HEALTH CHECK

STEP #	A	B	This procedure determines the health of the MPS before beginning the Full upgrade. This procedure should be done 1 week before scheduled Full upgrade and repeated the day of the Full upgrade. Estimated time: 5 minutes	
1.	□	□	**MPS X:** Validate date, time and time zone to ensure accuracy.	`# date` `Fri May 20 07:05:41 EDT 2016`

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Table 3-7 (Cont.) Procedure 3 PRE-UPGRADE HEALTH CHECK

STEP #	A	B	This procedure determines the health of the MPS before beginning the Full upgrade. This procedure should be done 1 week before scheduled Full upgrade and repeated the day of the Full upgrade. Estimated time: 5 minutes	

2.	☐	☐	**MPS X:**
			Execute syscheck.
				`# syscheck`
				`Running modules in class disk... OK`
				`Running modules in class net... OK`
				`Running modules in class proc... OK`
				`Running modules in class system... OK`
				`Running modules in class hardware... OK`
				`The log is available at:`
				`-->/opt/TKLCplat/log/syscheck/fail_log`

3.	☐	☐	**MPS X:** Check for any alarms on the server.	`[elapdev@ E5APP-B-a ~]$ manageBannerInfo -l` **`There are currently no BannerInfo messages for this side in the database.`**
4.	☐	☐	**MPS X:** Obtain the host id for logging purposes.	`[elapdev@ E5APP-B-a ~]$ hostid a8c0b23d`
5.	☐	☐	**MPS X:** Obtain the uptime of the system for logging purposes.	`[elapdev@ E5APP-B-a ~]$ uptime` `03:29:12 up 46 days, 20:00, 5 users, load average: 0.16, 0.24, 0.27`
6.	☐	☐	Repeat on the day of the scheduled Full upgrade	All Health Checks should be repeated the day of the Full upgrade. If any problems are encountered, resolve before proceeding further.
7.	☐	☐	**MPS X:** Note down the timestamp in log.	Run the following command. `$ date`

This procedure is complete!

3.3 Data Backup before Full upgrade

3.3.1 Procedure 4 LSMS SERVDI BACKUP

Table 3-8 Procedure 4 LSMS SERVDI BACKUP

1. ☐	**LSMS:** Login to Active LSMS server as root user.	`login: root` `Password: <root_password>`

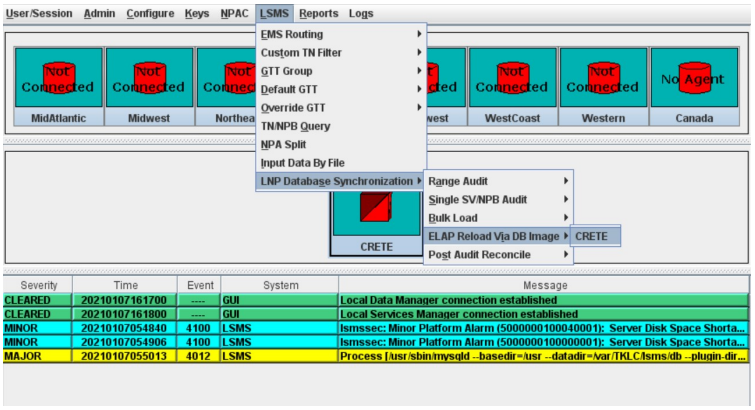
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Table 3-8 (Cont.) Procedure 4 LSMS SERVDI BACKUP

2. 	Change the user to lsmsadm.	`# su –lsmsadm`
3. 	Enable the servdi feature	`lsmsadm@lsmspri ~]$ dbcfginternal SERVDI_ENABLED Y` **Note:** The SERVDI feature will not be available within a GUI instance until the GUI is restarted. Update complete
4. 	Verify that servdi feature has been enabled.	`lsmsadm@lsmspri ~]# lsmsdb -c features | grep "SERVDI_ENABLED" Y SERVDI_ENABLED`
5. 	**LSMS:** Log in to the LSMS GUI as a member of the permission group that is authorized to perform this operation.	

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Table 3-8 (Cont.) Procedure 4 LSMS SERVDI BACKUP

6. Select the LSMS icon. Right click on LSMS icon LSMS-> LNP Database Synchronization -> ELAP Reload via DB image	Select the LSMS icon. Right click on LSMS icon LSMS-> LNP Database Synchronization -> ELAP Reload via DB image	
7. Click on generate image	Click on generate image	

This procedure is complete!

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3.3.2 Procedure 5 BACKUP EUIDB

This section lists the procedures, in order, that must be performed to backup the system prior to Full upgrade. Save the backup to third-party server instead of ELAP-A/B which are to be upgraded.

Table 3-9 Procedure 5 BACKUP EUIDB

STEP #	**This procedure backs up the EuiDB.** **Note: Estimated time of completion is 5 minutes.** **Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.** **Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.**	
1. □	**Active ELAP**: Login to the Active ELAP server as user “elapdev”.	MPS X login: elapdev Password:****** [elapdev@APPD-A elapdev]#
2. □	**Active ELAP:** Stop the ELAP Application	[elapdev@APPD-A ~]$ service Elap stop [elapdev@APPD-A ~]$
3. □	**Active ELAP:** Switch user to root.	$su - Password: <root_password>
4. □	**Active ELAP:** Switch user to elapconfig.	$su - elapconfig

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Table 3-9 (Cont.) Procedure 5 BACKUP EUIDB

STEP #	This procedure backs up the EuiDB. Note: Estimated time of completion is 5 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	
5. □	**Active ELAP:** Login as **"elapconfig"** to start the ELAP Configuration utility. Select option "6" and press enter.	/-----ELAP Configuration Menu----------\ /--\ | 1 | Display Configuration | |----|----------| | 2 | Configure Network Interfaces Menu | |----|----------| | 3 | Set Time Zone | |----|----------| | 4 | Exchange Secure Shell Keys | |----|----------| | 5 | Change Password | |----|----------| | 6 | Platform Menu | |----|----------| | 7 | Configure NTP Server | |----|----------| | 8 | Mate Disaster Recovery | |----|----------| | e | Exit | \--/ Enter Choice: 6

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Table 3-9 (Cont.) Procedure 5 BACKUP EUIDB

STEP #	This procedure backs up the EuiDB. Note: Estimated time of completion is 5 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	
6. □	**Active ELAP:** 1) Select "3" and press return to start the MySQL Backup. 2) Select "Y" when prompted and press return. **NOTE: Th MyISAM backup taken in this step, will be used, if in any case the full upgrade from ELAP 10.2 to ELAP 11.0 fails.** **For ELAP 11.0 we will use the InnoDB mysql backup for EuiDB taken at step 10 after changing the mysql engine.**	/-----ELAP Platform Menu-\ /--------------------------\ | 1 | Initiate Upgrade | |----|--------------------| | 2 | Reboot MPS | |----|--------------------| | 3 | MySQL Backup | |----|--------------------| | 4 | RTDB Backup | |----|--------------------| | e | Exit | \--------------------------/ Enter Choice:3 Are you sure you want to back up the MySQL database on MPS A? [N]: Y Backing up the NPDB... NPDB Backed up Successfully to /var/TKLC/appl/free/ npdbBackup_Floater04_20231116041558.sql. gz
7. □	**Active ELAP:** Select **"e"** and press Enter to exit the Platform Menu.	/-----ELAP Platform Menu-\ /--------------------------\ | 1 | Initiate Upgrade | |----|--------------------| | 2 | Reboot MPS | |----|--------------------| | 3 | MySQL Backup | |----|--------------------| | 4 | RTDB Backup | |----|--------------------| | e | Exit | \--------------------------/ Enter Choice:e

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Table 3-9 (Cont.) Procedure 5 BACKUP EUIDB

STEP #	This procedure backs up the EuiDB. Note: Estimated time of completion is 5 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	
8. □	**Active ELAP:** Enter e to exit the ELAP Configuration Menu.	/-----ELAP Configuration Menu----------\ /--\ | 1 | Display Configuration | |----|----------| | 2 | Configure Network Interfaces Menu | |----|----------| | 3 | Set Time Zone | |----|----------| | 4 | Exchange Secure Shell Keys | |----|----------| | 5 | Change Password | |----|----------| | 6 | Platform Menu | |----|----------| | 7 | Configure NTP Server | |----|----------| | 8 | Mate Disaster Recovery | |----|----------| | e | Exit | \--/ Enter Choice:e

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Table 3-9 (Cont.) Procedure 5 BACKUP EUIDB

STEP #	This procedure backs up the EuiDB. Note: Estimated time of completion is 5 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	
9. 	**ACTIVE ELAP**	Note that the alter mysql engine step must run while upgrading ELAP 10.x to 11.x. After upgrading from 11.x to 11.y, the engine will already be updated to InnoDB. Verify the mysql engine using the below command before running the alter_Table_Elap_11.0.pl `mysql -uroot -p EuiDB -e "show table status\G;"` **Example:** The example below contains a snapshot of only one table in EuiDB. The actual output will show all the tables present in EuiDB. *[elapdev@Arica-a ~]$ mysql -uroot -p EuiDB -e "show table status\G;"* *Enter password:* ************************** 1. row *************************** *Name: econfig* *Engine: InnoDB* *Version: 10* *Row_format: Dynamic* *Rows: 103* *Avg_row_length: 636* *Data_length: 65536* *Max_data_length: 0* *Index_length: 0* *Data_free: 0* *Auto_increment: NULL* *Create_time: 2026-01-22 02:08:13* *Update_time: 2026-01-22 02:46:48* *Check_time: NULL* *Collation: latin1_swedish_ci* *Checksum: NULL* *Create_options:* *Comment:* If the command output shows the engine as InnoDB, we don't need to run the alter_table_Elap_11.0.pl. If the engine is already InnoDB, then skip steps 10, 11, 12 and then restart Elap application. If the engine is MyISAM, proceed with the next steps in this procedure.

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Table 3-9 (Cont.) Procedure 5 BACKUP EUIDB

STEP #	This procedure backs up the EuiDB. Note: Estimated time of completion is 5 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	

10.
□
	ACTIVE ELAP:	Follow the steps mentioned below to change the mysql engine from MyISAM to InnoDB:
		1. Download the alter_Table_Elap_11.0.pl script.
		2. Keep it in /usr/TKLC/elap/bin directory.
		3. Update the permissions.
		`cd /usr/TKLC/elap/bin chmod 755`
		`alter_Table_Elap_11.0.pl chown elapdev:elap`
		`alter_Table_Elap_11.0.pl`
		4. Switch to elapdev user.
		`su – elapdev`
		5. Run the script.
		`cd /usr/TKLC/elap/Bin/ ./`
		`alter_Table_Elap_11.0.pl`
		`Example:`
		`[elapdev@Devloan03 ~]$ cd /usr/TKLC/elap/bin/`
		`[elapdev@Devloan03 bin]$ ./`
		`alter_Table_Elap_11.0.pl Success.`

11.
□
	Active ELAP: Check the update by logging in to EuiDB:	`[epapdev@Manaus-A free]$ mysql -uroot -p<mysql_password> mysql> use EuiDB;`
		`Reading table information for completion of table and column names`
		`You can turn off this feature to get a quicker startup with`
		`-A`
		`mysql> show table status\G;`
		`*************************** 1. row ***************************`
		`Name: alarmInfo`
		`Engine: InnoDB`
		`Version: 10`

12. □	**Active ELAP:** Take the EuiDB backup again after converting the engine from MyISAM to InnoDB.	Repeat Steps 3 to 8 of this Procedure 5 to take the EuiDB backup again for InnoDB.

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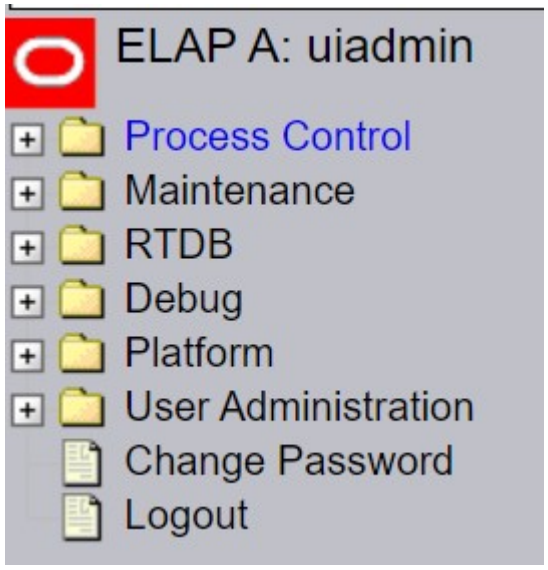
Table 3-9 (Cont.) Procedure 5 BACKUP EUIDB

STEP #	This procedure backs up the EuiDB. Note: Estimated time of completion is 5 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	
13. ☐	**Active ELAP:** Re-start the ELAP Application for Active ELAP.	`[root@E5APP-B-b ~]# service Elap start` `[root@E5APP-B-b ~]#`
14. ☐	**Active ELAP:** Note down the timestamp in log.	Run the following command: `$ date`

This procedure is complete!

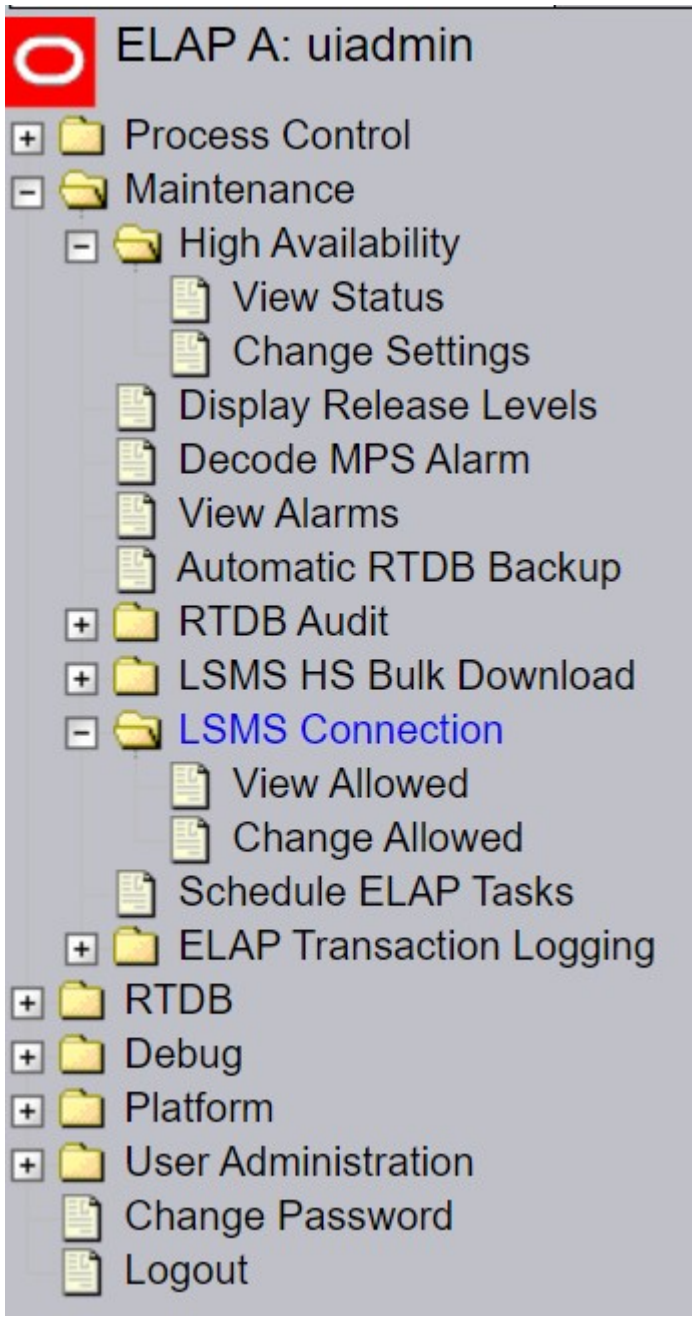
3.3.3 Procedure 6 DISCONNECT ELAP FROM LSMS

Table 3-10 Procedure 6 DISCONNECT ELAP FROM LSMS

STEP #	This procedure provides instructions to stop LSMS connection. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT ORACLE TECHNICAL SERVICES AND ASK FOR UPGRADE ASSISTANCE.	
1. ☐	**Active ELAP GUI:** Login as uiadmin using the default password. *Note ELAP Version may differ than example image shown.	

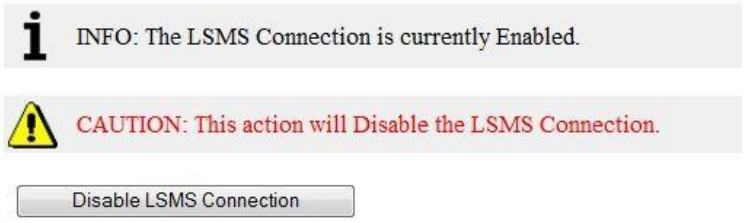
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Table 3-10 (Cont.) Procedure 6 DISCONNECT ELAP FROM LSMS

STEP #	This procedure provides instructions to stop LSMS connection. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT ORACLE TECHNICAL SERVICES AND ASK FOR UPGRADE ASSISTANCE.	
2. 	**Active ELAP GUI:** 1. Expand the "Maintenance ❼ LSMS Connection" folder. 2. Select the "Change Allowed" link.	

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Table 3-10 (Cont.) Procedure 6 DISCONNECT ELAP FROM LSMS

STEP #	This procedure provides instructions to stop LSMS connection. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT ORACLE TECHNICAL SERVICES AND ASK FOR UPGRADE ASSISTANCE.	
3. ☐	**Active ELAP GUI:** In the right panel, click the "Disable LSMS Connection" button.	
4. ☐	**ELAP A GUI:** A message indicating that the LSMS Connection is now Enabled should appear in the right panel.	

This procedure is complete!

3.4 IPM and ELAP 11.1.x Installation

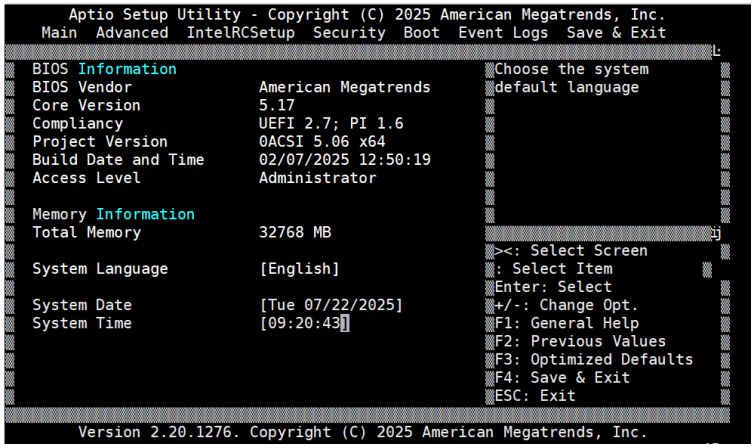
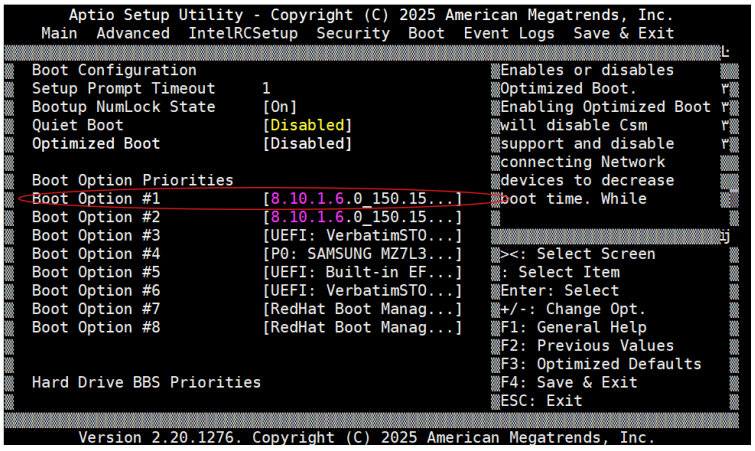
3.4.1 Procedure 7 IPM MPS SERVER WITH TPD 8.10.X

Table 3-11 Procedure 7 IPM MPS SERVER WITH TPD 8.10.X

STEP #	This procedure will IPM the APPD 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 My Oracle Support AND ASK FOR UPGRADE ASSISTANCE.	
1. ☐	**MPS X:** Insert TPD 8.10.0 USB media into the USB port (APPD)	Reboot server `# reboot`

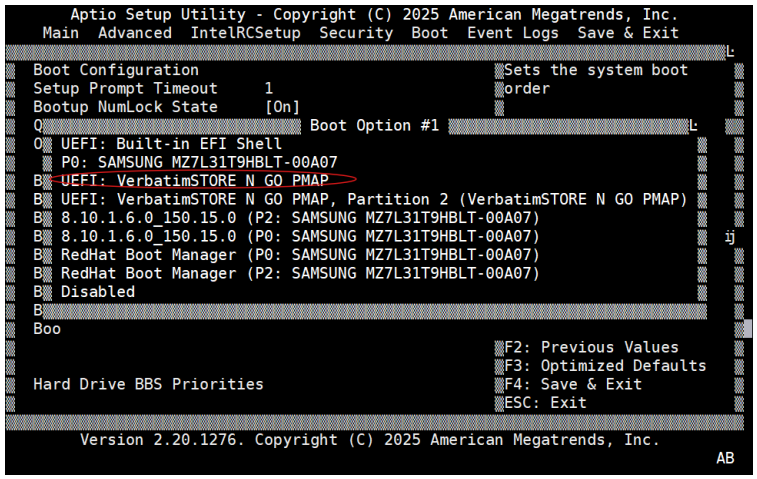
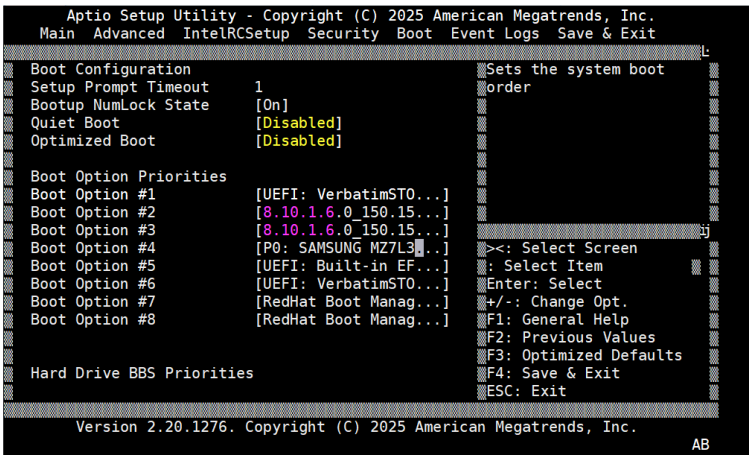
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Table 3-11 (Cont.) Procedure 7 IPM MPS SERVER WITH TPD 8.10.X

STEP #	This procedure will IPM the APPD 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 My Oracle Support AND ASK FOR UPGRADE ASSISTANCE.	
2. ☐	**MPS X:** Press 'del' key to enter the BIOS, set System Time to GMT time, and System Date.	
3. ☐	**MPS X:** Select *Boot Menu*→ Boot Option Priorities -> Boot Option #1 -> Press enter on Boot Option #1	

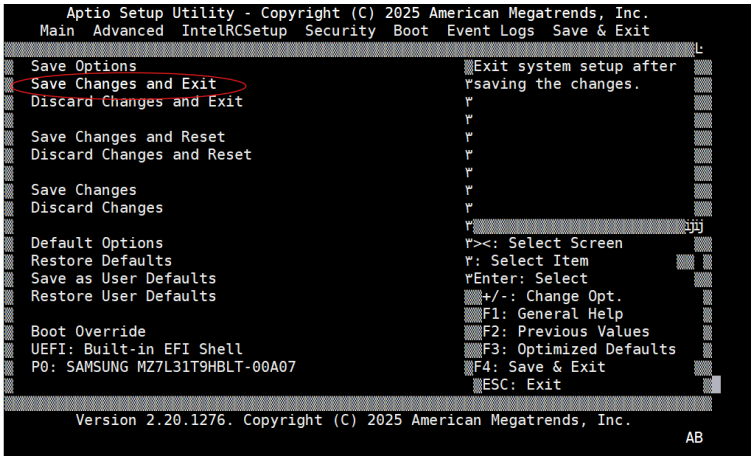
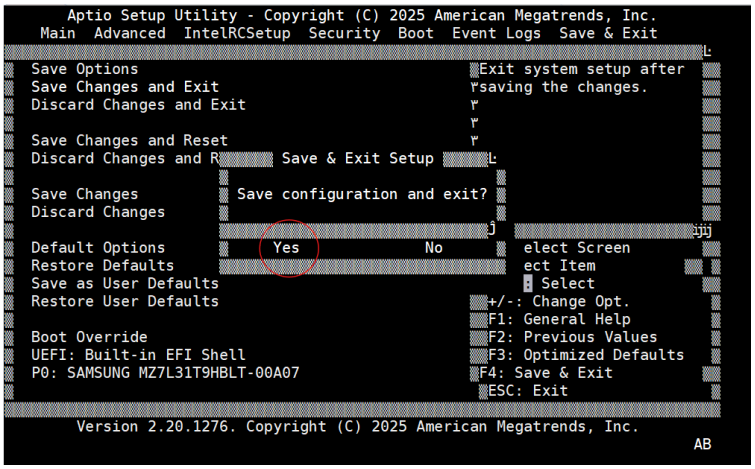
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Table 3-11 (Cont.) Procedure 7 IPM MPS SERVER WITH TPD 8.10.X

STEP #	This procedure will IPM the APPD 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 My Oracle Support AND ASK FOR UPGRADE ASSISTANCE.	
4. □	**MPS X:** Press 'Enter' key on Boot Option #1 and choose "UEFI: Verabtim N GO PMAP"	
5. □	**MPS X:** Press 'Esc' key and verify that Boot Option #1 is set to USB	

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Table 3-11 (Cont.) Procedure 7 IPM MPS SERVER WITH TPD 8.10.X

STEP #	This procedure will IPM the APPD 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 My Oracle Support AND ASK FOR UPGRADE ASSISTANCE.	
6. ☐	**MPS X:** Go to Save & *Exit* →*Select Save Changes and Exit* option	
7. ☐	**MPS X:** Select [OK] to save the configuration changes. The server will reboot and TPD boot prompt will appear.	

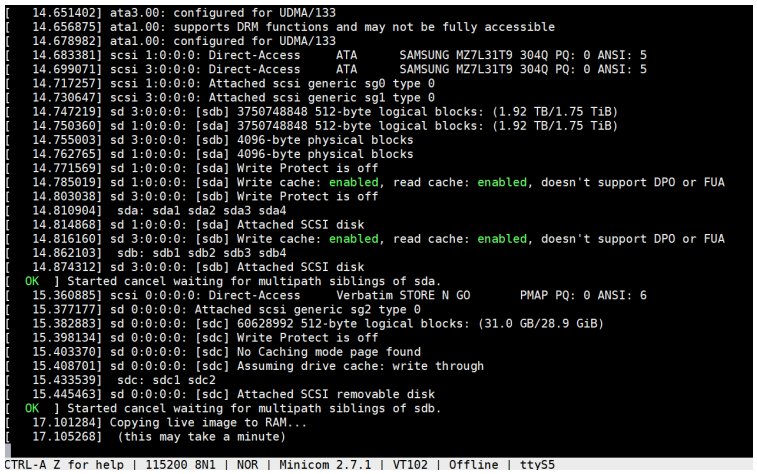
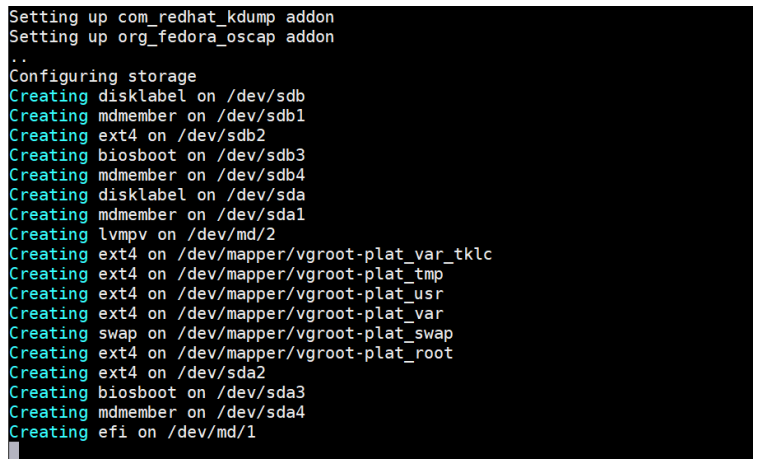
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Table 3-11 (Cont.) Procedure 7 IPM MPS SERVER WITH TPD 8.10.X

STEP #	This procedure will IPM the APPD 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 My Oracle Support AND ASK FOR UPGRADE ASSISTANCE.	
8. 	**MPS X:** Start the IPM process by giving “TPDlvmUEFI reserved=33G”	**Press ‘e’ after selecting TPDlvmUEFI to edit**   **Press Ctrl-x after editing TPDlvmUEFI to TPDlvmUEFI reserved=33G** If the following errors are observed while running the "TPDlvmUEFI reserved=33G" command, perform the "TPDlvm scrub reserved=33G": There is a problem with your existing storage configuration or your initial settings, for example a kickstart file. You must resolve this before the installation can proceed. There is a shell available for use which you can access by pressing ctrl-alt-f1 and then ctrl-b 2.

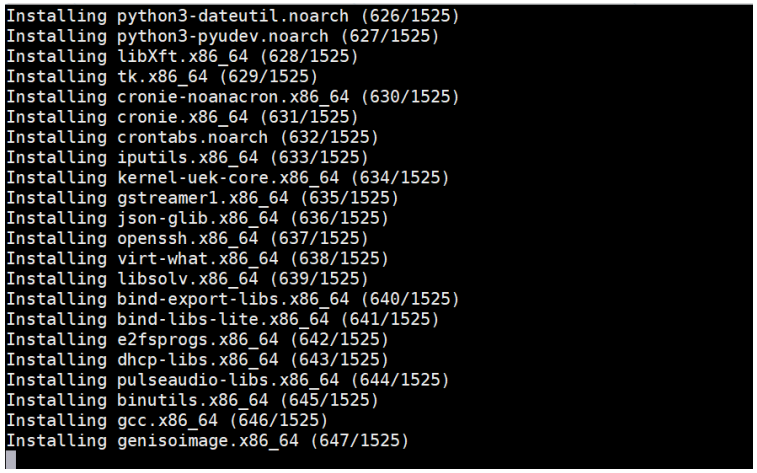
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Table 3-11 (Cont.) Procedure 7 IPM MPS SERVER WITH TPD 8.10.X

STEP #	This procedure will IPM the APPD 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 My Oracle Support AND ASK FOR UPGRADE ASSISTANCE.	
		Once you have resolved the issue, you can retry the storage scan. If you do not fix it, you will have to exit the installer. Duplicate UUID '00015466-01' found for devices: 'sdc1' and 'sda1' This is usually caused by cloning the device image resulting in duplication of the UUID value, which should be unique. In that case you can either disconnect one of the devices or reformat it. Press ENTER to exit: [[[11~^B^B^B^B^B2^H^H^H^H^H^H^[^[[11~[anaconda root@localhost ~]#
9. □	**MPS X:** After a few seconds, additional messages will begin scrolling by on the screen as the Linux kernel boots, and then the drive formatting and file system creation steps will begin.	 

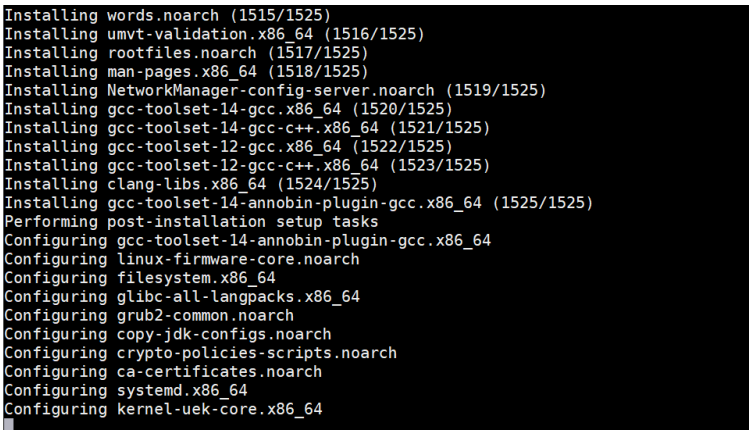
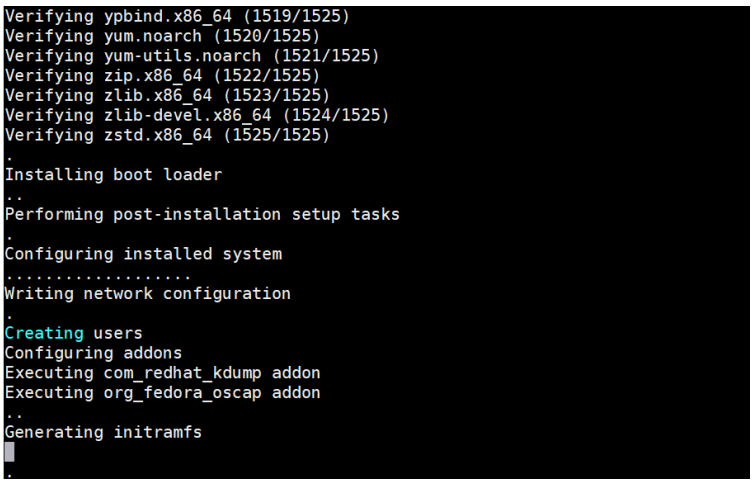
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Table 3-11 (Cont.) Procedure 7 IPM MPS SERVER WITH TPD 8.10.X

STEP #	This procedure will IPM the APPD 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 My Oracle Support AND ASK FOR UPGRADE ASSISTANCE.	
10. 	**MPS X:** Once the drive formatting and file system creation steps are complete, the screen at right will appear indicating that the package installation step has started.	

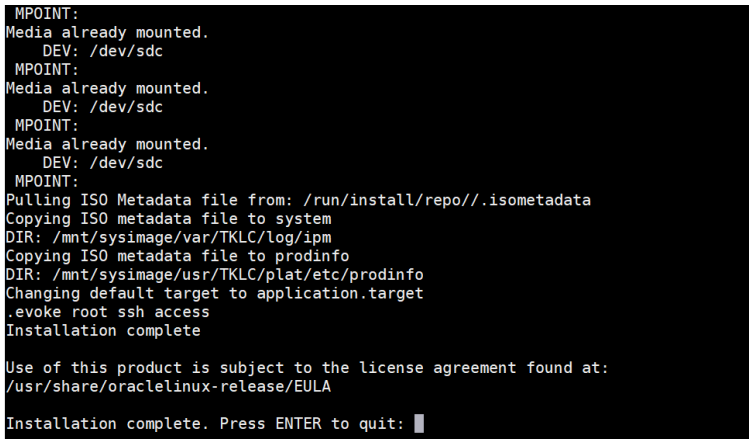
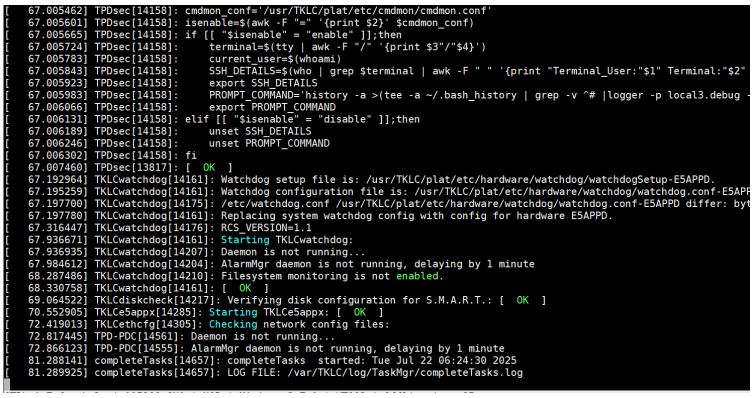
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Table 3-11 (Cont.) Procedure 7 IPM MPS SERVER WITH TPD 8.10.X

STEP #	This procedure will IPM the APPD 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 My Oracle Support AND ASK FOR UPGRADE ASSISTANCE.	
11. 	**MPS X:** Once the installation of packages is done. Post installation setup tasks will be done.	 

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Table 3-11 (Cont.) Procedure 7 IPM MPS SERVER WITH TPD 8.10.X

STEP #	This procedure will IPM the APPD 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 My Oracle Support AND ASK FOR UPGRADE ASSISTANCE.	
12. □	**MPS X:** After the TPD process is complete the console will come to the screen at the right. Press enter to continue.	
13. □	**MPS X:** The final screen will look like this. Press enter and login to the server.	
14. □	**MPS X:** Log in to the server as the user “root”	`console login: root` `password: <root_password>`

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Table 3-11 (Cont.) Procedure 7 IPM MPS SERVER WITH TPD 8.10.X

STEP #	This procedure will IPM the APPD 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 My Oracle Support AND ASK FOR UPGRADE ASSISTANCE.	

15.
25.
☐
	MPS X:
	Switch to UEK Kernel
		`#/usr/TKLC/plat/bin/bootKernel --UEK`
		`Setting UEK as default kernel`
		`The index of kernel is: 0`
		`Generating grub configuration file ...`
		`Adding boot menu entry for EFI firmware configuration`
		`done`
		`Generating grub configuration file ...`
		`Adding boot menu entry for EFI firmware configuration`
		`done`

16. ☐	**MPS X:** **Reboot the server**	`#reboot`
17. ☐	**MPS X: Log in to the server as the user "root"**	`console login: root` `password: <root_password>`

18.
☐
	MPS X: Perform a syscheck.
	Inspect the output and ensure that no errors are present. If an error is present, contact My Oracle Support for guidance.
		`# syscheck`
		`Running modules in class net...`
		`OK`
		`Running modules in class hardware...`
		`OK`
		`Running modules in class disk...`
		`OK`
		`Running modules in class system...`
		`OK`
		`Running modules in class proc...`
		`OK`
		`LOG LOCATION: /var/TKLC/log/syscheck/fail_log #`

19.
☐
	MPS X:
	Verify that the platform revision is same as the
	TPD USB or ISO used.
		`# getPlatRev`
		8.10.1.16.0_150.39.0
		`If there is any failure during IPM or the platform revision is not correct, repeat this procedure to IPM again. If the same issue persists after the second attempt, contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.`

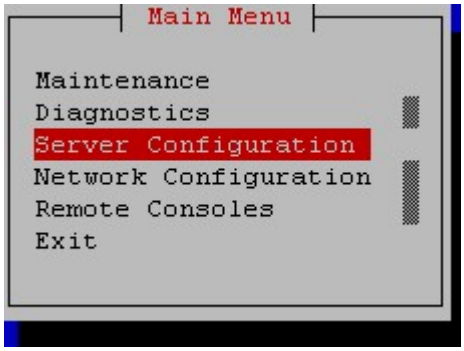
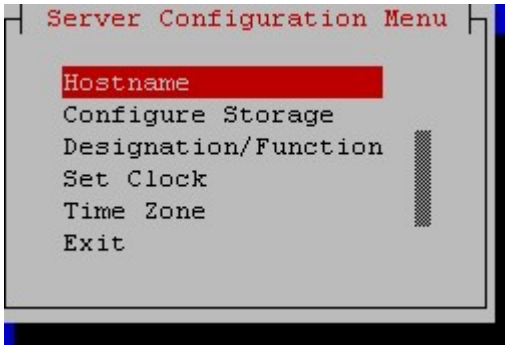
20. ☐	**MPS X:** Note down the timestamp in log.	Run the following command: `$ date`

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This procedure is complete!

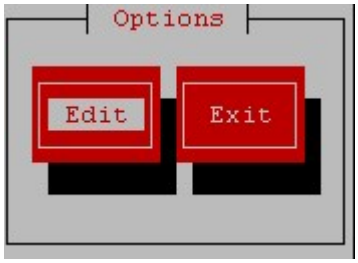
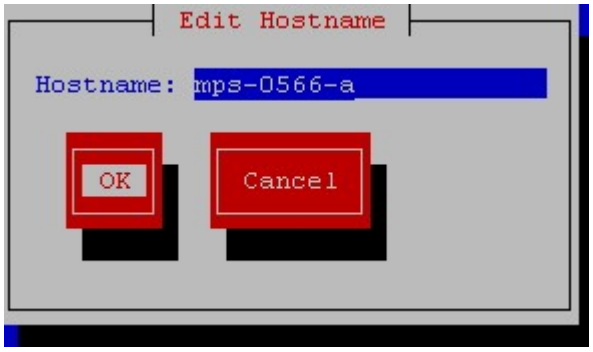
3.4.2 Procedure 8 PRE-INSTALL CONFIGURATION

Table 3-12 Procedure 8 PRE-INSTALL CONFIGURATION

STEP #	A	B	This procedure will perform the initial configuration required for ELAP installation. Note: Estimated time of completion is 15 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	
1.	☐	☐	**MPS X:** log in to the server console as the user “root”	`console login: root` `password: <root_password>`
2.	☐	☐	**MPS X:** Switch user to platcfg. Select “Server Configuration” Menu	`# su - platcfg` 
3.	☐	☐	**MPS X:** Select “Hostname” Menu	

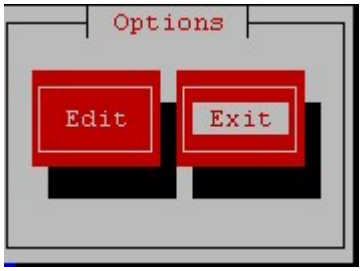
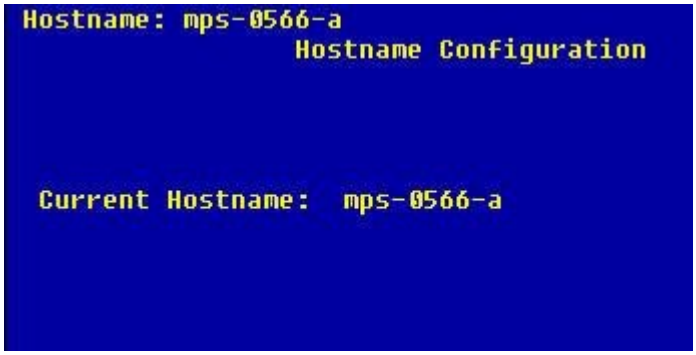
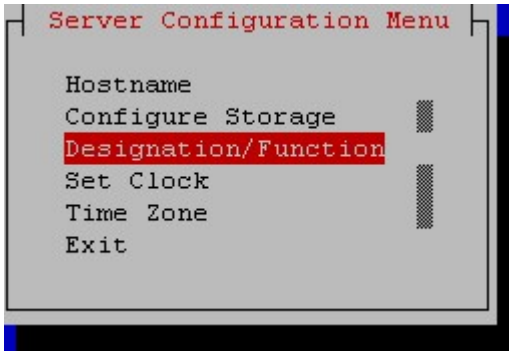
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Table 3-12 (Cont.) Procedure 8 PRE-INSTALL CONFIGURATION

STEP #	A	B	This procedure will perform the initial configuration required for ELAP installation. Note: Estimated time of completion is 15 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	
4.	☐	☐	**MPS X:** 1. Select “Edit” from the options dialogue box. 2. Set the hostname	 

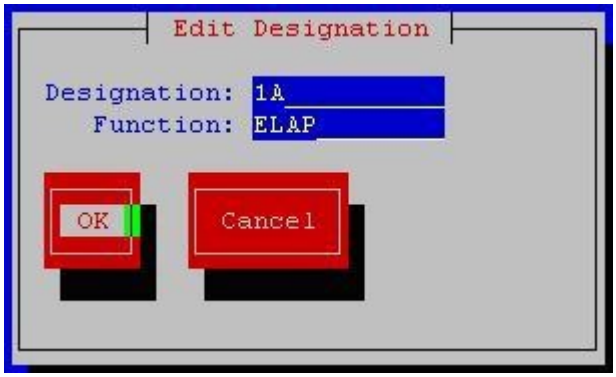
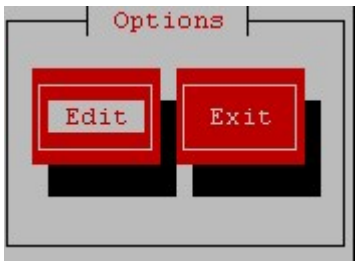
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Table 3-12 (Cont.) Procedure 8 PRE-INSTALL CONFIGURATION

STEP #	A	B	This procedure will perform the initial configuration required for ELAP installation. Note: Estimated time of completion is 15 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	
5.	☐	☐	**MPS X:** Verify that the Hostname is correct then select and press "Exit". Otherwise repeat the step above.	 
6.	☐	☐	**MPS X:** Select "Designation/ Function" Menu	

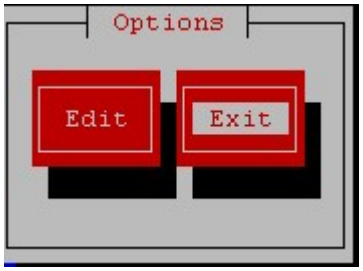
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Table 3-12 (Cont.) Procedure 8 PRE-INSTALL CONFIGURATION

STEP #	A	B	This procedure will perform the initial configuration required for ELAP installation. Note: Estimated time of completion is 15 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	
7.	☐	☐	**MPS X:** 1. Select "Edit" from the options dialogue box. 2. Set the Designation as "1A" on Server A and as "1B" on Server B, Function as "ELAP" and press "OK". **NOTE:** Designation and Function should be entered in UPPERCASE.	 

