Oracle® Communications
EAGLE LNP Application Processor

Full Upgrade Guide

Release 10.2

F38986-05

October 2025

ORACLE®

Oracle Communications EAGLE LNP Application Processor Full Upgrade Guide, Release 10.2

CAUTION: Use only the guide downloaded from the Oracle Technology Network (OTN) (http://www.oracle.com/technetwork/indexes/documentation/oracle-comms-tekelec-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.
Refer to 0 for instructions on accessing My Oracle Support.

CHANGE HISTORY

Date	ENG Version #	ECN Revision #	Author	Description	Approved* (Yes/No)
27/01/21	1.0	---	Shriya Prajapati	Initial Draft	No
21/01/21	2.0	---	Shriya Prajapati	Final document	Yes
04/06/21	3.0	---	Shriya Prajapati	Fix for Bug 30777953	Yes
16/06/21	4.0	---	Shriya Prajapati	Update TPD version to 7.8.0.0.0_89.5.0.	Yes
22/06/21	5.0	---	Shriya Prajapati	Updated snapshot in Procedure 17 step 2 and also updated the timeline for servdi backup according to 756M DB.	Yes
26/07/21	6.0	---	Nishchal Nagpal	Fix for Bug 33107680	Yes
28/07/21	7.0	---	Mohit Chauhan	Release 10.2.1 updates	Yes
23/09/21	7.0	---	Shriya Prajapati	Fix for Bug 33389113	Yes
15/02/22	8.0	---	Smriti Wadhwa	Fix for Bug 33850666	Yes
10/05/22			Smriti Wadhwa	Fix for Bug 33568812	
14/12/23			Shivali Sharma	Added the procedure for Telco to Cisco Switch Replacement	

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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 10.1 to ELAP 10.2.x on the E5-APP-B-01/02 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*

1.3 Acronyms

Acronym	Description
BIOS	Basic Input Output System
DB	Database
E5-APP-B/E5APPB	Eagle5 Application Card class B 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

Table 1: Acronyms

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.

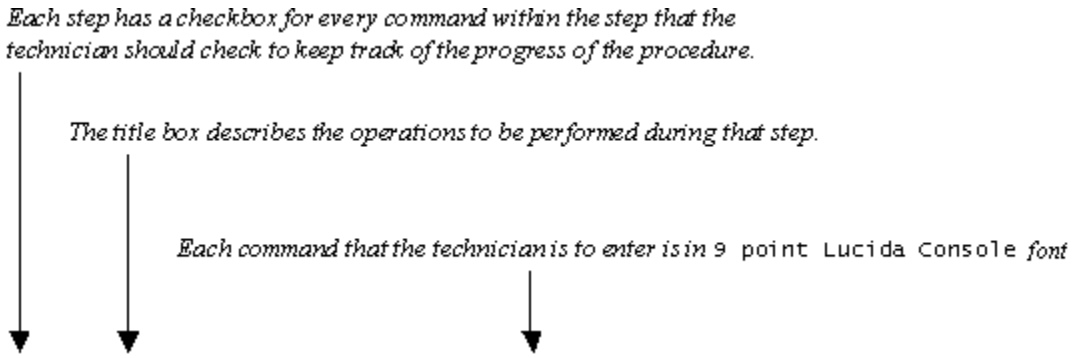
1.5 Definitions

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.

Table 2: Definitions

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:



1 ☐	MPS A: Verify all materials required are present	Materials are listed in Material List (Section 1.7)

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

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

Figure 2. Example of a step that needs to be executed on both MPS A and MPS B servers

1.7 Required Materials

Note: Make sure that the LSMS is already migrated to LSMS 13.5 before performing the ELAP migration from ELAP 10.1 to 10.2.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: _____
- 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:

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

Table 3: User Password Table

1.8 E5APPB Server (Rear)

Figure 3. E5-APP-B Server (Rear)

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

1.9 Telco T5C-24GT Switch (Front)

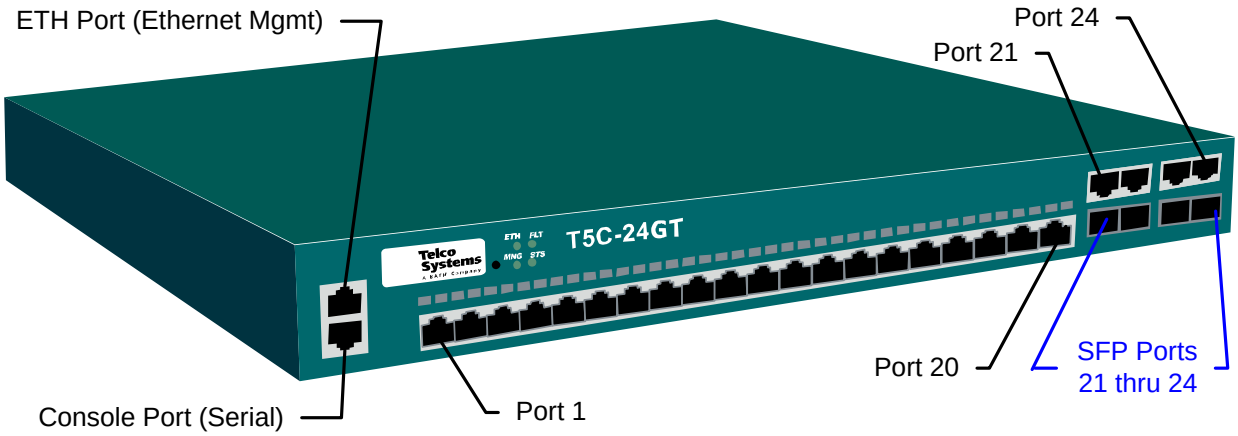


Figure 4. Telco Switch

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

1.10 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.

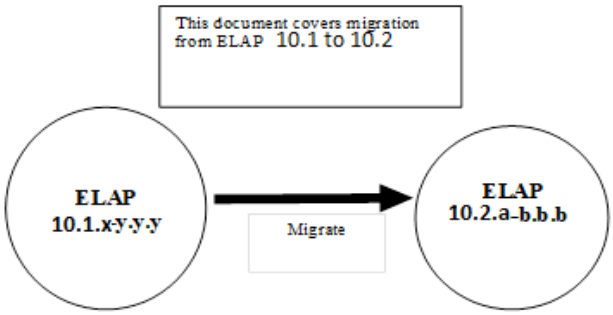
2. FULL UPGRADE PROCEDURES

This document defines the step-by-step actions performed to execute a software Full upgrade to ELAP 10.2.x.

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

Table 4 Install-Full upgrade paths for E5APPB-02

TPD Release for IPM	ELAP Initial Installation Release
7.8.0.0.0_89.5.0	10.2.x
Upgrade Source Release	**Upgrade Destination Release**
10.1	10.2.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 2.1.1 and 2.1.2 are to be executed in the order they are listed.

2.1 Upgrade Timeline for ELAP Procedure Execution Order

2.1.1 Preparation phase

Table 5: Timeline table for Full upgrade preparation

ELAP A				ELAP B		
Procedure	**Task**	**A**	**Task Start time (min)**	**B**	**Task**	**Procedure**
	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	15	20			
Procedure 3	Pre-upgrade health check	10	35			

			45	10	Pre-upgrade health check	Procedure 3

2.1.2 Maintenance Window Tasks

Table 6: Timeline table for Full upgrade of ELAP

LSMS			
Procedure	**Task**	**Time**	**Task Start time (min)**
2.7Appendix C	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.

ELAP A				ELAP B		
Procedure	**Task**	**A**	**Task Start time (min)**	**B**	**Task**	**Procedure**
Procedure 5	Backup EuiDB	5	5			
Procedure 6	Disconnect ELAP from LSMS	5	10			
			15	45	IPM MPS server with TPD 7.8.x	Procedure 7
			60	10	Pre-install configuration	Procedure 8
			70	30	ELAP installation steps	Procedure 9
			100	10	Configure Network for Backup transfer	Procedure 10
Procedure 14	Transfer backup to local B	5	110			
Procedure 7	IPM MPS server with TPD 7.8.x	45	115			
Procedure 8	Pre-install configuration	10	160			
Procedure 9	ELAP installation steps	30	170			
Procedure 11	*Configure NTP server	5	200			
Procedure 12	Initial Network Configuration	10	205			
Procedure 13	Verify Configurations	5	215			
			220	5	Transfer backup to local A	Procedure 14
Procedure 15	Restore EuiDB	5	225			
Procedure 16	SSH key exchange between ELAP and LSMS	5	230			
Procedure 17	Repoint LSMS to ELAP VIP	15	235			
Procedure 18	Transfer Servdi Image To ELAP	5	250			
Procedure 19	Restore Servdi	15	255			
2.7Appendix D	Connect NPAC to LSMS	5	270			
Procedure 20	Post Upgrade Syscheck	5	275	5	Post Upgrade Syscheck	Procedure 20
Procedure 21	Accept The Upgrade	5	280	5	Accept The Upgrade	Procedure 21

*** 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 ELAP Incremental Upgrade/Installation guide E76230, Procedure 8 (CGBU_018976) for switch configuration steps.**

NOTE: After accepting upgrade on ELAP, the SCCP cards at EAGLE should be initialized to load the ELAP DB.

2.2 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.**

Procedure 1 SETTING UP UPGRADE ENVIRONMENT

STEP #	A	B	This procedure sets up the Full upgrade environment. Estimated time: 5 minutes	
1.	☐	☐	**E5APPB MPS X:** Ensure 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, do the following. 1. Right click on the top bar in the PuTTY and choose "change setting". 2. Click on "Logging". 3. Select "Printable output". 4. Click on "Browse" and choose where you want the logs to be written so that you can collect those logs later, when needed. Put a name which will serve better on a later date to understand. For example, name of the log file can be <Server name>_active_pdba_A_server_puttylog_ddmmyyyy. 5. Click on "Save". 6. Type a text "Putty Logging starts" in the PuTTY session and check that above 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 execute procedure of this document.
2.	☐	☐	**E5APPB MPS X:** Login as root to MPS	SSH to MPS IP: login: **root** password: **<E5APPB_root_password>**
3.	☐	☐	**E5APPB MPS X:** Start capture file.	Start a capture file using IsoConsole, or by starting a local screen session and capturing its output.
4.	☐	☐	**E5APPB MPS X:** Access mate MPS via serial console	**# minicom mate**
5.	☐	☐	**E5APPB mate MPS:** Login as root.	console login: **root** password: **<E5APPB_root_password>**

This procedure is complete!

Procedure 2 CAPTURING E5-APP-B CURRENT CONFIGURATIONS

S	This procedure captures the exsting configuration on the server that runs on the source release.