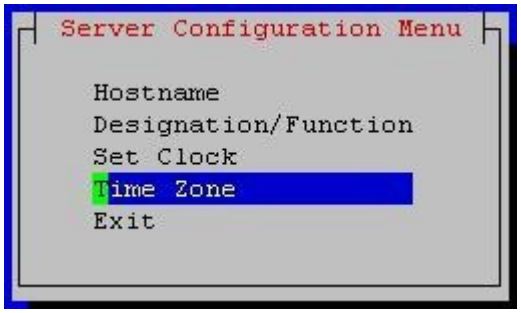
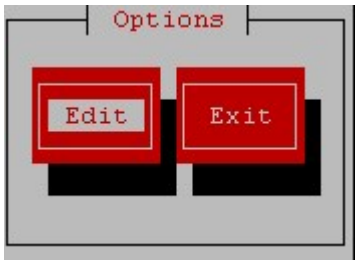
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STEP #	A	B	This procedure will perform the initial configuration required for ELAP installation. Note: Estimated time of completion is 15 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	
8.	☐	☐	**MPS X:** Verify that the Designation and Hostname information is correct then select and press "Exit". Otherwise repeat the step above.	  The values should be as follows. 1. The Designation is: a. "1A" for the A server b. "1B" for the B server 2. The Function field should be set to ELAP. If either value is not correct, then select **Edit** and press [ENTER]. If both values are correct, select **Exit**, press [ENTER].

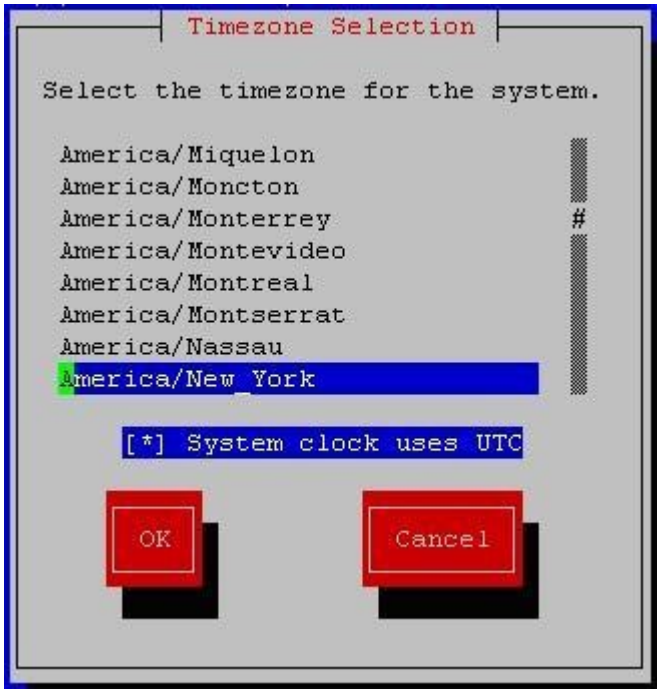
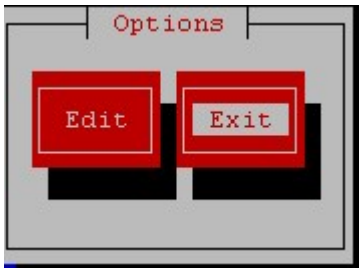
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STEP #	A	B	This procedure will perform the initial configuration required for ELAP installation. Note: Estimated time of completion is 15 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	
9.	☐	☐	**MPS X:** Using the arrow keys navigate to the “Time Zone” menu and press Enter. Select the “Edit” button and press Enter.	 

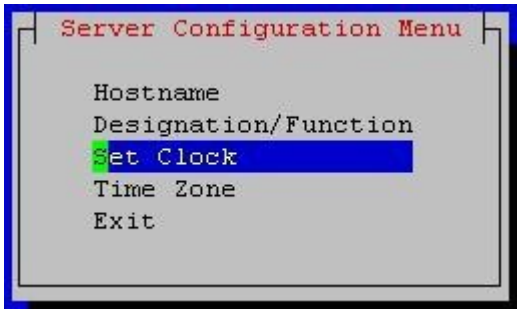
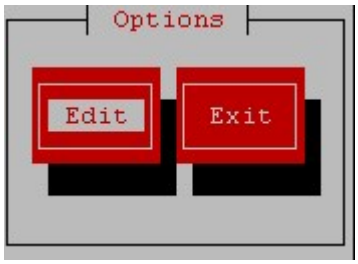
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Table 3-12 (Cont.) Procedure 8 PRE-INSTALL CONFIGURATION

STEP #	A	B	This procedure will perform the initial configuration required for ELAP installation. Note: Estimated time of completion is 15 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	
10.	☐	☐	**MPS X:** Using the arrow keys navigate to the appropriate "Time Zone" selection. Ensure that it is highlighted. Ensure the "System clock uses UTC" is set. If it is not set use the "Tab" key to highlight it and press the "Space Bar". Once the appropriate time zone is highlighted press the "Tab" key to highlight the "OK" button and press Enter. Using the "Tab" or arrow keys highlight the "Exit" button and press Enter.	 

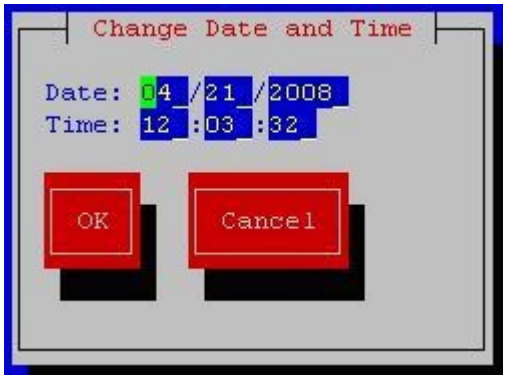
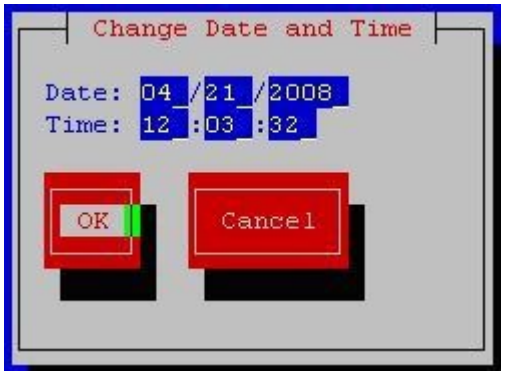
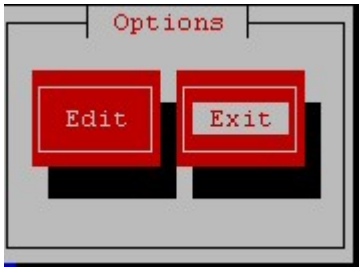
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Table 3-12 (Cont.) Procedure 8 PRE-INSTALL CONFIGURATION

STEP #	A	B	This procedure will perform the initial configuration required for ELAP installation. Note: Estimated time of completion is 15 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	
11.	☐	☐	**MPS X:** Using the arrow keys navigate to the appropriate "Set Clock" menu and press Enter. Using the "Tab" key highlight the "Edit" button and press Enter.	 

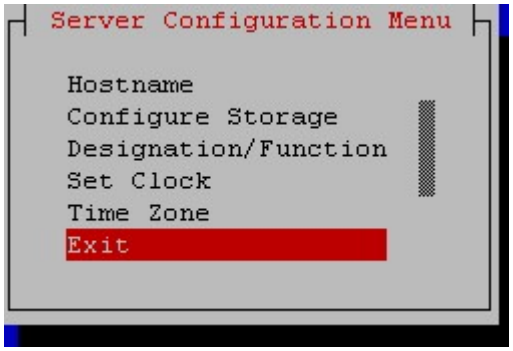
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Table 3-12 (Cont.) Procedure 8 PRE-INSTALL CONFIGURATION

STEP #	A	B	This procedure will perform the initial configuration required for ELAP installation. Note: Estimated time of completion is 15 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	
12.	☐	☐	**MPS X:** If the date and time is not same as the current date and time, set them using the “Tab” key to cycle between the fields. Using the “Tab” key navigate to the “OK” button and press Enter.	 
13.	☐	☐	**MPS X:** Using the “Tab” key navigate to the “Exit” button and press Enter.	

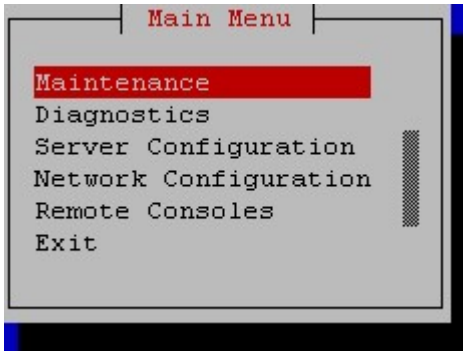
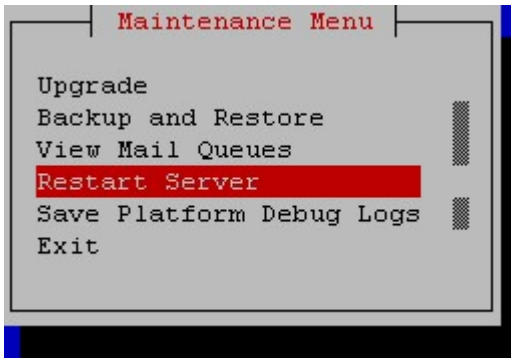
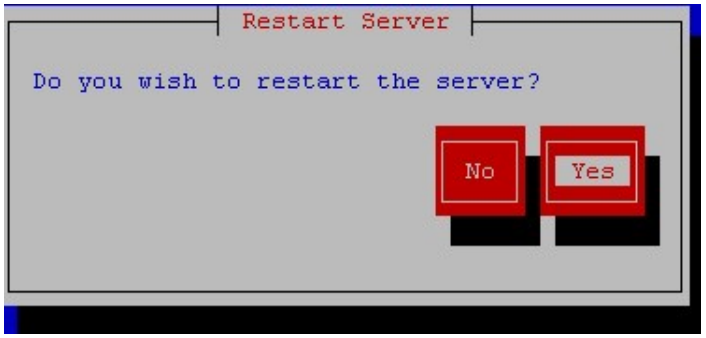
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Table 3-12 (Cont.) Procedure 8 PRE-INSTALL CONFIGURATION

STEP #	A	B	This procedure will perform the initial configuration required for ELAP installation. Note: Estimated time of completion is 15 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	
14.	☐	☐	**MPS X:** Exit the platcfg menu	

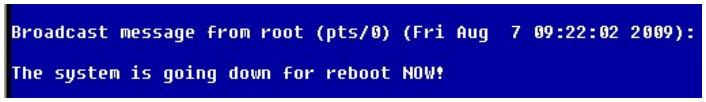
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Table 3-12 (Cont.) Procedure 8 PRE-INSTALL CONFIGURATION

STEP #	A	B	This procedure will perform the initial configuration required for ELAP installation. Note: Estimated time of completion is 15 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	
15.	☐	☐	**MPS X:** Select the menu options as indicated in the screen captures to the right in order to restart the server.	  

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Table 3-12 (Cont.) Procedure 8 PRE-INSTALL CONFIGURATION

STEP #	A	B	This procedure will perform the initial configuration required for ELAP installation. Note: Estimated time of completion is 15 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	
				
16.	☐	☐	**MPS X:** The system should reboot.	
17.	☐	☐	**MPS X:** Log in to the server as the user "root"	`console login: root password: <root_password>`

18.	☐	☐	**MPS X:** Perform syscheck.
			Inspect the output and ensure that no errors are present. If an error is present contact Oracle Customer Care for guidance.
				`# syscheck`
				`Running modules in class net...`
				`OK`
				`Running modules in class hardware...`
				`OK`
				`Running modules in class disk...`
				`OK`
				`Running modules in class system...`
				`OK`
				`Running modules in class proc...`
				`OK`
				`LOG LOCATION: /var/TKLC/log/syscheck/fail_log #`

19.	☐	☐	**MPS X:** Note down the timestamp in log.	Run the following command: `$ date`

This procedure is complete!

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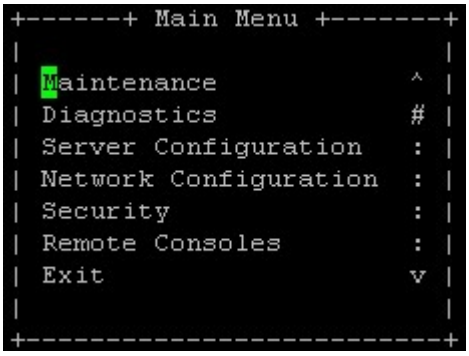
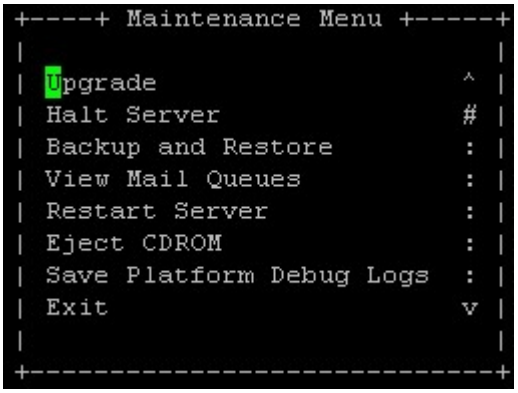
3.4.3 Procedure 9 INSTALL THE ELAP APPLICATION

Table 3-13 Procedure 9 INSTALL THE ELAP APPLICATION

STEP #	**This procedure installs the application on the 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 THE ORACLE TECHNICAL SERVICES AND ASK FOR ASSISTANCE.**	
1. □	**MPS A:** Log in as “admusr” user.	If not already logged in, then login as “admusr”: `consolelogin: admusr password: password`
2. □	**MPS A:** Put ISO image on ELAP server.	Use any of the following methods to put ELAP 11.1 ISO image on the ELAP server. • Perform ISO image generation from USB media using Appendix B • Copy ISO to /var/TKLC/upgrade directory. **Note:** To perform this step, the provisional IP of the ELAP server must be set via platcfg menu.
3. □	**MPS A:** Start platcfg utility.	`$sudo su - platcfg`

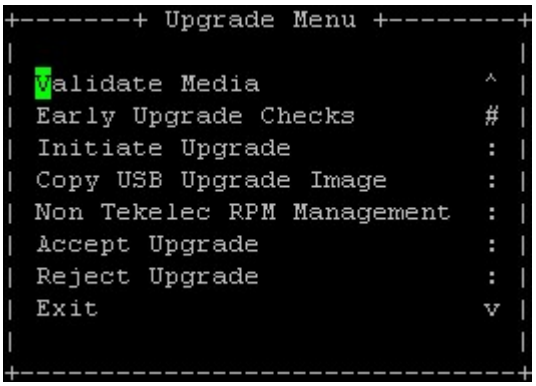
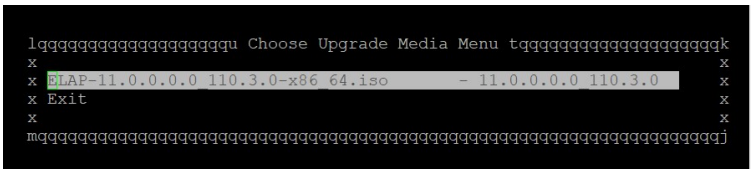
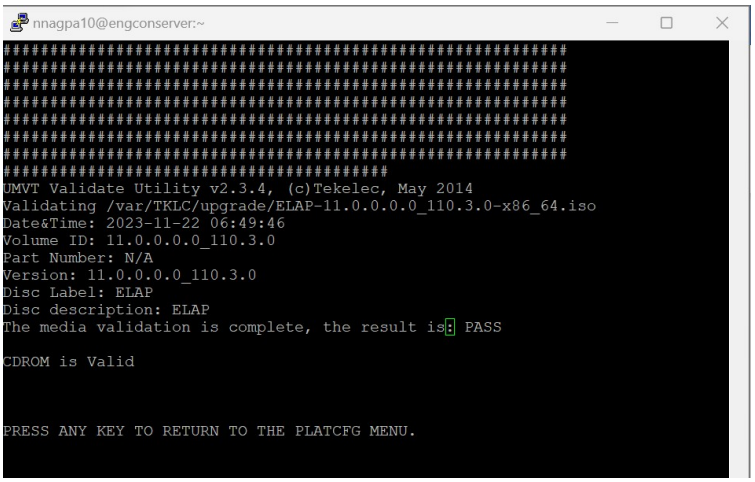
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Table 3-13 (Cont.) Procedure 9 INSTALL THE ELAP APPLICATION

STEP #	This procedure installs the application on the 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 THE ORACLE TECHNICAL SERVICES AND ASK FOR ASSISTANCE.	
4. 	**MPS A:** Select the Maintenance submenu.	The platcfg **Main Menu** appears. On the **Main Menu**, select **Maintenance** and press **[ENTER]**.  Select the **Upgrade** menu and press **[ENTER]**.  Select the **Validate media** menu and press **[ENTER]**.

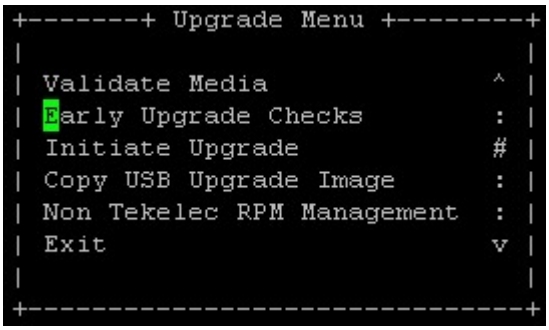
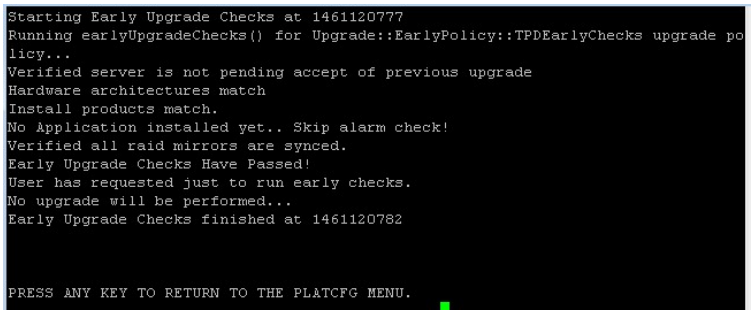
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Table 3-13 (Cont.) Procedure 9 INSTALL THE ELAP APPLICATION

STEP #	This procedure installs the application on the 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 THE ORACLE TECHNICAL SERVICES AND ASK FOR ASSISTANCE.	
		 Select the upgrade media to be validated and press **[ENTER]**.  **NOTE:** Output is dependent on target release.  **NOTE:** Output is dependent on target release. The media validation shall pass to proceed further. If media validation fails, user should remove the ELAP iso from /var/

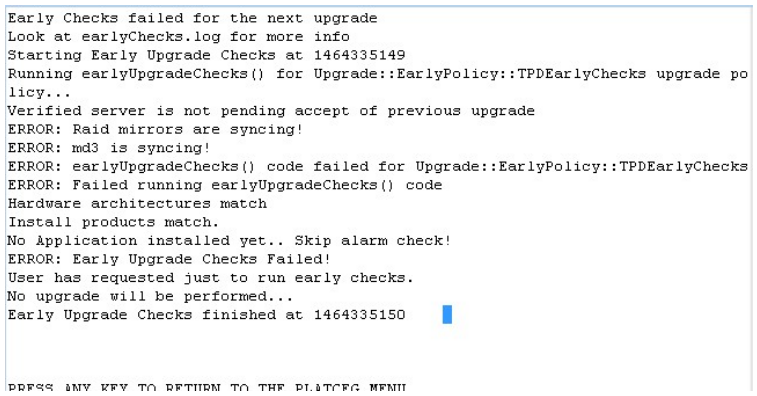
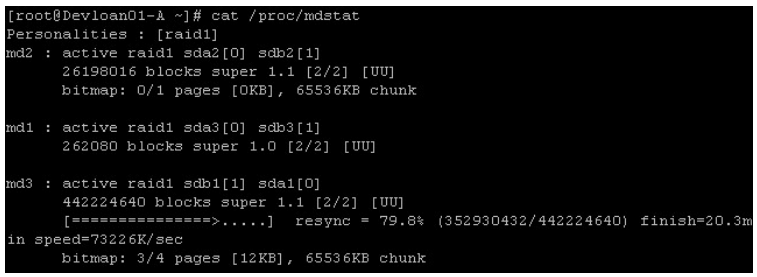
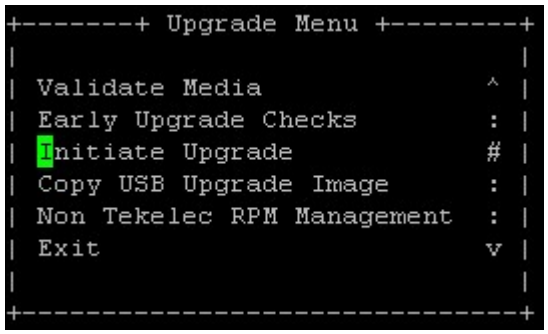
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Table 3-13 (Cont.) Procedure 9 INSTALL THE ELAP APPLICATION

STEP #	This procedure installs the application on the 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 THE ORACLE TECHNICAL SERVICES AND ASK FOR ASSISTANCE.	
		TKLC/upgrade path and copy the validated media iso on the same path again. Select the **Early Upgrade Checks** menu and press **[ENTER]**.  Early upgrade checks should be passed before upgrade is started.  If the Early Upgrade Checks fail due to the ongoing syncing of raid mirrors, then wait until the resync is completed and run the “Early Upgrade Checks” again.

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Table 3-13 (Cont.) Procedure 9 INSTALL THE ELAP APPLICATION

STEP #	This procedure installs the application on the 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 THE ORACLE TECHNICAL SERVICES AND ASK FOR ASSISTANCE.	
		  Contact My Oracle Support by following the instructions on the front page or the instructions in the Appendix G if the early Upgrade checks fail due to any other reason. Select the **Initiate Upgrade** menu and press **[ENTER]**. 

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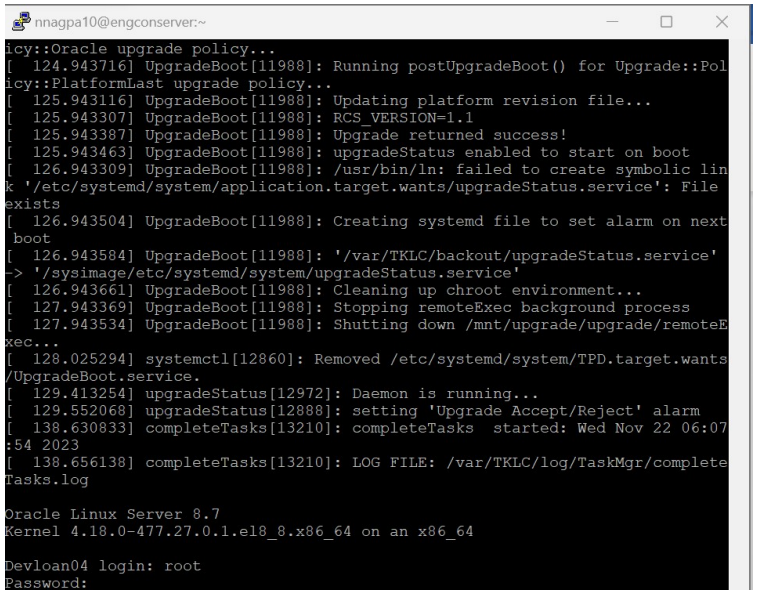
Table 3-13 (Cont.) Procedure 9 INSTALL THE ELAP APPLICATION

STEP #	**This procedure installs the application on the 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 THE ORACLE TECHNICAL SERVICES AND ASK FOR ASSISTANCE.**	

5.
▯
	MPS A: Select the Incremental upgrade Media.	The screen displays a message that it is searching for upgrade media. When the upgrade media is found, an Upgrade Media selection menu appears similar to the example below. Select the desired upgrade media and press **[ENTER]**.
		
		`lqqqqqqqqqqqqqqqqqqqqu Choose Upgrade Media Menu tqqqqqqqqqqqqqqqqqqqqqk`
		`x                                                                      x`
		`x ELAP-11.0.0.0.0_110.3.0-x86_64.iso        - 11.0.0.0.0_110.3.0      x`
		`x Exit                                                                 x`
		`x                                                                      x`
		`mqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqj`
		
		NOTE: Output is dependent on target release.
		Here first one is the TPD iso. Second iso is for ELAP application.
		The screen displays the output like following, indicating that the incremental upgrade software is first running the upgrade checks, and then proceeding with the upgrade.
		
		`No Application installed yet.. Skip alarm check!`
		`Verified all raid mirrors are synced.`
		`Early Upgrade Checks Have Passed!`
		`Early Upgrade Checks finished at 1447429031`
		`Initializing upgrade information...`

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Table 3-13 (Cont.) Procedure 9 INSTALL THE ELAP APPLICATION

STEP #	This procedure installs the application on the 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 THE ORACLE TECHNICAL SERVICES AND ASK FOR ASSISTANCE.	
6. 	**MPS A:** Press [**ENTER**] to start installation. Many informational messages will come across the terminal screen as the installation proceeds. Finally, after successful completion of ELAP install, the server should reboot, and login prompt should appear	After the final reboot, the screen displays the login prompt as in the example below. 

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Table 3-13 (Cont.) Procedure 9 INSTALL THE ELAP APPLICATION

STEP #	This procedure installs the application on the 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 THE ORACLE TECHNICAL SERVICES AND ASK FOR ASSISTANCE.	

7.
 	
	MPS A: Verify that installation is complete, and no error occurred during installation.	Switch to root user to grep the errors occurred during installation.
		
		`$su -`
		`Password: <root_password>`
		
		`$ grep "Upgrade returned success" /var/TKLC/log/upgrade/upgrade.log`
		`1461121282::Upgrade returned success!`
		`$ grep -i error /var/TKLC/log/upgrade/upgrade.log`
		
		Check the output of the upgrade log, contact the My Oracle Support by following the instructions in Appendix G, if the output contains any errors beside the following:
		Variable and RPMs that might contain the word error in them.
		All those messages are expected, and therefore aren't considered errors.
		`$grep -i error /var/TKLC/log/upgrade/ugwrap.log`
		Check the output of the ugwrap log. If the output contains any errors, contact the My Oracle Support by following the instructions in Appendix G.
		NOTE: After the ELAP is installation is complete, the below mentioned logging is observed on ELAP CLI. These errors can be ignored, and they will not be observed, once the key exchange is performed successfully.
		`# drbd drbd0/0 drbd0: ambiguous node id: meta-data: 0, config: 1 WARN: stdin/stdout is not a TTY; using /dev/console.....`
		`**********************************************************`
		DRBD's startup script waits for the peer node(s) to appear. If this node was already a degraded cluster before the reboot, the timeout is 5 seconds. [degr-wfc-timeout] - If the peer was available before the reboot, the timeout is 10 seconds. [wfc-timeout]
		`(These values are for resource 'drbd0'; 0 sec -> wait forever) To abort waiting enter 'yes' [ 10]:`
		`# drbd drbd0: State change failed: Can not disconnect a StandAlone device`
		`# drbd drbd0: State change failed: Can not disconnect a StandAlone device # drbd drbd0: State change failed: Can not disconnect a StandAlone device`
		`'drbd drbd0 tcp:unknown-b: Closing unexpected connection from 192.168.61.104'`

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Table 3-13 (Cont.) Procedure 9 INSTALL THE ELAP APPLICATION

STEP #	This procedure installs the application on the 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 THE ORACLE TECHNICAL SERVICES AND ASK FOR ASSISTANCE.	

		`& 'drbd drbd0 tcp:unknown-b: Closing unexpected connection from 192.168.61.105'`
		NOTE: After ELAP is installation is complete, gsConnect.pl core is observed on the server which can be ignored and deleted from the server.
		`$ls –lrt /var/TKLC/core`
		`-rw------- 1 root root 49807360 Jul 26 01:52 core.gsConnect.pl.7030 -rw-r----- 1 root root 2248 Jul 26 01:53 core.gsConnect.pl.7030.bt`
		Delete core file using below command:
		`$ rm /var/TKLC/core/ core.gsConnect*`

8 □	MPS X: Delete known_hosts files	`# rm /root/.ssh/known_hosts` `# rm /home/admusr/.ssh/known_hosts`

9.
□
	MPS A: Log in as “elapdev” user.	If not already logged in, then login as “elapdev”:
		`consolelogin: elapdev`
		`password: password`

10. □	**MPS A: Switch to root user**	`#su -` `Password:password`

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Table 3-13 (Cont.) Procedure 9 INSTALL THE ELAP APPLICATION

STEP #	This procedure installs the application on the 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 THE ORACLE TECHNICAL SERVICES AND ASK FOR ASSISTANCE.	
11 □	**MPS A:** Verify ELAP release.	rpm -qi TKLCelap Name : TKLCelap Version : 5.0.87 Release : 11.1.0.0.0_111.6.0 Architecture: x86_64 Install Date: Fri 09 Oct 2026 03:01:14 AM EDT Group : Development/Build Size : 178295180 License : Oracle 2004, 2026 Signature : (none) Source RPM : TKLCelap-5.0.87-11.1.0.0.0_111.6.0.src.rpm Build Date : Fri 09 Oct 2026 02:18:47 AM EDT Build Host : elap-dev-tpd-150-31-0 Relocations : (not relocatable) Packager : <@oracle.com> Vendor : Oracle URL : http://www.oracle.com/ Summary : Oracle Communications ELAP Package Description : This is the Oracle Communications EAGLE LNP Application Processor(ELAP) package. The package installs ELAP software. Eagle LNP Application Processor (ELAP) provides REALLY INCREDIBLE Database (RIDB). ELAP provides the LNP feature.

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Table 3-13 (Cont.) Procedure 9 INSTALL THE ELAP APPLICATION

STEP #	This procedure installs the application on the 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 THE ORACLE TECHNICAL SERVICES AND ASK FOR ASSISTANCE.	

12. □	**MPS A and B:** Update ssh_config to disable MD5 and MAC algorithm for security	Perform following steps to disable unsecure algorithm for ssh:
		
		1)
		`$ grep "MACs hmac-md5,hmac-md5-96," /etc/ssh/ssh_config`
		`If no output is displayed for above command skip this step and go to 2nd part of this step else continue to next command.`
		`$ rcstool co /etc/ssh/ssh_config`
		`$ sed -i '/MACs hmac-md5,hmac-md5-96,hmac-sha1-96/d' /etc/ssh/ssh_config`
		`$ rcstool ci /etc/ssh/ssh_config`
		`$ systemctl restart sshd`
		
		Now do the same for mac.
		
		2)
		`$ grep "MACs hmac-sha2-256,hmac-sha2-512" /etc/ssh/sshd_config`
		`If no output is displayed for above command continue to next command else skip this step and go to next step of this procedure.`
		`$ rcstool co /etc/ssh/sshd_config`
		`$ sed -i -e '$ a MACs hmac-sha2-256,hmac-sha2-512' /etc/ssh/sshd_config`
		`$ rcstool ci /etc/ssh/sshd_config`
		`$ systemctl restart sshd`

13. □	**MPS A :** Procedure complete.	This procedure is complete.

This procedure is complete!

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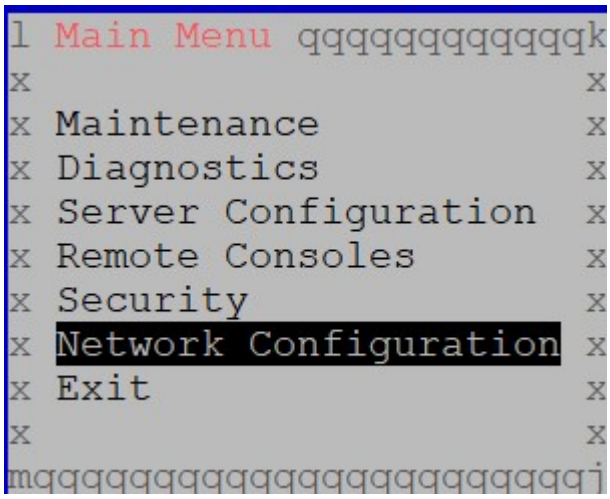
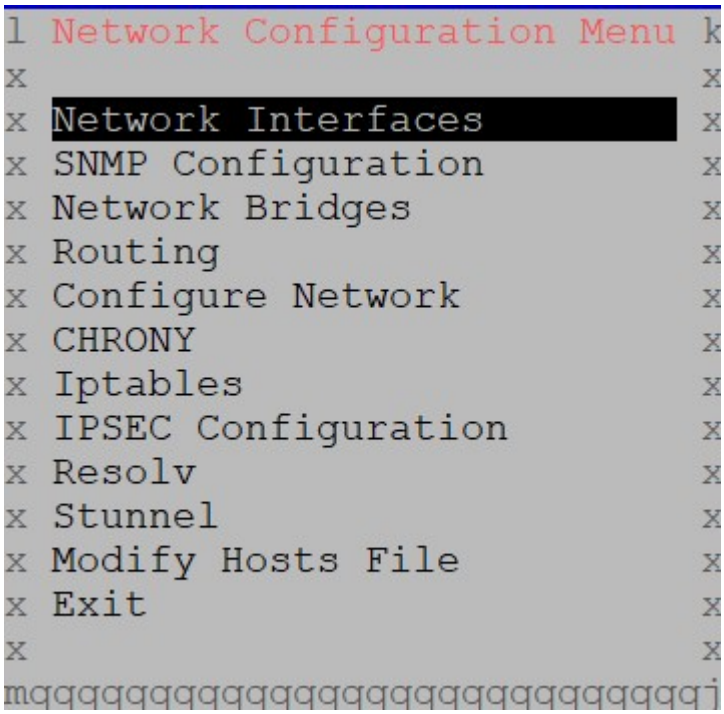
3.4.4 Procedure 10 CONFIGURE NETWORK'INTERFACE USING PLATCFG UTILITY

Table 3-14 Procedure 10 CONFIGURE NETWORK'INTERFACE USING PLATCFG UTILITY

STEP #	B	This procedure configures the network interfaces and makes the E5APPB servers accessible to the network. Estimated time: 5 minutes	
1.	☐	**MPS B:** Login as admusr.	`login: admusr` `Password: <admusr_password>`
2.	☐	**MPS B:** Login to platcfg utility	`$ sudo su - platcfg`

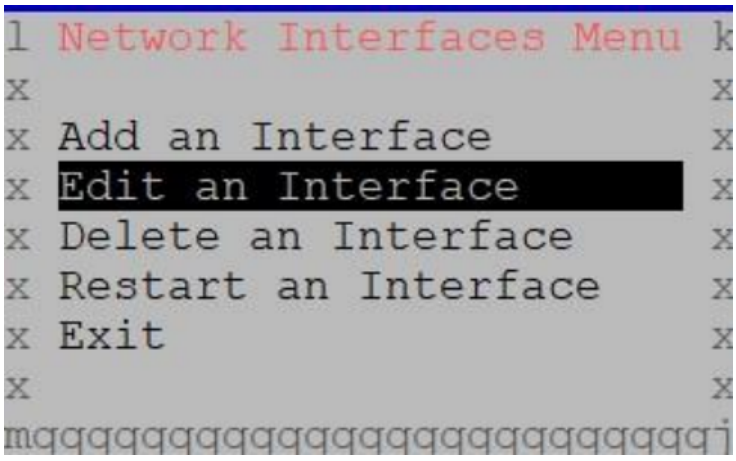
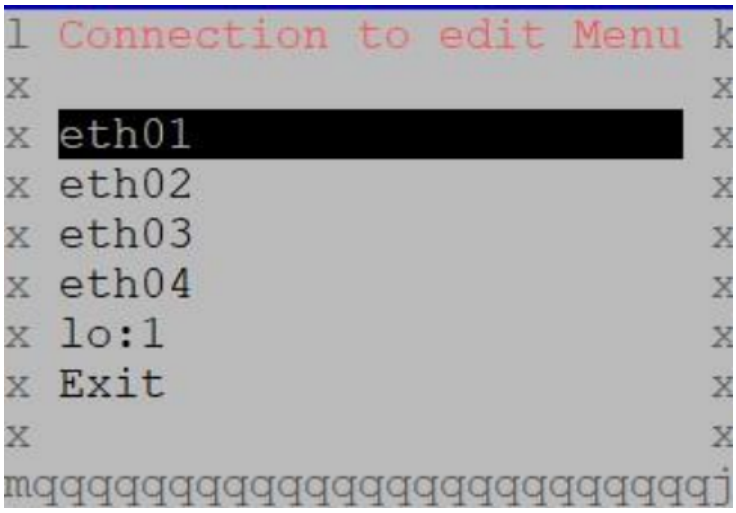
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Table 3-14 (Cont.) Procedure 10 CONFIGURE NETWORK'INTERFACE USING PLATCFG UTILITY

STEP #	B	This procedure configures the network interfaces and makes the E5APPB servers accessible to the network. Estimated time: 5 minutes	
3.	☐	**MPS B:** Select Interface Options	Go to network configuration and select network interfaces.   Select edit an interface as given in below snapshot.