STEP #	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 | |----|----------------------------------| | 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: 1
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 = 10.248.15.1 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 = 192.168.121.200 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 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. ☐	**Full upgrade Procedure:** 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>
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).	ntpserver1 **<Ipaddress 1>** ntpserver2 **<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.
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"`

12. ☐	**MPS A:** Capture the ELAP_PRETTY_ NAME on ELAP 10.1 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"

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_groups" is set to "readonly" "max_passwd_age" is set to "180" "EBDAD_LSMS_PORT" is set to "1030" "max_concurrent_user_logins" is set to "1" "ELAP_A_DSM_LPBK_NETWORK_ADDRESS" is set to "192.168.123.100" "max_concurrent_logins" is set to "20" "ELAP_A_NAME" is set to "Andros-A" "ELAP_RELEASE" is set to "10.1.5" "ELAP_LOGGING_REMOTE_USERNAME" is set to "" "ELAP_A_SYNCH_NETWORK_ADDRESS" is set to "169.254.1.100" "AUTO_RTDB_BKUP_FILEPATH" is set to "/var/TKLC/elap/free/backup/" "HTTP_ENABLED" is set to "No" "ELAP_A_PRETTY_NAME" is set to "ELAP_A_NAME" "AUTO_RTDB_BKUP_FILES_TO_MANTAIN" is set to "5" "session_idle_timeout" is set to "10" "ELAP_B_PROV_NETWORK_IP_ADDRESS" is set to "10.75.141.24" "EXINIT_DEBUG_LEVEL" is set to "OFF" "SNAPPER_ROLLBACK_INTERVAL" is set to "900" "EBDAD_DEBUG_LEVEL" is set to "OFF" "MAINT_DEBUG_NUM_LOGS" is set to "5" "RIDB_LV_PATH" is set to "/dev/vgdrbd0" "PROV_DEBUG_NUM_LOGS" is set to "5" "LNPTRANS_LOG_DAYS" is set to "7" "EXINIT_DEBUG_NUM_LOGS" is set to "5" "ELAP_A_HTTP_PORT" is set to "80" "EXINIT_ERROR_NUM_LOGS" is set to "5" "logon_msg" is set to "NOTICE: This is a private computer system. Unauthorized access or use may lead to prosecution." "ELAP_B_HTTPS_PORT" is set to "443" "ELAP_B_NAME" is set to "Andros-B" "AUTO_RTDB_BKUP_TIME" is set to "6:00" "EBDAD_GS_PORT" is set to "9692" "LNP_LRN_QTY" is set to "200000" "BACKUP_FILE_DIR" is set to "/var/TKLC/elap/free/backup" "ELAP_LOGGING_EXPORT" is set to "DISABLED" "AUTO_RTDB_BKUP_FREQUENCY" is set to "1" "PROVISIONING_NETWORK_NETMASK" is set to "255.255.255.0" "ELAP_LOGGING_REMOTE_SFTP_PATH" is set to "" "ELAP_B_SYNCH_NETWORK_ADDRESS" is set to "169.254.1.200" "ELAP_A_HTTPS_PORT" is set to "443" "ELAP_A_DSM_MAIN_NETWORK_ADDRESS" is set to "192.168.120.100" "ELAP_A_SUEXEC_HTTPS_PORT" is set to "8002" "ELAP_A_GS_BANNER_PORT" is set to "8473" "ELAP_B_DSM_BACKUP_NETWORK_ADDRESS" is set to "192.168.121.200" "MAINT_DEBUG_LEVEL" is set to "OFF" "DOWNLOAD_FILE_DIR" is set to "/var/TKLC/elap/free/backup" "euidb_version" is set to "3" "LNP_NPANXX_QTY" is set to "350000" "LSMS_PROVISIONING" is set to "OFF" "ELAP_LOGGING_TIME_FORMAT" is set to "UTC" "MAINT_ERROR_NUM_LOGS" is set to "5" "UI_IP_AUTHORIZATION_ENABLED" is set to "FALSE" "ELAP_LOGGING_REMOTE_IP_ADDRESS" is set to "" "AUTO_RTDB_BKUP_DELETE_OPTION" is set to "y" "HSOPD_ERROR_NUM_LOGS" is set to "5" "TRPD_ERROR_NUM_LOGS" is set to "5" "apache_403_error_message" is set to "NOTICE: This workstation is not authorized to access the GUI." "EBDAD_ERROR_NUM_LOGS" is set to "5" "max_account_inactivity" is set to "0" "HSOPD_DEBUG_LEVEL" is set to "OFF" "TRPD_DEBUG_NUM_LOGS" is set to "5" "ELAP_LOGGING_REMOTE_PASSWORD" is set to "" "ELAP_B_HTTP_PORT" is set to "80" "MATE_MPS_HTTPS_PORT" is set to "443" "EBDAD_DEBUG_NUM_LOGS" is set to "5"

		"ELAP_B_PRETTY_NAME" is set to "ELAP_B_NAME" "HSOPD_LSMS_PROVISIONING_PORT" is set to "7483" "ELAP_RIDB_RELEASE" is set to "10.0.0" "SNAPPER_LOG_LEVEL" is set to "0" "AUTO_RTDB_BKUP_TYPE" is set to "local_mate" "PROV_ERROR_NUM_LOGS" is set to "5" "ELAP_A_PROV_NETWORK_IP_ADDRESS" is set to "10.75.141.23" "CNF_QTY_THRESHOLD_PERC" is set to "90" "MATE_MPS_HTTP_PORT" is set to "80" "passwd_reuse_limit" is set to "12" "apache_403_error_message_default" is set to "NOTICE: This workstation is not authorized to access the GUI." "HTTPS_ENABLED" is set to "Yes" "HSOPD_DEBUG_NUM_LOGS" is set to "5" "ELAP_B_DSM_MAIN_NETWORK_ADDRESS" is set to "192.168.120.200" "LOCAL_PROVISIONING_VIP" is set to "10.75.141.25" "TRPD_DEBUG_LEVEL" is set to "OFF" "RTDB_AUDIT" is set to "ON" "LNP_TN_QTY" is set to "504000000" "ELAP_B_GS_BANNER_PORT" is set to "8473" "PROV_DEBUG_LEVEL" is set to "OFF" "RELOAD_FLOW_CONTROL_TIME" is set to "200" "passwd_complexity_checking" is set to "on" "LNP_MR_QTY" is set to "2000000" "RTDBA_NUM_LOGS" is set to "5" "PROVISIONING_NETWORK_DEFAULT_ROUTER" is set to "10.75.141.1" "RIDB_LV_NAME" is set to "lnpdb" "ELAP_A_SUEXEC_HTTP_PORT" is set to "8001" "ELAP_B_SUEXEC_HTTPS_PORT" is set to "8002" "LNP_LRNMR_QTY" is set to "2000000" "ELAP_LOGGING_ENHANCEMENTS_FEATURE" is set to "OFF" "ELAP_A_DSM_BACKUP_NETWORK_ADDRESS" is set to "192.168.121.100" "HSOPD_GS_PORT" is set to "9691" "ELAP_B_SUEXEC_HTTP_PORT" is set to "8001" "ELAP_B_DSM_LPBK_NETWORK_ADDRESS" is set to "192.168.123.200" "max_failed_logins" is set to "3" "BULK_DOWNLOAD" is set to "ON"
14. ☐	**MPS A:** Note down the timestamp in log.	Run the following command $ date

This procedure is complete!

Procedure 3 PRE-UPGRADE HEALTH CHECK

S T E P #	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
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

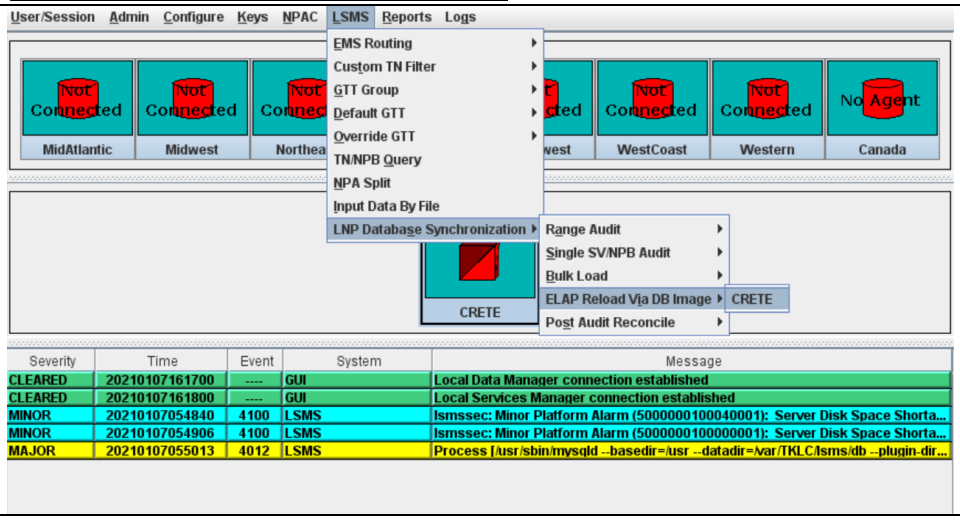
				Running modules in class hardware... OK The log is available at: -->/opt/TKLCplat/log/syscheck/fail_log
3.	☐	☐	**MPS X:** Check for any alarms on the server	[elapdev@ E5APP-B-a ~]$ manageBannerInfo -l **There are currently no BannerInfo messages for this side in the database.**
4.	☐	☐	**MPS X:** Obtain 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!

2.3 Data Backup before Full upgrade

Procedure 4 LSMS SERVDI BACKUP

1.	**LSMS:** Login to Active LSMS server as root user.	login: **root** Password: **<root_password>**
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	
6.	Select the LSMS icon. Right click on LSMS icon LSMS-> LNP Database Synchronization -> ELAP Reload via DB image	

7.	Click on generate image	

This procedure is complete!

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.