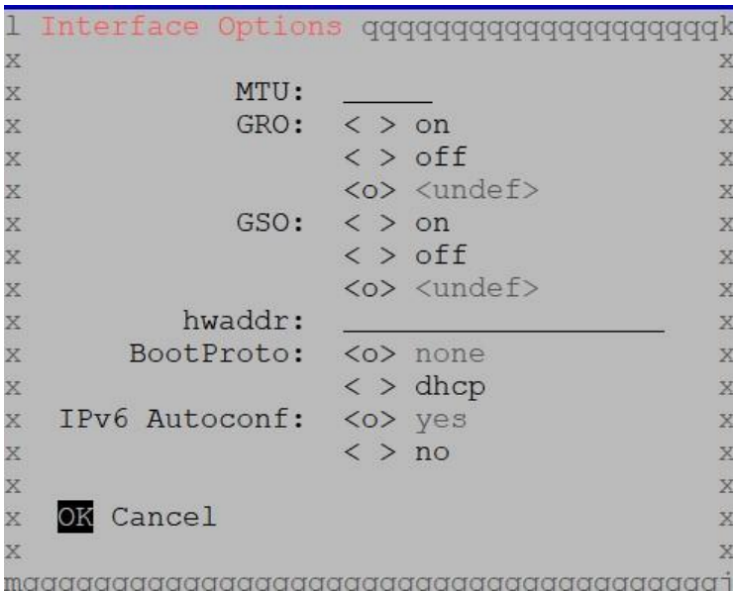
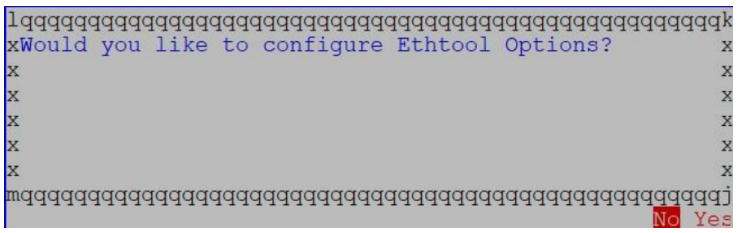
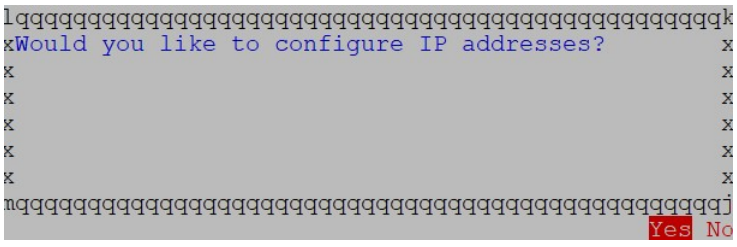
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Table 3-14 (Cont.) Procedure 10 CONFIGURE NETWORK'INTERFACE USING PLATCFG UTILITY

STEP #	B	This procedure configures the network interfaces and makes the E5APPB servers accessible to the network. Estimated time: 5 minutes	
			 Choose the interface and follow the snapshots further as given below: 

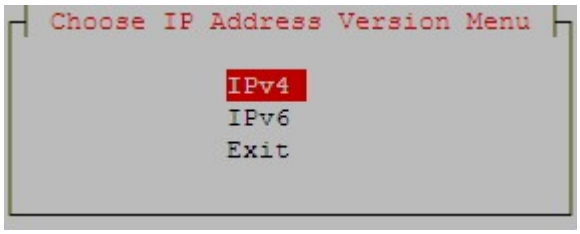
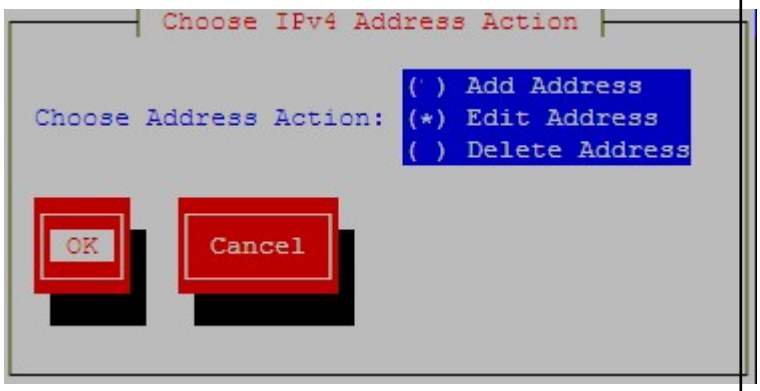
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Table 3-14 (Cont.) Procedure 10 CONFIGURE NETWORK'INTERFACE USING PLATCFG UTILITY

STEP #	B	This procedure configures the network interfaces and makes the E5APPB servers accessible to the network. Estimated time: 5 minutes	
			  

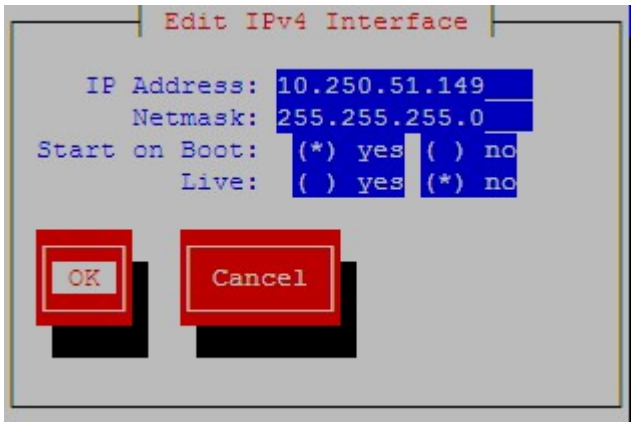
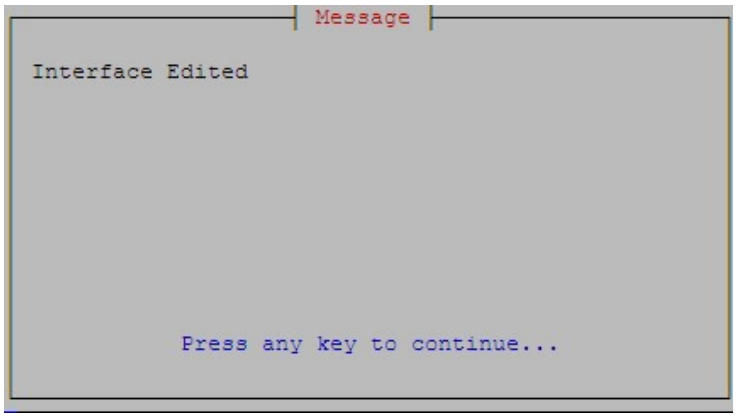
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Table 3-14 (Cont.) Procedure 10 CONFIGURE NETWORK'INTERFACE USING PLATCFG UTILITY

STEP #	B	This procedure configures the network interfaces and makes the E5APPB servers accessible to the network. Estimated time: 5 minutes	
			 

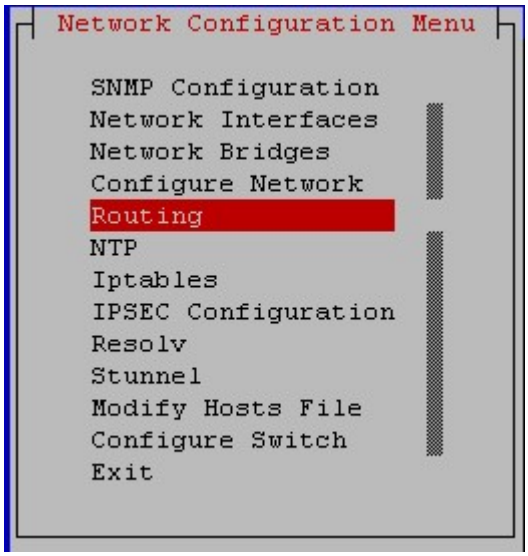
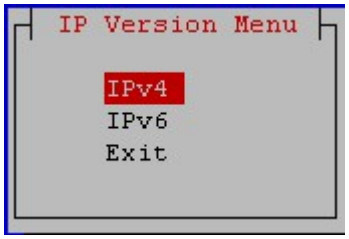
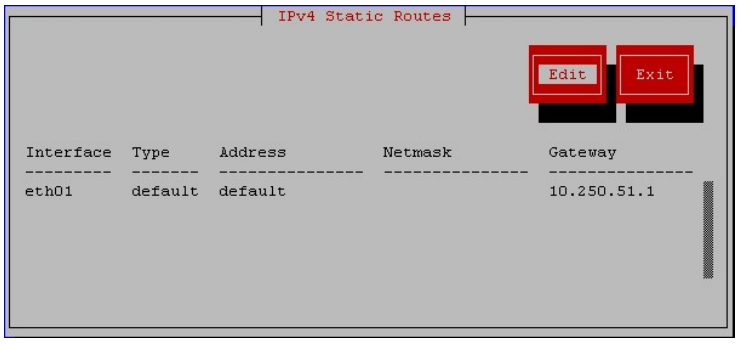
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Table 3-14 (Cont.) Procedure 10 CONFIGURE NETWORK'INTERFACE USING PLATCFG UTILITY

STEP #	B	This procedure configures the network interfaces and makes the E5APPB servers accessible to the network. Estimated time: 5 minutes	
4.	☐	**MPS B:** Input the Interface Address	  Select "Exit" until you exit from the platcfg utility.

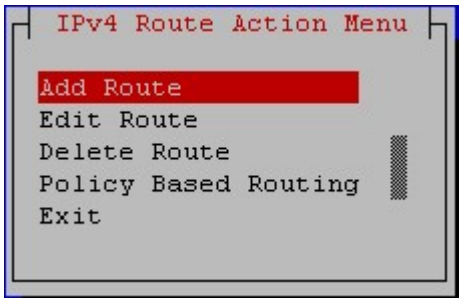
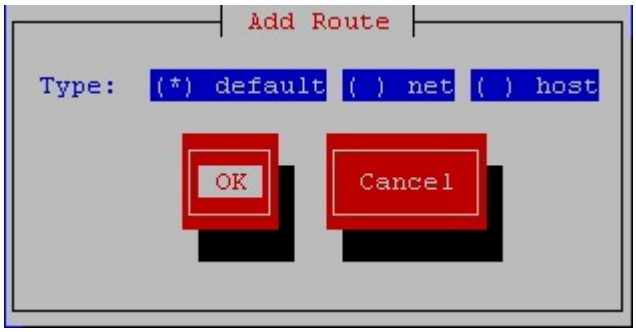
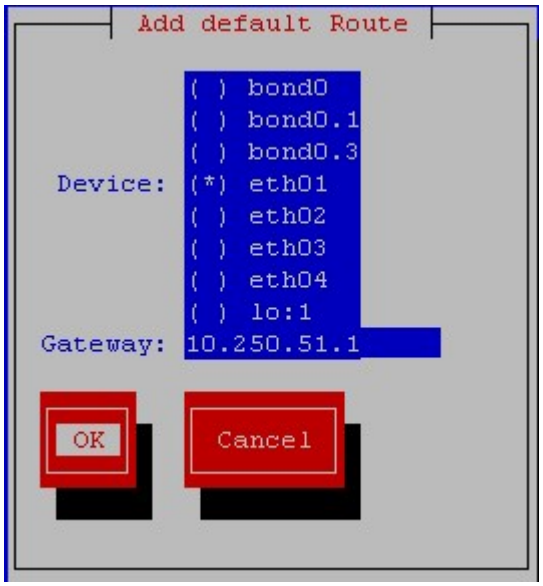
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Table 3-14 (Cont.) Procedure 10 CONFIGURE NETWORK'INTERFACE USING PLATCFG UTILITY

STEP #	B	This procedure configures the network interfaces and makes the E5APPB servers accessible to the network. Estimated time: 5 minutes	
5.	☐	**MPS B:** Configure default route.	  

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Table 3-14 (Cont.) Procedure 10 CONFIGURE NETWORK'INTERFACE USING PLATCFG UTILITY

STEP #	B	This procedure configures the network interfaces and makes the E5APPB servers accessible to the network. Estimated time: 5 minutes
		  

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Table 3-14 (Cont.) Procedure 10 CONFIGURE NETWORK'INTERFACE USING PLATCFG UTILITY

STEP #	B	This procedure configures the network interfaces and makes the E5APPB servers accessible to the network. Estimated time: 5 minutes	
			 Select "Exit" until you exit from the platcfg utility.
6.	☐	**MPS B:** Note down the timestamp in log.	Run the following command: `$ date`

3.5 Initial Configuration on APPD

This procedure sets the ELAP initial configuration parameters and prepares the new MPS-A and MPS-B servers for network access.

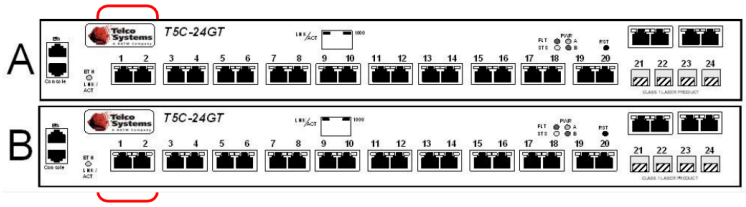
If exiting switches are used then the provisioning should be stopped at this point to avoid data loss. The anticipated down time for provisioning is expected to last approximately 5 hours.

> **Note**
>
> After IPM, switch configuration should be done before initial configuration. Follow *ELAP Incremental Upgrade/Installation guide* for ELAP 10.2, Procedure 8 (CGBU_046632) for switch configuration steps.

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3.5.1 Procedure 11 Switch Configuration

Table 3-15 Procedure 11 Switch Configuration

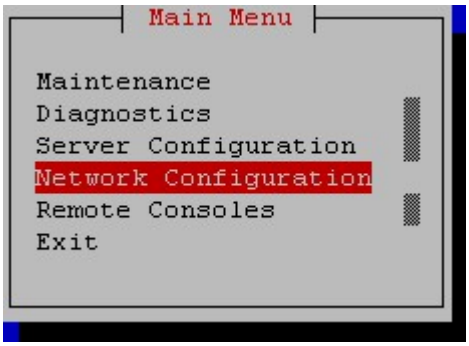
STEP #	This procedure Configures the Switches of a newly installed ELAP Server Pair. Check off (✓)each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT THE ORACLE TECHNICAL SERVICES AND ASK FOR ASSISTANCE.	
1. ☐	Make the cross- over cable connections.	**NOTE: THIS IS IMPORTANT** CONNECT the LAG cable from Port 1 of Switch1A to Port 1 of Switch1B. DISCONNECT the LAG cable from Port 2 of Switch1A to Port 2 of Switch1B.  **NOTE:** The switch configuration should only be attempted by a skilled technician. All uplinks should be removed while switch configuration. There should not be any loop in the switches during their configuration.
2. ☐	**MPS A:** Console login.	Login using serial console. `consolelogin: root password: password`

3. ☐	**MPS A:** Start services for switch configuration	Change the startup information for tftp:
		`# chkconfig tftp on`
		Change the startup information for xinetd:
		`# chkconfig xinetd on`
		Start xinetd:
		`# service xinetd start`
		Start and Enable tftp service:
		`#systemctl start tftp`
		`#systemctl enable tftp`
		Check if both xinetd and tftp are up and running:
		`#service status xinetd tftp`

4. ☐	**MPS A:** Verify the bond0 configuration.	Verify that the eth03 is the default primary port of the bond0: `# cat /proc/net/bonding/bond0 | grep "Currently Active Slave" Currently Active Slave: eth03`

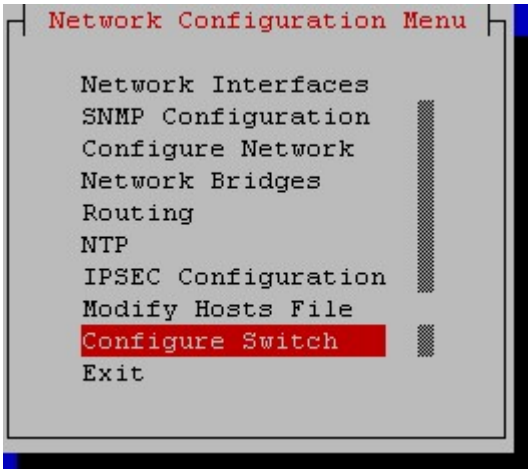
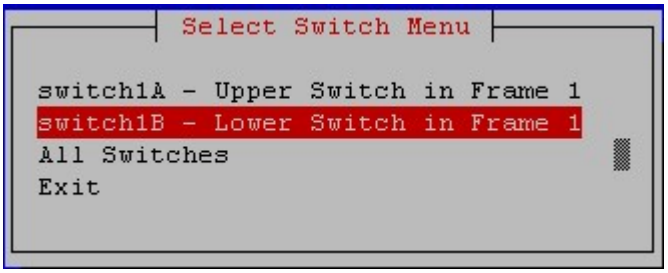
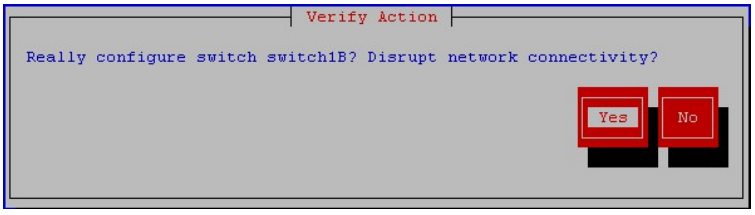
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Table 3-15 (Cont.) Procedure 11 Switch Configuration

STEP #	This procedure Configures the Switches of a newly installed ELAP Server Pair. Check off (✓)each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT THE ORACLE TECHNICAL SERVICES AND ASK FOR ASSISTANCE.	
5. □	**MPS A:** Set the permissions for BiNOS-T5CL3_24G-G_v8.6.R6.2.bin	Change the permissions of BinOS file to 644 # chmod 644 /var/TKLC/switchconfig/BiNOS-T5CL3_24G-G_v8.6.R6.2.bin Verify the permission of the file # ls -l /var/TKLC/switchconfig total 4432 -rw-r--r-- 1 root root 4537660 Nov 10 07:26 BiNOS-T5CL3_24GG_v8.6.R6.2.bin
6. □	**MPS A:** Start platcfg utility.	# su - platcfg
7. □	**MPS A:** Navigate to the Network Configuration Menu.	On the platcfg Main Menu, select Network Configuration and press [ENTER]. 

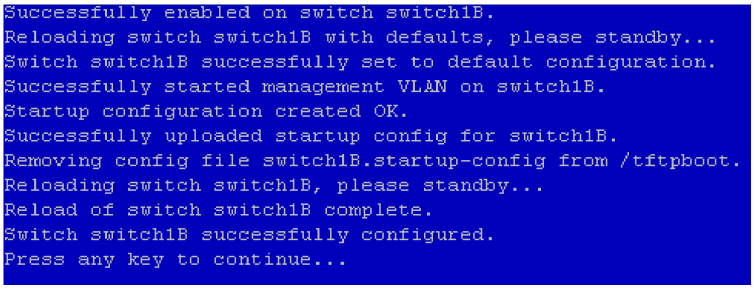
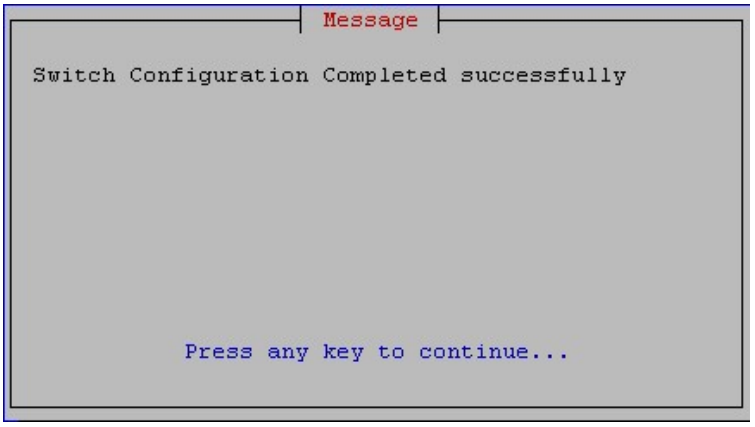
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Table 3-15 (Cont.) Procedure 11 Switch Configuration

STEP #	This procedure Configures the Switches of a newly installed ELAP Server Pair. Check off (✓)each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT THE ORACLE TECHNICAL SERVICES AND ASK FOR ASSISTANCE.	
8. ☐	**MPS A:** Navigate to the Configure Switch Menu.	On the Network Configuration menu, select Configure Switch and press [ENTER]. 
9. ☐	**MPS A:** Select to configure “switch1B – Lower Switch in Frame 1” and press Enter.	On the Select Switch Menu, select “switch1B – Lower Switch in Frame 1” and press [ENTER]. 
10. ☐	**MPS A:** Confirm Switch Configuration.	Select Yes and press [ENTER] to configure Switch 1B. 

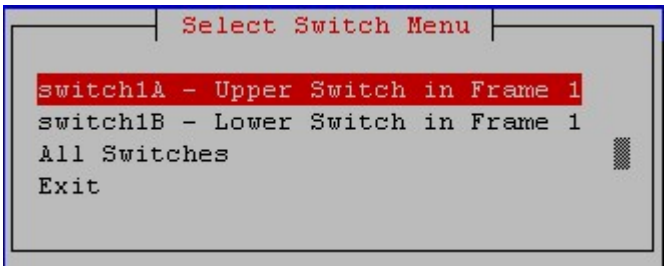
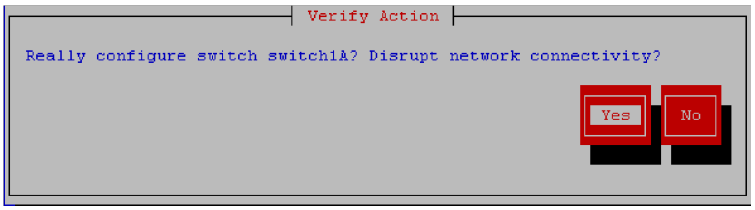
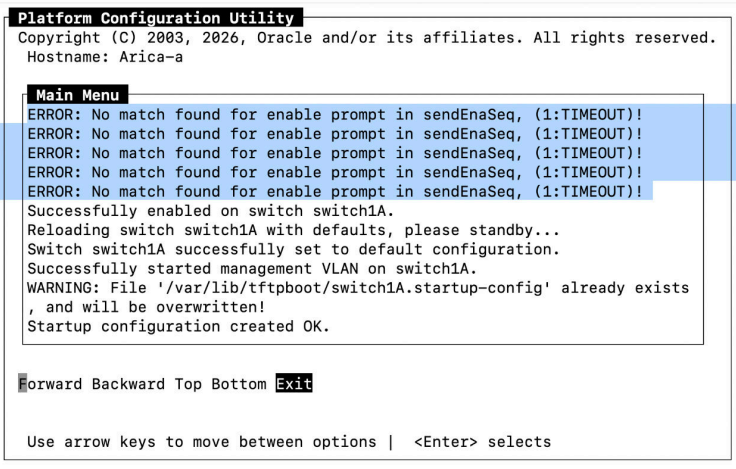
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Table 3-15 (Cont.) Procedure 11 Switch Configuration

STEP #	This procedure Configures the Switches of a newly installed ELAP Server Pair. Check off (✓)each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT THE ORACLE TECHNICAL SERVICES AND ASK FOR ASSISTANCE.	
11. 	**MPS A:** Switch Configuration Screen.	Configuring the switch takes about 10 minutes, once complete press [ENTER] to continue. 
12. 	**MPS A:** Switch Configuration completion screen.	The switch configuration completion screen is displayed. Press [ENTER] to continue. 

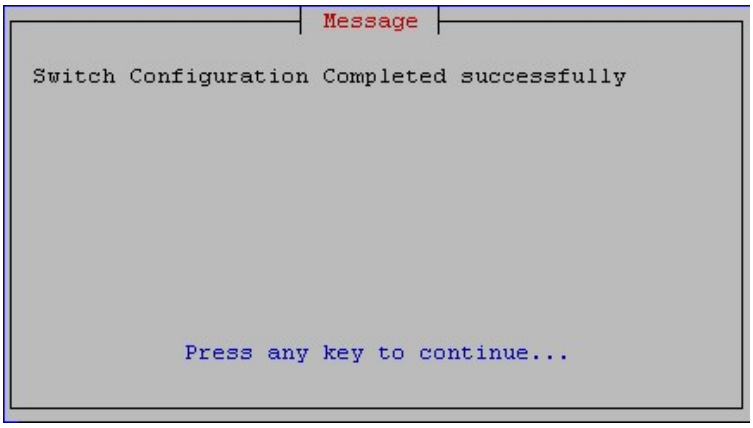
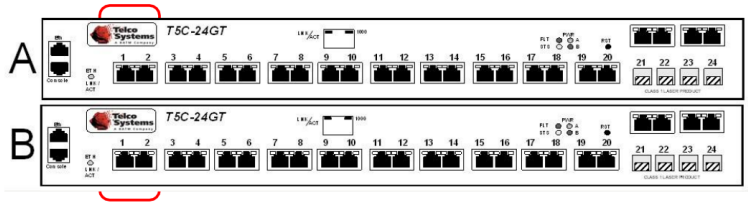
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Table 3-15 (Cont.) Procedure 11 Switch Configuration

STEP #	This procedure Configures the Switches of a newly installed ELAP Server Pair. Check off (✓)each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT THE ORACLE TECHNICAL SERVICES AND ASK FOR ASSISTANCE.	
13. □	**MPS A:** Select to configure “switch1A – Upper Switch in Frame 1” and press Enter.	 On the Select Switch Menu, select “switch1A – Upper Switch in Frame 1” and press [ENTER].
14. □	**MPS A:** Confirm Switch Configuration.	Select Yes and press [ENTER] to configure Switch 1A. 
15. □	**MPS A:** Switch Configuration Screen.	 Configuring the switch takes about 10 minutes. Once complete, press [ENTER] to continue.

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Table 3-15 (Cont.) Procedure 11 Switch Configuration

STEP #	This procedure Configures the Switches of a newly installed ELAP Server Pair. Check off (✓)each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT THE ORACLE TECHNICAL SERVICES AND ASK FOR ASSISTANCE.	
16. 	**MPS A:** Switch Configuration completion screen.	 The switch configuration completion screen is displayed. Press [ENTER] to continue.
17. 	**MPS A:** Exit out of platcfg.	`Select Exit and press [ENTER] to return to the Network Configuration Menu. Select Exit and press [ENTER] to return to the Main Menu.` `Select Exit and press [ENTER] to exit out of platcfg.`
18. 	**MPS A:** Connect the cross-over cable from Port 2 of Switch1A to Port 2 of Switch1B at this time.	Make sure that the LAG cable is connected from Port 1 of Switch1A to Port 1 of Switch1B. CONNECT the LAG cable from Port 2 of Switch1A to Port 2 of Switch1B. 

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Table 3-15 (Cont.) Procedure 11 Switch Configuration

STEP #	This procedure Configures the Switches of a newly installed ELAP Server Pair. Check off (✓)each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT THE ORACLE TECHNICAL SERVICES AND ASK FOR ASSISTANCE.	

19. □	**MPS A:** Stop services after switch configuration.	Change the startup information for tftp:
		
		`# chkconfig tftp off`
		`Change the startup information for xinetd:`
		`# chkconfig xinetd off`
		`Stop xinetd`
		`# service xinetd stop`

20. □	Procedure complete.	This procedure is complete.

3.5.2 Procedure 12 CONFIGURE CHRONY SERVERS

Table 3-16 Procedure 12 CONFIGURE CHRONY SERVERS

STEP #	This procedure configures the NTP server setting for both servers. Note: Estimated time of completion is 5 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	
1. □	**MPS A:** Switch user to elapconfig.	`# su - elapconfig`
2. □	**MPS A:** Press Return to continue.	**CAUTION:** This is the first login of the text user interface. Please review the following checklist before continuing. Failure to enter complete and accurate information at this time will have unpredictable results. 1. The mate MPS servers (MPS A and MPS B) must be powered on. 2. "Initial Platform Manufacture" for the mate MPS servers must be complete. 3. The sync network between the mate MPS servers must be operational. 4. You must have the correct password for the elapdev user on the mate MPS server. Press return to continue...

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Table 3-16 (Cont.) Procedure 12 CONFIGURE CHRONY SERVERS

STEP #	This procedure configures the NTP server setting for both servers. Note: Estimated time of completion is 5 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	
3. ☐	**MPS A:** Enter elapdev and root password when prompted.	Password of elapdev: Could not get authorized keys file from remote (mate). Maybe it does not exist. Continuing... ssh is working correctly. Password of root: Could not get authorized keys file from remote (mate). Maybe it does not exist. Continuing... ssh is working correctly. Password of admusr: Could not get authorized keys file from remote (mate). Maybe it does not exist. Continuing... ssh is working correctly. Password of root: ssh is working correctly. Performing DRBD configuration. Creating the DB Data directory. Moving DB files to the DRBD Volume. Changing ownership to mysql. Updating my.cnf. Restarting mysqld. Building the initial database on side A. Checking if EuiDB database exists: No preexisting EuiDB database was detected. Creating EuiDB database. Creating Alarms database. Creating Ulog database. Creating EuiDB, Alarms and Ulog tables. FIPS integrity verification test failed. FIPS integrity verification test failed. /bin/chmod: cannot access `/var/TKLC/elap/drbd/mysql/data/EuiDB': No such file or directory

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Table 3-16 (Cont.) Procedure 12 CONFIGURE CHRONY SERVERS

STEP #	This procedure configures the NTP server setting for both servers. Note: Estimated time of completion is 5 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	
4. ☐	**MPS A:** Select choice 7, Configure NTP Server Menu.	/-----ELAP Configuration Menu----------\ /----------\ | 1 | Display Configuration | |----|----------| | 2 | Configure Network Interfaces Menu | |----|----------| | 3 | Set Time Zone | |----|----------| | 4 | Exchange Secure Shell Keys | |----|----------| | 5 | Change Password | |----|----------| | 6 | Platform Menu | |----|----------| | 7 | Configure NTP Server | |----|----------| | 8 | Mate Disaster Recovery | |----|----------| | e | Exit | \----------/ Enter Choice: 7
5. ☐	**MPS A:** The Configure NTP Server Menu is displayed. Select choice 2, Add External NTP Server.	/-----ELAP Configure NTP Server Menu-\ /----------\ | 1 | Display External NTP Server | |----|----------| | 2 | Add External NTP Server | |----|----------| | 3 | Remove External NTP Server | |----|----------| | e | Exit | \----------/ Enter Choice: 2 Are you sure you wish to add new NTP Server? [N]: Y Enter the ELAP NTP Server IP Address: <NTP_server_IP_Addr> External NTP Server [<NTP_server_IP_Addr>] has been added. Press return to continue...

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Table 3-16 (Cont.) Procedure 12 CONFIGURE CHRONY SERVERS

STEP #	This procedure configures the NTP server setting for both servers. Note: Estimated time of completion is 5 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	
6. □	**MPS A:** The ELAP Configure NTP Server Menu is displayed. Enter choice 1, Display External NTP Server.	/-----ELAP Configure NTP Server Menu-\ /--------------------------------------\ | 1 | Display External NTP Server | |----|---------------------------------| | 2 | Add External NTP Server | |----|---------------------------------| | 3 | Remove External NTP Server | |----|---------------------------------| | e | Exit | \--------------------------------------/ Enter Choice: 1 chronyserver1 <NTP_server_IP_Addr> Press return to continue...
7. □	**MPS A:** The ELAP Configure NTP Server Menu is displayed. Select choice, Exit. If more Chrony servers are to be added, then repeat steps 1 to 6.	/-----ELAP Configure NTP Server Menu-\ /--------------------------------------\ | 1 | Display External NTP Server | |----|---------------------------------| | 2 | Add External NTP Server | |----|---------------------------------| | 3 | Remove External NTP Server | |----|---------------------------------| | e | Exit | \--------------------------------------/ Enter Choice: e

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Table 3-16 (Cont.) Procedure 12 CONFIGURE CHRONY SERVERS

STEP #	This procedure configures the NTP server setting for both servers. Note: Estimated time of completion is 5 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	

8.
□
	MPS A: Run the following command.
	Note: The "chronyc ntpdata" command works after the servers have been assigned with an IP. Hence, steps 8 and 9 works only after the network configuration is done.
		`# chronyc ntpdata`
		`Remote address : 10.75.124.27 (0A4B7C1B) Remote port : 123`
		`Local address : 10.75.141.11 (0A4B8D0B)`
		`Leap status : Normal Version : 4`
		`Mode : Server`
		`Stratum : 4`
		`Poll interval : 10 (1024 seconds)`
		`Precision : -19 (0.000001907 seconds)`
		`Root delay : 0.045807 seconds`
		`Root dispersion : 0.016266 seconds`
		`Reference ID : 0A4B7CF6 ()`
		`Reference time : Tue Jan 02 10:39:12 2024`
		
		`Offset : -0.000049386 seconds`
		`Peer delay : 0.000802394 seconds`
		`Peer dispersion : 0.000001940 seconds`
		`Response time : 0.000062915 seconds`
		`Jitter asymmetry: -0.50`
		`NTP tests : 111 111 1111`
		`Interleaved : No`
		`Authenticated : No`
		`TX timestamping : Kernel`
		`RX timestamping : Kernel`
		`Total TX : 4193`
		`Total RX : 4193`
		`Total valid RX : 4193`
		
		Make sure that delay and offset is zero. If delay and offset is not zero, follow step 9 Otherwise skip step 9.

9.
□
	MPS A: Run the following command.	`# systemctl stop chronyd`
		`# systemctl start chronyd`
		`# systemctl enable chronyd`
		`# chronyc makestep`

10. □	**MPS A**: Note down the timestamp in log.	Run the following command: `$ date`

This procedure is complete!

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3.5.3 Procedure 13 INITIAL NETWORK CONFIGURATION

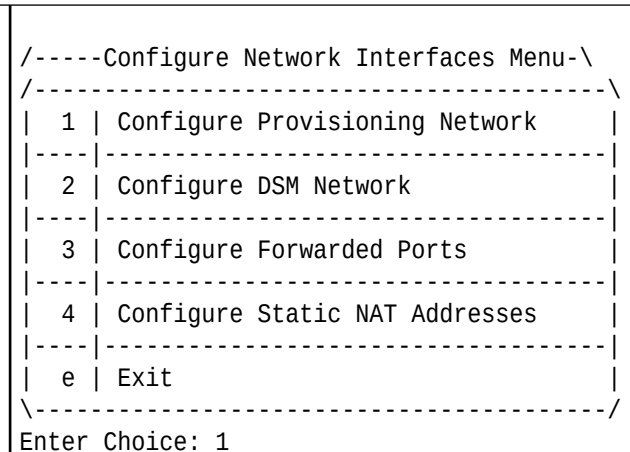
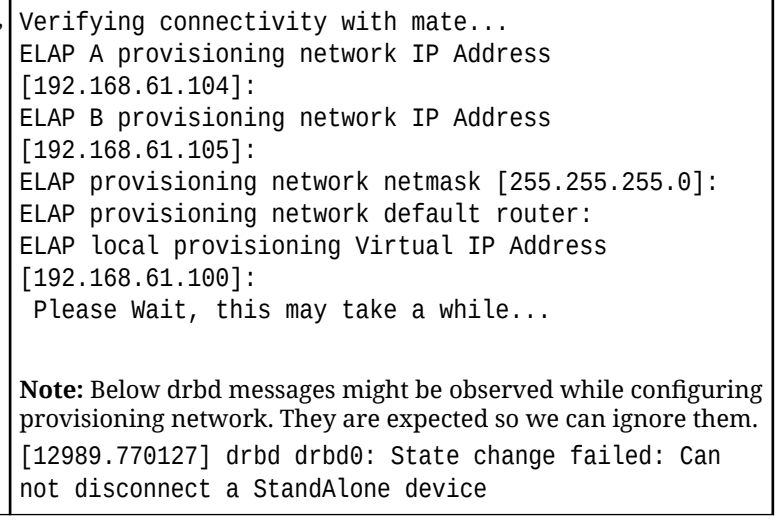
Table 3-17 Procedure 13 INITIAL NETWORK CONFIGURATION

STEP #	**This procedure configures the network interfaces and makes the APPD servers accessible to the network.** **Note: Estimated time of completion is 10 minutes.** **Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.** **Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.**	
1. □	**MPS** A: Login to serial console as root.	`login: root` `Password: <root_password>`
2. □	**MPS A:** Switch user to elapconfig.	`# su - elapconfig`

3.
□
	MPS A:
	The ELAP Configuration Menu is displayed. Select choice 2, Configure Network Interfaces Menu.
		`/-----ELAP Configuration Menu----------\`
		`/----------------------------------------\`
		`|  1 | Display Configuration             |`
		`|----|---------------------------------|`
		`|  2 | Configure Network Interfaces Menu |`
		`|----|---------------------------------|`
		`|  3 | Set Time Zone                    |`
		`|----|---------------------------------|`
		`|  4 | Exchange Secure Shell Keys       |`
		`|----|---------------------------------|`
		`|  5 | Change Password                 |`
		`|----|---------------------------------|`
		`|  6 | Platform Menu                   |`
		`|----|---------------------------------|`
		`|  7 | Configure NTP Server            |`
		`|----|---------------------------------|`
		`|  8 | Mate Disaster Recovery          |`
		`|----|---------------------------------|`
		`|  e | Exit                            |`
		`\----------------------------------------/`
		`Enter Choice: 2`

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Table 3-17 (Cont.) Procedure 13 INITIAL NETWORK CONFIGURATION

STEP #	This procedure configures the network interfaces and makes the APPD servers accessible to the network. Note: Estimated time of completion is 10 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	
4. □	**MPS A:** Configure Network Interfaces Menu is displayed. Select choice 1, Configure Provisioning Network Menu.	
5. □	**MPS A:** Enter the IP addresses, subnet mask, default gateway and Virtual IP.	 **Note:** Below drbd messages might be observed while configuring provisioning network. They are expected so we can ignore them. `[12989.770127] drbd drbd0: State change failed: Can not disconnect a StandAlone device`

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Table 3-17 (Cont.) Procedure 13 INITIAL NETWORK CONFIGURATION

STEP #	This procedure configures the network interfaces and makes the APPD servers accessible to the network. Note: Estimated time of completion is 10 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	
6. □	**MPS A:** Select option e to exit.	/-----Configure Network Interfaces Menu----\ /---\ | 1 | Configure Provisioning Network | |----|-------------------------------------| | 2 | Configure Sync Network | |----|-------------------------------------| | 3 | Configure DSM Network | |----|-------------------------------------| | 4 | Configure Backup Provisioning Network | |----|-------------------------------------| | 5 | Configure Forwarded Ports | |----|-------------------------------------| | 6 | Configure Static NAT Addresses | |----|-------------------------------------| | 7 | Configure Provisioning VIP Addresses | |----|-------------------------------------| | e | Exit | \---/ Enter Choice: e

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Table 3-17 (Cont.) Procedure 13 INITIAL NETWORK CONFIGURATION

STEP #	This procedure configures the network interfaces and makes the APPD servers accessible to the network. Note: Estimated time of completion is 10 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	
7. □	**MPS A:** Select option e to completely exit the menu.	/-----ELAP Configuration Menu----------\ /----------\ | 1 | Display Configuration | |----|----------| | 2 | Configure Network Interfaces Menu | |----|----------| | 3 | Set Time Zone | |----|----------| | 4 | Exchange Secure Shell Keys | |----|----------| | 5 | Change Password | |----|----------| | 6 | Platform Menu | |----|----------| | 7 | Configure NTP Server | |----|----------| | 8 | Mate Disaster Recovery | |----|----------| | e | Exit | \----------/ Enter Choice: e *Note if this menu is not exited properly root will not be disabled
8. □	**MPS A:** Note down the timestamp in log.	Run the following command : $ date

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Table 3-17 (Cont.) Procedure 13 INITIAL NETWORK CONFIGURATION

STEP #	This procedure configures the network interfaces and makes the APPD servers accessible to the network. Note: Estimated time of completion is 10 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	

9.
 	
	MPS A: Check that drbd syncing is complete. If not, then wait for drbd to sync
	Note: If DRBD is still syncing, run the DRBD status command periodically to check until both ELAPs get synced.
		Run the following command to display DRBD status.:
		
		`# drbdadm status all`
		`Expected status:`
		`Role: Primary/Secondary`
		`Disk: UpToDate/UpToDate`
		
		Example:
		
		`$ drbdadm status all drbd0 role:Primary disk:UpToDate`
		`  Devloan04 role:Secondary  peer-disk:UpToDate`
		
		If drbd is still syncing, you will see some output in percentage which shows that drbd is getting synced. Wait until it syncs completely till 100% and comes as Primary/UpToDate and Secondary/UpToDate.
		
		`# drbdadm status all drbd0 role:Primary disk:UpToDate`
		`  Devloan04 role:Secondary`
		`  replication:SyncSource peer-disk:Inconsistent`
		
		done:66.44

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Table 3-17 (Cont.) Procedure 13 INITIAL NETWORK CONFIGURATION

STEP #	This procedure configures the network interfaces and makes the APPD servers accessible to the network. Note: Estimated time of completion is 10 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	

10. □	**MPS A and MPS B:** Check the hastatus on both the nodes.	Check the hastatus on both the nodes. MPS A should be ACTIVE.
		
		`# hastatus`
		`ACTIVE`
		
		MPS B should be STANDBY.
		
		`# hastatus`
		`STANDBY`
		
		If hastatus for MPS B shows as “UNINITIALIZED "INHIBITED"”, then run the below command to make it STANDBY.
		
		`# /usr/TKLC/plat/sbin/hafailover --noinhibit`
		
		Example:
		
		`[root@Crete-B ~]# /usr/TKLC/plat/sbin/hafailover -noinhibit`
		`[root@Crete-B ~]# hastatus UNINITIALIZED`
		`[root@Crete-B ~]# hastatus`
		`STANDBY`
		`[root@Crete-B ~]#`

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Table 3-17 (Cont.) Procedure 13 INITIAL NETWORK CONFIGURATION

STEP #	This procedure configures the network interfaces and makes the APPD servers accessible to the network. Note: Estimated time of completion is 10 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	

11.
☐
	MPS A: Run the following command.	`# chronyc ntpdata`
		`Remote address : 10.75.124.27 (0A4B7C1B)`
		`Remote port : 123`
		`Local address : 10.75.141.11 (0A4B8D0B)`
		`Leap status : Normal`
		`Version : 4`
		`Mode : Server`
		`Stratum : 4`
		`Poll interval : 10 (1024 seconds)`
		`Precision : -19 (0.000001907 seconds)`
		`Root delay : 0.045807 seconds`
		`Root dispersion : 0.016266 seconds`
		`Reference ID : 0A4B7CF6 ()`
		`Reference time : Tue Jan 02 10:39:12 2024`
		`Offset : -0.000049386 seconds`
		`Peer delay : 0.000802394 seconds`
		`Peer dispersion : 0.000001940 seconds Response time : 0.000062915 seconds`
		`Jitter asymmetry: -0.50`
		`NTP tests : 111 111 1111`
		`Interleaved : No`
		`Authenticated : No`
		`TX timestamping : Kernel`
		`RX timestamping : Kernel Total TX : 4193`
		`Total RX : 4193`
		`Total valid RX : 4193`
		
		Make sure that delay and offset is zero. If delay and offset is not zero, run the below commands else skip the below commands.
		
		`# systemctl stop chronyd`
		`# systemctl start chronyd`
		`# systemctl enable chronyd`
		`# chronyc makestep`
		
		Run the below command to note the current timestamp on the server:
		`# date`

12. ☐	**MPS A and MPS B:** Reboot both MPS A and MPS B servers once after drbd is synced.	Reboot both MPS A and MPS B servers using below command.: `# reboot`

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Table 3-17 (Cont.) Procedure 13 INITIAL NETWORK CONFIGURATION

STEP #	This procedure configures the network interfaces and makes the APPD servers accessible to the network. Note: Estimated time of completion is 10 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	

13.
 	
	MPS A and MPS B: If any core files were formed during the upgrade MTC window, delete them.	Delete the core files that were formed during the upgrade maintenance window using below command. These core files are one time.
		`# rm /var/TKLC/core/<core file name>`
		For example:
		`# rm /var/TKLC/core/core.gs.10084*`
		`rm: remove regular file '/var/TKLC/core/core.gs.10084'? Y`
		`rm: remove regular file '/var/TKLC/core/core.gs.10084.bt'? Y`

This procedure is complete!

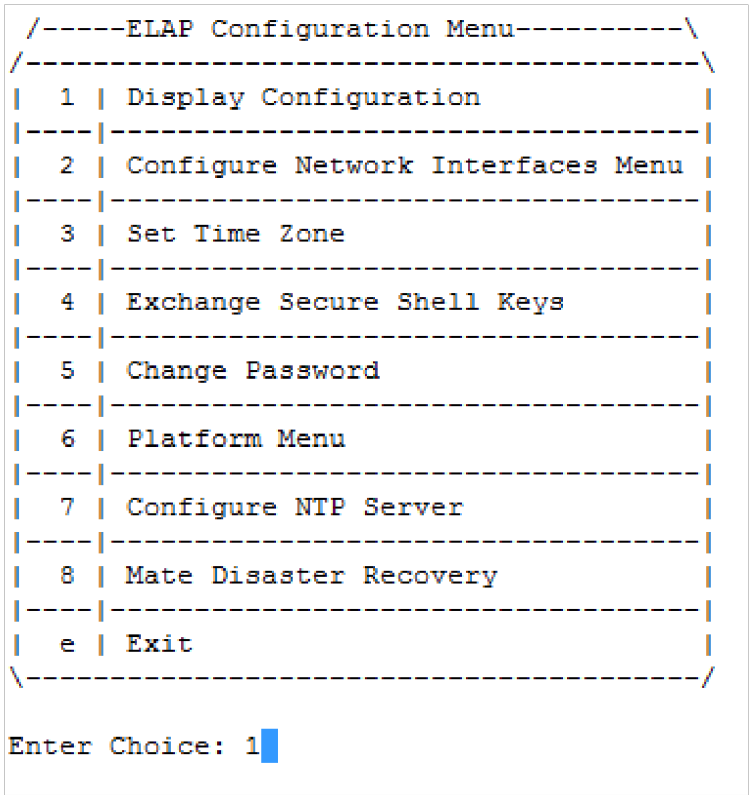
3.5.4 Procedure 14 VERIFY CONFIGURATIONS

Table 3-18 Procedure 14 VERIFY CONFIGURATIONS

STEP #	This procedure verifies the E5APPB configurations. Note: Estimated time of completion is 5 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	
1. 	**MPS A:** Login to serial console as root.	`login: root` `Password: <root_password>`
2. 	**MPS A:** Switch user to elapconfig.	`# su - elapconfig`

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Table 3-18 (Cont.) Procedure 14 VERIFY CONFIGURATIONS

STEP #	This procedure verifies the E5APPB configurations. Note: Estimated time of completion is 5 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	
3. □	**MPS A:** Enter option 1 to display the current configuration.	

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Table 3-18 (Cont.) Procedure 14 VERIFY CONFIGURATIONS

STEP #	This procedure verifies the E5APPB configurations. Note: Estimated time of completion is 5 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	
4. □	**MPS A:** Verify the configuration data with the data recorded earlier Press Return to continue.	ELAP A Provisioning Network IP Address = 192.168.59.9 –LAP B Provisioning Network IP Address = 192.168.59.10 Provisioning Network Netmask = 255.255.255.0 Provisioning Network Default Router = 192.168.59.250 Provisioning VIP = 192.168.59.22 ELAP A Sync Network Address = 169.254.1.100 ELAP B Sync Network Address = 169.254.1.200 ELAP A Main DSM Network Address = 192.168.120.100 ELAP B Main DSM Network Address = 192.168.120.200 ELAP A Backup DSM Network Address = 192.168.121.100 ELAP B Backup DSM Network Address = 192.168.121.200 ELAP A HTTP Port = 80 ELAP B HTTP Port = 80 ELAP A HTTPS Port = 443 ELAP B HTTPS Port = 443 ELAP A Banner Connection Port = 8473 ELAP B Banner Connection Port = 8473 ELAP A Static NAT Address = Not configured ELAP B Static NAT Address = Not configured ELAP A LSMS Connection Port = 7483 ELAP B LSMS Connection Port = 7483 ELAP A EBDA Connection Port = 1030 ELAP B EBDA Connection Port = 1030 Time Zone = America/New_York Press return to continue... ...<return>

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Table 3-18 (Cont.) Procedure 14 VERIFY CONFIGURATIONS

STEP #	This procedure verifies the E5APPB configurations. Note: Estimated time of completion is 5 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	
5. ☐	**MPS A:** Enter option e to Exit.	/-----ELAP Configuration Menu----------\ /--\ | 1 | Display Configuration | |----|----------| | 2 | Configure Network Interfaces Menu | |----|----------| | 3 | Set Time Zone | |----|----------| | 4 | Exchange Secure Shell Keys | |----|----------| | 5 | Change Password | |----|----------| | 6 | Platform Menu | |----|----------| | 7 | Configure NTP Server | |----|----------| | 8 | Mate Disaster Recovery | |----|----------| | e | Exit | \--/ Enter Choice: e * Note if this menu is not exited properly root access via ssh will not be disabled

3.6 Data Migration

This section lists the procedures, in order, that must be performed to bring the APPD ELAP into service.

3.6.1 Procedure 15 TRANSFER DATABASES TO MATE

> **Note**
>
> If the backups are transferred to a remote server, then it is recommended that the remote server has at least 100Mbps network bandwidth and 100G diskspace.

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Table 3-19 Procedure 15 TRANSFER DATABASES TO MATE

STEP #	A	B	This procedure transfers the database backup from the one ELAP to the APPD ELAP or remote server. Estimated time: 30-60 minutes	
1.	☐	☐	**MPS X:** Login as elapdev.	`login: elapdev` `Password: <elapdev_password>`

2.	☐	☐	**MPS X**:
			Verify Connectivity with the APPD card.
			If the APPD card cannot be pinged, check the network connectivity.
				`$ ping <APPD IP> -c 3`
				`PING 192.168.3.2 (192.168.3.2) 56(84) bytes of data. 64 bytes from mate (192.168.3.2): Icmp_seq=0 ttl=64 time=0.118 ms`
				`64 bytes from mate (192.168.3.2): icmp_seq=1 ttl=64 time=0.102 ms`
				`64 bytes from mate (192.168.3.2): icmp_seq=2 ttl=64 time=0.120 ms`
				`--- mate ping statistics ---`
				`3 packets transmitted, 3 received, 0% packet loss, time 2001ms`
				`rtt min/avg/max/mdev = 0.102/0.113/0.120/0.011 ms, pipe 2`

3.	☐	☐	**MPS X:** Change directory to the /var/TKLC/elap/free directory	`$ cd /var/TKLC/elap/free`

4.	☐	☐	**MPS X**:
			List the EuiDB Backup File in this directory.
			NOTE: There will be two npdbBackup listed here.
				`#ls -l npdbBackup*`
				`npdbBackup_xxxxx-a_xxxxxxxx.sql.gz`
				`npdbBackup_yyyyy-a_yyyyyyyy.sql.gz`
				`Please update the ownership of files to elapdev:elap by below command before transferring. Backup is taken from root user, it will be having ownership as root:root.`
				`# su -`
				`Password: <root password>`
				`# cd /var/TKLC/elap/free`
				`#chown elapdev:elap npdbBackup_xxxxx-a_xxxxxxxx.sql.gz`
				`#chown elapdev:elap npdbBackup_yyyyy-a_yyyyyyyy.sql.gz`
				`#su - elapdev`
				`# cd /var/TKLC/elap/free`

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Table 3-19 (Cont.) Procedure 15 TRANSFER DATABASES TO MATE

STEP #	A	B	This procedure transfers the database backup from the one ELAP to the APPD ELAP or remote server. Estimated time: 30-60 minutes	

5.	□	□	**MPS X**:
			Copy the EuiDB Backup
			File to the remote / mate server.
			NOTE: This backup will be used in case the full upgrade is not successful.
				`$ scp –p npdbBackup_xxxxx-a_xxxxxxxx.sql.gz elapdev@<APPD IP>:/var/TKLC/elap/free`
				`Or`
				`$ sftp elapdev@<REMOTE IP>`
				`Connecting to <REMOTE IP>...`
				`The authenticity of host '<APPD IP>' can't be established.`
				`DSA key fingerprint is 58:a5:7e:1b:ca:fd:1d:fa:99:f2:01:16:79:d8:b4:24.`
				
				`Are you sure you want to continue connecting (yes/no)? yes`
				`Warning: Permanently added '<REMOTE IP>' (DSA) to the list of known hosts. elapdev<REMOTE IP>'s password:`
				`sftp> cd /var/TKLC/elap/free`
				`sftp> p‘t npdbBackup_’xxxx’a_xxxxxxxx.sql.gz`
				`Uploading npdbBackup_xxxxx-a_xxxxxxxx.sql.gz to npdbBackup_xxxxx-a_xxxxxxxx.tar`
				`sftp> bye`

6.	□	□	**MPS X**:
			Copy the EuiDB‘mysqldump Backup File to the remote/mate server.
			NOTE: This mysqldump of EuiDB will be used for restoring EuiDB after the full upgrade is successful.
				`$ scp –p npdbBackup_yyyy-a_yyyyyyyy.sql.gz elapdev@<APPD IP>:/var/TKLC/elap/free`
				`Or`
				`$ sftp elapdev@<APPD IP>`
				`Connecting to <APPD IP>...`
				`The authenticity of host '<APPD IP>' can't be established.`
				`DSA key fingerprint is 58:a5:7e:1b:ca:fd:1d:fa:99:f2:01:16:79:d8:b4:24.`
				
				`Are you sure you want to continue connecting (yes/no)? yes`
				`Warning: Permanently added '<APPD IP>' (DSA) to the list of known hosts. elapdev<APPD IP>'s password:`
				`sftp> cd /var/TKLC/elap/free`
				`sftp> p‘t npdbBackup_’yyy-’_yyyyyyyy.sql.gz`
				`Uploading npdbBackup_yyyy-a_yyyyyyyy.sql.gz to npdbBackup_yyyy-a_yyyyyyyy.sql.gz‘’`
				`sftp> bye`

7.	□	□	**MPS X:** Note down the timestamp in log.	Run the following command: `$ date`

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This procedure is complete!

3.6.2 Procedure 16 RESTORE EUIDB

After the Databases are copied over, restore the Databases and start the ELAP application.

> **Note**
>
> HA status of ELAP servers should be Active and Standby. If HA status is not Active/ Standby, contact the My Oracle Support by following the instructions in Appendix E.

Table 3-20 Procedure 16 RESTORE EUIDB

STEP #	This procedure migrates the EuiDB database to the APPD. Note: Estimated time of completion is 15 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	
1. □	**Active ELAP:** Login as elapdev.	`login: elapdev` `Password: <elapdev_password>`

2.
□
	Active ELAP:
	Verify that the DB Backup file has been transferred over and its permissions are correct.
		`$ cd /var/TKLC/elap/free`
		`[elapdev@Natal-A free]$ ls -ltr /var/TKLC/elap/free/`
		`-rw-r----- 1 elapdev elap  5195 Jan 25 05:36 npdbBackup_NatalA_20210125053550.sql.gz`
		
		NOTE: The ownership of file should be elapdev:elap. Please check and provide correct ownership of elapdev:elap, if not correct.

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Table 3-20 (Cont.) Procedure 16 RESTORE EUIDB

STEP #	This procedure migrates the EuiDB database to the APPD. Note: Estimated time of completion is 15 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	

3.
□
	Active ELAP:
	Restore Output is displayed.
		`$/usr/TKLC/elap/bin/Euidb_migration.pl <backup name>`
		`Example: $ /usr/TKLC/elap/bin/Euidb_migration.pl npdbBackup_Natal-A_20210125053550.sql.gz`
		`Logs will be directed to /usr/TKLC/appl/logs/Euidb_migration.log for more details.`
		`INFO: This script is used to restore older 10.1 release EuiDB backup to current release. Please note that MySQL should be running for this process.`
		`Are you sure, you want to restore this EuiDB backup?`
		`(y/n) y`
		`Restoring up the NPDB...`
		`INFO: Backup restored successfully. Success.`
		`For more details, see "/usr/TKLC/elap/logs/Euidb_migration.log".`
		`$uiEdit LNP_TN_QTY`
		`Output: "LNP_TN_QTY" is set to "504000000"`
		`If LNP_TN_QTY is set to any value other than 756000000, set the proper value.`
		`$uiEdit LNP_TN_QTY 756000000`
		`Output: "LNP_TN_QTY" is se“ to "756000000"`
		`Check value of LNP_TN”QTY`
		`$uiEdit LNP_TN_QTY`
		`Output: "LNP_TN_QTY" is set to "756000000"`

4. □	**Active ELAP:** Reset IP Addresses. Login to elapconfig	Re-Set the IP addresses using elapconfig (for Prov and NTP if used). `$ sudo su – elapconfig`

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Table 3-20 (Cont.) Procedure 16 RESTORE EUIDB

STEP #	This procedure migrates the EuiDB database to the APPD. Note: Estimated time of completion is 15 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	
5. □	**Active ELAP:** The ELAP Configuration Menu is displayed.Select option 2 to enter the Network Interfaces Menu.	/-----ELAP Configuration Menu----------\ /--\ | 1 | Display Configuration | |----|----------| | 2 | Configure Network Interfaces Menu | |----|----------| | 3 | Set Time Zone | |----|----------| | 4 | Exchange Secure Shell Keys | |----|----------| | 5 | Change Password | |----|----------| | 6 | Platform Menu | |----|----------| | 7 | Configure NTP Server | |----|----------| | 8 | Mate Disaster Recovery | |----|----------| | e | Exit | \--/ Enter Choice: 2
6. □	**Active ELAP:** The Configure Network Interfaces Menu is displayed. Select option 1 to configure the provisioning network.	/-----Configure Network Interfaces Menu-\ /--\ | 1 | Configure Provisioning Network | |----|----------| | 2 | Configure DSM Network | |----|----------| | 3 | Configure Forwarded Ports | |----|----------| | 4 | Configure Static NAT Addresses | |----|----------| | e | Exit | \--/ Enter Choice: 1

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Table 3-20 (Cont.) Procedure 16 RESTORE EUIDB

STEP #	This procedure migrates the EuiDB database to the APPD. Note: Estimated time of completion is 15 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	
7. □	**Active ELAP:** Enter the IP addresses, subnet mask, default gateway and Virtual IP addres, subnet mask, default gateway and Virtual IP tering them again by just pressing enter key).	Verifying connectivity with mate... ELAP A provisioning network IP Address [192.168.61.104]: 192.168.61.136 ELAP B provisioning network IP Address [192.168.61.105]: 192.168.61.137 ELAP provisioning network netmask [255.255.255.0]: 255.255.255.0 ELAP provisioning network default router: 192.168.61.250 ELAP local provisioning Virtual IP Address [192.168.61.100]: 192.168.61.166 Please Wait, this may take a while... **Note:** Below drbd messages might be observed while configuring provisioning network. They are expected so we can ignore them. [12989.770127] drbd drbd0: State change failed: Can not disconnect a StandAlone device
8. □	**Active ELAP:** Select option e to exit.	/-----Configure Network Interfaces Menu----\ /---\ | 1 | Configure Provisioning Network | |----|-------------------------------------| | 2 | Configure Sync Network | |----|-------------------------------------| | 3 | Configure DSM Network | |----|-------------------------------------| | 4 | Configure Backup Provisioning Network | |----|-------------------------------------| | 5 | Configure Forwarded Ports | |----|-------------------------------------| | 6 | Configure Static NAT Addresses | |----|-------------------------------------| | 7 | Configure Provisioning VIP Addresses | |----|-------------------------------------| | e | Exit | \---/ Enter Choice: e

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Table 3-20 (Cont.) Procedure 16 RESTORE EUIDB

STEP #	This procedure migrates the EuiDB database to the APPD. Note: Estimated time of completion is 15 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	

9.
□
	Active ELAP:
	If configured, change “Pretty Name” to change the name on the ELAP GUI.
		`$ uiEdi set to "ELAP_A_NAME"`
		`"ELAP_B_PRETTY_NAME" is set TTY_NAME Santos-B`
		`# uiEdit ELAP_A_PRETTY_NAME Santos-A`
		`$ uiEdit | grep -i PRETTY_NAME`
		`"ELAP_A_PRETTY_NAME" is set to "Santos-A"`
		`"ELAP_B_PRETTY_NAME" is set to "Santos-B"`

10. □	**Active ELAP:** Switch user to elapconfig and verify the configurations.	Verify the configurations using the uiEdit command..
11. □	**Active ELAP:** Note down the timestamp in log.	Run the following command: `$ date`

This procedure is complete!

3.6.3 Procedure 17 SSH KEY EXCHANGE BETWEEN THE ELAP AND LSMS

Table 3-21 Procedure 17 SSH KEY EXCHANGE BETWEEN THE ELAP AND LSMS

STEP #	This procedure exchanges SSH keys between the ELAP and LSMS. Note: Estimated time of completion is 15 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	
1. □	**Active ELAP:** Login as root.	`login: root` `Password: <root_password>`
2. □	**Active ELAP:** Switch user to elapconfig.	`# su – elapconfig`

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Table 3-21 (Cont.) Procedure 17 SSH KEY EXCHANGE BETWEEN THE ELAP AND LSMS

S T ” P #	This procedure exchanges SSH keys between the ELAP and LSMS. Note: Estimated time of completion is 15 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	
3. 	**Active ELAP:** The ELAP Configuration Menu is displayed. Select option 4 to Exchange Secure Shell Keys.	/-----ELAP Configuration Menu----------\ /--\ | 1 | Display Configuration | |----|----------------------------------| | 2 | Configure Network Interfaces Menu | |----|----------------------------------| | 3 | Set Time Zone | |----|----------------------------------| | 4 | Exchange Secure Shell Keys | |----|----------------------------------| | 5 | Change Password | |----|----------------------------------| | 6 | Platform Menu | |----|----------------------------------| | 7 | Configure NTP Server | |----|----------------------------------| | 8 | Mate Disaster Recovery | |----|----------------------------------| | e | Exit | \--/ Enter Choice: 4
4. 	**Active ELAP:** The Exchange Secure Shell Keys Menu is displayed. Select option 4 to Exchange Keys with LSMS.	/-----Exchange Secure Shell Keys Menu-----\ /--\ | 1 | Exchange Keys with Mate | |----|----------------------------------| | 2 | Exchange Keys with Remote | |----|----------------------------------| | 3 | Exchange Keys with Mate as Root User | |----|----------------------------------| | 4 | Exchange Keys with LSMS | |----|----------------------------------| | e | Exit | \--/ Enter Choice:4

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Table 3-21 (Cont.) Procedure 17 SSH KEY EXCHANGE BETWEEN THE ELAP AND LSMS

S T " P #	This procedure exchanges SSH keys between the ELAP and LSMS. Note: Estimated time of completion is 15 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	

5.
☐
	Active ELAP: Exchange SSH keys with the **LSMS A (host lsmspri) server.**
	Enter "Y" and press Enter.
	Enter the **LSMS A (host lsmspri)** IP address and press Enter.
	Enter the LSMS "lsmsadm" user password and press Enter.
	Verify that keys were exchanged successfully for MPS A and LSMS A.
	Enter the LSMS "lsmsadm" user password and press Enter.
	Verify that keys were exchanged successfully for MPS B and LSMS A.
		Note: SSH keys will first be exchanged between the MPS A and LSMS A servers. The user will be prompted for the password again and SSH keys will be exchanged between the MPS B and LSMS A servers.
		
		`Are you sure you wish to exchange keys with LSMS? [N]:Y`
		`LSMS IP Address: <LSMS A IP>`
		`The server does not know of <LSMS A IP>.`
		`Will just exchange host keys for the name given!`
		`Password of lsmsadm:********`
		`Could not get authorized keys file from remote (<LSMS A IP>).`
		`Maybe it does not exist. Continuing...`
		`The server does not know of <LSMS A IP>.`
		`Will just exchange host keys for the name given!`
		`ssh is working correctly.`
		`The server does not know of <LSMS A IP>.`
		`Will just exchange host keys for the name given!`
		`Password of lsmsadm: ********`
		`The server does not know of 192.168.60.70. Will just exchange host keys for the name given! ssh is working correctly.`

6.
☐
	Active ELAP:
	The Exchange Secure Shell Keys Menu is displayed.
	Select option 4 to Exchange Keys with LSMS.
		`/-----Exchange Secure Shell Keys Menu-----\`
		`/-----------------------------------------\`
		`| 1 | Exchange Keys with Mate |`
		`|---|-----------------------------------|`
		`| 2 | Exchange Keys with Remote |`
		`|---|-----------------------------------|`
		`| 3 | Exchange Keys with Mate as Root User |`
		`|---|-----------------------------------|`
		`| 4 | Exchange Keys with LSMS |`
		`|---|-----------------------------------|`
		`| e | Exit |`
		`\-----------------------------------------/`
		
		Enter Choice: 4

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Table 3-21 (Cont.) Procedure 17 SSH KEY EXCHANGE BETWEEN THE ELAP AND LSMS

S T ” P #	This procedure exchanges SSH keys between the ELAP and LSMS. Note: Estimated time of completion is 15 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	

7.
☐
	Active ELAP: Exchange SSH keys with the **LSMS B (host lsmssec) server.**
	Enter “Y” and press Enter.
	Enter the **LSMS B (host lsmssec)** IP address and press Enter.
	Enter the LSMS “lsmsadm” user password and press Enter.
	Verify that keys were exchanged successfully for MPS A and LSMS B.
	Enter the LSMS “lsmsadm” user password and press Enter.
	Verify that keys were exchanged successfully for MPS B and LSMS B.
		Note: SSH keys will first be exchanged between the MPS A and LSMS B servers. The user will be prompted for the password again and SSH keys will be exchanged between the MPS B and LSMS B servers.
		
		`Are you sure you wish to exchange keys with LSMS? [N]:Y`
		`LSMS IP Address: <LSMS B IP>`
		`The server does not know of <LSMS B IP>.`
		`Will just exchange host keys for the name given!`
		`Password of lsmsadm:********`
		`Could not get authorized keys file from remote (<LSMS B IP>).`
		`Maybe it does not exist. Continuing...`
		`The server does not know of <LSMS B IP>.`
		`Will just exchange host keys for the name given!`
		`ssh is working correctly.`
		`The server does not know of <LSMS B IP>.`
		`Will just exchange host keys for the name given!`
		`Password of lsmsadm: ********`
		`The server does not know of <LSMS B IP>.`
		`Will just exchange host keys for the name given!`
		`ssh is working correctly.`

8.
☐
	Active ELAP: Exit the “Exchange Secure Shell Keys” Menu.
	Select “e” and press Enter.
		`/-----Exchange Secure Shell Keys Menu-----\`
		`/-----------------------------------------\`
		`| 1 | Exchange Keys with Mate |`
		`|---|-----------------------------------|`
		`| 2 | Exchange Keys with Remote |`
		`|---|-----------------------------------|`
		`| 3 | Exchange Keys with Mate as Root User |`
		`|---|-----------------------------------|`
		`| 4 | Exchange Keys with LSMS |`
		`|---|-----------------------------------|`
		`| e | Exit |`
		`\-----------------------------------------/`
		`Enter Choice: e`

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Table 3-21 (Cont.) Procedure 17 SSH KEY EXCHANGE BETWEEN THE ELAP AND LSMS

S T ” P #	This procedure exchanges SSH keys between the ELAP and LSMS. Note: Estimated time of completion is 15 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	
9. 	**Active ELAP:** Select option e to exit.	/-----Configure Network Interfaces Menu----\ /---\ | 1 | Configure Provisioning Network | |----|-----------------------------------| | 2 | Configure Sync Network | |----|-----------------------------------| | 3 | Configure DSM Network | |----|-----------------------------------| | 4 | Configure Backup Provisioning Network | |----|-----------------------------------| | 5 | Configure Forwarded Ports | |----|-----------------------------------| | 6 | Configure Static NAT Addresses | |----|-----------------------------------| | 7 | Configure Provisioning VIP Addresses | |----|-----------------------------------| | e | Exit | \---/ Enter Choice: e
10. 	**Active ELAP:** Select option e to exit.	/-----ELAP Configuration Menu----------\ /-------------------------------------\ | 1 | Display Configuration | |----|-----------------------------| | 2 | Configure Network Interfaces Menu | |----|-----------------------------| | 3 | Set Time Zone | |----|-----------------------------| | 4 | Exchange Secure Shell Keys | |----|-----------------------------| | 5 | Change Password | |----|-----------------------------| | 6 | Platform Menu | |----|-----------------------------| | 7 | Configure NTP Server | |----|-----------------------------| | 8 | Mate Disaster Recovery | |----|-----------------------------| | e | Exit | \-------------------------------------/ Enter Choice: e

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Table 3-21 (Cont.) Procedure 17 SSH KEY EXCHANGE BETWEEN THE ELAP AND LSMS

S T ” P #	This procedure exchanges SSH keys between the ELAP and LSMS. Note: Estimated time of completion is 15 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	
11. □	**Active ELAP:** Note down the timestamp	Run the following command: `$date`

This procedure is complete!

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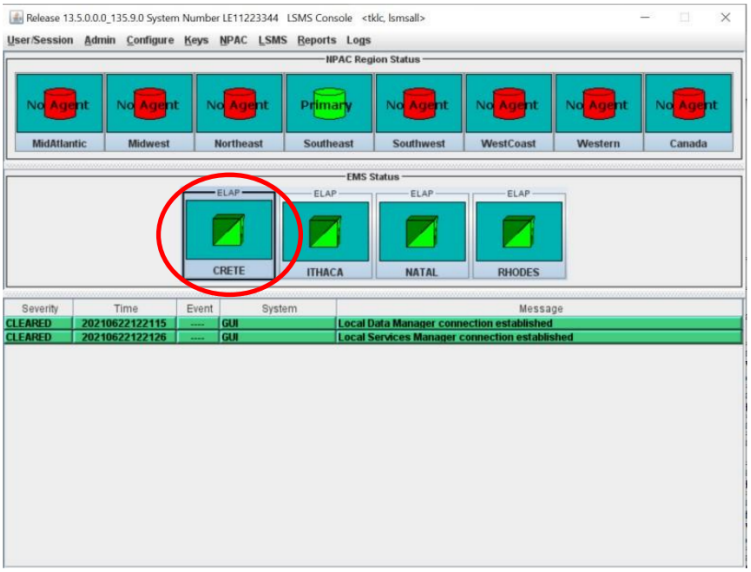
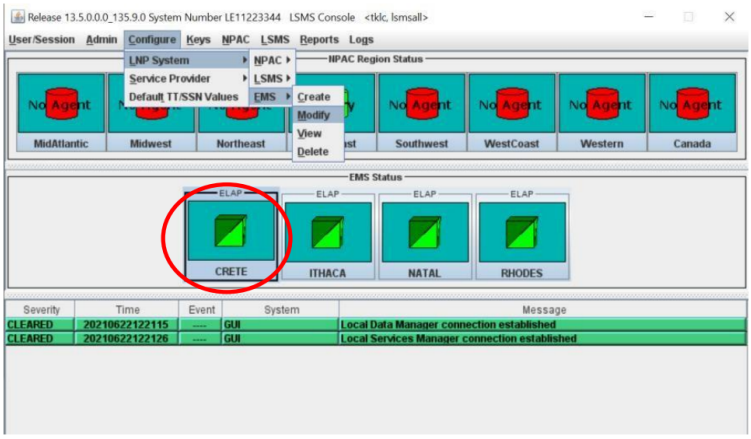
3.6.4 Procedure 18 RE-POINT LSMS TO ELAP VIP

Table 3-22 Procedure 18 RE-POINT LSMS TO ELAP VIP

#This procedure points the LSMS to the ELAP VIP. Note: Estimated time of completion is 15 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.		
1. ☐	**LSMS:** Log in to the LSMS GUI as a member of the permission group that is authorized to perform this operation	

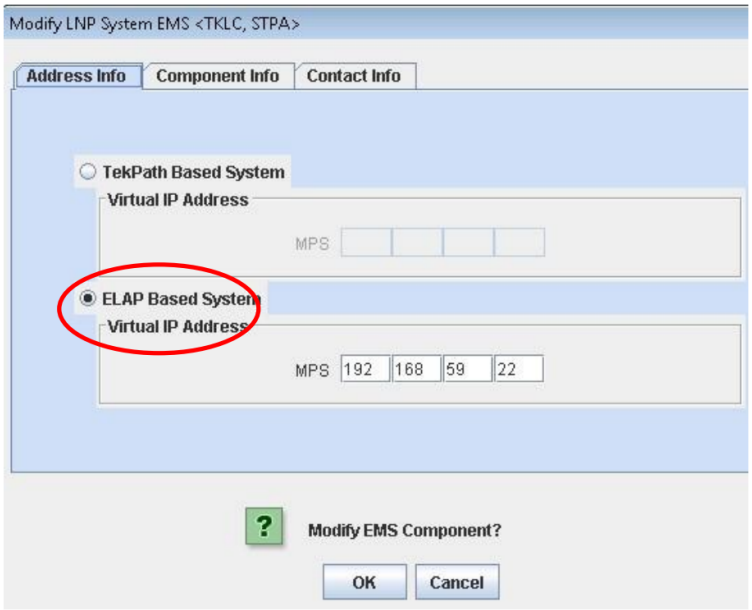
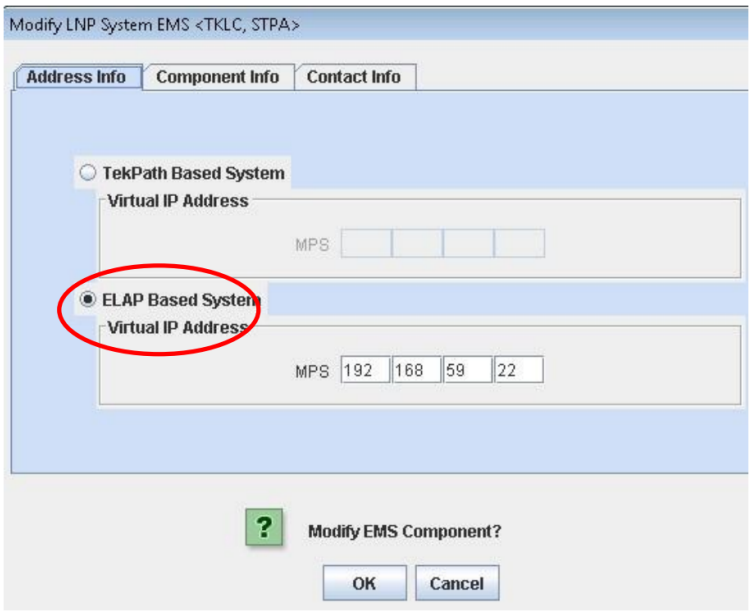
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Table 3-22 (Cont.) Procedure 18 RE-POINT LSMS TO ELAP VIP

#This procedure points the LSMS to the ELAP VIP. Note: Estimated time of completion is 15 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.		
2. ☐	**LSMS:** Select the EMS being fully upgraded to 11.0.	
3. ☐	**LSMS:** Navigate to the following Menu selection: **Configure** • **LNP System** • **EMS** • **Modify** **Note: EMS modification is only needed when there is a change in the VIP IP.**	

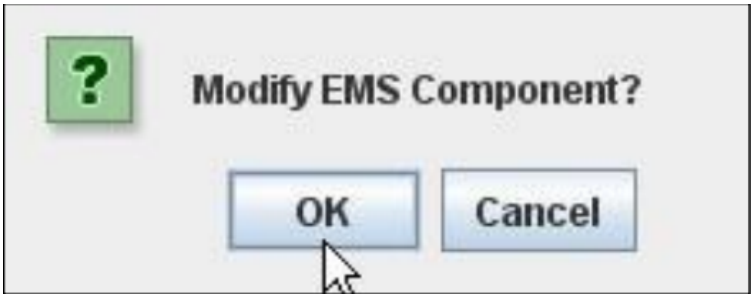
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Table 3-22 (Cont.) Procedure 18 RE-POINT LSMS TO ELAP VIP

#This procedure points the LSMS to the ELAP VIP. Note: Estimated time of completion is 15 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.		
4. ☐	**LSMS:** Select the **ELAP-Based System "Virtual IP Address"** radio button.	
5. ☐	**LSMS:** Enter the **Virtual IP Address** for the MPS as configured.	

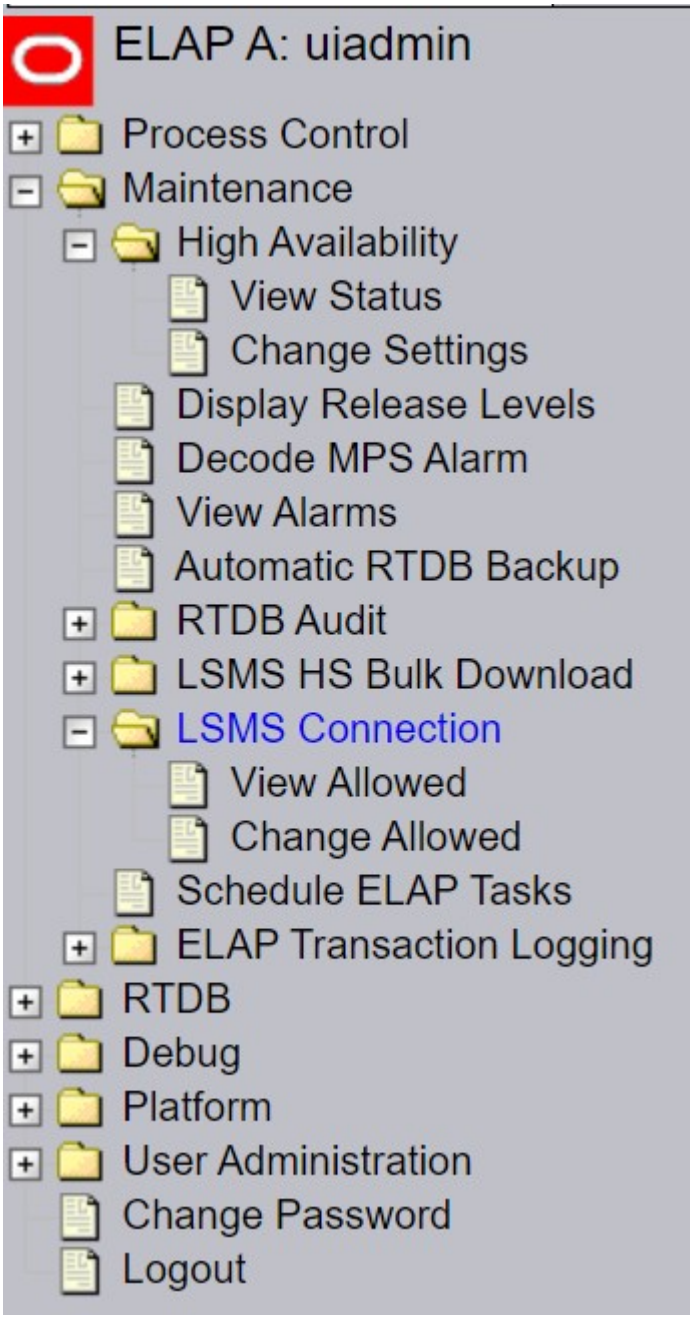
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Table 3-22 (Cont.) Procedure 18 RE-POINT LSMS TO ELAP VIP

#This procedure points the LSMS to the ELAP VIP. Note: Estimated time of completion is 15 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.		
6. ☐	**LSMS:** Confirm the modification by clicking **OK.**	
7. ☐	**LSMS:** Confirm by clicking **"OK".**	
8. ☐	**Active ELAP GUI:** Using the new Virtual IP address (VIP) configured in step 5 of Procedure 12, login to Active ELAP.	

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Table 3-22 (Cont.) Procedure 18 RE-POINT LSMS TO ELAP VIP

#This procedure points the LSMS to the ELAP VIP. Note: Estimated time of completion is 15 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.		
9. □	**Active ELAP GUI:** 1) Expand the "Maintenance LSMS Connection" folder. 2) Select the "Change Allowed" link.	

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Table 3-22 (Cont.) Procedure 18 RE-POINT LSMS TO ELAP VIP

#This procedure points the LSMS to the ELAP VIP. Note: Estimated time of completion is 15 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.		
10. □	**Active ELAP GUI:** In the right panel, click on the “Enable LSMS Connection” button.	
11. □	**ELAP A GUI:** A message indicating that the LSMS Connection is now Enabled should appear in the right panel.	
12. □	**LSMS:** Note down the timestamp in log.	Run the following command: `$ date`

This procedure is complete!

3.6.5 Procedure 19 TRANSFER SERVDI BACKUP TO ELAP

Table 3-23 Procedure 19 TRANSFER SERVDI BACKUP TO ELAP

STEP #	**This procedure transfers the servdi backup from the LSMS to the APPD ELAP. Estimated time: 5 minutes**	
1. □	**LSMS Standby Server:** Login as root.	`Login: root` `Password: <root_password>`
2. □	**LSMS Standby Server:** Change directory to the /var/TKLC/lsms/free/data/servdi directory	`$ cd /var/TKLC/lsms/free/data/servdi`
3. □	**LSMS Standby Server:** List the servdi Backup File in this directory.	`#ls -l servdiDownload*` `servdiDownload_STPA_20160226115322.gz`

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Table 3-23 (Cont.) Procedure 19 TRANSFER SERVDI BACKUP TO ELAP

STEP #	This procedure transfers the servdi backup from the LSMS to the APPD ELAP. Estimated time: 5 minutes	

4. □	**LSMS Standby Server:** Copy the servdi Backup File to local APPD card.	`# scp –p servdiDownload_STPA_20160226115322.gz elapdev@<E5APPB A IP>:/var/TKLC/elap/free/backup`
		`Or`
		`# sftp elapdev@<APPD A IP>`
		`Connecting to <APPD A IP>...`
		`The authenticity of host '<APPD A IP>' can't be established.`
		`DSA key fingerprint is 58:a5:7e:1b:ca:fd:1d:fa:99:f2:01:16:79:d8:b4:24.`
		`Are you sure you want to continue connecting (yes/no)? yes`
		`Warning: Permanently added '<APPD A IP>' (DSA) to the list of known hosts. elapdev<APPD A IP>'s password: sftp> cd /var/TKLC/elap/free/backup`
		`sftp> put servdiDownload_STPA_20160226115322.gz`
		`Uploading servdiDownl‘ad_STPA_20160’2611’322.gz to servdiDownload_STPA_20160226115322.gz sftp> bye`

5. □	**LSMS Standby Server:** Note down the timestamp in log.	Run the following command: `$ date`

This procedure is complete!

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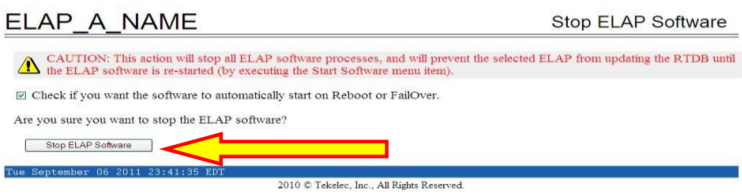
3.6.6 Procedure 20 RESTORE SERVDI BACKUP

Table 3-24 Procedure 20 RESTORE SERVDI BACKUP

STEP #	This procedure restores the SERVDI Backup to the ELAP. Note: Estimated time of completion is 30 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	
1. ☐	**Active ELAP GUI:** Using the new Virtual IP address (VIP) configured in step Procedure 12, Step 5 of Procedure 13, login to Active ELAP.	
2. ☐	**Active ELAP GUI:** 1. Expand the "Process Control" folder. 2. Select the "Stop Software" link.	

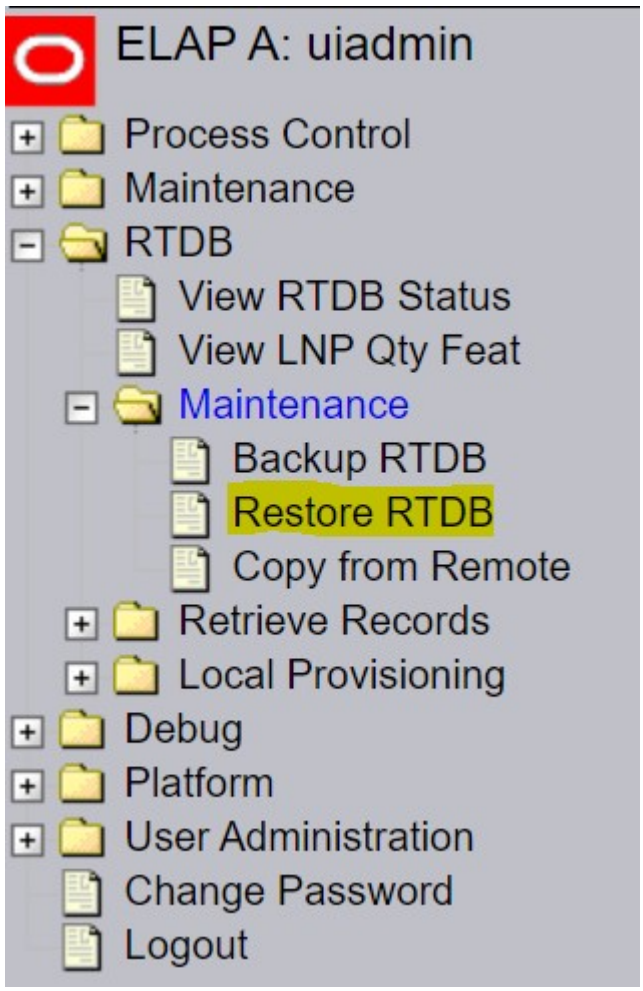
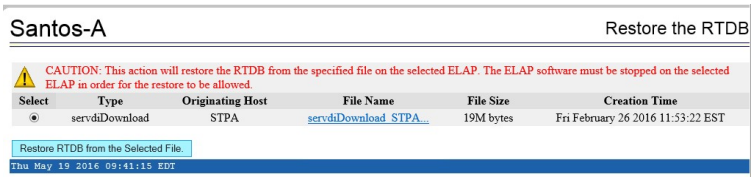
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Table 3-24 (Cont.) Procedure 20 RESTORE SERVDI BACKUP

STEP #	This procedure restores the SERVDI Backup to the ELAP. Note: Estimated time of completion is 30 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	
3. ☐	**Active ELAP GUI:** In the right panel, click on the "Stop ELAP Software" button.	
4. ☐	**ELAP A GUI:** A message indicating that the ELAP software has been successfully halted should appear in the right panel.	

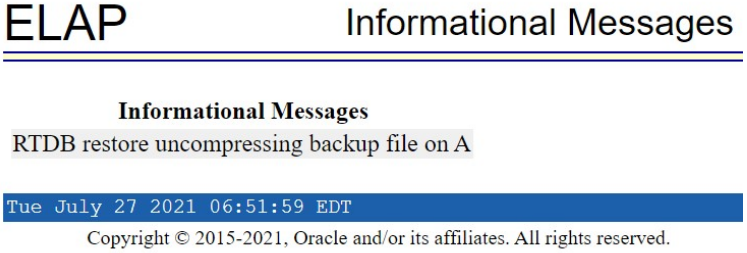
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Table 3-24 (Cont.) Procedure 20 RESTORE SERVDI BACKUP

STEP #	This procedure restores the SERVDI Backup to the ELAP. Note: Estimated time of completion is 30 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	
5. 	**ELAP-A G** 1) Expand the “RTDB” folder. 3.6.1.1 2) Expand the “Maintenance” sub-folder. 3) Select the “Restore RTDB” link.	
6. 	**ELAP-A GUI:** 1. Select the database file radio button. 2. Click on the “Restore RTDB from the Selected File” button.	

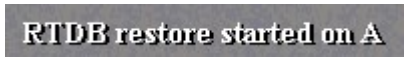
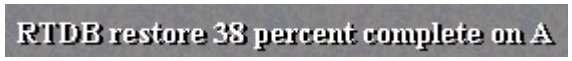
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Table 3-24 (Cont.) Procedure 20 RESTORE SERVDI BACKUP

STEP #	This procedure restores the SERVDI Backup to the ELAP. Note: Estimated time of completion is 30 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	
7. ☐	**ELAP A GUI:** Click on the "Confirm RTDB Restore" button.	
8. ☐	**ELAP A GUI:** A message showing that the RTDB Restore has been successfully started should appear in the right frame.	
9. ☐	3.6.1.2 **ELAP A GUI:** The GUI banner should begin displaying the message shown to the right.	