S T E P #	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".	E5APP-B-b login: **elapdev** Password:****** **[elapdev@E5APP-B-b elapdev]#**

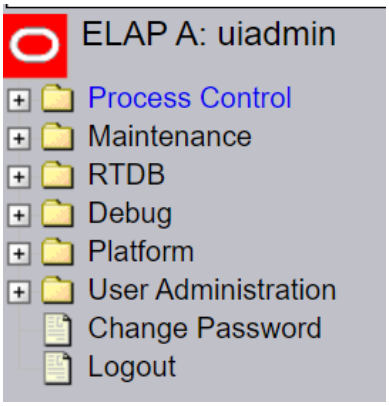
2. ☐	**Active ELAP:** Stop the ELAP Application	[elapdev@E5APP-B-b ~]$ /etc/init.d/Elap stop ~~ /etc/init.d/Elap stop ~~ All processes are dead ELAP-Application stopped Successfully. [elapdev@E5APP-B-b ~]$
3. ☐	**Active ELAP:** Switch user to root.	**$su -** Password: **<root_password>**
4. ☐	**Active ELAP:** Switch user to elapconfig.	**$su - elapconfig**
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
6. ☐	**Active ELAP:** 1) Select **"5"** and press return to start the MySQL Backup. 2) Select "**Y**" when prompted and press return. **NOTE: This MyISAM tar backup taken in this step, will be used if in any case the the full upgrade from ELAP 10.1 to ELAP 10.2 fails. From ELAP 10.2 we are using the mysqldump mechanism to backup and restore EuiDB.**	/-----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 Backup will be saved as "/var/TKLC/appl/free/npdbBackup_E5APP-B-a_20020118123143.tar"... Connecting to local MySQL server... Getting read lock... Tarring the NPDB... Backup Complete... Disconnecting from local MySQL server...
7. ☐	**Active ELAP:** Select **"e"** and press Enter to exit the Platform Menu.	/-----ELAP Platform Menu-\ /-------------------------\ | 1 | Initiate Upgrade | |----|--------------------| | 2 | Reboot MPS |

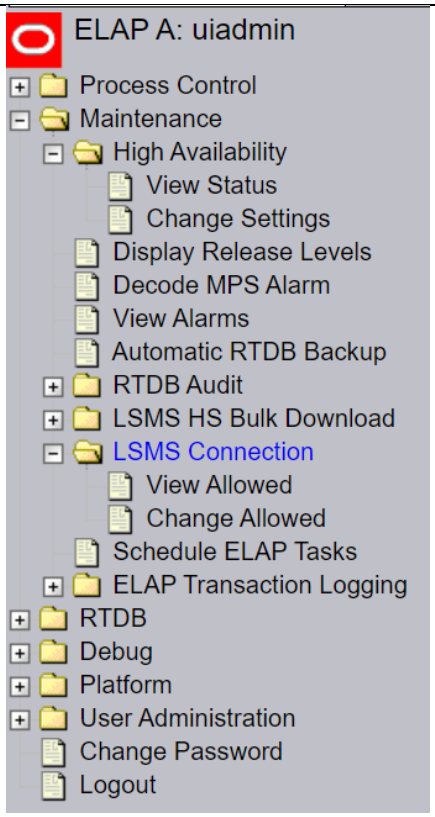
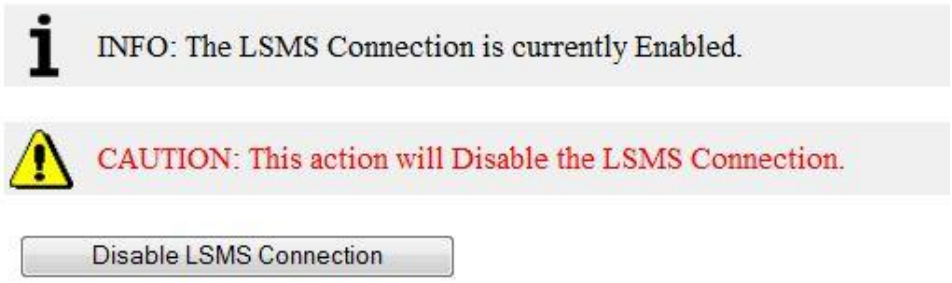
		|----|----------| | 3 | MySQL Backup | |----|----------| | 4 | RTDB Backup | |----|----------| | e | Exit | \----------/ Enter Choice: e
8. ☐	**Active ELAP:** Select **"e"** and press Enter to exit the ELAP Configuration Menu.	/-----ELAP Configuration Menu----------\ /----------\ | 1 | Display Configuration | |----|----------| | 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
9.	**ACTIVE ELAP:** Take mysqldump of EuiDB. **NOTE: Do not skip this step in any case. This EuiDB backup will be needed for restoring EuiDB after full upgrade to ELAP 10.2 is successful. We are using the mechanism of mysqldump for EuiDB backup and restore. Hence this mysqldump is step is important and should not be missed while preserving backups.**	**# mysqldump -uroot -p --opt EuiDB 2>/dev/null | gzip > /var/TKLC/appl/free/npdbBackup_<hostname>_<YYYYMMDDHHMMSS>.sql.gz** **Enter password:** Example: # mysqldump -uroot -p --opt EuiDB 2>/dev/null | gzip > /var/TKLC/appl/free/npdbBackup_Natal-A_20210128095703.sql.gz Enter password:
10. ☐	**Active ELAP:** Re-start the ELAP Application for Active ELAP.	[root@E5APP-B-b ~]# /etc/init.d/Elap start ~~ /etc/init.d/Elap start ~~ "ELAP_RELEASE" is set to "10.1.5" ELAP application start Successful.

11. ☐	**Active ELAP:** Note down the timestamp in log.	Run the following command $ date

This procedure is complete!

Procedure 6 DISCONNECT ELAP FROM LSMS

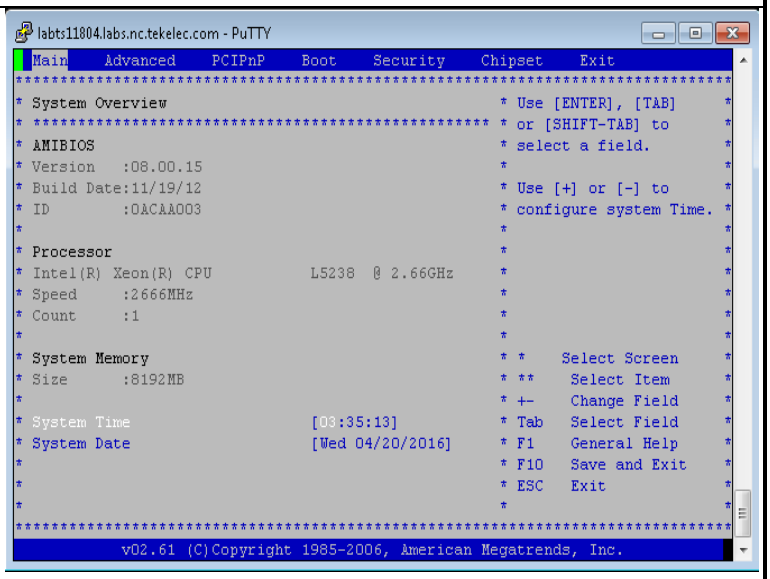
S T E P #	This procedure provides instructions to stop LSMS connection. Check off (√) each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT ORACLE TECHNICAL SERVICES AND ASK FOR UPGRADE ASSISTANCE.	
1. ☐	**Active ELAP GUI:** Login as uiadmin using the default password. *Note ELAP Version may differ than example image shown.	
2. ☐	**Active ELAP GUI:** 1) Expand the "Maintenance → LSMS Connection" folder. 2) Select the "Change Allowed" link.	

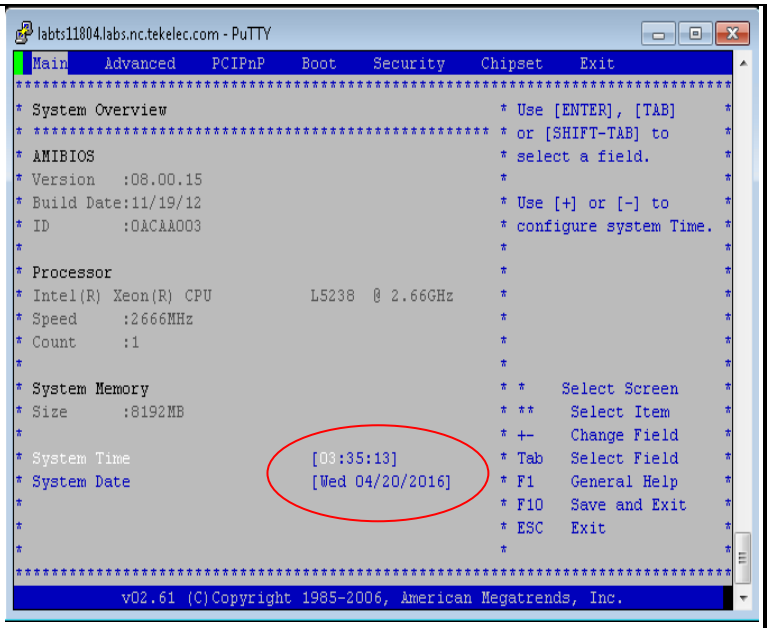
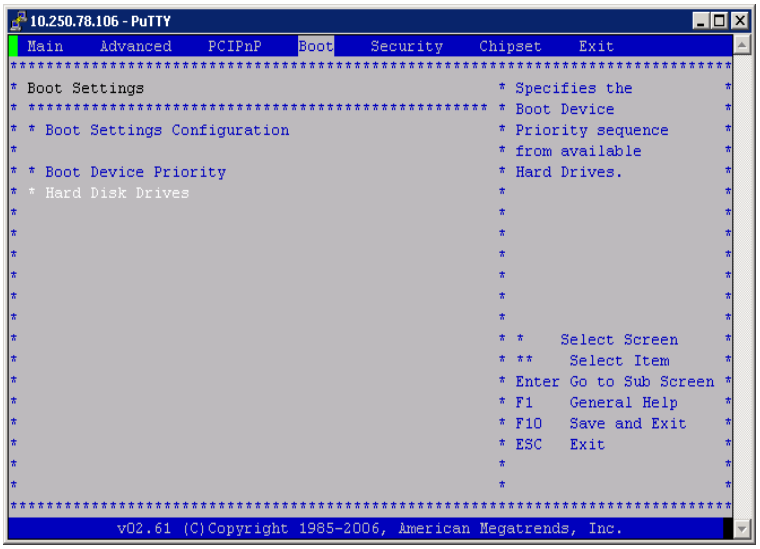
		
3. ☐	**Active ELAP GUI:** In the right panel, click on the "Disable LSMS Connection" button.	
4. ☐	**ELAP A GUI:** A message indicating that the LSMS Connection is now Enabled should appear in the right panel.	