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Table 3-24 (Cont.) Procedure 20 RESTORE SERVDI BACKUP

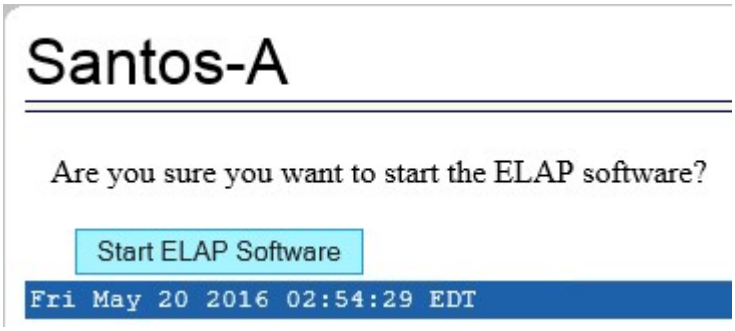
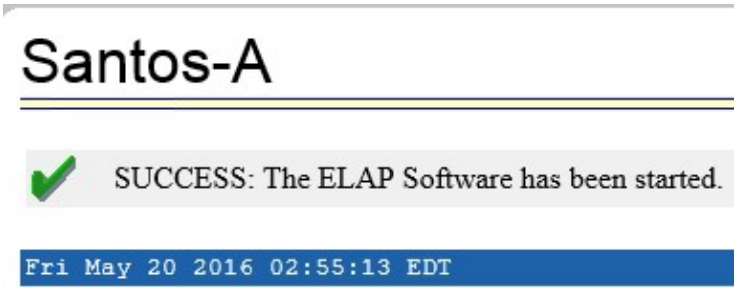
STEP #	This procedure restores the SERVDI Backup to the ELAP. Note: Estimated time of completion is 30 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	
10. ☐	**ELAP A GUI:** The messages shown to the right display the stages of the RTDB Restore. Monitor these messages in the GUI banner as the process progresses.	   

11.
☐
	ELAP A:
	The banner messages may alternatively be viewed from the command line using the “manageBannerInfo” command.
	NOTE: *During this transitory state, access to the ELAP-A GUI may terminate unexpectedly. If sustained GUI access is problematic at this time, you may monitor these messages from the ELAPA command line.*
		`[elapdev@E5APP-B-a ~]$ manageBannerInfo -l`
		`ID: RESTORE_RTDB_STATUS  SIDE: A`
		`MSG: RTDB restore 51 percent complete`
		`SetTime: 2016-05-19 10:29:13  ClearTime: 0000-00-00 00:00:00`
		`[elapdev@E5APP-B-a ~]$`

12.
☐
	ELAP A:
	If monitoring from the ELAP-A command line, the messages shown to the right display the stages of the RTDB Restore.
		`MSG: RTDB restore started`
		`MSG: RTDB restore 13 percent complete`
		`MSG: RTDB restore completed successfully`
		`MSG: RTDB restore recompressing backup file`
		`There are currently no BannerInfo messages for this side in the database.`

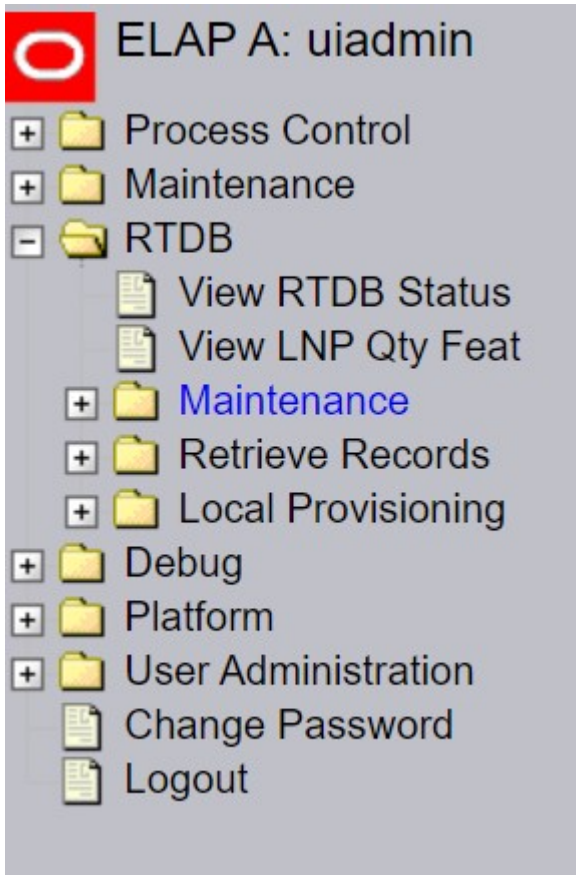
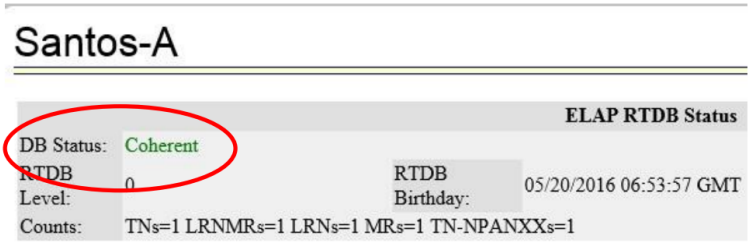
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Table 3-24 (Cont.) Procedure 20 RESTORE SERVDI BACKUP

STEP #	This procedure restores the SERVDI Backup to the ELAP. Note: Estimated time of completion is 30 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	
13. □	**ELAP A GUI:** 1. Expand the "Process Control" folder. 2. Select the "Start Software" link.	
14. □	**ELAP A GUI:** In the right panel, click on the "Start ELAP Software" button.	
15. □	**ELAP A GUI:** A message indicating that the ELAP software has been successfully started should appear in the right panel.	

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Table 3-24 (Cont.) Procedure 20 RESTORE SERVDI BACKUP

STEP #	This procedure restores the SERVDI Backup to the ELAP. Note: Estimated time of completion is 30 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	
16. □	**ELAP A GUI:** 3.6.1.3 1) Expand the "RTDB" folder. 2) Select the "View RTDB Status" link.	
17. □	**ELAP A GUI:** Verify the "DB Status" and the "RTDB Level" shown in the right panel.	

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Table 3-24 (Cont.) Procedure 20 RESTORE SERVDI BACKUP

STEP #	This procedure restores the SERVDI Backup to the ELAP. Note: Estimated time of completion is 30 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	
18. ☐	**ELAP A GUI:** Record the "DB Status" and the "RTDB Level" shown in the previous STEP.	DB Status = _____ 3.6.1.4 RTDB Level = _____
19. ☐	**LSMS:** Login to the LSMS CLI as the **"lsmsadm"** user.	
20. ☐	**LSMS:** Login to the LSMS CLI as the **"lsmsadm"** user.	lsmsadm@<ISMS IP>'s password: Last login: Wed Jul 9 18:40:24 2008 from 10.25.150.101 [lsmsadm@lsmspri ~]$
21. ☐	**LSMS:** Execute an **"eagle status"** command to verify the current status of the CLLI (EMS site being fully upgraded to 10.1).	[lsmsadm@lsmspri ~]$ eagle status CLLI Pid State Resync Conn A Conn B EBDA Debug Queue Memory CPU Timestamp ELAP21 32269 A_ACTIVE COMPLETE ACTIVE --- IDLE OFF 0 % 500 M 0.0 % 17:42:59 STPA 15565 NONE_ACTIVE NO_CONNECTION DOWN --- IDLE OFF 0 % 500 M 0.0 % 17:43:00
22. ☐	**LSMS:** Execute an **"eagle stop"** command using the CLLI of the EMS site being migrated to 11.0.	[lsmsadm@lsmspri ~]$ eagle stop ELAP21 eagle: Stopping... eagle: eagleagent ELAP21 stopped at Wed Apr 27 17:43:25 2016
23. ☐	**LSMS:** Execute an **"eagle start"** command using the CLLI of the EMS site being fully upgraded to 11.0.	[lsmsadm@lsmspri ~]$ eagle start ELAP21 eagle: Starting... eagle: eagleagent ELAP21 started at Wed Apr 27 17:43:48 2016

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Table 3-24 (Cont.) Procedure 20 RESTORE SERVDI BACKUP

STEP #	This procedure restores the SERVDI Backup to the ELAP. Note: Estimated time of completion is 30 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	

24.
☐
	LSMS:
	1. Execute an **"eagle status"** command using the CLLI of the EMS site being fully upgraded to 11.0.
	2. Verify that the **"State"** and the **"Connection VIP"** reflect the values shown to the right.
		`[lsmsadm@lsmspri ~]$ eagle status ELAP21`
		`eagleagent: CLLI = ELAP21`
		`Pid = 3110`
		`State = NONE_ACTIVE`
		`Resync = NO_CONNECTION`
		`Connection VIP = ACTIVE`
		`EBDA = IDLE`
		`Debug logging = OFF`
		`Pending queue = 0 of 2000000 bytes (0%)`
		`Keepalive timestamp = Wed Apr 27 17:45:19 IST 2016`
		`Virtual memory = 500308 K bytes`
		`CPU usage = 0.0 %`

25. ☐	**ELAP A GUI:** Note down the timestamp in log.	Run the following command: `$ date`

This procedure is complete!

3.6.7 Procedure 21 POST FULL UPGRADE SYSCHECK

Table 3-25 Procedure 21 POST FULL UPGRADE SYSCHECK

STEP #	This procedure runs an initial system check to validate the software install and system readiness. Note: Estimated time of completion is 5 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	
1. ☐	**MPS A**: Login as root.	`login: root` `Password: <root_password>`
2. ☐	**MPS A:** Issue the command to retrieve the system status	`# syscheck`

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Table 3-25 (Cont.) Procedure 21 POST FULL UPGRADE SYSCHECK

STEP #	This procedure runs an initial system check to validate the software install and system readiness. Note: Estimated time of completion is 5 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.	
3. ☐	**MPS A:** The syscheck response is displayed. Verify all components are "OK" on the mate ELAP **NOTE:** Investigate the cause of any failure in the syscheck response. Correct the issue or contact Support for resolution before proceeding.	Running modules in class disk... OK Running modules in class hardware... OK Running modules in class net... OK Running modules in class proc... OK Running modules in class services... OK Running modules in class system... OK Running modules in class upgrade... OK LOG LOCATION: /var/TKLC/log/syscheck/fail_log
4. ☐	**MPS A:** Issue the command to retrieve the system status on the mate ELAP	# ssh admusr@mate 'sudo syscheck'
5. ☐	**MPS A:** The syscheck response is displayed. Verify all components are "OK" on the mate ELAP	Running modules in class disk... OK Running modules in class hardware... OK Running modules in class net... OK Running modules in class proc... OK Running modules in class services... OK Running modules in class system... OK Running modules in class upgrade... OK LOG LOCATION: /var/TKLC/log/syscheck/fail_log
6. ☐	**MPS A:** Note down the timestamp in log.	Run the following command: $ date

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This procedure is complete!

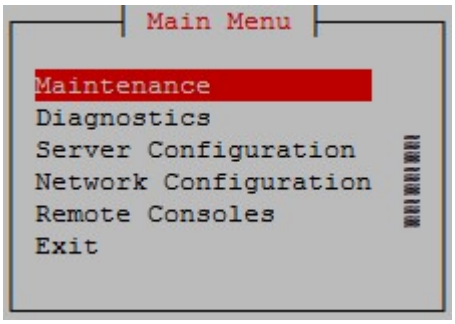
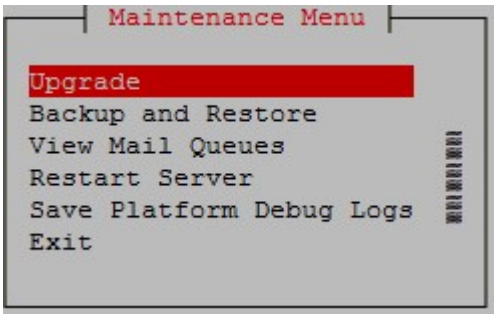
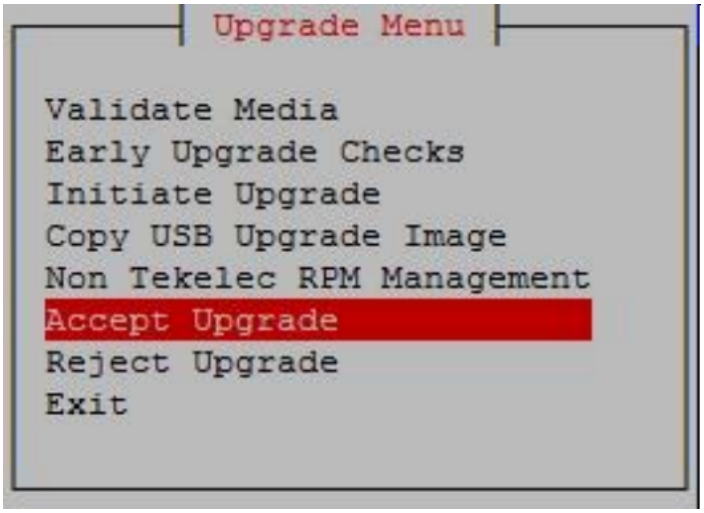
3.6.8 Procedure 22 ACCEPT THE UPGRADE

Table 3-26 Procedure 22 ACCEPT THE UPGRADE

STEP #	A	B	This procedure will accept the upgrade. Estimated time: 5 minutes	
1.	☐	☐	**MPS X:** Log in to the server as the user “root”.	`Login: root` `Password: <root_password>`
2.	☐	☐	**MPS X:** Start platcfg utility.	`# su - platcfg`

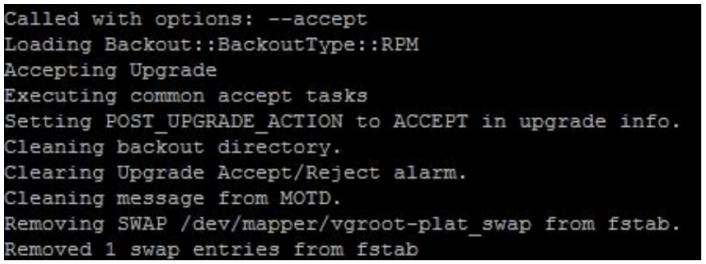
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Table 3-26 (Cont.) Procedure 22 ACCEPT THE UPGRADE

STEP #	A	B	This procedure will accept the upgrade. Estimated time: 5 minutes	
3.	☐	☐	**MPS X:** Accept Upgrade	 On the “Main Menu”, select Maintenance and press [ENTER].  Select the “Upgrade” menu and press [ENTER]. Select the “Accept Upgrade” menu and press [ENTER]. 

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Table 3-26 (Cont.) Procedure 22 ACCEPT THE UPGRADE

STEP #	A	B	This procedure will accept the upgrade. Estimated time: 5 minutes	
				Note: The “Reject Upgrade” menu is also available after the ELAP installation. However, this option should not be used after the first installation of application. It should be used in subsequent upgrades to return to a previous application release. Select Yes and press [ENTER].    **NOTE:** If Accept upgrade is successful, then skip the next step in this procedure. If accept upgrade fails, then go to the next step of this procedure.

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Table 3-26 (Cont.) Procedure 22 ACCEPT THE UPGRADE

STEP #	A	B	This procedure will accept the upgrade. Estimated time: 5 minutes	
4.	☐	☐	**MPS X:** If accept upgrade fails but disk redundancy is restored, follow these steps to remove the false alarm of upgrade pending accept.	Following error is observed when accepting the upgrade fails: Called with options: --accept Loading Backout::BackoutType::SPLIT_MIRROR Accepting Upgrade Re-joining raid mirrors. Adding /dev/sdb3 to /dev/md1 mdadm: added /dev/sdb3 Adding /dev/sdb2 to /dev/md2 mdadm: re-added /dev/sdb2 md1 is syncing... md2 is syncing... md2 is syncing... md2 is syncing... md2 is syncing... md2 is syncing... md2 is syncing... md2 is syncing... md2 is syncing... md2 is syncing... md2 is syncing... Adding /dev/sdb1 to /dev/md3 ERROR: Command Failed! ERROR: Child process has exited with: CMD: '/sbin/mdadm --add /dev/md3 /dev/sdb1' RC: 1 SIGNAL: 0 CORE: no <<< CMD OUTPUT >>> mdadm: Cannot open /dev/sdb1: Device or resource busy <<< END OF CMD OUTPUT >>> ERROR: Failed to accept upgrade. mdadm: Cannot open /dev/sdb1: Device or resource busy === Window terminated (Thu Jan 16 13:17:39 2020) === Check disk redundancy by below command. # cat /proc/mdstat NOTE: If you observe the output as given below then follow the APPENDIX F remove the false alarm. Here [UU] implies both the mirror disks are synchronized # cat /proc/mdstat Personalities : [raid1] md1 : active raid1 sdb3[2] sda3[0] 262080 blocks super 1.0 [2/2] [UU] md2 : active raid1 sdb2[1] sda2[0] 26198016 blocks super 1.1 [2/2] [UU] bitmap: 1/1 pages [4KB], 65536KB

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Table 3-26 (Cont.) Procedure 22 ACCEPT THE UPGRADE

STEP #	A	B	This procedure will accept the upgrade. Estimated time: 5 minutes	
				chunk md3 : active raid1 sdb1[1] sda1[0] 442224640 blocks super 1.1 [2/2] [UU] bitmap: 3/4 pages [12KB], 65536KB chunk
5.	☐	☐	**MPS X:** Note down the timestamp in log.	Run the following command: `$ date`

This procedure is complete!

3.6.9 Procedure 23 DETERMINE IF UPGRADE OR INSTALLATION IS REQUIRED

Table 3-27 Procedure 23 DETERMINE IF UPGRADE OR INSTALLATION IS REQUIRED

STEP #	This procedure executes the steps required to determine if an incremental upgrade of the system is required or an initial application installation is required. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT MY ORACLE SUPPORT AND ASK FOR INCREMENTAL UPGRADE ASSISTANCE.	
1. ☐	**MPS A**: Log in to MPS A.	If not already logged-in, login at MPS A as 'admusr'. `<hostname> console login: admusr password: <password>` If 'admusr' is not available, then login as 'root' user.
2. ☐	**MPS B**: Log in to MPS B.	If not already logged-in, login at MPS B as 'admusr'. `<hostname> console login: admusr password: <password>` If 'admusr' is not available, then login as 'root' user.

3.
☐
	MPS X: Verify the TPD release.	Execute the following command to verify the TPD release on the MPS.
		`# getPlatRev`
		If no output is displayed, then contact My Oracle Support by following the instructions on the front page or the instructions in the Appendix E, to know whether to perform the procedure to install the operating system on the MPS. After installing the operating system, proceed with this procedure.
		Otherwise, if the following output is displayed, then the MPS has been installed with the correct operating system. Proceed with this procedure.
		`# getPlatRev`
		`8.10.1.9.0_150.20.0`

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Table 3-27 (Cont.) Procedure 23 DETERMINE IF UPGRADE OR INSTALLATION IS REQUIRED

STEP #	This procedure executes the steps required to determine if an incremental upgrade of the system is required or an initial application installation is required. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT MY ORACLE SUPPORT AND ASK FOR INCREMENTAL UPGRADE ASSISTANCE.	
4. ☐	**MPS X:** Determine if the application is currently installed on the servers. (MPS B will be used to determine the current state of the servers. We will assume that the state of the A server is the same.)	Execute an rpm query command and examine the output: `$ rpm –qi TKLCelap`

5.
☐
	MPS X: Observe the output from the rpm query.	The following is an example of what the output may look like:
		$**rpm -qi TKLCelap**
		
		`rpm -qi TKLCelap`
		`Name : TKLCelap`
		`Version : 5.0.87`
		`Release : 11.1.0.0.0_111.6.0`
		`Architecture: x86_64`
		`Install Date: Fri 09 Oct 2026 03:01:14 AM EDT`
		`Group : Development/Build`
		`Size : 178295180`
		`License : Oracle 2004, 2026`
		`Signature : (none)`
		`Source RPM :`
		`TKLCelap-5.0.87-11.1.0.0.0_111.6.0.src.rpm`
		`Build Date : Fri 09 Oct 2026 02:18:47 AM EDT`
		`Build Host : elap-dev-tpd-150-31-0`
		`Relocations : (not relocatable)`
		`Packager : <@oracle.com>`
		`Vendor : Oracle`
		`URL : http://www.oracle.com/`
		`Summary : Oracle Communications ELAP Package`
		`Description : This is the Oracle Communications EAGLE LNP Application Processor(ELAP) package. The package installs ELAP software.`
		`Eagle LNP Application Processor (ELAP) provides REALLY INCREDIBLE Database (RIDB). ELAP provides the LNP feature.`
		
		NOTE: Output is dependent on source release.
		If the output similar to the above example is displayed, then skip to step 7. Otherwise, proceed to the next step.

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Table 3-27 (Cont.) Procedure 23 DETERMINE IF UPGRADE OR INSTALLATION IS REQUIRED

STEP #	This procedure executes the steps required to determine if an incremental upgrade of the system is required or an initial application installation is required. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT MY ORACLE SUPPORT AND ASK FOR INCREMENTAL UPGRADE ASSISTANCE.	
6. □	**MPS X:** Installation is required if the application is not present on the server, else incremental upgrade is required.	Run the following command: `$ rpm –qi TKLCelap package TKLCelap is not installed` If the application is not currently installed, output similar to the above will be returned from the rpm –qi command in the previous step. If this is the case, then an application installation is required.
7. □	Determine if it is an incremental upgrade or incremental upgrade with split mirror or full upgrade.	If the target release is 11.X, it is a full upgrade.
8. □	**MPS X:** Procedure Complete.	This procedure is complete.

3.6.10 Procedure 24 VERIFYING AND CAPTURING REQUIREMENTS

Table 3-28 Procedure 24 VERIFYING AND CAPTURING REQUIREMENTS

STEP #	This procedure verifies that all pre-upgrade requirements have been met. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT MY ORACLE SUPPORTAND ASK FOR UPGRADE ASSISTANCE.	
1. □	Verify all required materials are present.	Verify that the materials listed in Incremental upgrade Material List (Section2.1) are present.
2. □	Procedure Complete.	This procedure is complete.

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3.7 SM Migration

3.7.1 Procedure 25 SM CARDS - CABLE MIGRATION AND DB RELOAD

Table 3-29 Procedure 25 SM CARDS - CABLE MIGRATION AND DB RELOAD

STEP #	**This procedure initializes the SM cards to the RTDB databases on the APPDcards.** **Note: Estimated time of completion is 45 minutes.** **Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.** **Should this procedure fail, Contact Oracle technical services and ask for MIGRATION ASSISTANCE.**	
1. 	**Eagle: Replace DSM with SLIC** Replace all the DSM cards with SLIC cards.	

2.
 	
	Eagle STP connected to
	ELAP servers: Login to the
	Eagle STP.
		`login:uid=<Eagle_STP_username>`
		`password: <Eagle_STP_username_password>`
		`Note. Password is not displayed.`

3.
 	
	Eagle STP connected to
	ELAP servers: Change IP link for both A and B port
	for the new SMxG card.
	Note: This step should be done for all new SMxG
	cards, where xxxx is the
	location of a SM card.
		`inh-card:loc=XXXX chg-ip-lnk:loc=XXXX:ipaddr=www.xxx.yyy.zzz:port=a:auto=yes:mcast= yes:submask=aaa.bbb.ccc.ddd`
		`chg-ip-lnk:auto=yes:port=b:loc=XXXX`
		`Add defrouter and bpipaddr using the below command then allow the SCCP card: chg-ip-card:defrouter=aaa.bbb.ccc.ddd:bpipaddr=www.xxx.yyy.zzz:bp submask=eee.fff.ggg.hhh:loc=XXXX`
		`alw-card:loc=XXXX`
		`(Where XXXX is the location of a replaced SM card)`

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Table 3-29 (Cont.) Procedure 25 SM CARDS - CABLE MIGRATION AND DB RELOAD

STEP #	This procedure initializes the SM cards to the RTDB databases on the APPDcards. Note: Estimated time of completion is 45 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for MIGRATION ASSISTANCE.	
4. □	**Eagle STP connected to ELAP servers**: Issue the command to display card status. Repeat this step until the SM cards have been reloaded but wait until the cards go IS-NR before modifying IP link of another card.	rept-stat-card:loc=XXXX (Where XXXX is the location of a replaced SM card in step [3]) tklc1110903 21-04-08 00:20:06 MST EAGLE 47.0.0.0.0- 78.10.0 rept-stat-card:loc=1105 Command entered at terminal #2. ; tklc1110903 21-04-08 00:20:06 MST EAGLE 47.0.0.0.078.10.0 CARD VERSION TYPE GPL PST SST AST 1105 148-010-000 SLIC SCCP64 IS-NR Active ----- ALARM STATUS = No Alarms. BLSLC64 GPL version = 148-009-000 IMT BUS A = Conn IMT BUS B = Conn CURRENT TEMPERATURE = 41C (106F) PEAK TEMPERATURE: = 43C (110F) [21-04-06 05:43] SCCP % OCCUP = 0% SCCP SM DATA TYPE = ELAP Command Completed. ;
5. □	**Eagle STP connected to ELAP servers**: Change IP link for the rest of SM cards.	Repeat steps [3] and [4] for the rest of SM cards which were replaced for DSM cards.
6. □	**Eagle STP connected to** **ELAP servers**: Verify no other RTDB reload alarms are present on the Eagle.	rept-stat-trbl

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Table 3-29 (Cont.) Procedure 25 SM CARDS - CABLE MIGRATION AND DB RELOAD

STEP #	This procedure initializes the SM cards to the RTDB databases on the APPDcards. Note: Estimated time of completion is 45 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for MIGRATION ASSISTANCE.	
7. □	**Eagle STP connected to** **ELAP servers**: Response to trouble command is displayed. Output can vary depending of EAGLE STP status.	cdsitu 13-02-11 15:32:46 EDT EAGLE5 47.0.0.0.0-78.10.0 Searching devices for alarms... ; cdsitu 13-02-11 15:32:46 EDT EAGLE5 47.0.0.0.0-78.10.0 SEQN UAM AL DEVICE ELEMENT TROUBLE TEXT 7721.0048 * TERMINAL 1 Terminal failed 9492.0048I * TERMINAL 2 Terminal failed 5088.0002 * GPL SYSTEM BPDCM Card is not running approved GPL * 0100.0444 * CARD 1108 VSCCP RTDB database is inconsistent 0100.0448 * CARD 1108 VSCCP RTDB database incoherent ** 0100.0451 ** CARD 1108 VSCCP RTDB reload required Command Completed. ;

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Table 3-29 (Cont.) Procedure 25 SM CARDS - CABLE MIGRATION AND DB RELOAD

STEP #	This procedure initializes the SM cards to the RTDB databases on the APPDcards. Note: Estimated time of completion is 45 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for MIGRATION ASSISTANCE.	
8. □	**Eagle STP connected to** **ELAP servers:** Verify Databases Output is displayed Verify the Current Database levels to the level of the database restored on the APPD The new database level on APPD can be found using the GUI RTBD → View RTDB Status.	rept-stat-db:display=all:db=mps Command Accepted - Processing cdsitu 13-02-11 15:56:50 EDT EAGLE5 47.0.0.0.0-78.10.0 rept-stat-db:display=all:db=mps Command entered at terminal #14. ; cdsitu 13-02-11 15:56:50 EDT EAGLE5 47.0.0.0.0-78.10.0 ELAP A (STDBY) C BIRTHDATE LEVEL EXCEPTION - ---------- ---------- ---------- PDB 13-01-16 13:04:04 2013160 - RTDB Y 13-01-16 13:04:04 2013160 - RTDB-EAGLE 13-01-16 13:07:34 2013160 - ELAP B (ACTV) C BIRTHDATE LEVEL EXCEPTION - ---------- ---------- ---------- PDB 13-01-16 13:04:04 2013160 - RTDB Y 13-01-16 13:04:04 2013160 - RTDB-EAGLE 13-01-16 13:07:34 2013160 - EAGLE RTDB REPORT CARD/APPL LOC C BIRTHDATE LEVEL EXCEPTI ON IN-SRVC --------- ---- - ---------- ---------- ------- ----- ----------- VSCCP 1103 Y 13-01-16 13:07:34 2013160 - 26d 2h 21m VSCCP 1105 Y 13-01-16 13:07:34 2013160 - 26d 2h 22m
9. □	**Eagle STP connected to** **ELAP servers**: Issue the command to display SCCP status.	rept-stat-sccp

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Table 3-29 (Cont.) Procedure 25 SM CARDS - CABLE MIGRATION AND DB RELOAD

STEP #	This procedure initializes the SM cards to the RTDB databases on the APPDcards. Note: Estimated time of completion is 45 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for MIGRATION ASSISTANCE.	
10. □	**Eagle STP connected to** **ELAP servers**: Response to SCCP status command is displayed. Note card location of all SM cards: SM _____ SM _____ SM _____ SM _____ SM _____	tekelecstp xx-03-09 19:47:19 EST Rel XX.X.X SCCP SUBSYSTEM REPORT IS-NR Active ----- SCCP Cards Configured= 4 Cards IS-NR= 4 Capacity Threshold = 60% CARD VERSION PST SST AST MSU USAGE CPU USAGE ---------- ------ ---------- 1103 XXX-XXX-XXX IS- NR Active DB_DIFF 29% 4% 1105 XXX-XXX-XXX IS- NR Active DB_DIFF 33% 5% 1111 XXX-XXX-XXX IS- NR Active DB_DIFF 39% 6% ---------- ------ ---------- SCCP Service Average MSU Capacity = 33% Average CPU Capacity = 5% Command Completed. ;
11. □	**Eagle STP connected to** **ELAP servers**: Issue the initialize card command for 1 SM card. **Note:** This step should be done for 1 SM card, where xxxx is the location of a SM card.	init-card:loc=XXXX (Where *XXXX* is the location of a SM card recorded in step [10])
12. □	**Eagle STP connected to** **ELAP servers**: Response to the initialize command is displayed.	tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y * 0261.0013 * CARD XXXX Card is isolated from the system ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y 5038.0014 CARD XXXX Card is present ;

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Table 3-29 (Cont.) Procedure 25 SM CARDS - CABLE MIGRATION AND DB RELOAD

STEP #	This procedure initializes the SM cards to the RTDB databases on the APPDcards. Note: Estimated time of completion is 45 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for MIGRATION ASSISTANCE.	
13. 	**Eagle STP connected to** **ELAP servers**: Monitor the progress of SM card being reinitialized	Repeat steps [6] to [10] as necessary to monitor the progress of the SM card being reinitialized and until it is in normal state (IS-NR).

14.
 	
	Eagle STP connected to
	ELAP servers: Issue the initialize card command for the rest of SM cards.
		`SMxG cards in 4 batches (booting 1/4 of the cards at a single time).`
		`Note: This step should be done for each SMxG card, where xxxx is the location of each SM card from steps [10],`
		`repeat this step until all SM cards have been reloaded but wait until the cards go IS-NR before initializing other set of cards.`

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Table 3-29 (Cont.) Procedure 25 SM CARDS - CABLE MIGRATION AND DB RELOAD

STEP #	This procedure initializes the SM cards to the RTDB databases on the APPDcards. Note: Estimated time of completion is 45 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for MIGRATION ASSISTANCE.	
15. ☐	**Eagle STP connected to** **ELAP servers**: Verify MPS Database Output is displayed. Verify the Current Database levels on SM cards matches with the level of the database restored on the APPD. The new database level on APPD can be found using the GUI RTBD→View RTBD Status.	rept-stat-db:display=all:db=mps Command Accepted - Processing cdsitu 13-02-11 15:56:50 EDT EAGLE5 47.0.0.0.0-78.10.0 rept-stat-db:display=all:db=mps Command entered at terminal #14. ; cdsitu 13-02-11 15:56:50 EDT EAGLE5 47.0.0.0.0-78.10.0 ELAP A (STDBY) C BIRTHDATE LEVEL EXCEPTION - ---------- ---------- ---------- PDB 13-01-16 13:04:04 18918 - RTDB Y 13-01-16 13:04:04 18918 - RTDB-EAGLE 13-01-16 13:07:34 18918 - ELAP B (ACTV) C BIRTHDATE LEVEL EXCEPTION - ---------- ---------- ---------- PDB 13-01-16 13:04:04 18918 - RTDB Y 13-01-16 13:04:04 18918 - RTDB-EAGLE 13-01-16 13:07:34 18918 - EAGLE RTDB REPORT CARD/APPL LOC C BIRTHDATE LEVEL EXCEPTI ON IN-SRVC --------- ---- - ---------- ---------- ------- ----- ----------- VSCCP 1103 Y 13-01-16 13:07:34 18918 - 26d 2h 21m VSCCP 1105 Y 13-01-16 13:07:34 18918 - 26d 2h 22m ;
16. ☐	**Eagle STP connected to** **ELAP servers**: Issue the command to display SCCP status.	rept-stat-sccp

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Table 3-29 (Cont.) Procedure 25 SM CARDS - CABLE MIGRATION AND DB RELOAD

STEP #	This procedure initializes the SM cards to the RTDB databases on the APPDcards. Note: Estimated time of completion is 45 minutes. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for MIGRATION ASSISTANCE.	
17. □	**Eagle STP connected to** **ELAP servers**: Response to SCCP status command is displayed.	tekelecstp xx-03-09 19:47:19 EST Rel XX.X.X SCCP SUBSYSTEM REPORT IS-NR Active ----- SCCP Cards Configured= 4 Cards IS-NR= 4 Capacity Threshold = 60% CARD VERSION PST SST AST MSU USAGE CPU USAGE ---------- 1103 XXX-XXX-XXX IS-NR Active ----- 29% 4% 1105 XXX-XXX-XXX IS-NR Active ----- 33% 5% 1111 XXX-XXX-XXX IS-NR Active ----- 39% 6% ---------- SCCP Service Average MSU Capacity = 33% Average CPU Capacity = 5% Command Completed. ;
18. □	**Eagle STP connected to** **ELAP servers**: Verify no other RTDB reload alarms are present on the Eagle.	rept-stat-trbl
19. □	**Eagle STP connected to** **ELAP servers**: Response to trouble command is displayed. Output can vary depending of EAGLE STP status.	cdsitu 13-02-11 15:32:46 EDT EAGLE5 47.0.0.0.0-78.10.0 Searching devices for alarms... ; cdsitu 13-02-11 15:32:46 EDT EAGLE5 47.0.0.0.0-78.10.0 SEQN UAM AL DEVICE ELEMENT TROUBLE TEXT 7721.0048 * TERMINAL 1 Terminal failed 9492.0048I * TERMINAL 2 Terminal failed 5088.0002 * GPL SYSTEM BPDCM Card is not running approved GPL Command Completed. ;

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This procedure is complete!

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4

DUAL IMAGE UPGRADE OVERVIEW

Table 4-1 DUAL IMAGE UPGRADE OVERVIEW

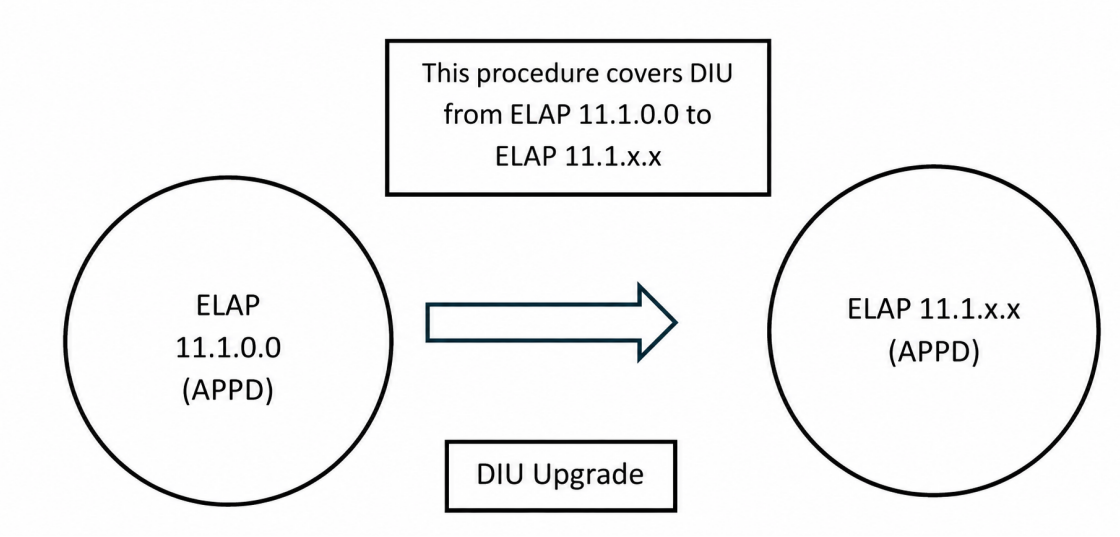
Dual Image Upgrade (DIU)	This process upgrades both the Application as well as the TPD version on the system together. This provides a faster method to upgrade the setup.

The ELAP application can be installed, or full upgraded based on the table below.

Table 4-2 Full upgrade paths for E5APPB-02

Upgrade Source Release	Upgrade Destination Release
11.1.0.0	11.1.x.x

Figure 4-1 DIU Upgrade



4.1 Required Materials

1. A target-release ELAP DIU ISO (for ELAP DIU upgrade) and preUpgrade script (diuPreUpgrade_elap.sh).
2. A terminal and null modem cable to establish a serial connection.
3. Eagle STP login IP, user, and password
4. Write down the system configuration information.

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Table 4-3 System Configuration Information

Description	Information
Provisioning IPs and their netmasks	
VIP	
NTP1 IP	
NTP2 IP	
NTP3 IP	
Provisionable Gateway	
Time Zone	
Other IPs required and their netmasks	

5. Passwords for users on the local system:

Table 4-4 User Password Table

ELAP USERS		
login	**MPS A password**	**MPS B password**
elapconfig		
elapdev		
root		
elapall (needed for GUI access)		
MySQL (EuiDB) root user		
admusr		

4.2 DIU Upgrade Phases

The following table shows the DIU upgrade process by procedure and estimated time. Actual times may vary with typing speed and system configuration. Perform the DIU upgrade on ELAP B first, then on ELAP A. Complete the phases in the order shown.

Table 4-5 DIU upgrade Phases

Phase	Elapsed Time (Minutes)		Activity	Procedure
	This Step	Cum.		
Connectivity setup	15	15	Set up connectivity to the MPS servers.	Procedure 1
Verify DIU upgrade	9	10	Verify this should be an DIU upgrade.	Procedure 26
Requirements check	2	5	Verify requirements for DIU upgrade are met.	Procedure 27
Assess readiness for DIU upgrade	15	20	Assess the server's readiness for DIU upgrade.	Procedure 29

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Table 4-5 (Cont.) DIU upgrade Phases

Phase	Elapsed Time (Minutes)		Activity	Procedure
	This Step	Cum.		
Pre-DIU upgrade health check	7	15	Run the syscheck utility to verify the MPS server is operationally sound.	Procedure 3
Pre-DIU upgrade system time check	5	60	Pre-DIU upgrade system time check.	Procedure 30
Pre-DIU upgrade Backups	22	75	Backup application databases and other pertinent information.	Procedure 5 , Procedure 31
Perform DIU upgrade	22	120	Run the DIU upgrade procedure on MPS B and A.	Procedure 32
Post-DIU upgrade health check	7	15	Run the syscheck utility to verify the MPS server is operationally sound.	Procedure 3
Accept the upgrade after successful soak period. **Note:** User will not be able to perform backout procedure in case of any problem once the upgrade is accepted.	4	This is done in a separate MTC	Accept the upgrade on both MPS-A and MPS-B after sufficient soak period of around 1-7 days (depending upon customer provisioning volume) to see that everything works fine after the upgrade.	Procedure 33
Post-DIU upgrade health check	7	15	Run the syscheck utility to verify the MPS server is operationally sound.	Procedure 3

4.3 Backout Phases

The following table shows the backout process by procedure and estimated time. Actual times may vary with typing speed and system configuration. Complete the phases in the order shown.

Table 4-6 Backout Procedure Overview

Phase	Elapsed Time (Hours or Minutes)		Activity	Impact	Procedure
	This Step	Cum.			
Determine state of system	15-30	15-30	Investigate and determine the state of the MPS system. This may take anywhere from 15 to 30 minutes.	Cannot proceed with backout until failure analysis is complete. Some hand-fixes may be required before proceeding with backout.	**Contact the My Oracle Support by following the instructions on the front page or the instructions in the Appendix E.**

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Table 4-6 (Cont.) Backout Procedure Overview

Phase	Elapsed Time (Hours or Minutes)		Activity	Impact	Procedure
	This Step	Cum.			
Backout MPS A and MPS B	8	90-120	Backout MPS A and then MPS B.	N/A	Procedure 33
Post-backout health check	7	15	Run the syscheck utility to verify the MPS server is operationally sound.	Verify that the backout was successful.	Procedure 3

4.4 Log Files

All commands run during a DIU upgrade are logged in `/var/TKLC/log/upgrade/upgrade.log`. The log starts automatically when the DIU upgrade software is invoked and rolled each time an upgrade begins.

The `diuPreUpgrade_elap.sh` script logs its actions to `/var/TKLC/log/upgrade/Pre_upgrade_DIU.log`. The `PostDIUValidation.sh` script logs its actions to `/var/TKLC/log/upgrade/PostDIUValidation.log`.

The technician following these procedures is responsible for enabling screen logging in the selected connectivity application.

4.5 DIU UPGRADE PREPARATION

4.5.1 Procedure 26: Determine Whether a DIU Upgrade Is Required

Table 4-7 Procedure 26: Determine Whether a DIU Upgrade Is Required

STEP #	**This procedure includes the steps required to determine if an DIU upgrade of the system is required or an initial application installation is required.** **Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.** **IF THIS PROCEDURE FAILS, CONTACT MY ORACLE SUPPORT AND ASK FOR DIU UPGRADE ASSISTANCE.**	
1. □	**MPS A**: Log in to MPS A.	If not already logged-in, login at MPS A as 'admusr'. `<hostname> console login: admusr password: <password>` If 'admusr' is not available, then login as 'root' user.
2.	**MPS B**: Log in to MPS B.	If not already logged-in, login at MPS B as 'admusr'. `<hostname> console login: admusr password: <password>` If 'admusr' is not available, then login as 'root' user.