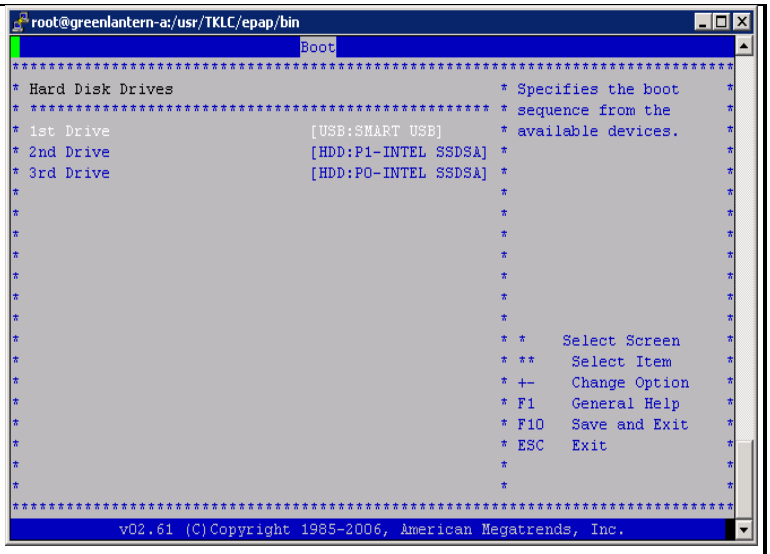
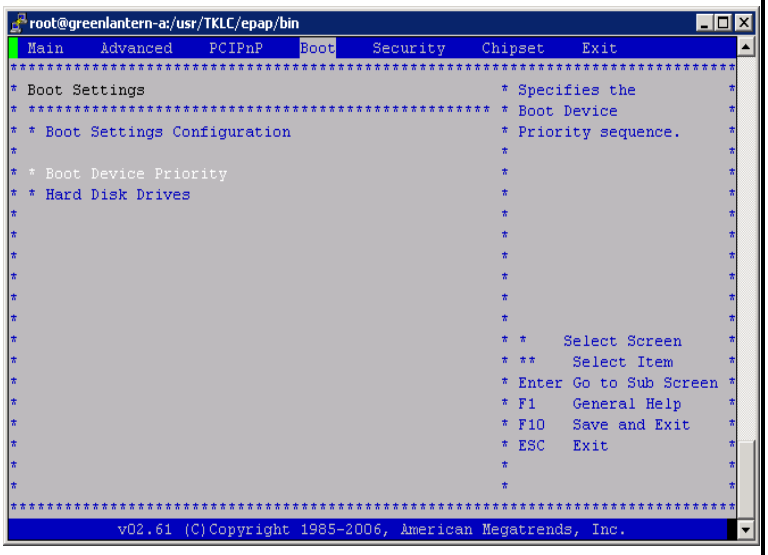
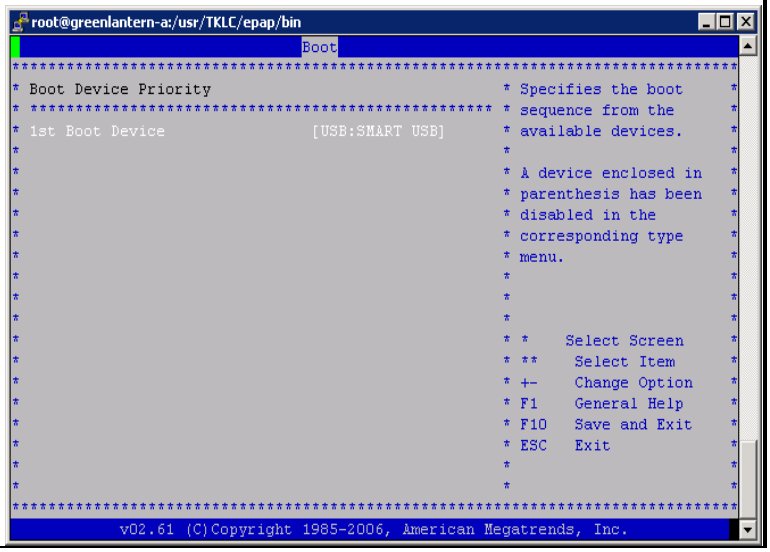
This procedure is complete!

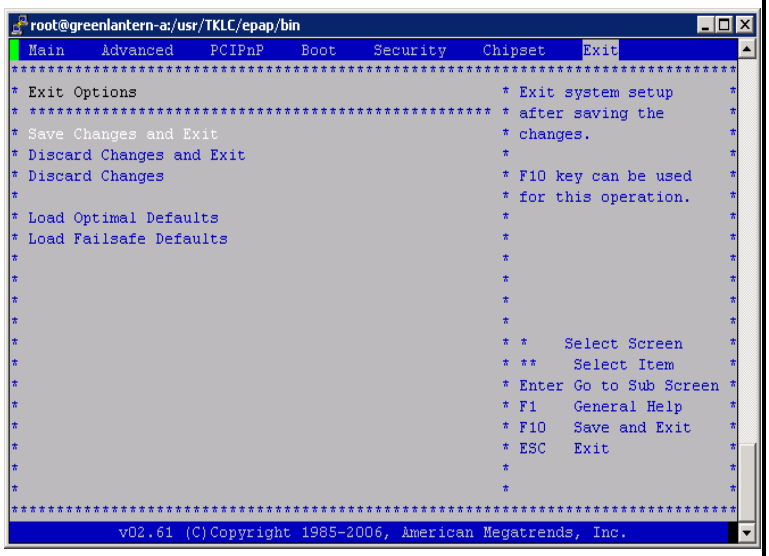
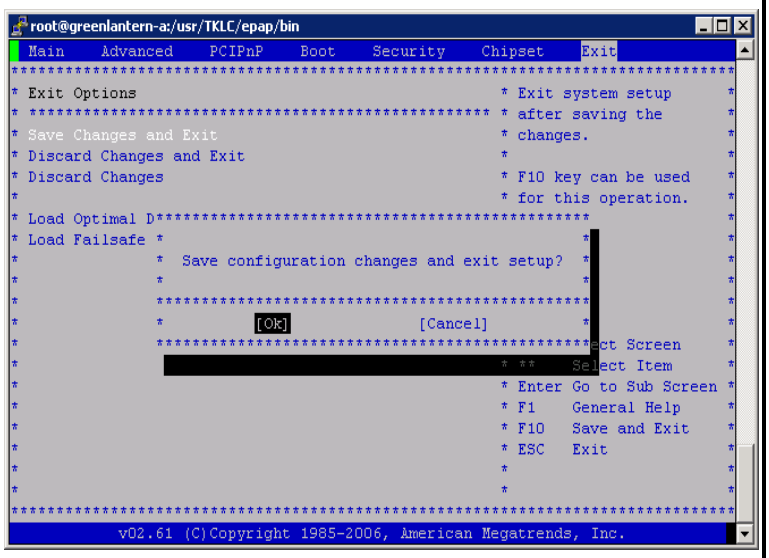
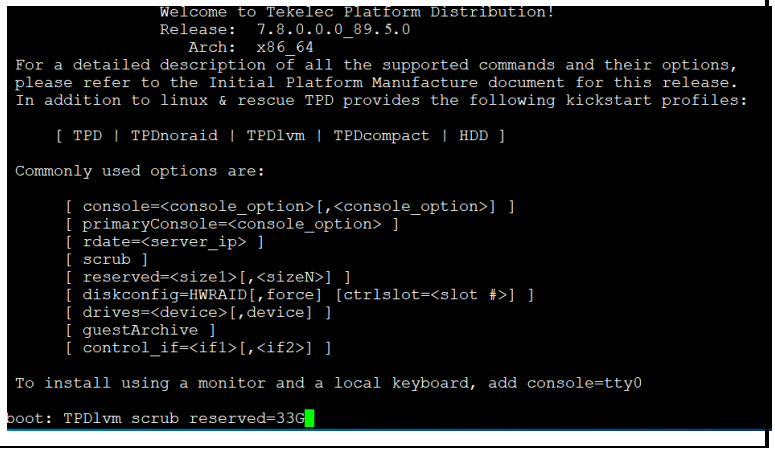
2.4 IPM and ELAP 10.2.x Installation

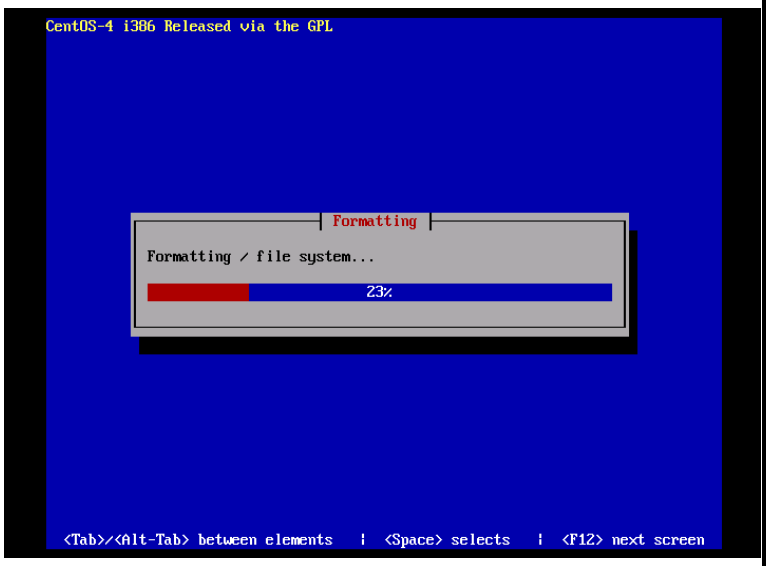
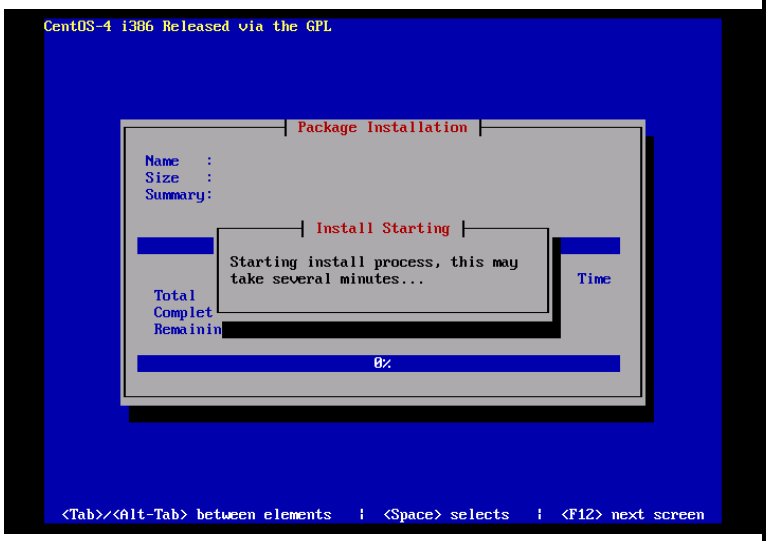
Procedure 7 IPM MPS SERVER WITH TPD 7.8.X

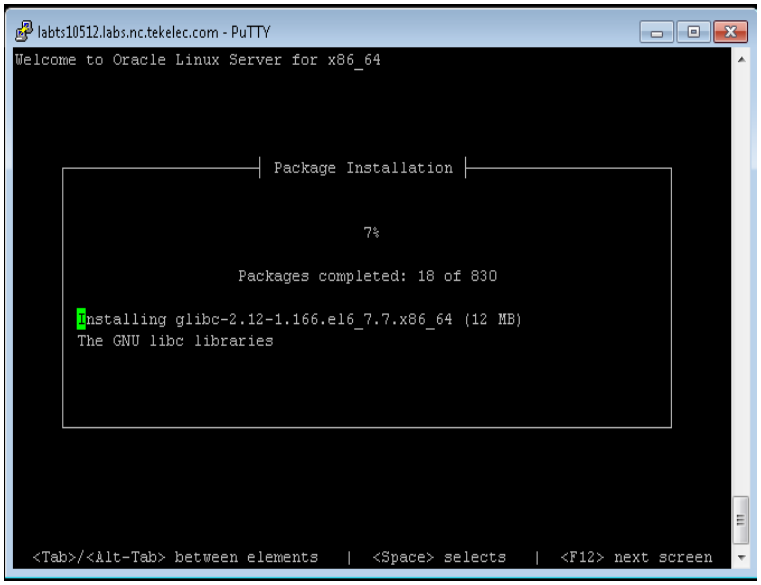
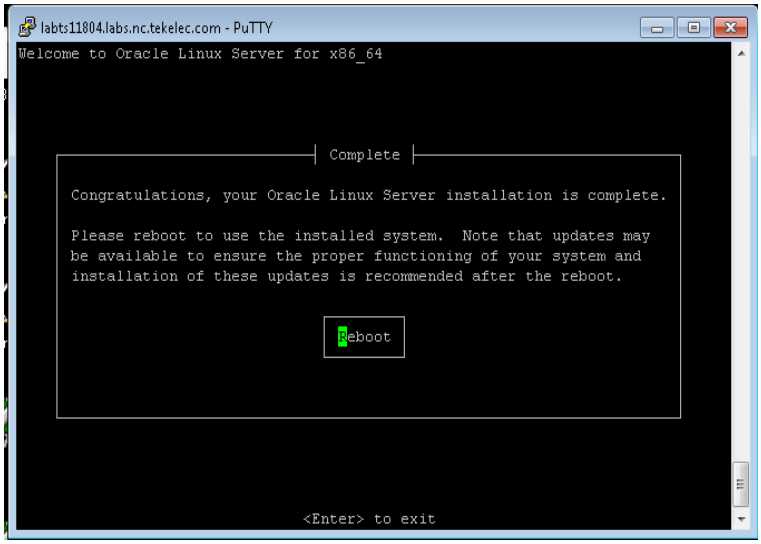
S T E P #	A	B	This procedure will install TPD. **Note: Estimated time of completion is 45 minutes.** Check off (√) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for **FULL UPGRADE ASSISTANCE.**	
1.	☐	☐	**MPS X:** Insert TPD 7.8.xUSB media into the USB port (E5-APP-B).	
2.	☐	☐	**MPS X:** If necessary, log in to the server as the user "root".	Login to the MPS server as "root" user by following steps in **Procedure 1**.
3.	☐	☐	**MPS X:** Reboot server.	`# reboot`
4.	☐	☐	**MPS X:** Press 'del' key to enter the BIOS when the system starts up after reboot (Use 'F4' key in case of Remote keyboard).	

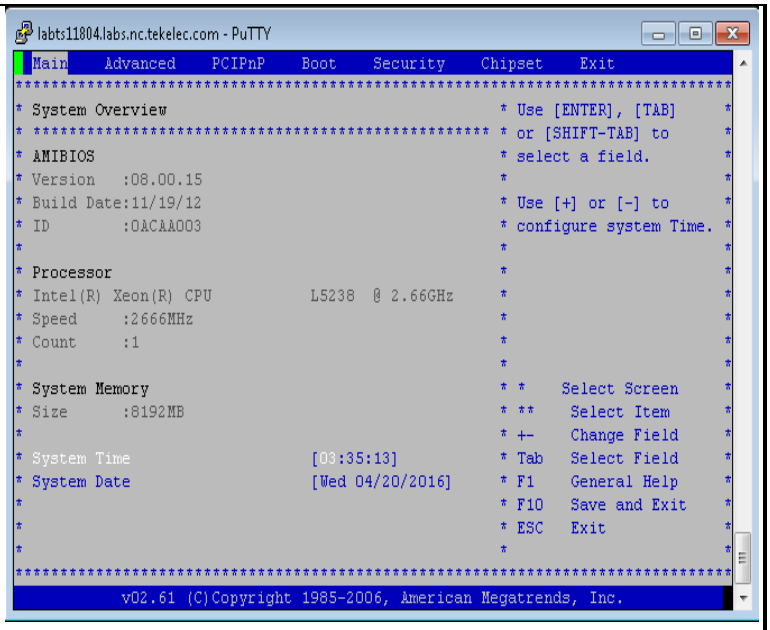
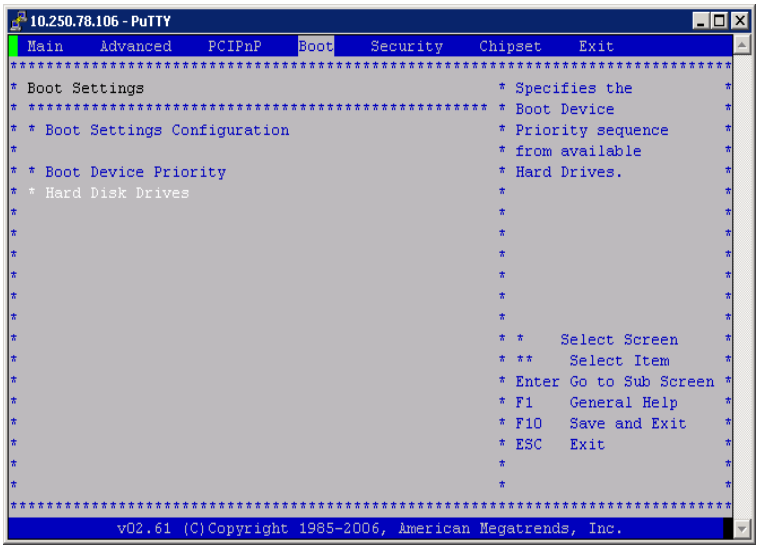
5.	☐	☐	**MPS X:** **Set the System Time and Date to UTC time.** Press 'Enter' key to select the various fields (hh/mm/ss) of system time and system date (mm/dd/yyyy). Use UP or DOWN arrow keys to select between System Time and System Date.	
6.	☐	☐	***MPS X:*** Select *Boot → Hard Disk Drives* option.	
7.	☐	☐	**MPS X:** Press 'Enter' key and select USB as the 1st Drive.	

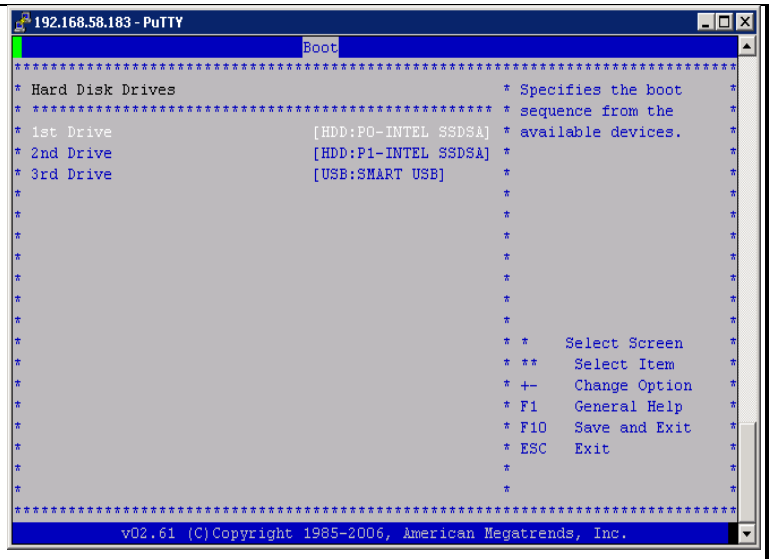
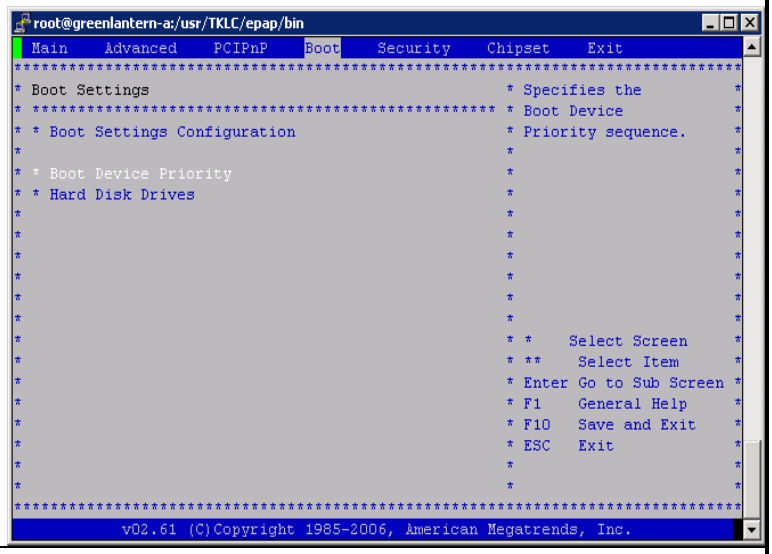
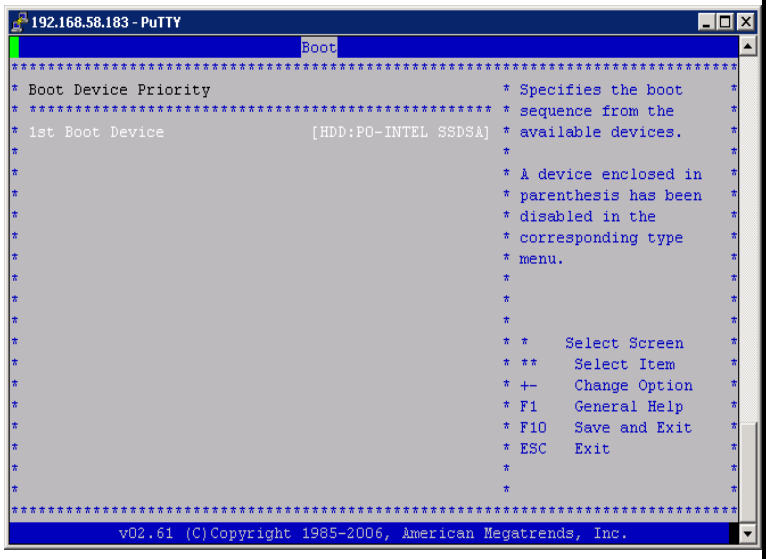
				
8.	☐	☐	**MPS X:** Press 'Esc' key and select Boot Device Priority.	
9.	☐	☐	**MPS X:** Verify that the 1st Boot Device is set to USB.	