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Table 4-7 (Cont.) Procedure 26: Determine Whether a DIU Upgrade Is Required

STEP #	**This procedure includes the steps required to determine if an DIU upgrade of the system is required or an initial application installation is required.** **Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.** **IF THIS PROCEDURE FAILS, CONTACT MY ORACLE SUPPORT AND ASK FOR DIU UPGRADE ASSISTANCE.**	
3.	**MPS X**: Verify the TPD release.	Run the following command to verify the TPD release on the MPS. `# getPlatRev` If no output is displayed, then contact My Oracle Support by following the instructions on the front page or the instructions in the Appendix E, to know whether to perform Procedure 5 to install the operating system on the MPS. After installing the operating system, proceed with this procedure. Otherwise, if the following output is displayed, then the MPS has been installed with the correct operating system. Proceed with this procedure. `# getPlatRev` 8.10.1.9.0-150.20.0
4.	**MPS X:** Determine if the application is currently installed on the servers. (MPS B will be used to determine the current state of the servers. Assume that the state of the A server is the same.)	Run an rpm query command and examine the output: `$ rpm –qi TKLCelap`

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Table 4-7 (Cont.) Procedure 26: Determine Whether a DIU Upgrade Is Required

STEP #	This procedure includes the steps required to determine if an DIU upgrade of the system is required or an initial application installation is required. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT MY ORACLE SUPPORT AND ASK FOR DIU UPGRADE ASSISTANCE.	
5. ☐	**MPS X:** Observe the output from the rpm query.	The following is an example of what the output may look like: **$rpm -qi TKLCelap** [root@manaus-a elapall]# rpm -qi TKLCelap Name : TKLCelap Version : 5.0.87 Release : 11.1.0.0.0_111.6.0 Architecture: x86_64 Install Date: Thu 03 Sep 2026 07:52:57 AM EDT Group : Development/Build Size : 178293984 License : Oracle 2004, 2026 Signature : (none) Source RPM : TKLCelap-5.0.87-11.1.0.0.0_111.6.0.src.rpm Build Date : Thu 03 Sep 2026 06:38:22 AM EDT Build Host : elap-dev-tpd-150-31-0 Relocations : (not relocatable) Packager : <@oracle_peo_bot.com> Vendor : Oracle URL : http://www.oracle.com/ Summary : Oracle Communications ELAP Package Description : This is the Oracle Communications EAGLE LNP Application Processor(ELAP) package. The package installs ELAP software. Eagle LNP Application Processor (ELAP) provides REALLY INCREDIBLE Database (RIDB). ELAP provides the LNP feature. **If the output similar to the above example is displayed, then skip to step 7. Otherwise, proceed to the next step.**

6. ☐	**MPS X:** Installation is required if the application is not present on the server, else DIU upgrade is required.	Run the following command:
		
		`$ rpm –qi TKLCelap`
		
		`package TKLCelap is not installed`
		If the application is not currently installed, output similar to the above will be returned from the `rpm –qi` command in the previous step. If this is the case, then an application installation is required. Refer to section 5to perform ELAP installation, otherwise, skip to the next step.

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Table 4-7 (Cont.) Procedure 26: Determine Whether a DIU Upgrade Is Required

STEP #	This procedure includes the steps required to determine if an DIU upgrade of the system is required or an initial application installation is required. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT MY ORACLE SUPPORT AND ASK FOR DIU UPGRADE ASSISTANCE.	
7. □	**MPS X:** Confirm that the DIU upgrade from the existing version is compatible with the desired destination version. .	Document the current and destination release level: Source Release: Target Release: If the release number on the MPS is less than the release number on the DIU upgrade media, then an DIU upgrade is required.
8. □	Determine if it is a DIU upgrade.	If the current release is 11.0.0.4.x and target release is 11.1.y (less than the number on the upgrade media), it is a **DIU** upgrade.
9. □	**MPS X:** Procedure Complete.	This procedure is complete.

4.5.2 Procedure 27: Verify and Capture Requirements

Table 4-8 Procedure 27: Verify and Capture Requirements

STEP #	This procedure verifies that all pre-upgrade requirements have been met. Check off (✓) each step as it is completed. A checkbox is provided beside each step number. IF THIS PROCEDURE FAILS, CONTACT MY ORACLE SUPPORT AND ASK FOR UPGRADE ASSISTANCE.	
1. □	Verify all required materials are present.	Verify that the materials listed in DIU upgrade Material List (Section 4.1) are present.
2. □	Procedure Complete.	This procedure is complete.

4.5.3 Procedure 28: Perform a System Health Check

Table 4-9 Procedure 28: Perform a System Health Check

STEP #	This procedure determines the health of the MPS System before beginning an DIU upgrade. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT MY ORACLE SUPPORT AND ASK FOR DIU UPGRADE ASSISTANCE.	
1. □	**MPS A**: Verify health of MPS A.	Run Procedure 3 on MPS A to verify the health of MPS A.

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Table 4-9 (Cont.) Procedure 28: Perform a System Health Check

STEP #	This procedure determines the health of the MPS System before beginning an DIU upgrade. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT MY ORACLE SUPPORT AND ASK FOR DIU UPGRADE ASSISTANCE.	
2. ☐	**MPS B**: Verify health of MPS B.	Run **Procedure 3** on MPS B to verify the health of MPS B.
3. ☐	Procedure Complete.	This procedure is complete.

4.6 SOFTWARE DIU UPGRADE PREPARATION

4.6.1 Procedure 29: Assess MPS Server Readiness

Table 4-10 Procedure 29: Assess MPS Server Readiness

STEP #	This procedure includes the steps required to assess the readiness of a system to be DIU upgraded. Check off (✓)each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT MY ORACLE SUPPORT AND ASK FOR DIU UPGRADE ASSISTANCE.	

1. ☐	**MPS A**: Log in as the user "elapdev" user.	If not already logged-in, then log in.
		`<hostname> console login: elapdev`
		`password: <password>`

2. ☐	**MPS A:** Verify High Availability status.	Run the following command to display the high availability status of the ELAP pair.
		`$ hastatus`
		`ACTIVE`
		Note: HA status could be Active or Standby. If HA status is not Active/ Standby, contact the My Oracle Support by following the instructions on the front page or the instructions in the Appendix E.

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Table 4-10 (Cont.) Procedure 29: Assess MPS Server Readiness

STEP #	This procedure includes the steps required to assess the readiness of a system to be DIU upgraded. Check off (✓)each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT MY ORACLE SUPPORT AND ASK FOR DIU UPGRADE ASSISTANCE.	

3. □	**MPS A:** Verify DRBD status. Check the CS value as 'Connected'.
	Note: If CS value is other than 'Connected', periodically run drbd status until both ELAPs get synced.
		Run the following command to display the DRBD status.
		`$ sudo drbdadm status all drbd0 role:Primary`
		`disk:UpToDate`
		`natal-B role:Secondary peer-disk:UpToDate`
		Expected status:
		ST: Primary/Secondary
		DS: UpToDate/UpToDate
		If any status is not as expected then contact My Oracle Support by following the instructions on the front page or the instructions in the Appendix E.

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Table 4-10 (Cont.) Procedure 29: Assess MPS Server Readiness

STEP #	This procedure includes the steps required to assess the readiness of a system to be DIU upgraded. Check off (✓)each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT MY ORACLE SUPPORT AND ASK FOR DIU UPGRADE ASSISTANCE.	

4. □	**MPS A:** For logging purposes cat the hosts file.
	Note: The hostname in this file will be as per the configuration.
		`$ cat /etc/hosts`
		
		`#`
		
		`# Do not modify this file by hand. Refer to Tekelec`
		
		`Configuration`
		
		`# documentation. #`
		`# The order of the aliases in this file is significant`
		`# to the installation process.`
		
		`#`
		
		`127.0.0.1 localhost loghost devloan-01-prova-bkup mate-provb-bkup`
		`192.168.120.100 dsmm-a`
		`192.168.121.100 dsmb-a`
		`192.168.120.200 dsmm-b`
		`192.168.121.200 dsmb-b`
		`169.254.1.200 mate sync-b hasync-1a`
		`169.254.1.100 sync-a hasync-1b`
		`192.168.123.100 dsmvip-a`
		`192.168.123.200 dsmvip-b`
		`169.254.1.201 mate-ipdptp0 server_ppp0`
		`169.254.1.202 mate-ppp client_ppp0`
		`169.254.1.101 devloan-01-ipdptp0 server_ppp1`
		`169.254.1.102 devloan-01-ppp client_ppp1`
		`169.254.1.1 switch1A`
		`169.254.1.2 switch1B`
		`10.250.32.10 ntpserver1`
		`192.168.59.9 devloan-01 prova-ip`
		`192.168.59.10 mate-prov provb-ip devloan-02`
		`192.168.59.22 prov-vip`

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Table 4-10 (Cont.) Procedure 29: Assess MPS Server Readiness

STEP #	This procedure includes the steps required to assess the readiness of a system to be DIU upgraded. Check off (✓)each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT MY ORACLE SUPPORT AND ASK FOR DIU UPGRADE ASSISTANCE.	

5. ☐	**MPS A:** Check the static routes.	Run the following command to display the static routes.
		
		`$netstat –r –n`
		`Kernel IP routing table`
		`Destination Gateway Genmask Flags MSS Window irtt Iface`
		
		`192.168.122.1 192.168.121.1 255.255.255.255 UGH 0 0 0 bond0.3`
		`10.248.10.0 0.0.0.0 255.255.255.0 U 0 0 0 eth01`
		`169.254.1.0 0.0.0.0 255.255.255.0 U 0 0 0 bond0.1`
		`192.168.120.0 0.0.0.0 255.255.255.0 U 0 0 0 eth02`
		`192.168.121.0 0.0.0.0 255.255.255.0 U 0 0 0 bond0.3`
		`169.254.0.0 0.0.0.0 255.255.0.0 U 0 0 0 bond0.3`
		`0.0.0.0 10.248.10.1 0.0.0.0 UG 0 0 0 eth01`

6. ☐	**MPS A:** Delete unwanted ISO images.	Run the following command to display the presence of ELAP software ISO images.
		
		`$ ls –la /var/TKLC/upgrade`
		
		Below is an example of the output of the 'ls -la' command:
		`total 877220`
		`drwxrwxr-x. 2 root admgrp 4096 May 30 06:09 .`
		`dr-xr-xr-x. 22 root root 4096 May 30 22:24 ..`
		`-r-------- 1 admusr admgrp 898260992 May 30 06:09 ELAP-10.2.0.0.0_101.2.0-x86_64.iso`
		Remove any ISO images that are not the target software ISO image using the following command:
		
		`$ rm –f /var/TKLC/upgrade/<filename>`

7. ☐	**MPS A:** Determine when last reboot occurred. For any server up longer than 180 days would be a candidate for reboot during a maintenance window.	`$ uptime` `23:41:53 up 1:16, 3 users, load average: 0.16, 0.15, 0.17`

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Table 4-10 (Cont.) Procedure 29: Assess MPS Server Readiness

STEP #	This procedure includes the steps required to assess the readiness of a system to be DIU upgraded. Check off (✓)each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT MY ORACLE SUPPORT AND ASK FOR DIU UPGRADE ASSISTANCE.	

8.
□
	MPS A: Following self test on the disk.	Run the following command:
		
		`$sudo smartctl -t short /dev/sda`
		`smartctl 5.43 2012-06-30 r3573 [x86_64-linux-2.6.32-573.18.1.el6prerel7.0.3.0.0_86.44.0.x86_64] (local build) Copyright (C) 2002-12 by Bruce Allen, http://smartmontools.sourceforge.net`
		
		`=== START OF OFFLINE IMMEDIATE AND SELF-TEST SECTION ===`
		`Sending command: "Run SMART Short self-test routine immediately in off-line mode".`
		`Drive command "Run SMART Short self-test routine immediately in off-line mode" successful.`
		`Testing has begun.`
		`Please wait 1 minutes for test to complete.`
		`Test will complete after Mon May 30 23:46:59 2016 Use smartctl -X to end test.`
		Note: Please wait for 5 minutes for the test to complete.

9.
□
	MPS A: Examine the results of self test on the disk.
	In case of any error/failure, contact the My Oracle Suppor tby following the instructions on the front page or the instructions in the Appendix E.
		Run the following command:
		
		`$ smartctl -l selftest /dev/sda`
		`smartctl 5.43 2012-06-30 r3573 [x86_64-linux-2.6.32-573.18.1.el6prerel7.0.3.0.0_86.44.0.x86_64] (local build) Copyright (C) 2002-12 by Bruce Allen, http://smartmontools.sourceforge.net`
		
		`=======> INVALID ARGUMENT TO -l: selftest/dev/sda`
		
		`=======> VALID ARGUMENTS ARE: error, selftest, selective, directory[,g|s], xerror[,N][,error], xselftest[,N][,selftest], background, sasphy[,reset], sataphy[,reset], scttemp[sts,hist], scttempint,N[,p], scterc[,N,M], devstat[,N], ssd, gplog,N[,RANGE], smartlog,N[,RANGE] <=======`
		
		`Use smartctl -h to get a usage summary`

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Table 4-10 (Cont.) Procedure 29: Assess MPS Server Readiness

STEP #	This procedure includes the steps required to assess the readiness of a system to be DIU upgraded. Check off (✓)each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT MY ORACLE SUPPORT AND ASK FOR DIU UPGRADE ASSISTANCE.	

10. ☐	**MPS A:** Disk Integrity step	Run the following command:
		
		`$sudo smartctl -a /dev/sda | grep -i LBA`
		
		The output would be like:
		
		`241 Total_LBAs_Written 0x0032 100 100 000 Old_age Always - 350550`
		`242 Total_LBAs_Read 0x0032 100 100 000 Old_age Always - 1695220`
		`Num Test_Description Status Remaining LifeTime(hours) LBA_of_first_error`
		`SPAN MIN_LBA MAX_LBA CURRENT_TEST_STATUS`
		
		If any output shows “Completed: read failure” or “Error: UNC xxx sectors”, contact the My Oracle Support by following the instructions on the front page or the instructions in the Appendix E.

11. ☐	**MPS A:** Disk Integrity Test.	Repeat steps 8 to 10, for the ‘/dev/sdb’ disk drive on the APPD card.
12. ☐	**MPS A:**Inspect the banner for any messages.	Run the following command to display the banner messages. `$ manageBannerInfo –l` There are currently no BannerInfo messages for this side in the database. If unexpected output is returned, then contact My Oracle Support by following the instructions on the front page or the instructions in the Appendix E.
13. ☐	**MPS B:** Repeat checks on Server B.	Repeat steps 1 to 12, on MPS B.

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Table 4-10 (Cont.) Procedure 29: Assess MPS Server Readiness

STEP #	This procedure includes the steps required to assess the readiness of a system to be DIU upgraded. Check off (✓)each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT MY ORACLE SUPPORT AND ASK FOR DIU UPGRADE ASSISTANCE.	
14. ☐ ☐ ☐ ☐	**Active MPS:** Verify RTDB status Login to ELAP GUI using VIP. Expand the "RTDB" Folder. Select the "View RTDB Status". Ensure that the DB Status is Coherent.	ELAP_A_NAME ELAP RTDB Status DB Status: Coherent RTDB Level: 0 RTDB Birthday: 05/31/2016 03:25:38 GMT Counts: If the RTDB status is other than Coherent, contact My Oracle Support by following the instructions on the front page or the instructions in the Appendix E.
15. ☐	Procedure Complete.	This procedure is complete.

4.6.2 Procedure 30: Check the Pre-Upgrade System Date and Time

Table 4-11 Procedure 30: Check the Pre-Upgrade System Date and Time

STEP #	This procedure performs the pre-upgrade system time check. Check off (✓)each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT MY ORACLE SUPPORT AND ASK FOR DIU UPGRADE ASSISTANCE.	
NOTE: The MPS servers make use of NTP to keep time synchronized between servers. Under some circumstances, either at initial installation in the customer's network or due to power interruption and battery failure, it is possible for an MPS server to have a system date/time value too large for NTP to correct. If the system time is 20 minutes or more off from the real time, NTP cannot correct it. **Check the date/time on *both* MPS-A and MPS-B servers, and correct the system time on any server off by more than 30 seconds from the real time.**		
1. ☐	**MPS A:** Login as the user "admusr".	If not already logged-in, then login at MPS A: login: admusr password: <password>
2. ☐	**MPS A:** Verify Network Time Protocol daemon is running.	Use the service command to check the status of CHRONYD. `$ service chronyd status` If the chronyd service is running, then continue with the next step, otherwise if the chronyd service is not running, contact My Oracle Support by following the instructions on the front page or the instructions in the Appendix E.

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Table 4-11 (Cont.) Procedure 30: Check the Pre-Upgrade System Date and Time

STEP #	**This procedure performs the pre-upgrade system time check. Check off (✓)each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT MY ORACLE SUPPORT AND ASK FOR DIU UPGRADE ASSISTANCE.**	
3. □	**MPS A:** Run the "date" command.	Run the "date" command and examine the result. `$ date` Mon May 01 23:50:35 EDT 20xx
4. □	**MPS A:** Compare result to the real time.	Compare the result from the "date" command in the previous step to the real time. If the difference is 30 seconds or less, then continue with the next step. If the difference exceeds 30 seconds, contact My Oracle Support by following the instructions on the front page or the instructions in Appendix E.

5. □	**MPS A:** Stop Network Time Protocol daemon.	Use the service command to stop the CHRONYD.
		`$sudo service chronyd stop`
		An example output of this command is as follows:
		`Shutting down chronyd [OK]`

6. □	**MPS A:** Verify Network Time Protocol daemon is stopped.	To verify the status of chronyd, use the following command:
		`$ service chronyd status`
		Ensure the output is as follows:
		`chronyd is stopped`
		Force a NTP sync with the NTP server by this command:
		`$ chronyd -q`

7. □	**MPS A:** Start Network Time Protocol daemon.	Use the service command to start NTPD.
		`$sudo service chronyd start`
		An example output of this command is as follows:
		`Starting chrony d: [ OK ]`

8. □	**MPS A:** Run the "date" command.	Run the "date" command and examine the result. `$ date` Mon May 01 23:52:35 EDT 20xx Expected result is that the time difference is corrected.

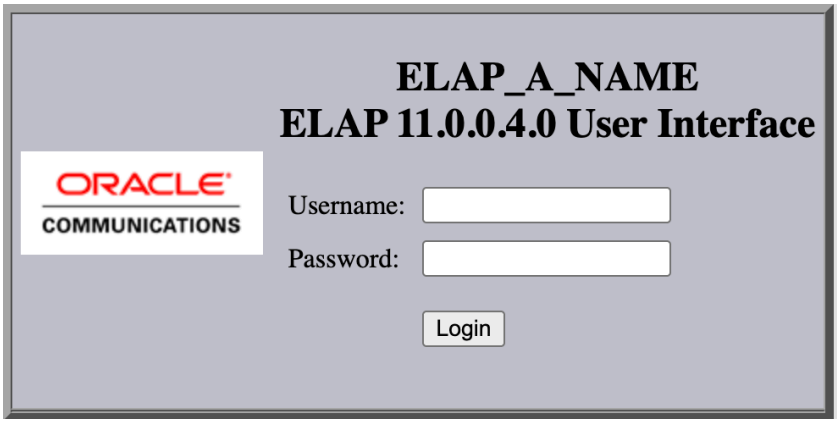
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Table 4-11 (Cont.) Procedure 30: Check the Pre-Upgrade System Date and Time

STEP #	This procedure performs the pre-upgrade system time check. Check off (✓)each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT MY ORACLE SUPPORT AND ASK FOR DIU UPGRADE ASSISTANCE.	
9. ☐	**MPS B:** System time check on MPS B.	Repeat this procedure on the MPS B. If these steps have been performed on both MPS servers, continue with next step.
10. ☐	**MPS X:** Procedure Complete.	This procedure is complete

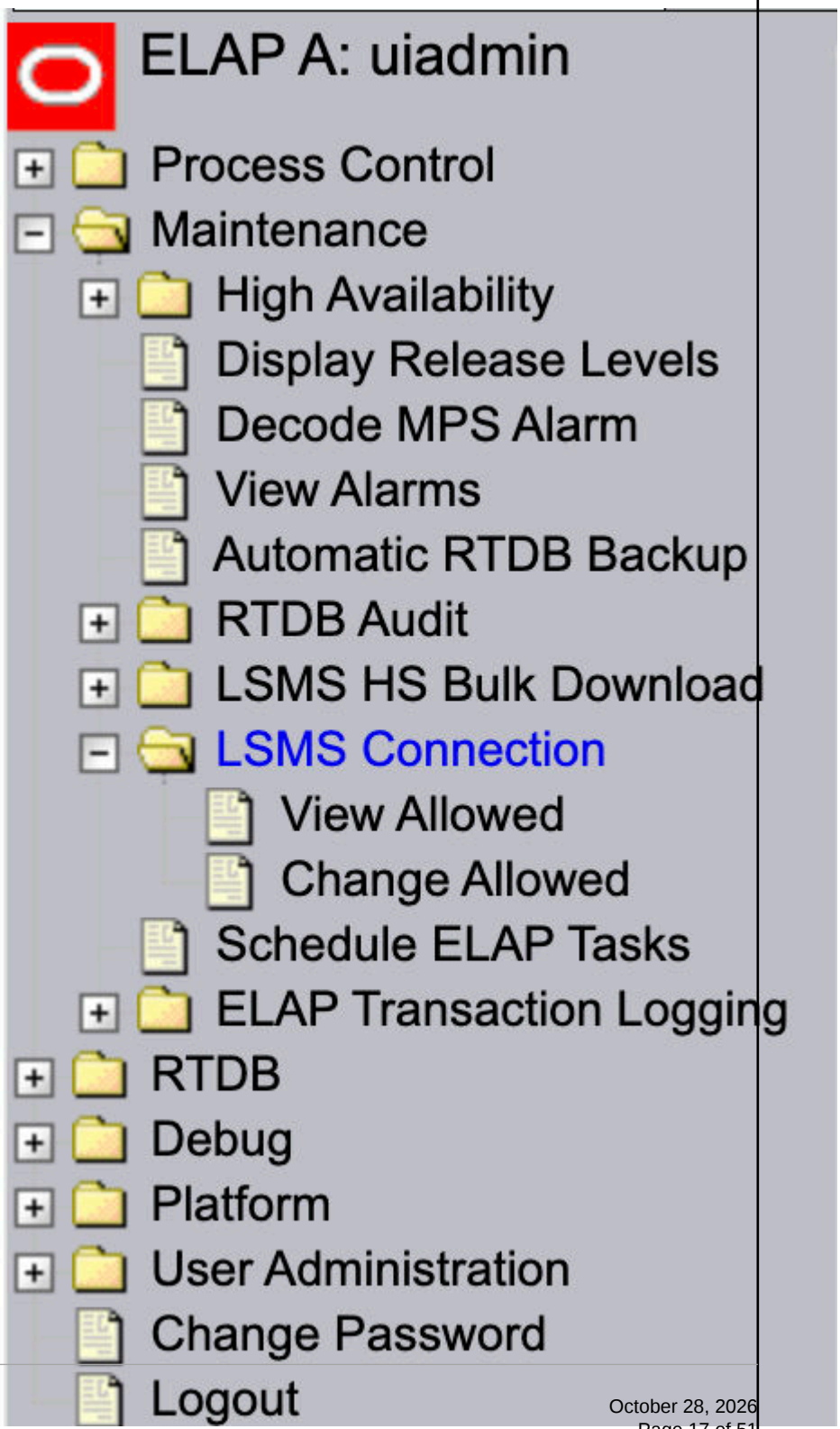
4.6.3 Procedure 31: Back Up the RTDB

Table 4-12 Procedure 31: Back Up the RTDB

STEP #	This procedure performs the RTDB backup. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT ORACLE SUPPORT AND ASK FOR UPGRADE ASSISTANCE.	
1. ☐	**Active ELAP GUI:** Using the new Virtual IP address login to Active ELAP.	

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Table 4-12 (Cont.) Procedure 31: Back Up the RTDB

STEP #	This procedure performs the RTDB backup. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT ORACLE SUPPORT AND ASK FOR UPGRADE ASSISTANCE.	
2. □	**Active ELAP GUI:** Disable the LSMS Connection. Expand the "Maintenance" Folder. Expand the "LSMS Connection" Folder. Select the "Change Allowed" link. Click on the "Disable LSMS Connection" button. Confirmation that the connection is disabled will appear.	

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Table 4-12 (Cont.) Procedure 31: Back Up the RTDB

STEP #	This procedure performs the RTDB backup. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT ORACLE SUPPORT AND ASK FOR UPGRADE ASSISTANCE.	
		
3. ☐	**Active ELAP:** Verify RTDB status Login to ELAP GUI using VIP. Expand the "RTDB" Folder. Select the "View RTDB Status". Ensure that the DB Status is Coherent.	ELAP_A_NAME **ELAP RTDB Status** DB Status: Coherent RTDB Level: 41 RTDB Birthday: 07/01/2026 13:25:54 GMT Counts: TNs=755016450 NPBs=251500 LRNMRs=335284 LRNs=142916 MRs=19604 NPANXXs=122291 TN-NPANXXs=202229 If the RTDB status is other than Coherent, contact My Oracle Support by following the instructions on the front page or the instructions in Appendix E.

4. ☐	**Active ELAP:** Log in as 'root' user.	If not already logged-in, then login at MPS A:
		`login: root`
		`password: <password>`

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Table 4-12 (Cont.) Procedure 31: Back Up the RTDB

STEP #	This procedure performs the RTDB backup. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT ORACLE SUPPORT AND ASK FOR UPGRADE ASSISTANCE.	
5. □	**Active ELAP:** Log in as "elapconfig" to start the ELAP Configuration utility and enter choice 6 to go to the platform menu.	/-----ELAP Configuration Menu----------\ /----------\ | 1 | Display Configuration | |----|----------| | 2 | Configure Network Interfaces Menu | |----|----------| | 3 | Set Time Zone | |----|----------| | 4 | Exchange Secure Shell Keys | |----|----------| | 5 | Change Password | |----|----------| | 6 | Platform Menu | |----|----------| | 7 | Configure NTP Server | |----|----------| | 8 | Mate Disaster Recovery | |----|----------| | e | Exit | \----------/ Enter Choice: 6

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Table 4-12 (Cont.) Procedure 31: Back Up the RTDB

STEP #	This procedure performs the RTDB backup. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT ORACLE SUPPORT AND ASK FOR UPGRADE ASSISTANCE.	
6. □	**Active ELAP:** Select **"6"** to start the RTDB Backup.	/-----ELAP Platform Menu-\ /-------------------------\ | 1 | Initiate Upgrade | |----|--------------------| | 2 | Reboot MPS | |----|--------------------| | 3 | MySQL Backup | |----|--------------------| | 4 | RTDB Backup | |----|--------------------| | e | Exit | \-------------------------/ Enter Choice: 4 Are you sure you want to back up the RTDB database on MPS B to "/var/TKLC/appl/free/backup/rtdbBackup_mps-appd- b_20020117201248.gz"? [N]: Y RTDB database Backup successfully started.

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Table 4-12 (Cont.) Procedure 31: Back Up the RTDB

STEP #	This procedure performs the RTDB backup. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT ORACLE SUPPORT AND ASK FOR UPGRADE ASSISTANCE.	
7. □	**Active ELAP:** Select **"e"** to exit the Platform Menu.	/-----ELAP Platform Menu-\ /-------------------------\ | 1 | Initiate Upgrade | |----|---------------------| | 2 | Reboot MPS | |----|---------------------| | 3 | MySQL Backup | |----|---------------------| | 4 | RTDB Backup | |----|---------------------| | e | Exit | \-------------------------/ Enter Choice: e

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Table 4-12 (Cont.) Procedure 31: Back Up the RTDB

STEP #	This procedure performs the RTDB backup. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT ORACLE SUPPORT AND ASK FOR UPGRADE ASSISTANCE.	
8. □	**Active ELAP:** Exit the Main Menu.	/-----ELAP Platform Menu-\ /-------------------------\ | 1 | Initiate Upgrade | |----|--------------------| | 2 | Reboot MPS | |----|--------------------| | 3 | MySQL Backup | |----|--------------------| | 4 | RTDB Backup | |----|--------------------| | e | Exit | \-------------------------/ Enter Choice: e

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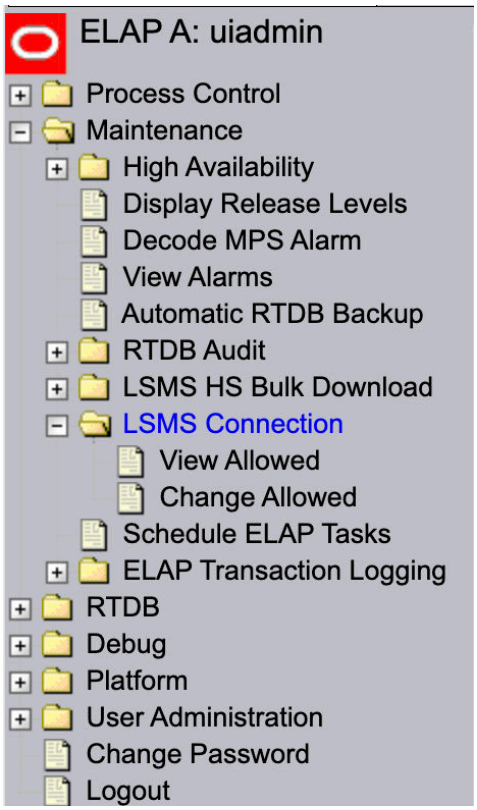
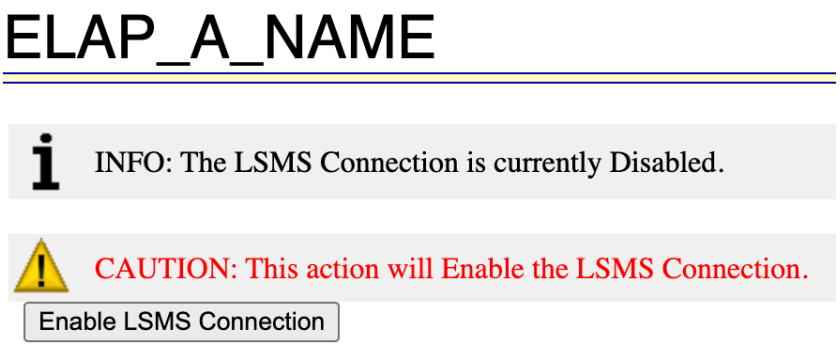
Table 4-12 (Cont.) Procedure 31: Back Up the RTDB

STEP #	This procedure performs the RTDB backup. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT ORACLE SUPPORT AND ASK FOR UPGRADE ASSISTANCE.	
9. □	**Active ELAP:** Verify the backup is completed. Periodically run the "manageBannerInfo –l" command until the message "RTDB backup completed successfully" appears. Verify the /usr/TKLC/elap/logs/c gi.dbg log file for the status of RTDB backup.	`# manageBannerInfo -l` ID: BACKUP_RTDB_STATUS SIDE: A MSG: RTDB backup started SetTime: 2013-11-07 02:47:31 ClearTime: 0000-00-00 00:00:00 `# manageBannerInfo -l` ID: BACKUP_RTDB_STATUS SIDE: A MSG: RTDB backup completed successfully SetTime: 2013-11-07 02:45:05 ClearTime: 2013-11-07 02:46:34 Also, verify that the following logs appear in the "/usr/TKLC/elap/logs/cgi.dbg" log file. 11/07/13-02:49:05:<elapdev>::9300: backupOutfile = /var/TKLC/elap/free/backup/ rtdbBackup_mps-appd- b_20020117201248 11/07/13-02:49:05:<elapdev>::9300: Backup of RTDB finished successfully. 11/07/13-02:49:33:<elapdev>::7193: Compression of RTDB backup file finished successfully.

10. □	**Active ELAP:**
	Transfer file to the remote machine.
		Using SFTP (secure-FTP), transfer the RTDB Backup to a remote, customer-provided computer. Enter "yes" when prompted if you want to continue to connect.
		
		`# cd /var/TKLC/elap/free/backup`
		`# sftp<IP address of remote computer>`
		
		`Connecting to <IP address of remote computer>...`
		`The authenticity of host '<IP address of remote computer>' can't be established.`

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Table 4-12 (Cont.) Procedure 31: Back Up the RTDB

STEP #	This procedure performs the RTDB backup. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT ORACLE SUPPORT AND ASK FOR UPGRADE ASSISTANCE.	
11.	**Active ELAP GUI:** Enable the LSMS Connection. Expand the "Maintenance" Folder. Expand the "LSMS Connection" Folder. Select the "Change Allowed" link. Click on the "Enable LSMS Connection" button. Confirmation that the connection is enabled will appear.	 

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Table 4-12 (Cont.) Procedure 31: Back Up the RTDB

STEP #	This procedure performs the RTDB backup. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT ORACLE SUPPORT AND ASK FOR UPGRADE ASSISTANCE.	
		ELAP_A_NAME SUCCESS: The LSMS Connection is now Enabled.
12.	**Active ELAP:** Procedure Complete.	This procedure is complete.

4.6.4 Procedure 32: Perform the DIU Upgrade

> **Note**
>
> Ensure that the legacy upgrade preceding DIU is accepted; otherwise, an error can occur when the background DIU upgrade starts.

Table 4-13 Procedure 32: Perform the DIU Upgrade

S. No	STEPS	This procedure performs Dual Image Upgrade on the server. NOTE: DIU upgrade should be done first on ELAP B, then on ELAP A. NOTE: Upgrade is supported only from 11.0.0.4.X to 11.1.Y release. For all other releases, install procedure shall be followed. Check off (□) each step as it is completed. Boxes have been provided for this purpose beside each step number. If this procedure fails, contact My Oracle Support and ask for ASSISTANCE.
	MPS X:	Run the steps below first on MPS B, and then on MPS A. MPS B is the B side of the server. MPS B can either be Active or Standby.
1 □	MPS X: Login prompt is displayed.	**<hostname> console login:** **Note:** Press enter if no login prompt is displayed.
2 □	MPS X: Log in as “root” user.	`[hostname] console login: root` `password: password`

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Table 4-13 (Cont.) Procedure 32: Perform the DIU Upgrade

S. No	STEPS	This procedure performs Dual Image Upgrade on the server. NOTE: DIU upgrade should be done first on ELAP B, then on ELAP A. NOTE: Upgrade is supported only from 11.0.0.4.X to 11.1.Y release. For all other releases, install procedure shall be followed. Check off (□) each step as it is completed. Boxes have been provided for this purpose beside each step number. If this procedure fails, contact My Oracle Support and ask for ASSISTANCE.
3. □	**MPS X :** Put ISO image on ELAP server.	Use any of the following methods to put ELAP 11.1 DIU ISO image with `diuPreUpgrade_elap.sh` on the ELAP server. c. Perform ISO image generation from USB media using **Appendix B** d. Copy ISO to `/var/TKLC/upgrade` directory. Add `diuPreUpgrade_elap.sh` to the /tmp directory **Note:** To perform this step, the provisional IP of the ELAP server must be set via platcfg menu.
4 □	Create a terminal window log in MPS X.	If not already connected, connect to the APPD card via the serial port. For connecting the APPD card, disconnect the console cable from the serial port on the APPD A card's adapter. The cable should be disconnected at the point where it connects to the serial port labeled 'S1' on the APPD A card's adapter and use it for serial access. Cable part numbers - 830-1220-xx
5 □	MPS X: Copy DIU pre upgrade script on server and change permissions	`[root@MPS-A ]# chmod +x diuPreUpgrade_elap.sh` `[root@MPS-A ]# chown root:root diuPreUpgrade_elap.sh`

6. □	MPS X: Enable root login on both servers
	Note: This must be enabled on both servers.
		`[root@manaus-a elapall]# /usr/TKLC/plat/sbin/rootSshLogin --permit`
		
		`Successfully updated config file with permitRootLogin yes.`
		`FILE: /etc/ssh/sshd_config`
		`Restarting the sshd daemon...`
		`The sshd daemon has been restarted.`
		`The root ssh login is set to yes.`
		
		`[root@manaus-b elapall]# /usr/TKLC/plat/sbin/rootSshLogin --permit`
		
		`Successfully updated config file with permitRootLogin yes.`
		`FILE: /etc/ssh/sshd_config`
		`Restarting the sshd daemon...`
		`The sshd daemon has been restarted.`
		`The root ssh login is set to yes.`

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Table 4-13 (Cont.) Procedure 32: Perform the DIU Upgrade

S. No	STEPS	This procedure performs Dual Image Upgrade on the server. NOTE: DIU upgrade should be done first on ELAP B, then on ELAP A. NOTE: Upgrade is supported only from 11.0.0.4.X to 11.1.Y release. For all other releases, install procedure shall be followed. Check off (□) each step as it is completed. Boxes have been provided for this purpose beside each step number. If this procedure fails, contact My Oracle Support and ask for ASSISTANCE.
7. □	Ensure hastatus and drbdadm status of both servers.	#hastatus The servers should be ACTIVE/STANDBY or viceversa state. #drbdadm status on Active: drbd0 role:Primary disk:UpToDate open:yes Tacna-a role:Secondary peer-disk:UpToDate on Standby: drbd0 role:Secondary disk:UpToDate open:no Tacna-b role:Primary peer-disk:UpToDate **Note:** If MPS B is already upgraded, then skip this step.

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Table 4-13 (Cont.) Procedure 32: Perform the DIU Upgrade

S. No	STEPS	This procedure performs Dual Image Upgrade on the server. NOTE: DIU upgrade should be done first on ELAP B, then on ELAP A. NOTE: Upgrade is supported only from 11.0.0.4.X to 11.1.Y release. For all other releases, install procedure shall be followed. Check off (□) each step as it is completed. Boxes have been provided for this purpose beside each step number. If this procedure fails, contact My Oracle Support and ask for ASSISTANCE.
8. □	**MPS X:** Move all custom files and run pre upgrade script	**NOTE:** All custom files, scripts, folders need to be migrated to remote/mate server before the DIU process is started. These need to be restored back to their place after the DIU process is completed. **NOTE:**- Before running the pre-upgrade script, ensure the mount point `/var/TKLC/elap/free` is not in active use. Specifically, verify that no interactive shells (e.g., `bash`) or other processes have their current working directory set to `/var/TKLC/elap/free` (or any subdirectory), as this will cause the unmount step to fail with “target is busy.” Run the pre-upgrade script `[root@manaus-b ]# ./diuPreUpgrade_elap.sh` **`[INFO] Setting SPLIT_MIRROR=1 in /usr/TKLC/plat/etc/upgrade/upgrade.conf`** **`[INFO] + mkdir -p '/usr/TKLC/plat/etc/upgrade'`** **`[INFO] + printf '%s\n' 'SPLIT_MIRROR=1' > '/usr/TKLC/plat/etc/upgrade/upgrade.conf'`** **`[INFO] + cat '/usr/TKLC/plat/etc/upgrade/upgrade.conf'`** **`SPLIT_MIRROR=1`** **`[INFO] Running on side-B`** **`[INFO] Discovered side-A`** **`[INFO] Existing pre-DIU state found. Preserving the first captured state.`** **`[INFO] Complete pre-DIU state already exists on side-A. Preserving it and skipping copy.`** **`[INFO] Stopping and masking ELAP services only: TKLCha TKLCharsync Elap ExQueue RemoveInfoMsgs runGsConn runGS runExInit periodckd mysqld@app`** **`[INFO] [side-B] Stopping TKLCha`** **`[INFO] [side-A] Stopping TKLCha`** **`[INFO] [side-B] Stopping TKLCharsync`** **`[INFO] [side-A] Stopping TKLCharsync`** **`[INFO] [side-B] Elap already stopped`** **`[INFO] [side-A] Elap already stopped`** **`[INFO] [side-B] Stopping ExQueue`** **`[INFO] [side-A] Stopping ExQueue`**

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Table 4-13 (Cont.) Procedure 32: Perform the DIU Upgrade

S. No	STEPS	This procedure performs Dual Image Upgrade on the server. NOTE: DIU upgrade should be done first on ELAP B, then on ELAP A. NOTE: Upgrade is supported only from 11.0.0.4.X to 11.1.Y release. For all other releases, install procedure shall be followed. Check off (□) each step as it is completed. Boxes have been provided for this purpose beside each step number. If this procedure fails, contact My Oracle Support and ask for ASSISTANCE.
		[INFO] [side-B] Stopping RemoveInfoMsgs [INFO] [side-A] Stopping RemoveInfoMsgs [INFO] [side-B] Stopping runGsConn [INFO] [side-A] Stopping runGsConn [INFO] [side-B] Stopping runGS [INFO] [side-A] Stopping runGS [INFO] [side-B] Stopping runExInit [INFO] [side-A] Stopping runExInit [INFO] [side-B] Stopping periodckd [INFO] [side-A] Stopping periodckd [INFO] [side-B] mysqld@app already stopped [INFO] [side-A] mysqld@app already stopped [INFO] [side-B] Masking TKLCha Created symlink /etc/systemd/system/TKLCha.service -> /dev/null. [INFO] [side-A] Masking TKLCha Created symlink /etc/systemd/system/TKLCha.service -> /dev/null. [INFO] [side-B] Masking TKLCharsync Created symlink /etc/systemd/system/TKLCharsync.service -> /dev/null. [INFO] [side-A] Masking TKLCharsync Created symlink /etc/systemd/system/TKLCharsync.service -> /dev/null. [INFO] [side-B] Masking Elap Created symlink /etc/systemd/system/Elap.service -> /dev/null. [INFO] [side-A] Masking Elap Created symlink /etc/systemd/system/Elap.service -> /dev/null. [INFO] [side-B] Masking ExQueue Created symlink /etc/systemd/system/ExQueue.service -> /dev/null. [INFO] [side-A] Masking ExQueue Created symlink /etc/systemd/system/ExQueue.service -> /dev/null. [INFO] [side-B] Masking RemoveInfoMsgs

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Table 4-13 (Cont.) Procedure 32: Perform the DIU Upgrade

S. No	STEPS	This procedure performs Dual Image Upgrade on the server. NOTE: DIU upgrade should be done first on ELAP B, then on ELAP A. NOTE: Upgrade is supported only from 11.0.0.4.X to 11.1.Y release. For all other releases, install procedure shall be followed. Check off (□) each step as it is completed. Boxes have been provided for this purpose beside each step number. If this procedure fails, contact My Oracle Support and ask for ASSISTANCE.
		Created symlink /etc/systemd/system/RemoveInfoMsgs.service -> /dev/null. [INFO] [side-A] Masking RemoveInfoMsgs Created symlink /etc/systemd/system/RemoveInfoMsgs.service -> /dev/null. [INFO] [side-B] Masking runGsConn Created symlink /etc/systemd/system/runGsConn.service -> /dev/null. [INFO] [side-A] Masking runGsConn Created symlink /etc/systemd/system/runGsConn.service -> /dev/null. [INFO] [side-B] Masking runGS Created symlink /etc/systemd/system/runGS.service -> /dev/null. [INFO] [side-A] Masking runGS Created symlink /etc/systemd/system/runGS.service -> /dev/null. [INFO] [side-B] Masking runExInit Created symlink /etc/systemd/system/runExInit.service -> /dev/null. [INFO] [side-A] Masking runExInit Created symlink /etc/systemd/system/runExInit.service -> /dev/null. [INFO] [side-B] Masking periodckd Created symlink /etc/systemd/system/periodckd.service -> /dev/null. [INFO] [side-A] Masking periodckd Created symlink /etc/systemd/system/periodckd.service -> /dev/null. [INFO] [side-B] Masking mysqld@app Created symlink /etc/systemd/system/mysqld@app.service -> /dev/null. [INFO] [side-A] Masking mysqld@app Created symlink /etc/systemd/system/mysqld@app.service -> /dev/null. [INFO] Detected free folder to preserve: /var/TKLC/elap/free/backup

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Table 4-13 (Cont.) Procedure 32: Perform the DIU Upgrade

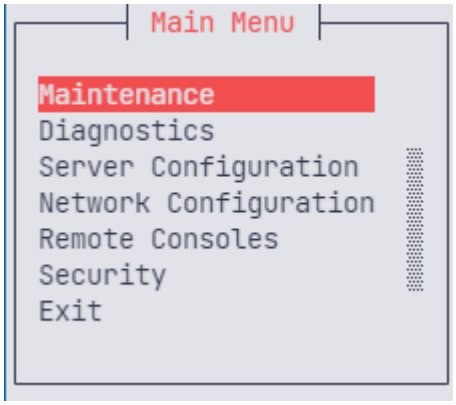
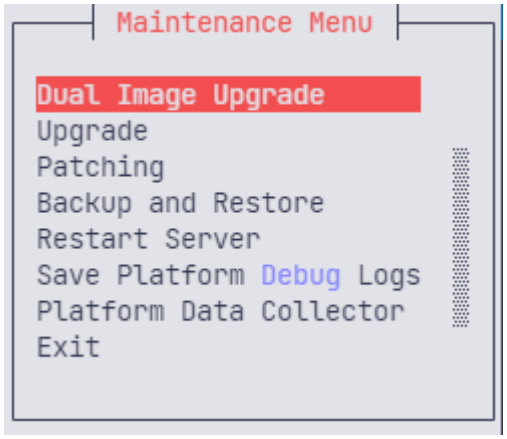
S. No	STEPS	This procedure performs Dual Image Upgrade on the server. NOTE: DIU upgrade should be done first on ELAP B, then on ELAP A. NOTE: Upgrade is supported only from 11.0.0.4.X to 11.1.Y release. For all other releases, install procedure shall be followed. Check off (□) each step as it is completed. Boxes have been provided for this purpose beside each step number. If this procedure fails, contact My Oracle Support and ask for ASSISTANCE.