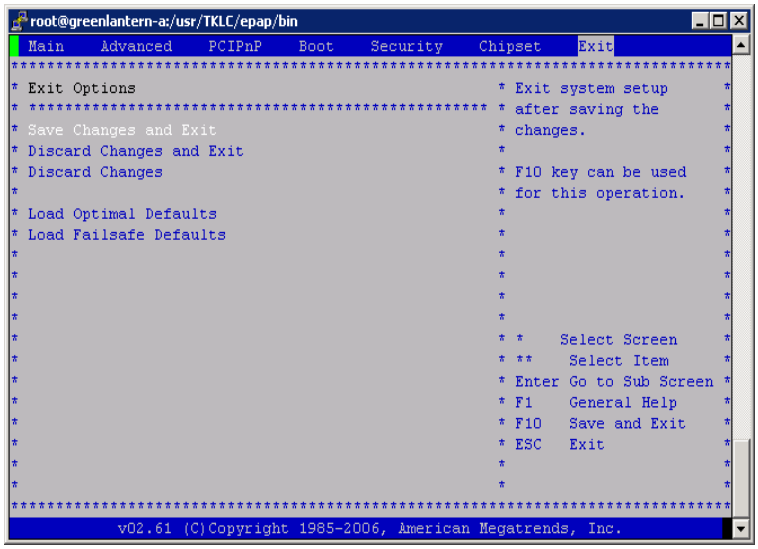
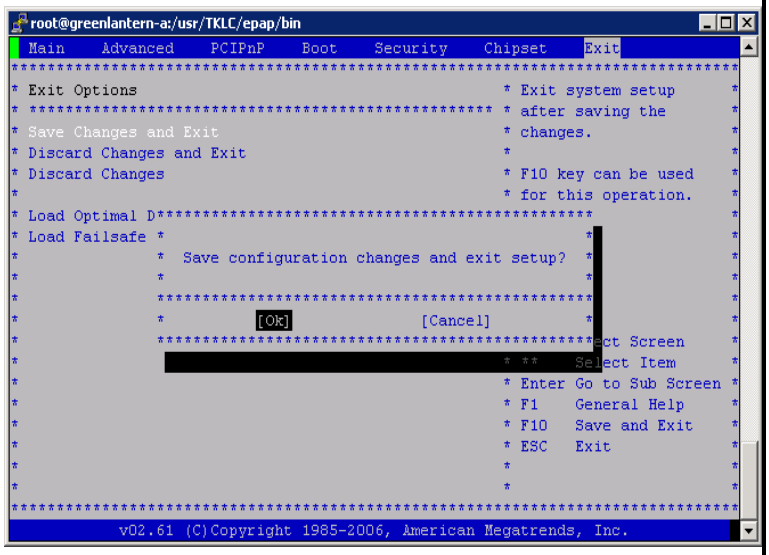
10.	☐	☐	**MPS X:** Press 'Esc' key and select *Exit* → *Save Changes and Exit* option.	
11.	☐	☐	**MPS X:** Select [OK] to save the configuration changes. The server will reboot and TPD boot prompt will appear.	
12.	☐	☐	**MPS X:** Start the IPM process by entering the TPD command at the boot prompt. **WARNING: You must add the "reserved=33G" parameter at the TPD boot prompt. Failure to TPD using this parameter will require this**	**boot: TPDlvm scrub reserved=33G** 

			procedure to be repeated!!!	
13.	☐	☐	**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.	
14.	☐	☐	**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 is about to begin.	
15.	☐	☐	**MPS X:**	

			After a few minutes, you will see a screen similar to that at right, showing the status of the package installation step. For each package, there will be a status bar at the top indicating how much of the package has been installed, with a cumulative status bar at the bottom indicating how many packages remain. In the middle, you will see text statistics indicating the total number of packages, the number of packages installed, the number remaining, and current and projected time estimates.	
16.	☐	☐	**MPS X:** Once all the packages have been successfully installed, the screen at right will appear letting you know the installation process is complete.	

17.	☐	☐	**MPS X:** Press 'del' key to enter the BIOS when the system starts up after reboot. (Use 'F4' key in case of Remote keyboard).	
18.	☐	☐	**MPS X:** Select *Boot → Hard Disk Drives* option	
19.	☐	☐	**MPS X:** Press 'Enter' key and select HDD:P0 as the 1st Drive	

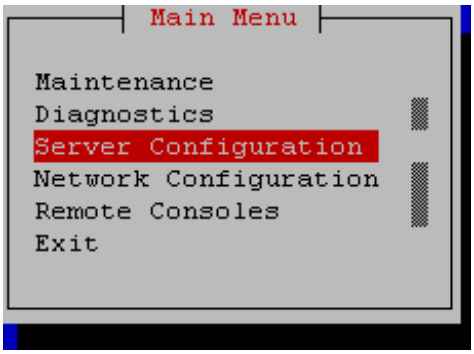
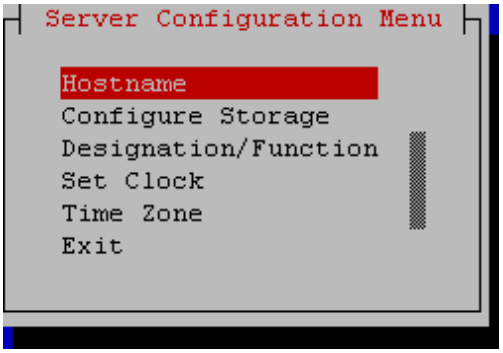
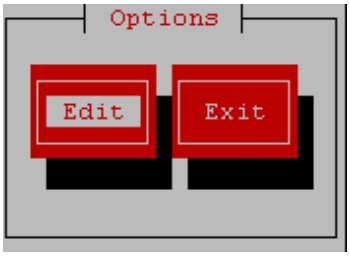
				
20.	☐	☐	**MPS X:** Press 'Esc' key and select Boot Device Priority	
21.	☐	☐	**MPS X:** Verify that the 1st Boot Device is set to HDD:P0.	

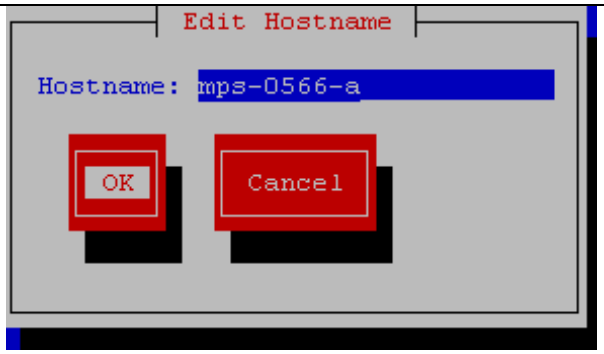
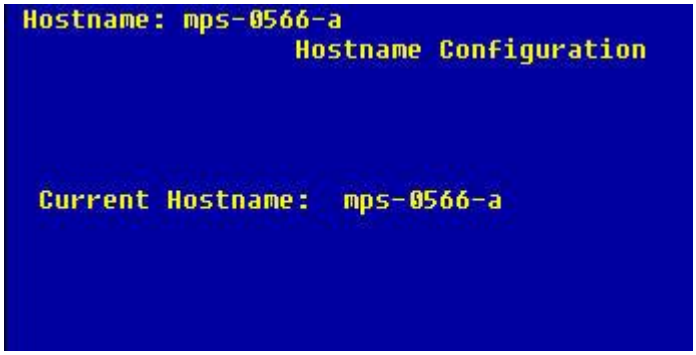
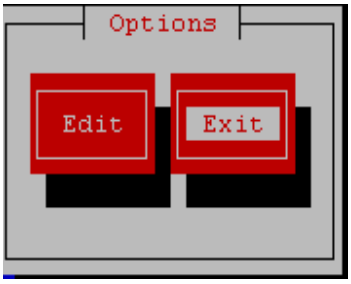
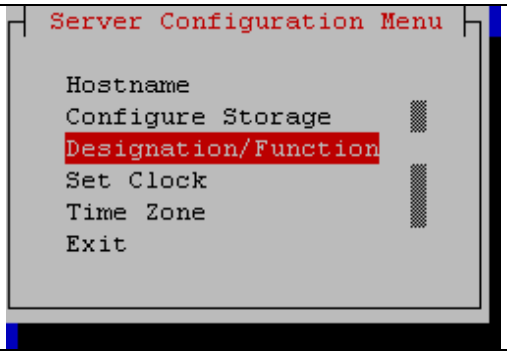
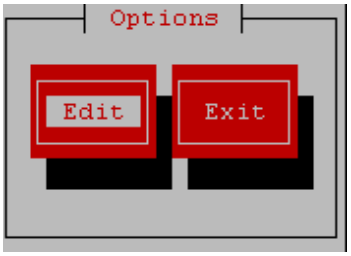
22.	☐	☐	**MPS X:** Press 'Esc' key and select *Exit → Save Changes and Exit* option	
23.	☐	☐	**MPS X:** Select [OK] to save the configuration changes. The server will reboot. Remove the TPD USB media from the USB port.	
24.	☐	☐	**MPS X:** Log in to the server as the user "root"	**console login: root** **password: <root_password>**
25.	☐	☐	**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 #

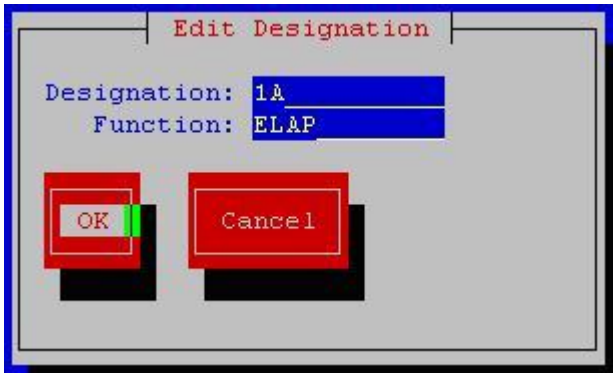
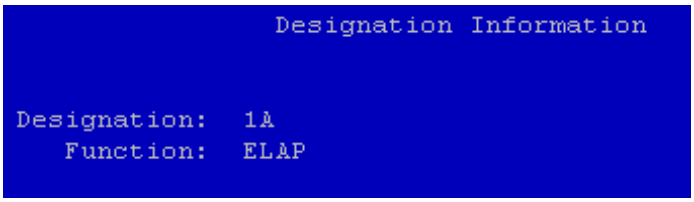
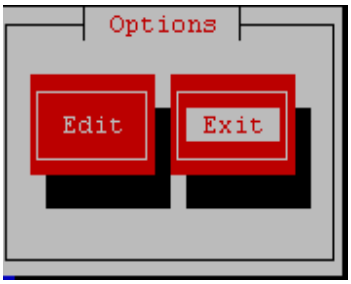
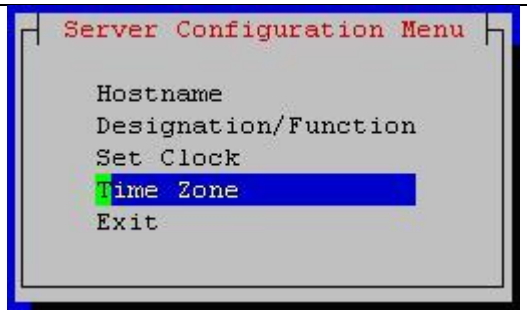
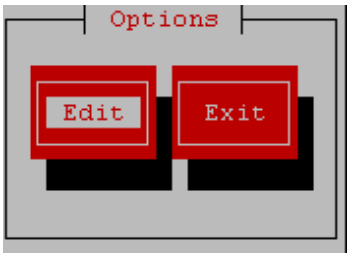
26.	☐	☐	**MPS X:** Verify that the platform revision is same as the TPD USB or ISO used.	`# getPlatRev` `7.8.0.0.0_89.5.0` `If there is any failure during IPM or the platform revision is not correct, repeat this procedure to IPM again. If the same issue persists after the second attempt, contact Oracle technical services and ask for FULL UPGRADE ASSISTANCE.`
27.	☐	☐	**MPS X:** Note down the timestamp in log.	`Run the following command` `$ date`

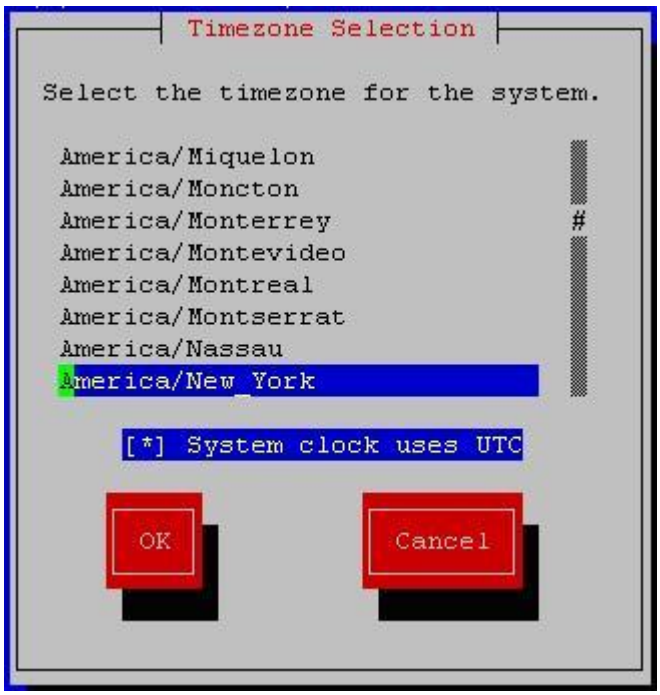
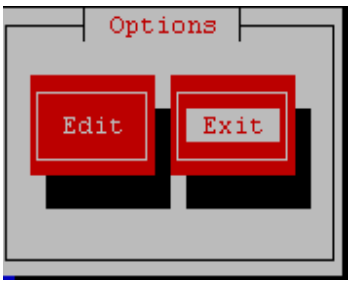
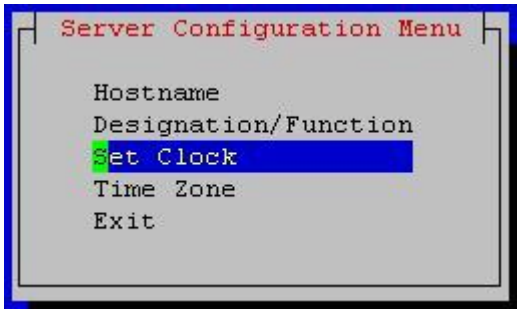
This procedure is complete!

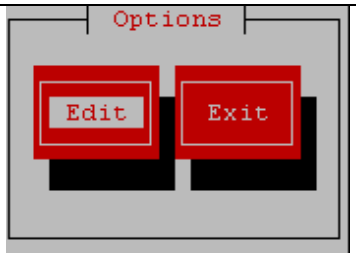
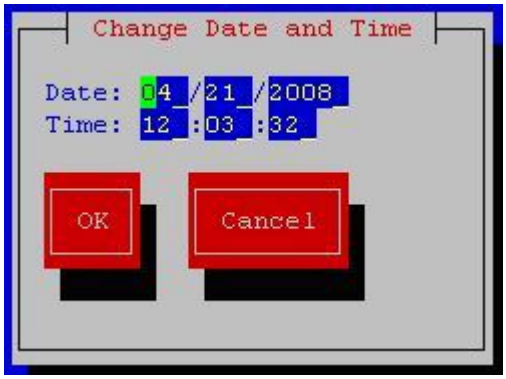
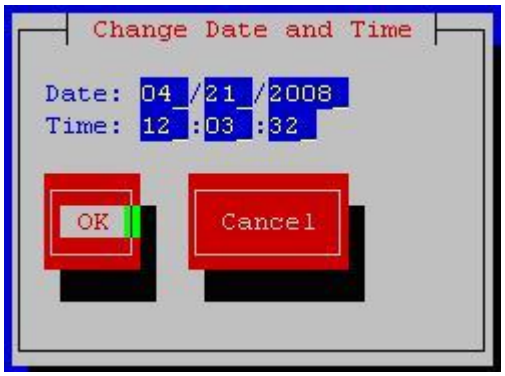
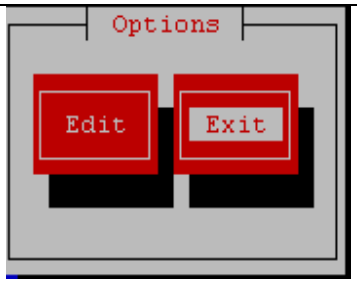
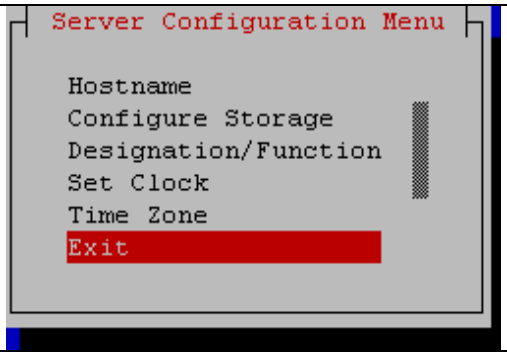
Procedure 8 PRE INSTALL CONFIGURATION

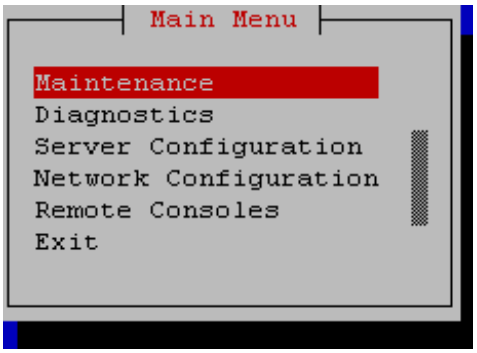
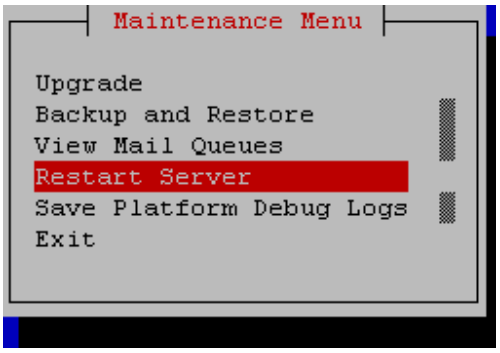
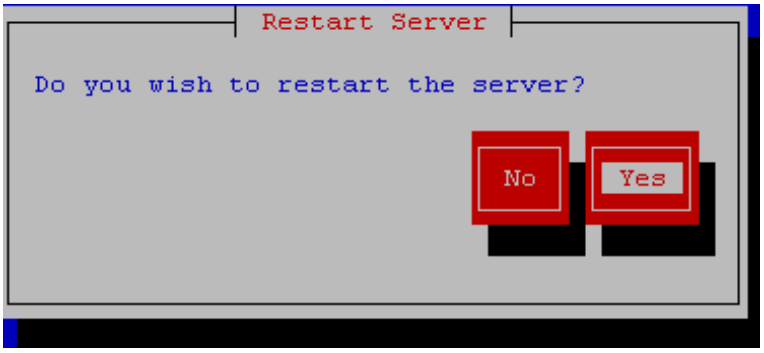
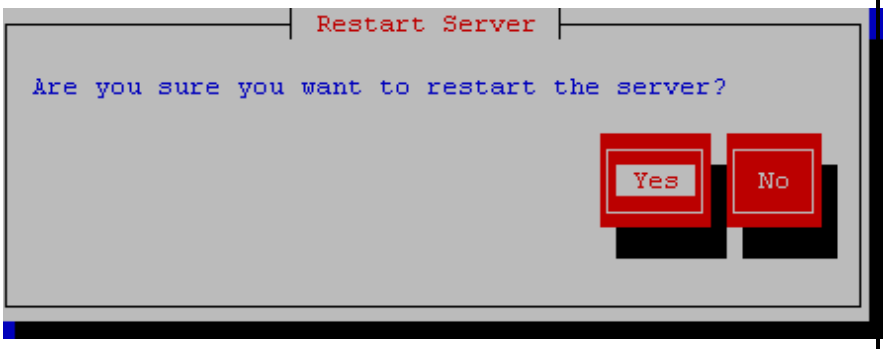
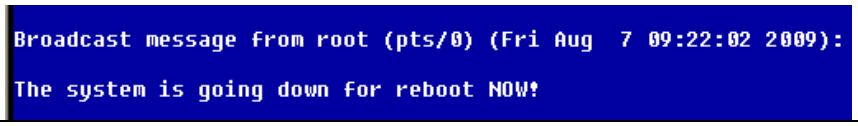
S T E P #	A	B	This procedure will perform the initial configuration required for ELAP installation. **Note: Estimated time of completion is 15 minutes.** Check off (√) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle 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	
4.	☐	☐	**MPS X:** 1) Select "Edit" from the options dialogue box. 2) Set the hostname	

				
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	
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.	
8.	☐	☐	**MPS X:** Verify that the Designation and Hostname information is correct then select and press "Exit". Otherwise repeat the step above.	 
9.	☐	☐	**MPS X:** Using the arrow keys navigate to the "Time Zone" menu and press Enter. Select the "Edit" button and press Enter.	 

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.	 
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.	