		[INFO] Detected free folder to preserve: /var/TKLC/elap/free/comcol
		[INFO] Detected free folder to preserve: /var/TKLC/elap/free/logsExport
		[INFO] Precheck(start): verifying /var/TKLC/elap/free is not busy
		Required space already present (>=30G). Exiting no need to move free folders...
		Run vgs to make sure Free space is 30G in vgroot
		`[root@manaus-b elapall]#`
		`VG #PV #LV #SN Attr VSize VFree`
		`vgdrbd0 1 2 0 wz--n- 32.96g 22.96g`
		`vgroot 1 10 0 wz--n- <409.41g <30.33g`
		`[root@manaus-b elapall]#`

9 □	MPS X: Start platcfg utility.	**$ su - platcfg**

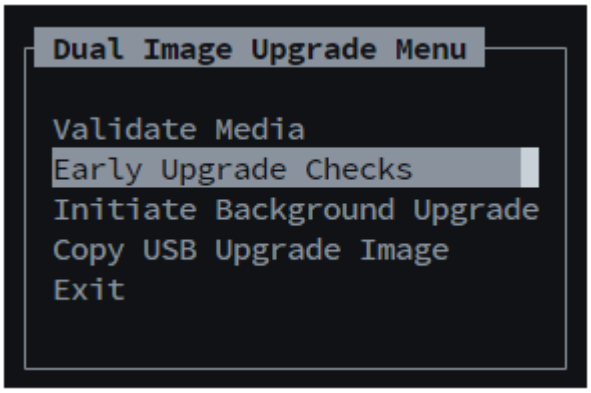
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Table 4-13 (Cont.) Procedure 32: Perform the DIU Upgrade

S. No	STEPS	This procedure performs Dual Image Upgrade on the server. NOTE: DIU upgrade should be done first on ELAP B, then on ELAP A. NOTE: Upgrade is supported only from 11.0.0.4.X to 11.1.Y release. For all other releases, install procedure shall be followed. Check off (□) each step as it is completed. Boxes have been provided for this purpose beside each step number. If this procedure fails, contact My Oracle Support and ask for ASSISTANCE.
10 □	MPS X: Navigate to the Upgrade menu. **NOTE**: Make sure to select Dual Image Upgrade only.	The platcfg Main Menu appears. 1. On the Main Menu, select Maintenance and press [ENTER].  2. Select the Dual Image Upgrade menu and press [ENTER]. 
11. □	MPS X: Validate ISO file.	Validate ISO file using Procedure A.2.

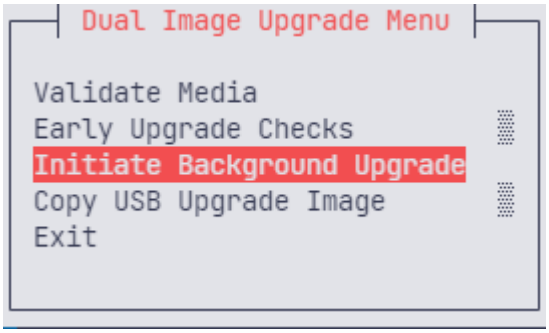
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Table 4-13 (Cont.) Procedure 32: Perform the DIU Upgrade

S. No	STEPS	This procedure performs Dual Image Upgrade on the server. NOTE: DIU upgrade should be done first on ELAP B, then on ELAP A. NOTE: Upgrade is supported only from 11.0.0.4.X to 11.1.Y release. For all other releases, install procedure shall be followed. Check off (□) each step as it is completed. Boxes have been provided for this purpose beside each step number. If this procedure fails, contact My Oracle Support and ask for ASSISTANCE.
12. □	**MPS X:** Select Early Upgrade Checks	Select the "Early Upgrade Checks" menu to verify that the system is ready for upgrade.  If the Early Upgrade Checks fail due to the drbd not replicating related alarms, then ignore such alarms using the following commands: Exit the platcfg menu. • Change to root user using the "su –" command. • vim /usr/TKLC/plat/etc/upgrade/upgrade.conf • Edit the following line to include the NTP related alarms. – EARLY_CHECK_ALARM_WHITELIST=TKSPLATMA30 – Add the following alarm code to ignore tpdApplicationProcessError Problem: TKSPLATMI2 – Add the following line for the tpdPdcError related alarms: – EARLY_CHECK_ALARM_WHITELIST=TKSPLATMA5,TKSPLATMI39 **Note:** There should not be any space between two alarms i.e. between TKSPLATMI2 and TKSPLATMI39 EARLY_CHECK_ALARM_WHITELIST= TKSPLATMA5, TKSPLATMA30, TKSPLATMI2, TKSPLATMI39, TKSPLATMI9 Run early checks again after allowlisting the alarms. Early checks should completely be passed.

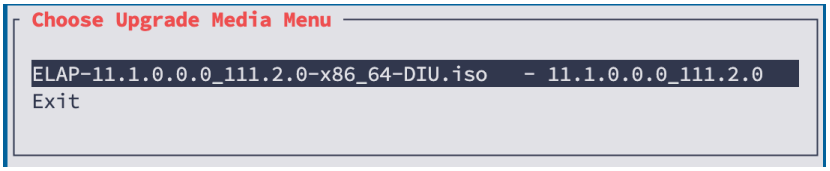
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Table 4-13 (Cont.) Procedure 32: Perform the DIU Upgrade

S. No	STEPS	This procedure performs Dual Image Upgrade on the server. NOTE: DIU upgrade should be done first on ELAP B, then on ELAP A. NOTE: Upgrade is supported only from 11.0.0.4.X to 11.1.Y release. For all other releases, install procedure shall be followed. Check off (□) each step as it is completed. Boxes have been provided for this purpose beside each step number. If this procedure fails, contact My Oracle Support and ask for ASSISTANCE.
13 □	MPS X: Navigate to the Initiate Upgrade menu	Select the Initiate Background Upgrade menu and press [ENTER]. 

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Table 4-13 (Cont.) Procedure 32: Perform the DIU Upgrade

S. No	STEPS	This procedure performs Dual Image Upgrade on the server. NOTE: DIU upgrade should be done first on ELAP B, then on ELAP A. NOTE: Upgrade is supported only from 11.0.0.4.X to 11.1.Y release. For all other releases, install procedure shall be followed. Check off (□) each step as it is completed. Boxes have been provided for this purpose beside each step number. If this procedure fails, contact My Oracle Support and ask for ASSISTANCE.
14 □	MPS X: Select the Upgrade Media.	The screen displays a message that it is searching for upgrade media. When the upgrade media is found, an Upgrade Media selection menu appears similar as shown in the example below. Select the desired upgrade media and press [ENTER].  In case there is a failure in the upgrade process, then run the following command to verify whether the raid is synced or not: `[root@manaus-b elapall]# cat /proc/mdstat` Personalities : [raid1] md1 : active raid1 sdc3[3] sda3[2] 34569216 blocks super 1.2 [2/2] [UU] bitmap: 1/1 pages [4KB], 65536KB chunk md2 : active raid1 sdc2[3] sda2[2] 429294592 blocks super 1.2 [2/2] [UU] bitmap: 2/4 pages [8KB], 65536KB chunk In this output both md1 and md2 are in sync , as the output end with [UU] md1 ... [UU] md2 ... [UU] When the raid not in sync the output look-like: `[root@manaus-b elapall]# cat /proc/mdstat` Personalities : [raid1] md1 : active raid1 sda3[2] 34569216 blocks super 1.2 [2/1] [U_] bitmap: 1/1 pages [4KB], 65536KB chunk md2 : active raid1 sda2[2] 429294592 blocks super 1.2 [2/1] [U_] bitmap: 2/4 pages [8KB], 65536KB chunk unused devices: <none> Here, both md1 and md2 sync is broken as cleealy seen by [U_] in the output. If the raid is not in sync, then run the following command: • `mdadm --add /dev/md1 /dev/sdX`

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Table 4-13 (Cont.) Procedure 32: Perform the DIU Upgrade

S. No	STEPS	This procedure performs Dual Image Upgrade on the server. NOTE: DIU upgrade should be done first on ELAP B, then on ELAP A. NOTE: Upgrade is supported only from 11.0.0.4.X to 11.1.Y release. For all other releases, install procedure shall be followed. Check off (□) each step as it is completed. Boxes have been provided for this purpose beside each step number. If this procedure fails, contact My Oracle Support and ask for ASSISTANCE.
		• `mdadm --add /dev/md2 /dev/sdX` where sdX can be any of sda, sdb, or sdc according to LV configurations. This can be verified using lsblk command – "lsblk -o NAME,SIZE,MODEL,SERIAL,TYPE" `[root@manaus-b elapall]# lsblk -o NAME,SIZE,MODEL,SERIAL,TYPE` `NAME SIZE MODEL SERIAL TYPE` `sda 447.1G INTEL SSDSC2BB48 BTWL516606M7480QGN disk` `|-sda1 512M part` `|-sda2 409.5G part` `| `-md2 409.4G raid1` `| |-vgroot-plat_root 4G lvm` `| |-vgroot-plat_swap 2G lvm` `| |-vgroot-plat_usr 10G lvm` `| |-vgroot-plat_var_tklc 8G lvm` `| |-vgroot-plat_tmp 1G lvm` `| |-vgroot-plat_var 2G lvm` `| |-vgroot-drbdmeta 128M lvm` `| | `-drbd0 33G disk` `| |-vgroot-elaproot 4G lvm` `| |-vgroot-logs 40G lvm` `| `-vgroot-free 308G lvm` `|-sda3 33G part` `| `-md1 33G raid1` `| `-drbd0 33G disk` ``-sda4 4G part` `sdb 28.9G STORE N GO 90001760C79DEA15 disk` `|-sdb1 3.1G part` ``-sdb2 9.8M part` `sdc 447.1G INTEL SSDSC2BB48 BTWL51660521480QGN disk` `|-sdc1 512M part` `|-sdc2 409.5G part` `|-sdc3 33G part` ``-sdc4 4G part` The command output shows sdb as the USB device and sdc as the SSD. Synchronize only with the SSD. Match each SSD partition to the corresponding md device by comparing their sizes. In this example, sdc3 (33 GB) corresponds to md1 (33 GB), and sdc2 (409.5 GB) corresponds to md2 (409.4 GB). To add sdc3 to md1, run: `mdadm --add /dev/md1 /dev/sdc3` `mdadm --add /dev/md2 /dev/sdc2`

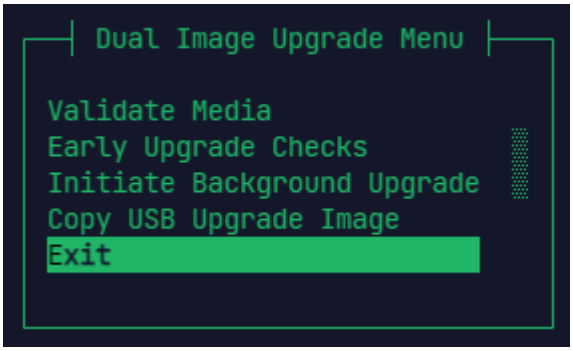
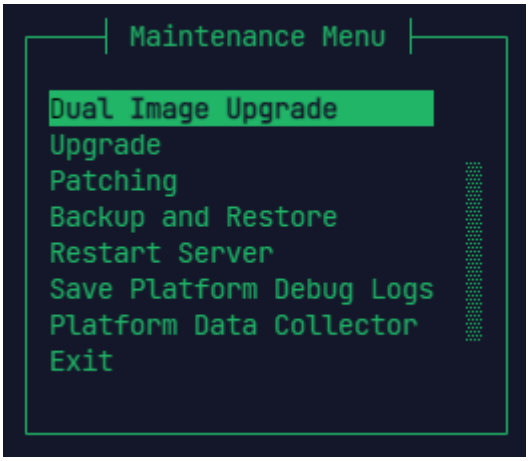
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Table 4-13 (Cont.) Procedure 32: Perform the DIU Upgrade

S. No	STEPS	This procedure performs Dual Image Upgrade on the server. NOTE: DIU upgrade should be done first on ELAP B, then on ELAP A. NOTE: Upgrade is supported only from 11.0.0.4.X to 11.1.Y release. For all other releases, install procedure shall be followed. Check off (□) each step as it is completed. Boxes have been provided for this purpose beside each step number. If this procedure fails, contact My Oracle Support and ask for ASSISTANCE.
		The following command can be used to check the status of the sync after running the above command: `[root@manaus-b elapall]# cat /proc/mdstat` Personalities : [raid1] md1 : active raid1 sdc3[3] sda3[2] 34569216 blocks super 1.2 [2/2] [UU] bitmap: 1/1 pages [4KB], 65536KB chunk md2 : active raid1 sdc2[3] sda2[2] 429294592 blocks super 1.2 [2/1] [U_] [==========>.....] recovery = 67.6% (290331648/429294592) finish=9.0min speed=254696K/sec bitmap: 2/4 pages [8KB], 65536KB chunk unused devices: <none> Wait till the time recovery is completed for both md1 and md2.

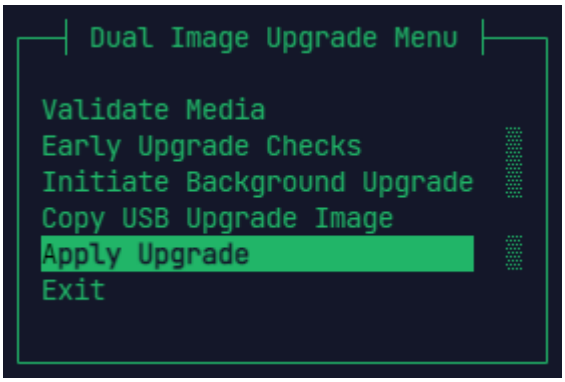
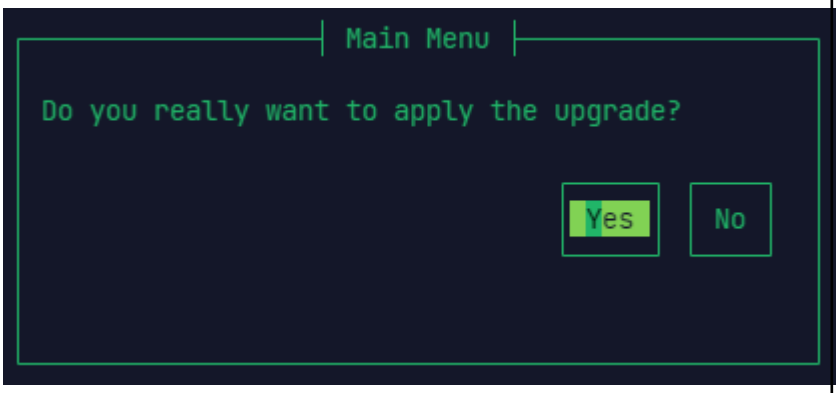
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Table 4-13 (Cont.) Procedure 32: Perform the DIU Upgrade

S. No	STEPS	This procedure performs Dual Image Upgrade on the server. NOTE: DIU upgrade should be done first on ELAP B, then on ELAP A. NOTE: Upgrade is supported only from 11.0.0.4.X to 11.1.Y release. For all other releases, install procedure shall be followed. Check off (□) each step as it is completed. Boxes have been provided for this purpose beside each step number. If this procedure fails, contact My Oracle Support and ask for ASSISTANCE.
15 □	MPS X: Upgrade proceeds. Apply Upgrade.	Many informational messages appear on the terminal screen as the upgrade proceeds. After the background upgrade is done, the system will return to this screen. After this, select [EXIT] and press [ENTER]. From the Dual image Upgrade Menu, select [EXIT] and press [ENTER}.  From the maintenance menu, select Dual Image Upgrade and then Press Enter.  From the Dual Image Upgrade Menu, select Apply Upgrade and press [ENTER]].

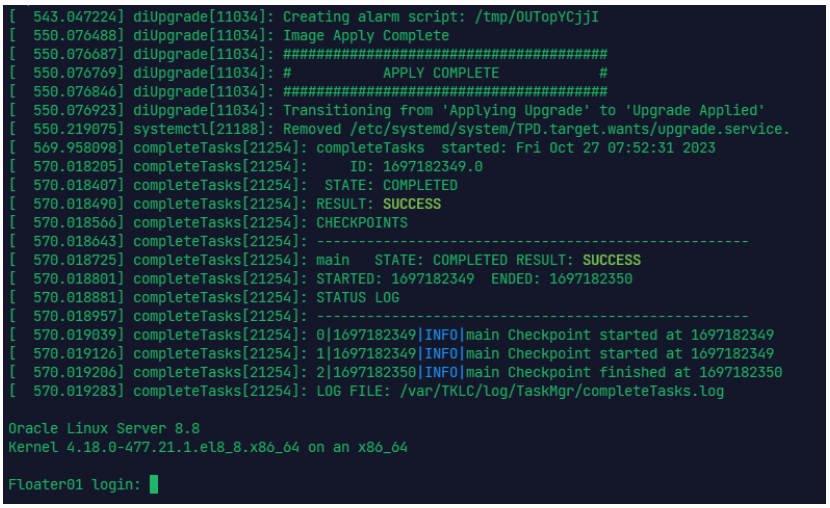
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S. No	STEPS	This procedure performs Dual Image Upgrade on the server. NOTE: DIU upgrade should be done first on ELAP B, then on ELAP A. NOTE: Upgrade is supported only from 11.0.0.4.X to 11.1.Y release. For all other releases, install procedure shall be followed. Check off (□) each step as it is completed. Boxes have been provided for this purpose beside each step number. If this procedure fails, contact My Oracle Support and ask for ASSISTANCE.
		 Select YES and press ENTER.  When the upgrade process is complete, the server reboots.

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Table 4-13 (Cont.) Procedure 32: Perform the DIU Upgrade

S. No	STEPS	This procedure performs Dual Image Upgrade on the server. NOTE: DIU upgrade should be done first on ELAP B, then on ELAP A. NOTE: Upgrade is supported only from 11.0.0.4.X to 11.1.Y release. For all other releases, install procedure shall be followed. Check off (□) each step as it is completed. Boxes have been provided for this purpose beside each step number. If this procedure fails, contact My Oracle Support and ask for ASSISTANCE.
16 □	MPS X: Upgrade completed.	After the final reboot, the screen displays the login prompt as displayed in the example below.  Make sure to verify that the state is transitioned from “Applying upgrade” to “Upgrade Applied” and we get Completed Result: SUCCESS.
17 □	MPS X: log in as “root” user.	`[hostname] consolelogin: root` `password: password`

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Table 4-13 (Cont.) Procedure 32: Perform the DIU Upgrade

S. No	STEPS	**This procedure performs Dual Image Upgrade on the server.** **NOTE: DIU upgrade should be done first on ELAP B, then on ELAP A.** **NOTE: Upgrade is supported only from 11.0.0.4.X to 11.1.Y release. For all other releases, install procedure shall be followed.** **Check off (□) each step as it is completed. Boxes have been provided for this purpose beside each step number.** **If this procedure fails, contact My Oracle Support and ask for ASSISTANCE.**

18
□
	MPS X: Check the Upgrade log.	Examine the upgrade logs in the directory /var/TKLC/log/upgrade and verify that no errors and warnings were reported.
		
		`$ grep –i error /var/TKLC/log/upgrade/upgrade.log`
		
		Check the output of the upgrade log. Contact My Oracle Support following the instructions on the front page or the instructions on the Appendix E, if the output contains any error except the following:
		
		`[root@Salta-B core]# grep -i error /var/TKLC/log/upgrade/upgrade.log`
		
		1673985608::ERROR: run-r1841b65093e14801be5696ea62d92ac2 is not recognized as a systemdystem service!
		1673985608::ERROR: Could not stop run-r1841b65093e14801be5696ea62d92ac2!
		1673985608::ERROR: service_conf reconfig failed!
		1726140936::ERROR: SEQ: 83 UPTIME: 12737 BIRTH: 1726139350 TYPE: SET ALARM: TKSPLATMI2|tpdApplicationProcessError|1.3.6.1.4.1.323.5.3.18.3.1.3.2|32501|Processing Error|Software Program Error|HOST-RESOURCES-MIB::hrSWRunName:1.3.6.1.2.1.25.4.2.1.2:OCTET_STRING:eaglelog
		
		`$ grep -i warning /var/TKLC/log/upgrade/upgrade.log`
		
		Examine the output of the above command to determine if any warnings were reported.
		Contact My Oracle Support following the instructions on the front page or the instructions on the Appendix E, if the output contains any warnings beside the following:
		
		`[root@Salta-B core]# grep -i error /var/TKLC/log/upgrade/upgrade.log`
		
		1789628974::Sep 17 03:07:08 Recife-B ExQueue[1728]: 2026-09-17 03:07:06 [140507027259584] INFO - Error loading log configuration from database: 1005:DbSession.C:162:The thread is not attached to a session.
		1789628974::Sep 17 03:07:08 Recife-B ExQueue[1728]: 2026-09-17 03:07:06 [140507027259584] WARN - 1001:DbSession.C:128:Database

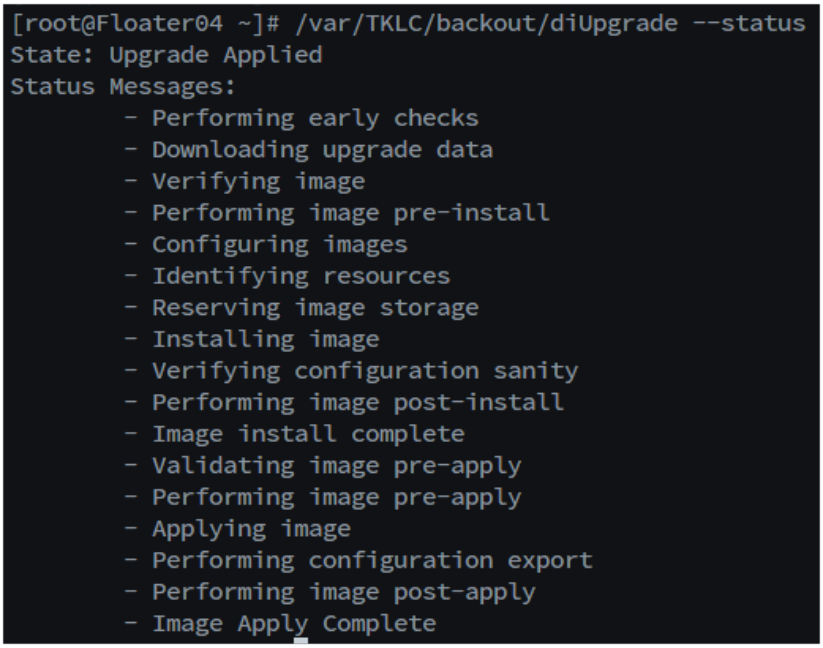
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S. No	STEPS	This procedure performs Dual Image Upgrade on the server. NOTE: DIU upgrade should be done first on ELAP B, then on ELAP A. NOTE: Upgrade is supported only from 11.0.0.4.X to 11.1.Y release. For all other releases, install procedure shall be followed. Check off (□) each step as it is completed. Boxes have been provided for this purpose beside each step number. If this procedure fails, contact My Oracle Support and ask for ASSISTANCE.
		Error: Can't connect to local MySQL server through socket '/var/lib/mysql/mysql.sock' (2) `[root@Salta-B core]# grep -i warning /var/TKLC/log/upgrade/upgrade.log` 1789628551: :warning: Hostname not changed because it is the same. 1789628974::1789628973 : Warning : systemctl is-enabled services failed with rc=1 1789628974::Sep 17 03:08:45 Recife-B Elap[11789]: WARNING: MYSQL_OPT_RECONNECT is deprecated and will be removed in a future version. 1789628974::Sep 17 03:09:20 Recife-B Elap[15634]: WARNING: MYSQL_OPT_RECONNECT is deprecated and will be removed in a future version. 1789628974::Sep 17 03:09:06 Recife-B runGS[2191]: WARNING: MYSQL_OPT_RECONNECT is deprecated and will be removed in a future version. 1789628974::Sep 17 03:09:07 Recife-B runGS[2191]: WARNING: MYSQL_OPT_RECONNECT is deprecated and will be removed in a future version. 1789628974::Sep 17 03:09:12 Recife-B runGS[2191]: WARNING: MYSQL_OPT_RECONNECT is deprecated and will be removed in a future version. 1789628974::Sep 17 03:09:16 Recife-B runGS[2191]: WARNING: MYSQL_OPT_RECONNECT is deprecated and will be removed in a future version. 1789628974::Sep 17 03:09:17 Recife-B runGS[2191]: WARNING: MYSQL_OPT_RECONNECT is deprecated and will be removed in a future version. 1789628974::Sep 17 03:09:22 Recife-B runGS[2191]: WARNING: MYSQL_OPT_RECONNECT is deprecated and will be removed in a future version. 1789628974::Sep 17 03:09:26 Recife-B runGS[2191]: WARNING: MYSQL_OPT_RECONNECT is deprecated and will be removed in a future version. 1789628974::Sep 17 03:09:27 Recife-B runGS[2191]: WARNING: MYSQL_OPT_RECONNECT is deprecated and will be removed in a future version. 1789628974::Sep 17 03:09:32 Recife-B runGS[2191]: WARNING: MYSQL_OPT_RECONNECT is deprecated and will be removed in a future version. 1789628974::Sep 17 03:07:07 Recife-B runExInit[1636]: WARNING: MYSQL_OPT_RECONNECT is deprecated and will be removed in a future version.

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Table 4-13 (Cont.) Procedure 32: Perform the DIU Upgrade

S. No	STEPS	This procedure performs Dual Image Upgrade on the server. NOTE: DIU upgrade should be done first on ELAP B, then on ELAP A. NOTE: Upgrade is supported only from 11.0.0.4.X to 11.1.Y release. For all other releases, install procedure shall be followed. Check off (□) each step as it is completed. Boxes have been provided for this purpose beside each step number. If this procedure fails, contact My Oracle Support and ask for ASSISTANCE.
		1789628974::1789628973 : Warning : systemctl status services failed with rc=3
19 □	MPS X: Check that the upgrade completed successfully.	Run the command from the root user: `var/TKLC/backout/diUpgrade --status`
20 □	MPS X: Check that the upgrade completed successfully.	Verify that the following output is displayed. If it is not, contact My Oracle Support following the instructions on the front page or the instructions on the Appendix E.  [root@Floater04 ~]# /var/TKLC/backout/diUpgrade --status State: Upgrade Applied Status Messages: - Performing early checks - Downloading upgrade data - Verifying image - Performing image pre-install - Configuring images - Identifying resources - Reserving image storage - Installing image - Verifying configuration sanity - Performing image post-install - Image install complete - Validating image pre-apply - Performing image pre-apply - Applying image - Performing configuration export - Performing image post-apply - Image Apply Complete

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Table 4-13 (Cont.) Procedure 32: Perform the DIU Upgrade

S. No	STEPS	This procedure performs Dual Image Upgrade on the server. NOTE: DIU upgrade should be done first on ELAP B, then on ELAP A. NOTE: Upgrade is supported only from 11.0.0.4.X to 11.1.Y release. For all other releases, install procedure shall be followed. Check off (□) each step as it is completed. Boxes have been provided for this purpose beside each step number. If this procedure fails, contact My Oracle Support and ask for ASSISTANCE.

21 □	Retrieve and restore free directory data backup taken	Retrieve the backup tar file back to the local server (from remote or mate) **Option 1** – If the backup is placed on the remote server, then follow the below steps:
		1. On the local server, start an SFTP session to the remote system:
		`$ sftp <remote_user>`
		`@<remote_host_or_ip>`
		2. In the SFTP prompt, navigate to the directory containing the backup and download it:
		`$ sftp> cd <remote_backup_directory>`
		`$ sftp> lcd /var/TKLC/elap/free`
		`$ sftp> get free_<hostname>_<YYYY-MM-DD>_<HHMMSS>.tgz`
		`$ sftp> bye`
		Option 2 – Retrieve using SCP (from mate to local)
		1. Run the following command on the local server:
		`$ scp elapdev@mate:/var/TKLC/elap/free/free_<hostname>_<YYYY-MM-DD>_<HHMMSS>.tgz /var/TKLC/elap/free`
		2. Run the below restore command to extract the archive and overwrite existing files while preserving permissions:
		`$ sudo tar -C /var/TKLC/elap -xzpf /var/TKLC/elap/free/free_<hostname>_<YYYY-MM-DD>_<HHMMSS>.tgz –overwrite`

22 □	Note down the timestamp in log.	Run the following command: `$ date`
23 □	Repeat all above steps from 1-22 on MPS-A I	Run all the above steps on MPS-A now, in the same order.
24 □	Run PostDIUValidation.sh only on MPS-A	Complete the PostDIUValidation.sh only on MPS-A . This automatically works on MPS-B `[root@manaus-a bin]# /usr/TKLC/elap/bin/PostDIUValidation.sh`

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Table 4-13 (Cont.) Procedure 32: Perform the DIU Upgrade

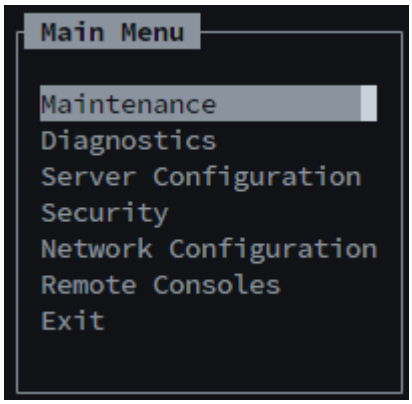
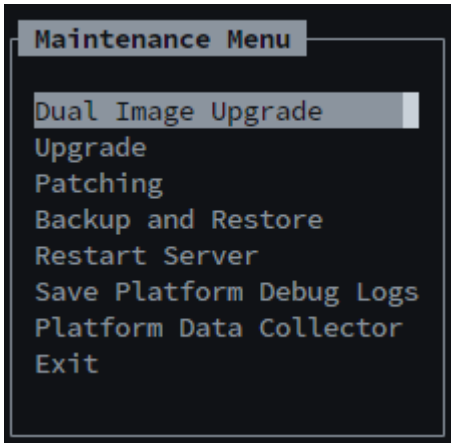
S. No	STEPS	This procedure performs Dual Image Upgrade on the server. NOTE: DIU upgrade should be done first on ELAP B, then on ELAP A. NOTE: Upgrade is supported only from 11.0.0.4.X to 11.1.Y release. For all other releases, install procedure shall be followed. Check off (□) each step as it is completed. Boxes have been provided for this purpose beside each step number. If this procedure fails, contact My Oracle Support and ask for ASSISTANCE.
25 □	Reboot Servers	Reboot Active server first. Once it is up, reboot another server. `# reboot`

> **Note**
>
> Once an upgrade is done, the system reports an internal disk error and clears it only when you accept the upgrade.

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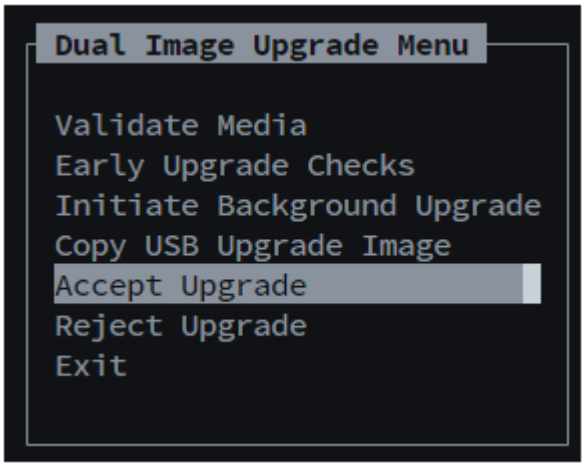
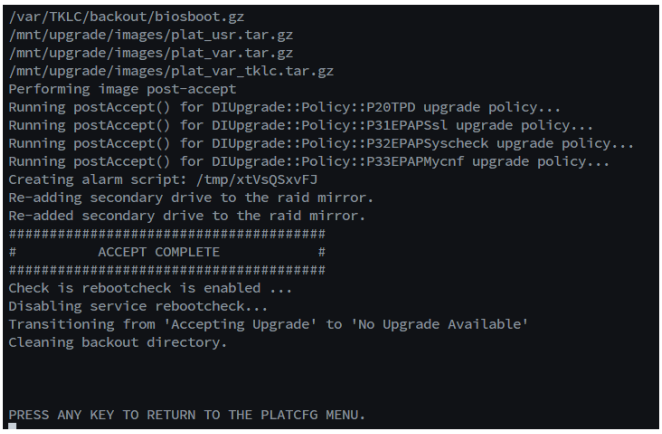
4.6.5 Procedure 33: Accept or Reject the Dual Image Upgrade

Table 4-14 Procedure 33: Accept or Reject the Dual Image Upgrade

STEP #	This procedure lists the steps to accept or reject the Dual Image Upgrade.	
1 	**MPS X:** Accept or Reject the DIU upgrade **NOTE:** Accept/Reject should be performed on both servers.	Log in to the setup with the root user. 1. Run the following command: `[root@Floater04 ~]# su - platcfg` 2. Select the Maintenance option and press [ENTER].  3. From the maintenance menu, select the Dual Image Upgrade option and press [ENTER].  4. From the dual image upgrade menu, select the Accept or Reject option and press Enter.

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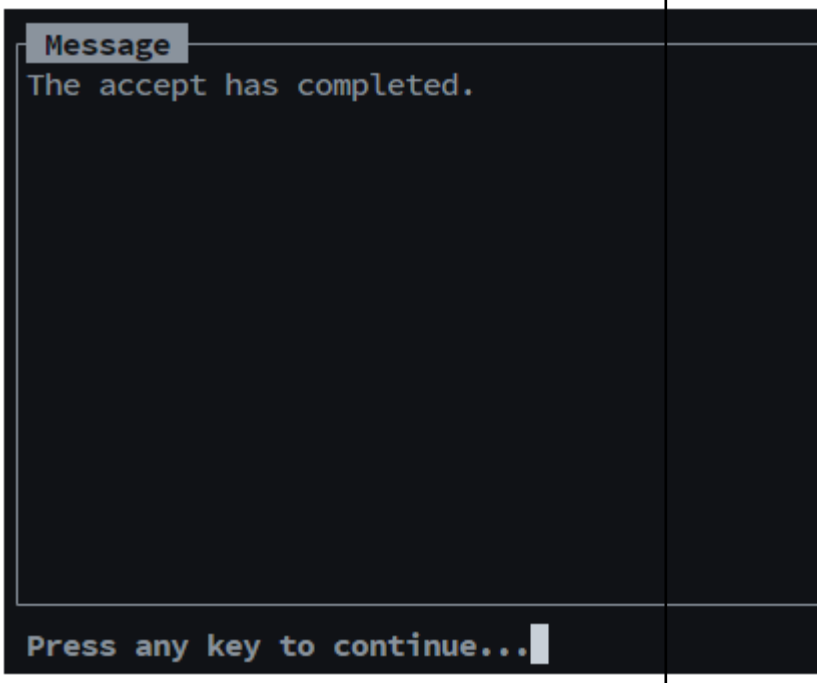
Table 4-14 (Cont.) Procedure 33: Accept or Reject the Dual Image Upgrade

STEP #	This procedure lists the steps to accept or reject the Dual Image Upgrade.	
		 a. The following logs will appear on the screen (in case of Accept). 

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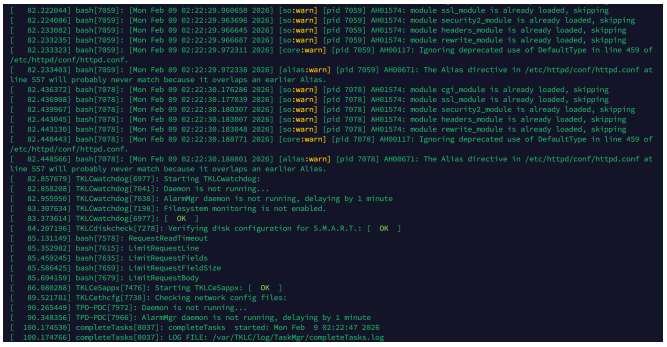
Table 4-14 (Cont.) Procedure 33: Accept or Reject the Dual Image Upgrade

STEP #	This procedure lists the steps to accept or reject the Dual Image Upgrade.



b. The following logs will appear on the screen (in case of Reject)





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Table 4-14 (Cont.) Procedure 33: Accept or Reject the Dual Image Upgrade

STEP #	This procedure lists the steps to accept or reject the Dual Image Upgrade.	
		NOTE: In case of rejecting DIU upgrade, if the reject DIU upgrade gets stuck in between, try reseating the card. It has been observed that after reseating the card DIU upgrade reject proceeds further successfully. Please note that this is just a workaround which might not work if the issue is different. Contact My Oracle support in case the issue is not resolved.
2	Steps to follow to accept/reject the upgrade.	In case of **accepting** the upgrade follow steps 2-3. In case of **rejecting** the upgrade, follow steps 4-9.
2	**MPS X:** Revert the space taken during DIU. This step should only be done after accepting the DIU upgrade.	Revert the unmounted space that was taken while doing the DIU procedure. **Note:** This should only be done after accepting the DIU upgrade. Run the following command on both MPSA and MPSB: `lvextend -L +30G /dev/vgroot/free; resize2fs /dev/vgroot/free`

3.	**MPS X:** Delete pre-diu-state folder on both MPS A and B	Run the below command:
		`#cd /var/TKLC/log/upgrade/`
		`# rm –rf pre_diu_state`

Follow the below steps if the upgrade is rejected		

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Table 4-14 (Cont.) Procedure 33: Accept or Reject the Dual Image Upgrade

STEP #	This procedure lists the steps to accept or reject the Dual Image Upgrade.	

4
 	
	MPS X: Follow this step only if rejecting DIU upgrade	After the DIU upgrade is rejected, follow the below steps to unmask and restart services.
		These commands will be run on both MPS-A and MPS-B after rejecting DIU upgrade. First execute them on MPS X which is expected to be Active and then on the other.
		
		`systemctl unmask TKLCha TKLCharsync Elap ExQueue RemoveInfoMsgs runGsConn runGS runExInit periodckd mysqld@app`
		`systemctl start TKLCha`
		`systemctl start TKLCharsync`
		
		`systemctl start runExInit`
		`systemctl start runGS`
		`systemctl start runGsConn`
		`systemctl start periodckd`
		`systemctl start RemoveInfoMsgs`
		`systemctl start ExQueue`
		
		`systemctl start mysqld@app`
		
		`systemctl start Elap`
		`systemctl status TKLCha TKLCharsync Elap ExQueue RemoveInfoMsgs runGsConn runGS runExInit periodckd mysqld@app --no-pager`
		
		NOTE: Elap, mysqld@app services will be inactive on standby.

5 	Check Hastatus of both servers.	Run the below command to check the hastatus of both servers: `#hastatus.` It should be Active/Standby as expected.

6
 	
	Removing DRBD Split brain	Run the following commands on Standby server.
		
		`#drbdadm secondary drbd0`
		
		`# drbdadm disconnect drbd0`
		
		`#drbdadm --discard-my-data connect drbd0`
		
		Execute following command on Active Server
		
		`#drbdadm connect drbd0`

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Table 4-14 (Cont.) Procedure 33: Accept or Reject the Dual Image Upgrade

STEP #	This procedure lists the steps to accept or reject the Dual Image Upgrade.	
7	Check drbd status after 5 minutes.	Run the following command to check drbd status: `#drbdadm status`
8	**MPS X:** Delete pre-diu-state folder on both MPS-A and MPS-B	Run the below command: **`#cd /var/TKLC/log/upgrade/`** **`# rm -rf pre_diu_state`**
9	**This procedure is complete.**	**This procedure is complete.**

THIS COMPLETES THE DIU UPGRADE

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A
GENERIC PROCEDURES

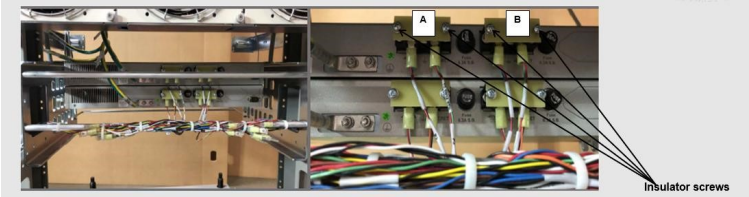
A.1 TELCO TO CISCO SWITCH REPLACEMENT

Table A-1 TELCO TO CISCO SWITCH REPLACEMENT

STEP #	This procedure is for replacing the Telco switch with the Cisco switch. Check off (✓)each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT MY ORACLE SUPPORTAND ASK FOR ASSISTANCE.
The following tools are required to perform this procedure: • Ground Strap (Wrist or Heel) • #2 Phillips Screwdriver • #3 Phillips Screwdriver • 1/4” Nut Driver or Socket • 5/16” Nut Driver or Socket • Diagonal Wire Cutter (to cut Tie-wraps) • Multi Meter • Tie Wraps • Electrical Tape • Cable Tags/Marker (to label all cables)	

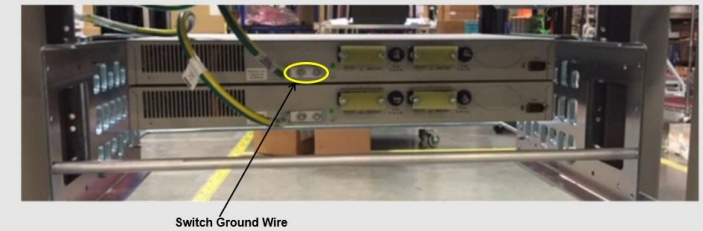
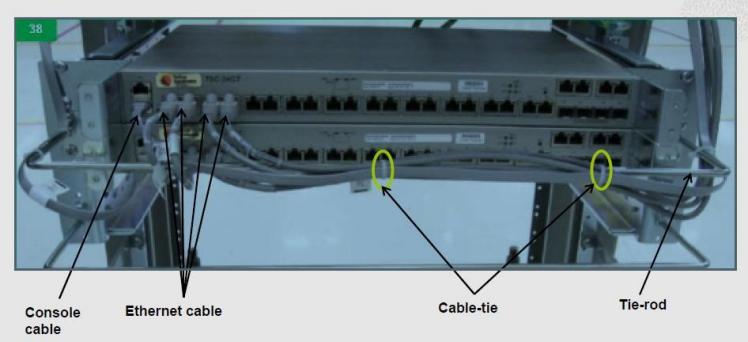
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Table A-1 (Cont.) TELCO TO CISCO SWITCH REPLACEMENT

STEP #	**This procedure is for replacing the Telco switch with the Cisco switch. Check off (✓)each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT MY ORACLE SUPPORTAND ASK FOR ASSISTANCE.**	
1. □	Disable and disconnect switch power	**Tools required**: Ground Strap, #2 Phillips Screwdriver, Multi Meter, and Diagonal Wire Cutter a. At the fuse panel, locate the fuse positions for the switch being removed. To power down the Switch, remove the fuses for both A and B feeds. b. Once the switch is off, unscrew and remove the terminal-block insulator covers from both terminals blocks A and B. c. With covers removed, using a Multi Meter, ensure that there is no power. d. Ensure that the power leads are marked -48V & RTN. e. With the cables marked, one at a time, remove the power cable and tape the terminal ring. Repeat these steps until all power connections are removed.  **Note:** This procedure will reference replacing the Switch #1 location (top). Same procedure is applicable for other switch locations.  **Note:** For the replacement switch, if required, more cable slack/ length can be added if the cable-ties are cut from the Tie-rod. See Step 8.

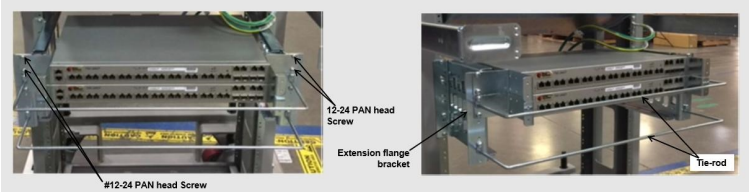
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Table A-1 (Cont.) TELCO TO CISCO SWITCH REPLACEMENT

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2. □	Disconnect ground cable from switch	**Tools required**: Ground Strap and 5/16" Nut Driver or Socket a. Remove the Switch Ground Wire from the grounding point, by loosening and removing Hex nut, Flat washer, and External tooth washer. b. Leave Ground Wire dangling. Do not disconnect ground wire attached to cabinet/frame. **Note:** Hardware removed, nut, and washers are NOT required on the replacement switch. 
3. □	Disconnect Front ENET and Console Cables	**Tools required**: Diagonal Wire Cutters **Note:** This procedure will reference replacing the Switch #1 location (Top). The same procedure used for other switch locations. • Make sure that all the cables are labeled and are in the correct position that they are terminated at. If not, ensure to mark or label before starting any removal. • Disconnect the Console and Ethernet cables from Telco switch being replaced. Leave the cables dangling. • (Optional) If cable management tie-rod is mounted to the switch being replaced, it may be necessary to cut or remove the cable-ties, holding the cables from the Tierod. 

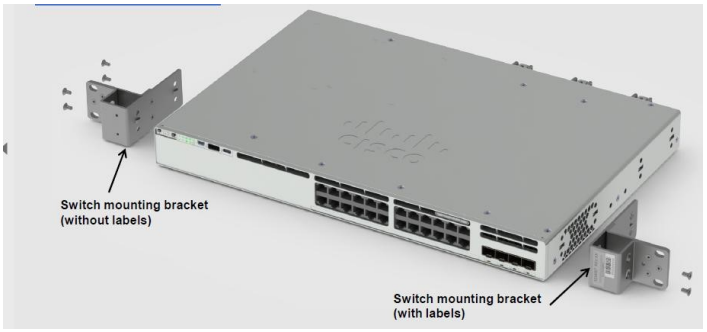
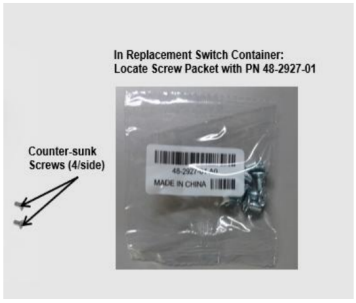
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4. 	Remove the Switch being replaced	**Tools required**: Ground Strap and #3 Phillips Screwdriver • Remove the four (4) PAN head screws (Two (2) on either side of the switch). If there is no support under the switch, take care to support the switch while removing the screws. • Remove the Switch from the Eagle rack. • Keep the screws safely set aside. Required for mounting the new switch. **Note:** If Tie-rod is attached via the screws being removed, then the Tie-rod needs to be set aside for reattachment when the replacement Switch is installed. 

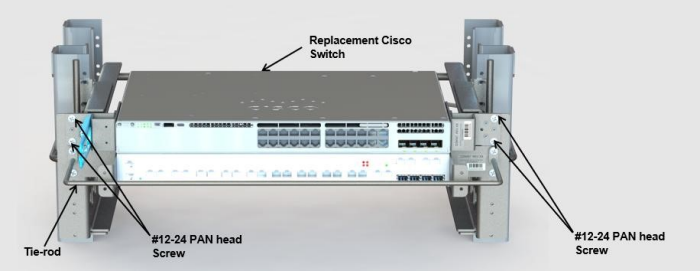
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5. 	Assemble the replacement Cisco Switch	**Tools required**: Ground Straps and #2 Phillips Screwdriver Attach the mounting brackets with Cisco switch assembly. • Locate the supplied mounting brackets and screws from the Switch package.  • Align the mounting bracket to the switch using four mounting holes. **Note:** Bracket with labels to be mounted on the right side of the switch. • Insert four screws, supplied with each switch, and tighten.   • Repeat the steps b and c for the other side of the switch. • Attach optional Cable Manager. – Locate Cable Manager and Screw from replacement Switch packaging. – Attach the Cable Manager to the rack mounting bracket using the supplied screw.

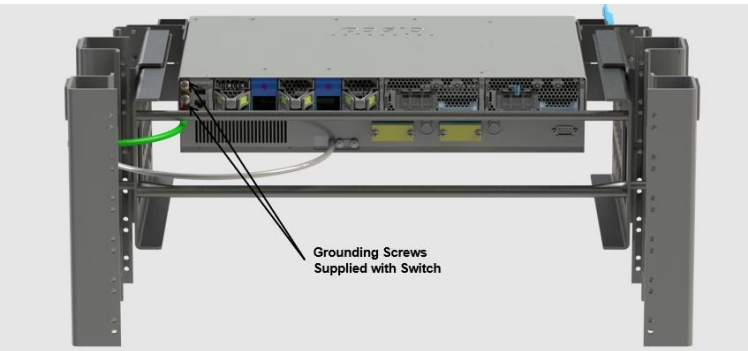
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6. □	Install Replacement Cisco Switch	**Tools required**: Ground Straps and #3 Phillips Screwdriver • Align Replacement Cisco Switch in the slot where the original switch was removed.  • Using screws removed from step 4, insert the four (4) PAN head screws (Two (2) on either side of the switch) and tighten. **Note:** If Tie-rod was removed in step 4, reattach at this time.

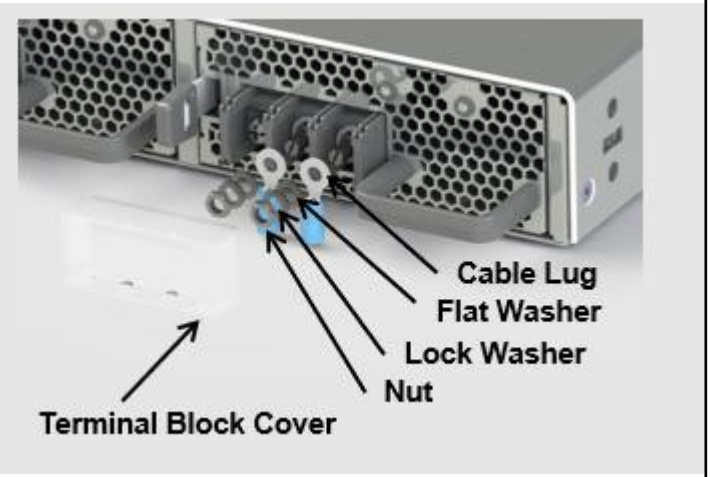
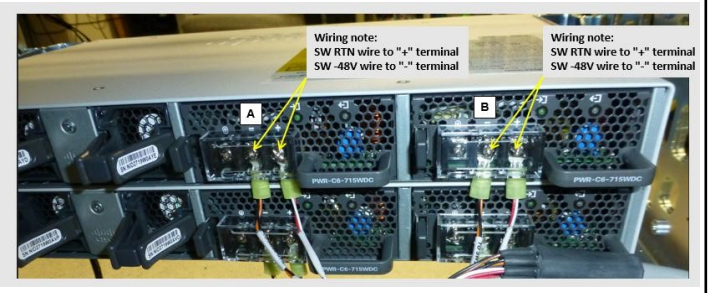
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7. 	Reattach the ground cable	**Tools required**: Ground Straps and #2 Phillips Screwdriver Reattach the chassis ground wire (from Step 3) to switch where shown. Use Screws provided with replacement Cisco Switch.  In Replacement Switch Container, locate grounding screw packet with PN 48-2381-01. 

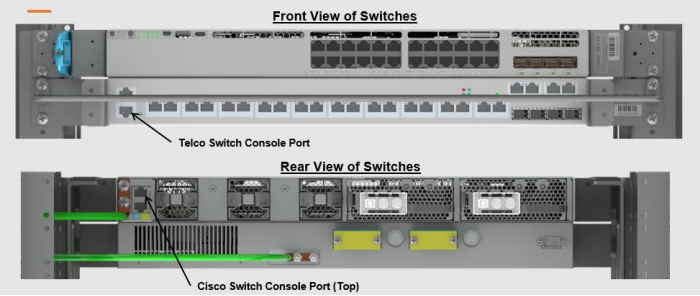
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8. 	Connect power to the replacement Cisco Switch	**Tools required**: Ground Strap and 1/4” Nut Driver • Remove terminal block cover.  • Remove Nuts and Washers from studs on A feed terminal block. • Install the lugs from the power cable (A) to switch terminal block A. • Secure the nuts after inserting flat washer and lock washer on top of the cable lug. • Ensure connections to terminal block are as follows: **SW RTN wire to "+" terminal, SW -48V wire to "-" terminal**.  • Reattach protective cover. • Repeat the above steps for the B feed connection.

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Table A-1 (Cont.) TELCO TO CISCO SWITCH REPLACEMENT

STEP #	This procedure is for replacing the Telco switch with the Cisco switch. Check off (✓)each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT MY ORACLE SUPPORTAND ASK FOR ASSISTANCE.	
9. 	Reattach Console Cable and Ethernet Cables	**Tools required**: Ground Strap • Plug-in the console port cable to the Replacement Switch.  **Note:** The Console port on the New Cisco Switch is on the rear side where the power is applied. • Plug-in the Ethernet cables to Replacement Cisco Switch. **Note:** The Switch locations are marked on cable from Step 3.
10. 	Reapply power	• Double check all the connections are in their proper place and are secure. • Reinstall the A and B feed power fuses (removed in Step 1) one at a time. • Check the switch power supply LED to ensure power is up. Then, install the other fuse and again check power supply LED.  The replacement switch is now ready to be set up and configured.
11. 	Configure the new Cisco Switch	Refer to the following procedure “Switch Configuration” to configure the new Cisco Switch.

A.2 CISCO SWITCH CONFIGURATION

Note: Contact My Oracle Support atleast 48 hours before the scheduled start of the switch configuration process, to obtain the Enable secret key.

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Table A-2 CISCO SWITCH CONFIGURATION

STEP #	This procedure Configures the Cisco Switches on an Installed APPB ELAP Server Pair. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. If this procedure fails, contact My Oracle Supportand ask for ASSISTANCE.	
1. **1.** □	**Make the cross-over cable connections.**	**NOTE: THIS IS IMPORTANT** CONNECT the cross-over cable from **Port 1** of **Switch1A** to **Port 1** of **Switch1B**. DISCONNECT the cross-over cable from **Port** 2 of **Switch1A** to **Port 2** of **Switch1B. Similarly while Configuring Switch1C and Switch1D Disconnect the cable from port 24 and connect back post configuration done.** Please make a note that the switch configuration should only be attempted by a skilled technician and not all. All uplinks should be removed while switch configuration. There should not be any loop in the switches during their configuration. Switch1B must be configured first. **NOTE: the following should be the sequence of switch configuration.** **Switch1B > Switch1A > Switch1C > Switch1D** **Make sure to enable and start tftp service by using following commands if not started earlier :-** `sudo systemctl start tftp sudo systemctl enable tftp`
2. □	Do minicom to enter the cisco switch console. Command – “minicom switch1A” for the console cable connected to MPS-A and for console cable connected to MPS-B use “minicom switch1B”.	`[root@Donut-B ]#` `[root@Donut-B ]# minicom switch1B`

3. **3.** □	**MPS X:** Do not enter in the initial config dialog in the freshly connected cisco switch.	Autoinstall will terminate if any input is detected on console
		`--- System Configuration Dialog ---`
		`Would you like to enter the initial configuration dialog? [yes/no]:no`

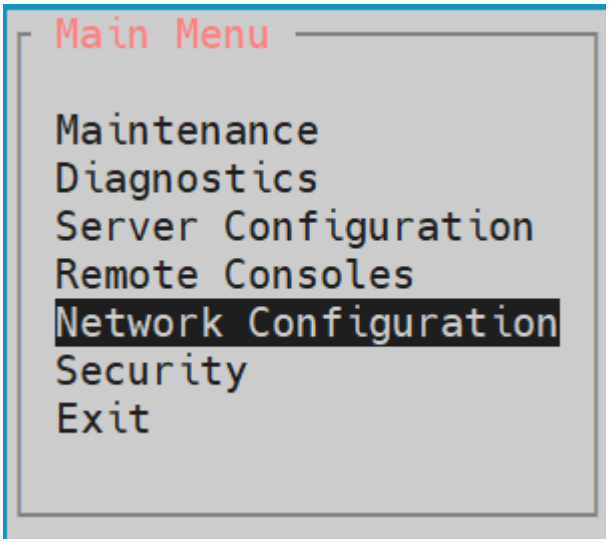
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Table A-2 (Cont.) CISCO SWITCH CONFIGURATION

STEP #	This procedure Configures the Cisco Switches on an Installed APPB ELAP Server Pair. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. If this procedure fails, contact My Oracle Supportand ask for ASSISTANCE.	
4. **4.** □	**MPS X:** Enter an Enable secret key :- **NOTE: Please note that this key is predetermined. If the key to be entered here is not known contact My Oracle support for assistance**	The enable secret is a password used to protect access to privileged EXEC and configuration modes. This password, after entered, becomes encrypted in the configuration. --- secret should be of minimum 10 characters and maximum 32 characters with at least 1 upper case, 1 lower case, 1 digit and should not contain [cisco] --- Enter enable secret: Confirm enable secret:
5. **5.** □	**MPS X: Press 0 and enter**	The following configuration command script was created: enable secret 9 9/ 0zJZO.MDLzHsE$OAPNpW6gMhNRkdv5.CjQnxF1.rJtyDBiTQ7F2/ Nr1YU ! end [0] Go to the IOS command prompt without saving this config. [1] Return back to the setup without saving this config. [2] Save this configuration to nvram and exit. Enter your selection [2]: 0 % You can enter the setup, by typing setup at IOS command prompt Press RETURN to get started!
6. **6.** □	**MPS X:** Initial configuration building done.	Press RETURN to get started!
7. **7.** □	**MPS X:** Write “enable” and provide the password set in step 4	Switch>enable Password:
8. 8. □	**MPS X: Once the switch is enabled to take configuration > sign changes to the # sign**	Switch>enable Password: Switch#

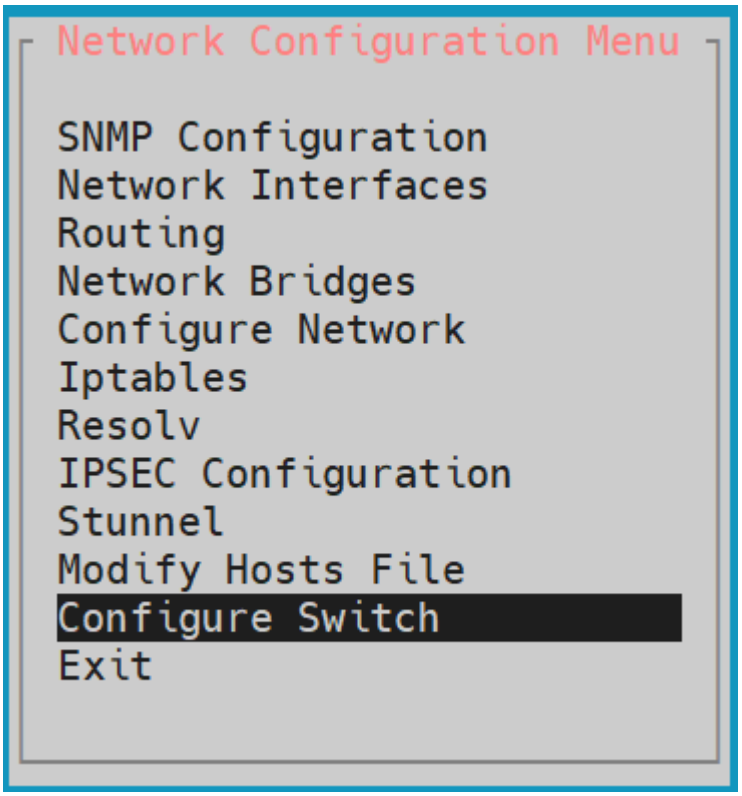
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Table A-2 (Cont.) CISCO SWITCH CONFIGURATION

STEP #	This procedure Configures the Cisco Switches on an Installed APPB ELAP Server Pair. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. If this procedure fails, contact My Oracle Supportand ask for ASSISTANCE.	
9. 9. □	**MPS X: Write command – "Configure terminal with no logging enabled"**	Switch#configure terminal Enter configuration commands, one per line. End with CNTL/Z. Switch(config)#no logging console Switch(config)#exit Switch#exit
10. 9. □	**MPS X: Exit from the minicom**	Ctrl+A and then Press Z. This will exit the minicom console and you will come back to the server terminal.
11. 11 □	**MPS B:** Navigate to the Network Configuration Menu.	On the platcfg **Main Menu**, select **Network Configuration** and press [**ENTER**]. 

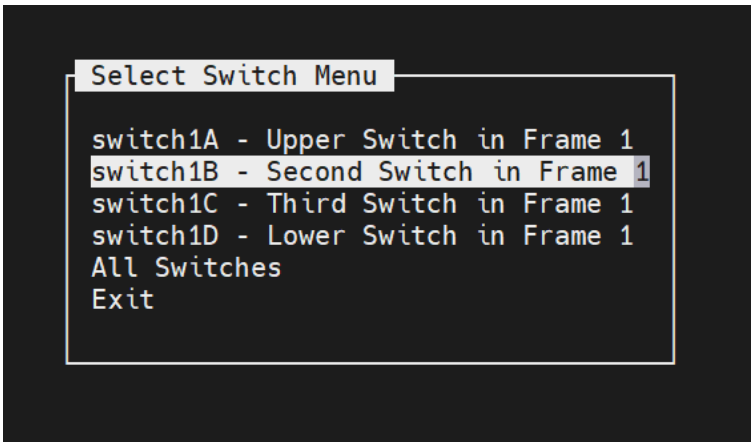
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Table A-2 (Cont.) CISCO SWITCH CONFIGURATION

STEP #	This procedure Configures the Cisco Switches on an Installed APPB ELAP Server Pair. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. If this procedure fails, contact My Oracle Supportand ask for ASSISTANCE.	
12. 11 □	**MPS B:** Navigate to the Configure Switch menu	On the Network Configuration menu, select **Configure Switch** and press [**ENTER**]. 

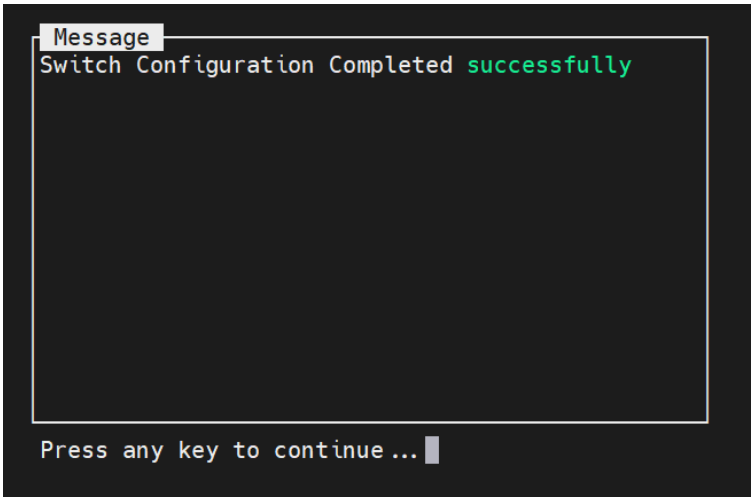
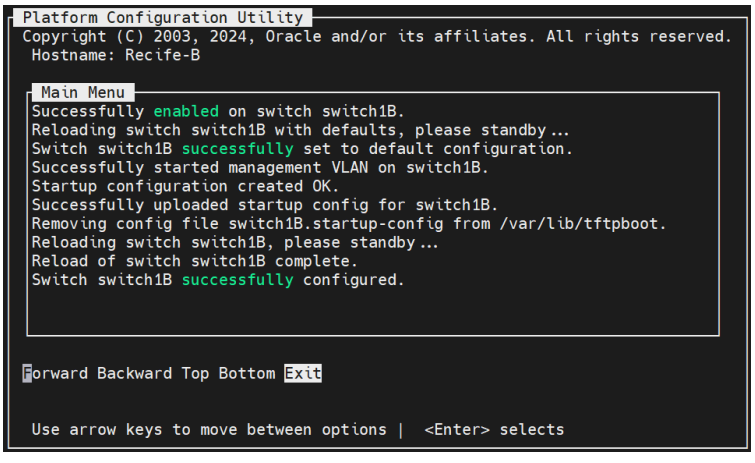
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Table A-2 (Cont.) CISCO SWITCH CONFIGURATION

STEP #	This procedure Configures the Cisco Switches on an Installed APPB ELAP Server Pair. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. If this procedure fails, contact My Oracle Supportand ask for ASSISTANCE.	
13. **13** ☐	**MPS B:** Select Switch1B.	On the Select Switch Menu, select **Switch1B – Second Switch in Frame 1** and press [**ENTER**]. 
14. **14** ☐	**MPS B:** Confirm Switch 1B Configuration.	Select **Yes** and press **[ENTER]** to configure Switch 1B. 

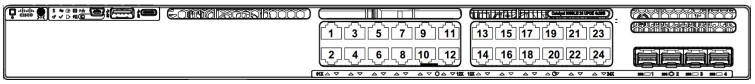
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Table A-2 (Cont.) CISCO SWITCH CONFIGURATION

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15. □	**MPS B:** Switch Configuration Screen.	Configuring the switch takes about 10 minutes, once completed press **any key** to continue and then click Exit.   

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Table A-2 (Cont.) CISCO SWITCH CONFIGURATION

STEP #	This procedure Configures the Cisco Switches on an Installed APPB ELAP Server Pair. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. If this procedure fails, contact My Oracle Supportand ask for ASSISTANCE.	
16. **14.** □	**MPS X**: Similarly need to configure all other connected cisco switches.	Use the steps mentioned from step 2 - 15. Make sure to select the proper switch as per the switch location for eg Switch1A,switch1C etc. **NOTE: the following should be the sequence of switch configuration.** **Switch1B > Switch1A > Switch1C > Switch1D**
17. **15.** □	Connect the cross-over cable from **Port 2** of **Switch1A** to **Port 2** of **Switch1B**.	

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Table A-2 (Cont.) CISCO SWITCH CONFIGURATION

STEP #	This procedure Configures the Cisco Switches on an Installed APPB ELAP Server Pair. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. If this procedure fails, contact My Oracle Supportand ask for ASSISTANCE.	

18. **16.** □	Ping to Confirm connectivity. Note: Ip address 192.168.2.1 associated with Switch1A , ip address 192.168.2.2 associated with Switch1B , ip address 192.168.2.3 with Switch1C and ip address 192.168.2.4 with Switch1D.	Ping from all the newly connected switches to the mentioned IP address (192.168.2.1, 192.168.2.2, 192.168.2.3, 192.168.2.4, 192.168.2.100, 192.168.2.200), till you see an 100% success rate.
		
		`switch1D#ping 192.168.2.1`
		`Sending 5, 100-byte ICMP Echoes to 192.168.2.1,`
		`timeout 2 sec, delay 0 sec:`
		`Press Esc for break`
		`!!!!!`
		`Success rate is 100 percent (5/5), round-trip`
		`min/avg/max = 0/0/0 ms`
		`switch1D#ping 192.168.2.2`
		`Sending 5, 100-byte ICMP Echoes to 192.168.2.2,`
		`timeout 2 sec, delay 0 sec:`
		`Press Esc for break`
		`!!!!!`
		`Success rate is 100 percent (5/5), round-trip`
		`min/avg/max = 0/0/0 ms`
		`switch1D#ping 192.168.2.3`
		`Sending 5, 100-byte ICMP Echoes to 192.168.2.3,`
		`timeout 2 sec, delay 0 sec:`
		`Press Esc for break`
		`!!!!!`
		`Success rate is 100 percent (5/5), round-trip`
		`min/avg/max = 0/0/0 ms`
		`switch1D#ping 192.168.2.4`
		`Sending 5, 100-byte ICMP Echoes to 192.168.2.4,`
		`timeout 2 sec, delay 0 sec:`
		`Press Esc for break`
		`!!!!!`
		`Success rate is 100 percent (5/5), round-trip`
		`min/avg/max = 0/0/0 ms`
		`switch1D#ping 192.168.2.100`
		`Sending 5, 100-byte ICMP Echoes to 192.168.2.100,`
		`timeout 2 sec, delay 0 sec:`
		`Press Esc for break`
		`!!!!!`
		`Success rate is 100 percent (5/5), round-trip`
		`min/avg/max = 0/1/5 ms`
		`switch1D#ping 192.168.2.200`
		`Sending 5, 100-byte ICMP Echoes to 192.168.2.200,`
		`timeout 2 sec, delay 0 sec:`
		`Press Esc for break`
		`!!!!!`
		`Success rate is 100 percent (5/5), round-trip`
		`min/avg/max = 0/0/0 ms`
		`switch1D#`

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Table A-2 (Cont.) CISCO SWITCH CONFIGURATION

STEP #	This procedure Configures the Cisco Switches on an Installed APPB ELAP Server Pair. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. If this procedure fails, contact My Oracle Supportand ask for ASSISTANCE.	
19. **17.** □	Procedure complete.	Procedure is complete.

A.3 E5-APP-B to APPD Card Replacement.

Note: Customers may follow this procedure to replace E5-APP-B card by APPD

Table A-3 E5-APP-B to APPD Card Replacement.

S.No.	Steps	Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. If this procedure fails, Contact My Oracle Support AND ASK FOR UPGRADE ASSISTANCE.
2. □	**MPS X: Replace E5-APP-B card by APPD card.**	Please follow the below procedures: Procedure for removing E5-APP-B Cards is given in Oracle Communications EAGLE Application B Card Hardware and Installation Guide, Release 47.0 in ELAP 11.0 documents. Procedure for installing APPD Cards is given in the Oracle Communications EAGLE Application D Card Hardware and Installation Guide, Release 47.0 in ELAP 11.1 documents.
3. □	**Procedure is complete.**	Procedure is complete.

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B
ISO IMAGE COPY FROM USB MEDIA

Assumption: The USB media contains the desired ELAP ISO.

Table B-1 APPENDIX B. ISO IMAGE COPY FROM USB MEDIA

STEP #	This procedure provides instructions to copy an ISO image from an USB media. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT ORACLE TECHNICAL SERVICES AND ASK FOR UPGRADE ASSISTANCE.	
1. ☐	**MPS X:** Insert USB.	Insert media in the USB drive
2. ☐	**MPS X:** Log in to the server as the “admusr” user.	`[hostname] consolelogin: admusr password: <admusr_password>`

3.
☐
	MPS X: Run syscheck to make sure there is no error.	Run the following command:
		
		`# syscheck`
		The output should look like:
		`[root@hostname ~]# syscheck`
		`Running modules in class proc...`
		`OK`
		`Running modules in class`
		`services... OK`
		`Running modules in class system...`
		`OK`
		`Running modules in class disk...`
		`OK`
		`Running modules in class`
		`hardware... OK`
		`Running modules in class net...`
		`OK`
		`LOG LOCATION: /var/TKLC/log/syscheck/fail_log`

4.
☐
	MPS X: Verify ISO image doesn’t already exist.	Run the following command to perform directory listing:
		
		`# ls –al /var/TKLC/upgrade`
		The output should look like:
		`[root@hostname ~]# ls -al /var/TKLC/upgrade total 16 dr-xr-xr-x 2 root root 4096 Oct 22 16:31 . dr-xr-xr-x 21 root root 4096 Oct 18 13:40 ..`
		If an ISO image exists, remove it by executing the following command:
		`# rm –f /var/TKLC/upgrade/<ISO image>`

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Table B-1 (Cont.) APPENDIX B. ISO IMAGE COPY FROM USB MEDIA

STEP #	This procedure provides instructions to copy an ISO image from an USB media. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT ORACLE TECHNICAL SERVICES AND ASK FOR UPGRADE ASSISTANCE.	

5.
□
	MPS X: Delete unwanted ISOs from USB media.	Run the following command to create a directory to mount the USB media:
		`# sudo mkdir -p /mnt/usb`
		Run the following command to get the USB drive name:
		`# sudo fdisk -l |grep FAT`
		The output should look like:
		`/dev/sdc1 * 1 812 831472 6 FAT16`
		Run the following command to mount the USB media using the USB drive name from the output above:
		`# sudo mount /dev/sdc1 /mnt/usb`
		Run the following command to perform directory listing and verify the file name format is as expected:
		`# sudo ls -al /mnt/usb`
		The output should look like:
		`[root@hostname ~]# # ls -al /mnt/usb total 629400 dr-xr-xr-x 2 root root 4096 Oct 16 13:33 . dr-xr-xr-x 22 root root 4096 Oct 16 13:55 ..`
		`-rw-r--r-- 1 root root 643852288 Oct 15 15:37 ELAP-11.0.0.0.0_110.3.0-x86_64.iso`
		Only one ISO file should be listed, if additional files are listed, run the following command to remove unwanted ELAP ISOs:
		`# sudo rm –f /mnt/usb/<ISO_NAME>.iso`
		For e.g.,
		`# sudo rm –f /mnt/usb/ELAP-11.0.0.0.0_110.3.0-x86_64.iso`
		Run the following command to unmount the USB media:
		`# sudo umount /mnt/usb`

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Table B-1 (Cont.) APPENDIX B. ISO IMAGE COPY FROM USB MEDIA

STEP #	This procedure provides instructions to copy an ISO image from an USB media. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT ORACLE TECHNICAL SERVICES AND ASK FOR UPGRADE ASSISTANCE.	

6.
☐
	MPS X: Verify space exists for ISO.	Run the following command to verify the available disk space:
		`# df -h /var/TKLC`
		The output should look like:
		`[root@hostname ~]# df -h /var/TKLC`
		`Filesystem Size Used Avail Use% Mounted on`
		`/dev/md8 4.0G 89M 3.7G 3% /var/TKLC`
		Verify that there is at least 620M in the Avail column. If not, clean up files until there is space available.
		CAUTION: Make sure you know what files you can remove safely before cleaning up. It is recommended that you only clean up files in the /var/TKLC/upgrade directory as this is a platform owned directory that should only contain ISO images. This directory should not be expected to contain images for any length of time as they can get purged.
		Contact Technical Services beforehand if removing files other than the /var/TKLC/upgrade directory as removing files is dangerous.

7. ☐	**MPS X:** Copy iso from mounted path to the destination path.	Run the following command to copy ISO: `$ sudo cp /mnt/usb/<xyz.iso> /var/TKLC/upgrade/`

8.
☐
	MPS X: Verify ISO image exists.	Run the following command to perform directory listing:
		`# ls –al /var/TKLC/upgrade`
		The output should look like:
		`[root@hostname ~]# ls -al /var/TKLC/upgrade total 16 dr-xr-xr-x 2 root root 4096 Oct 22 16:31 . dr-xr-xr-x 21 root root 4096 Oct 18 13:40 .. -rw-r--r-- 1 root root 643852288 Oct 15 15:37 ELAP11.0.0.0.0_110.3.0-x86_64.iso`
		Repeat this procedure from step 5 if ELAP ISO file is not as expected.

9.
☐
	MPS X: Unmount media and Logout from server.	Run the following command to unmount the USB media once iso copy is complete:
		`$ sudo umount /mnt/usb`
		Logout from the server by running the following command:
		`# logout`

10. ☐	**MPS X:** Remove USB media.	Remove media from USB drive.

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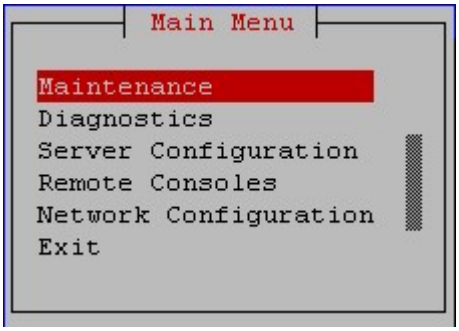
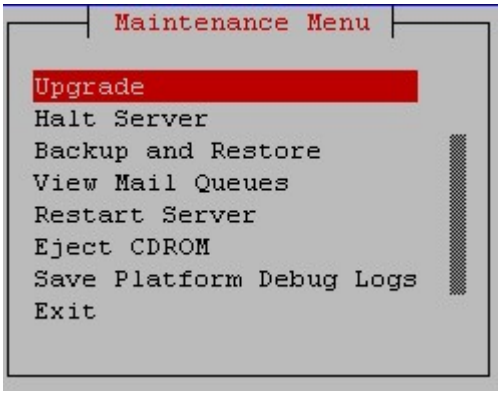
This procedure is complete!

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C

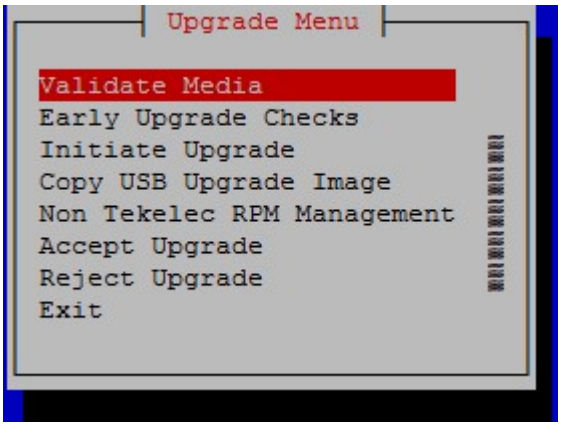
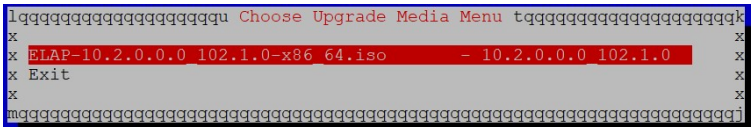
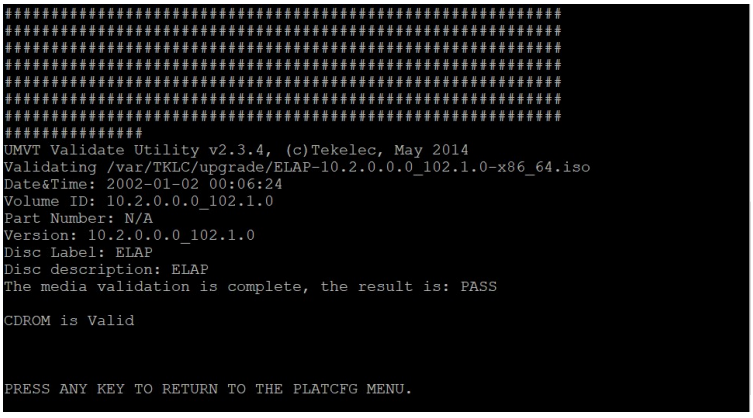
VALIDATE ISO IMAGE

Table C-1 APPENDIX C. VALIDATE ISO IMAGE

STEP #	This procedure provides instructions to copy an ISO image from an USB media. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT ORACLE TECHNICAL SERVICES AND ASK FOR UPGRADE ASSISTANCE.	
1. ☐	**MPS X:** Log in to the server as the "root" user.	`[hostname] consolelogin: root password: password`
2. ☐	**MPS X:** Start platcfg utility by logging in as user "platcfg".	Execute the following command to change the user: `# su - platcfg`
3. ☐	**MPS X:** Select the Maintenance submenu.	On the Main Menu of the Platform Configuration Utility, select Maintenance and press [ENTER]. 
4. ☐	**MPS X:** Select the Upgrade submenu.	 Select the Upgrade menu and press [ENTER].

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Table C-1 (Cont.) APPENDIX C. VALIDATE ISO IMAGE

STEP #	This procedure provides instructions to copy an ISO image from an USB media. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT ORACLE TECHNICAL SERVICES AND ASK FOR UPGRADE ASSISTANCE.	
5. □	**MPS X:** Select Validate Media submenu.	Select the Validate Media menu and press [ENTER]. 
6. □	**MPS X:** Select the ISO to be validated.	
7. □	**MPS X:** Check the validation status.	

This procedure is complete!

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D
DISCONNECT NPAC FROM LSMS

Table D-1 APPENDIX D. DISCONNECT NPAC FROM LSMS

STEP #	This procedure disconnects NPAC from E5APPB/APPD LSMS. Estimated time: 5 minutes	
1. ☐	**LSMS Active server:** Log in to the server as the user “lsmsadm”.	`Login: lsmsadm` `Password: <lsmsadm_password>`

2. ☐	**LSMS Active server:**
	Stop all connected NPAC regions
		Run the following command to list the active NPAC regions
		
		`$ dbnames -n all -a`
		`Canada CanadaDB`
		`MidAtlantic MidAtlanticDB`
		`Midwest MidwestDB`
		`Northeast NortheastDB`
		`Southeast SoutheastDB`
		`Southwest SouthwestDB`
		`WestCoast WestCoastDB`
		`Western WesternDB`
		
		Note: The above output shall vary depending on LSMS configuration.
		Run the following command to stop an NPAC region.
		
		`$ lsms stop <region name>`
		`Checking if npacagent is running....Yes.`
		`Stopping npacagent....`
		`OK.`
		`npacagent stopped:  Wed Jan  2 05:52:42 2014`
		`Command complete.`
		
		Run the above command for all active regions.

This procedure is complete!

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E
CONNECT NPAC TO LSMS

Table E-1 APPENDIX E. CONNECT NPAC TO LSMS

STEP #	This procedure connects NPAC to E5APPB / APPDLSMS. Estimated time: 5 minutes	
1. □	**LSMS Active server:** Log in to the server as the user “lsmsadm”.	`Login: lsmsadm` `Password: <lsmsadm_password>`

2. □	**LSMS Active server:**
	Start all NPAC regions
		Execute the following command to list the NPAC regions
		
		`$ dbnames -n all -a`
		`Canada CanadaDB`
		`MidAtlantic MidAtlanticDB`
		`Midwest MidwestDB`
		`Northeast NortheastDB`
		`Southeast SoutheastDB`
		`Southwest SouthwestDB`
		`WestCoast WestCoastDB`
		`Western WesternDB`
		
		Note: The above output shall vary depending on LSMS configuration.
		Run the following command to start an NPAC region.
		
		`$ lsms start <region name>`
		`Checking if npacagent is already running....No`
		`Starting npacagent....`
		`Verifying....OK.`
		`npacagent started:  Thu Jul 13 05:18:35 2017`
		`Command complete.`
		
		Run the above command for all NPAC regions.

This procedure is complete!

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F

MY ORACLE SUPPORT

> ⚠ **Caution**
>
> Use only the guide downloaded from the Oracle Technology Network (OTN) http://www.oracle.com/technetwork/indexes/documentation/oracle-commshttp://www.oracle.com/technetwork/indexes/documentation/oracle-comms-tekelec-2136003.htmltekelec-2136003.html).

Before upgrading your system, access the **My Oracle Support** web portal

(https://support.oracle.com) and review any Knowledge Alerts that may be related to the System Health Check or the Upgrade.

Before beginning this procedure, contact My Oracle Support and inform them of your upgrade plans. If installing for an Oracle customer on a customer site, obtain the customer's Support Identifier (SI) before requesting assistance.

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Glossary

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