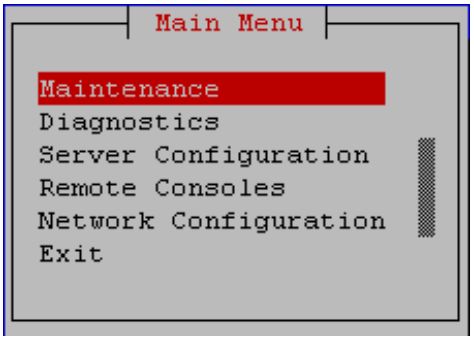
				
12.	☐	☐	**MPS X:** If the date and time is not same as the current date and time, set them using the “Tab” key to cycle between the fields. Using the “Tab” key navigate to the “OK” button and press Enter.	 
13.	☐	☐	**MPS X:** Using the “Tab” key navigate to the “Exit” button and press Enter.	
14.	☐	☐	**MPS X:** Exit the platcfg menu	

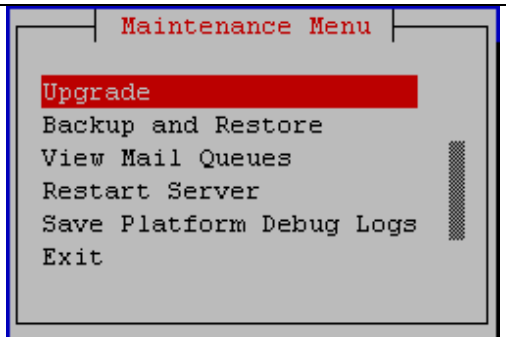
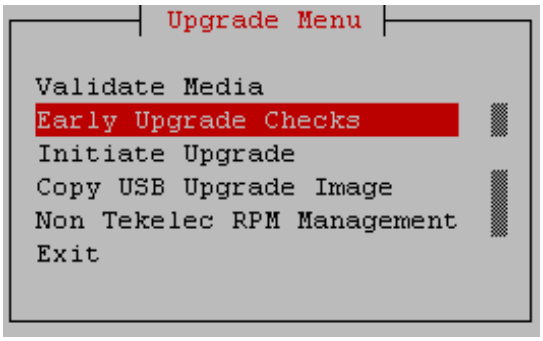
15.	☐	☐	**MPS X:** Select the menu options as indicated in the screen captures to the right in order to restart the server.	   
16.	☐	☐	**MPS X:** The system should reboot.	
17.	☐	☐	**MPS X:** Log in to the server as the user "root"	console login: root password: <root_password>

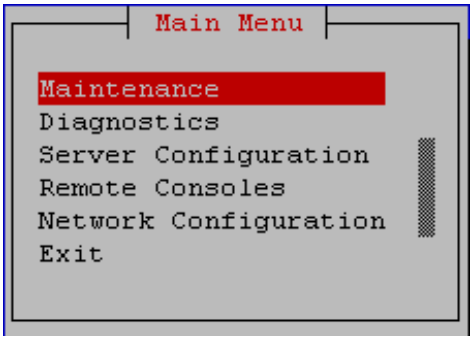
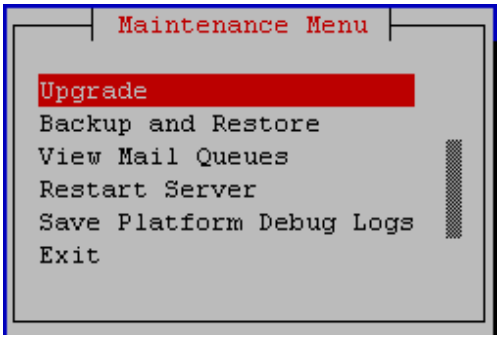
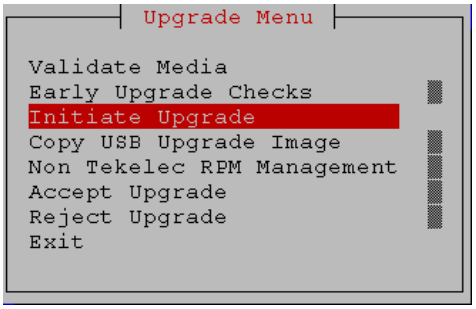
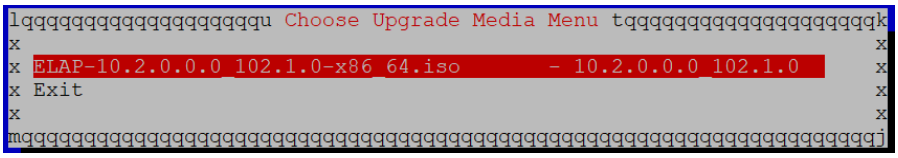
18.	☐	☐	**MPS X:** Perform syscheck. Inspect the output and ensure that no errors are present. If an error is present contact Oracle Customer Care for guidance.	`# syscheck` `Running modules in class net...` `OK` `Running modules in class hardware...` `OK` `Running modules in class disk...` `OK` `Running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

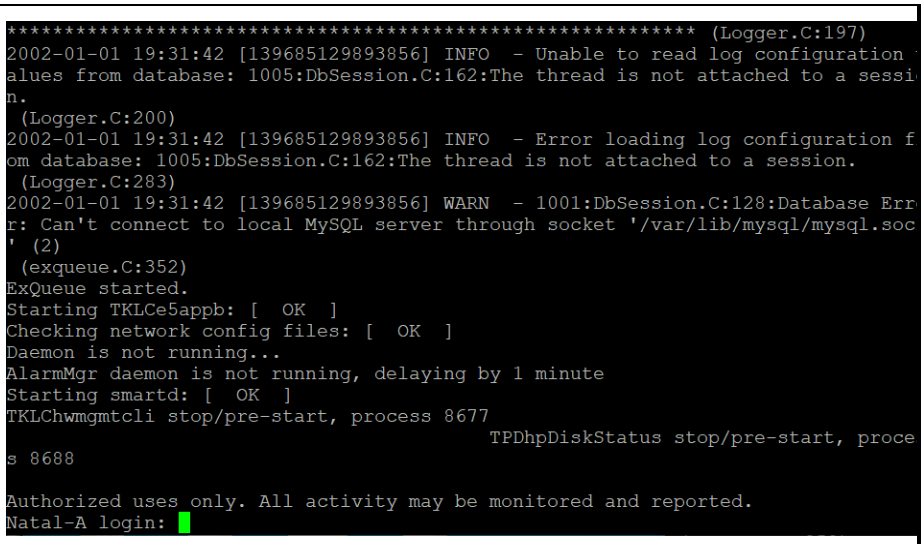
This procedure is complete!

Procedure 9 INSTALL THE ELAP APPLICATION

S T E P #	A	B	This procedure will install the ELAP application on the server. **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.	☐	☐	**MPS X:** log in to the server as the user "root"	`console login: root` `password: <root_password>`
2.	☐	☐	**MPS X:** Copy ELAP 10.2 ISO using Appendix A Or transfer an ELAP 10.2 ISO image to /var/TKLC/upgrade directory. **NOTE**: Transfer of ELAP ISO is possible only if the IP is configured via platcfg.	Use any of the following methods to put ELAP 10.2 ISO image on the ELAP server. a. Perform ISO image generation from USB media using 2.7Appendix A. b. Copy ISO to /var/TKLC/upgrade directory. Note: To execute this step, the provisional IP of the ELAP server must be set via platcfg menu following steps in Procedure 10.
3.	☐	☐	**MPS X:** Validate ELAP ISO using Appendix B.	Refer section 2.7Appendix B to validate iso image
4.	☐	☐	**MPS X:** Run the command "su -platcfg".	`# su - platcfg` 

			Use the "Arrow" and the [**ENTER**] keys to navigate the Menu options as shown to choose the upgrade media.	  Early Checks failed for the next upgrade Look at earlyChecks.log for more info tarting Early Upgrade Checks at 1011413059 Running earlyUpgradeChecks() for Upgrade::EarlyPolicy::TPDEarlyChecks upgrade policy... Verified server is not pending accept of previous upgrade ERROR: Raid mirrors are syncing! ERROR: md2 is syncing! ERROR: earlyUpgradeChecks() code failed for Upgrade::EarlyPolicy::TPDEarlyChecks ERROR: Failed running earlyUpgradeChecks() code Hardware architectures match Install products match. No Application installed yet.. Skip alarm check! ERROR: Early Upgrade Checks Failed! User has requested just to run early checks. No upgrade will be performed... Early Upgrade Checks finished at 1011413059 If the Early Upgrade Checks fail due to the ongoing syncing of raid mirrors, then proceed to the next step to ignore the disk mirroring before the ELAP installation. Contact My Oracle Support following the instructions on or the instructions on the 0, if the early upgrade checks fail due to any other reason.
5.	☐	☐	**MPS X:** Exit the platcfg menu and change to root user	$ su - root Password: <root_password>
6.	☐	☐	**MPS X:** Ignore disk mirroring before ELAP installation	# echo "IGNORE_EARLY_CHECKS=1" > /var/TKLC/log/upgrade/tmp_upgrade.conf Verify: # cat /var/TKLC/log/upgrade/tmp_upgrade.conf IGNORE_EARLY_CHECKS=1
7.	☐	☐	**MPS X:**	# su - platcfg

			Initiate the upgrade Run the command ”su -platcfg”. Use the “Arrow” and the [**ENTER**] keys to navigate the Menu options as shown to choose the upgrade media.	   

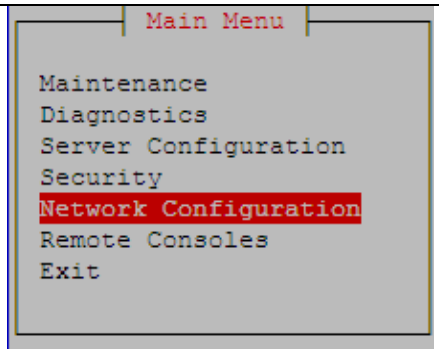
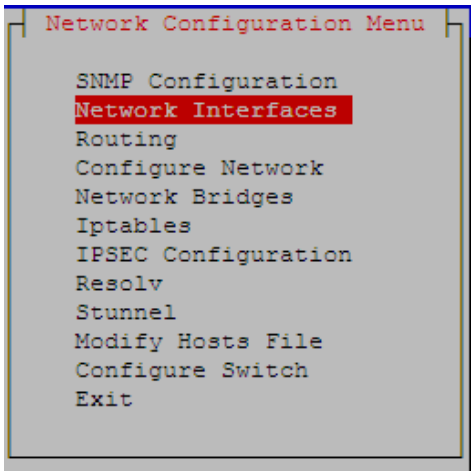
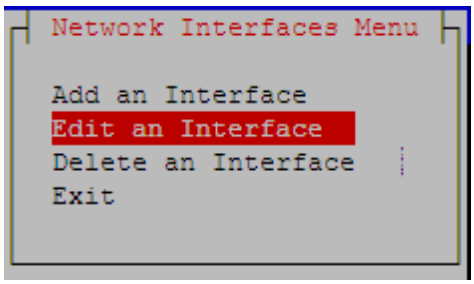
8.	☐	☐	**MPS X:** Select the proper upgrade media and press [**ENTER**] Many informational messages will come across the terminal screen as the installation proceeds. Finally, after successful completion of ELAP install, the server should reboot and login prompt should appear.	 `(output truncated for display purpose)` `login:`
9.	☐	☐	**MPS X:** Login as root user.	`login: root` `Password : <root_password>`
10.	☐	☐	**MPS X:** Verify that installation is complete and no error occurred during installation.	`# grep "Upgrade returned success" /var/TKLC/log/upgrade/upgrade.log` `1463147805::Upgrade returned success!` `#` `# grep -i error /var/TKLC/log/upgrade/upgrade.log` Check the output of the upgrade log, contact the Technical Assistance Center following the instructions on the 0, if the output contains any errors beside the following: Variable and RPMs that might contain the word error in them Example: 1461121117:: U> perl-Class-ErrorHandler-0.04-10.1.0.0.0_101.4.0.noarch 1461121127::perl-Class-ErrorHandler 1467008173::myisamchk: error: File '/var/TKLC/appl/drbd/mysql/data/*/*.MYI' doesn't exist 1467008173::myisamchk: error: File '/var/TKLC/appl/drbd/mysql/data/*/*.MYI' doesn't exist 1467008173::myisamchk: error: 140 when opening MyISAM-table '/var/TKLC/appl/db/appconfig/mysql/columns_priv.MYI' 1467008173::myisamchk: error: 140 when opening MyISAM-table '/var/TKLC/appl/db/appconfig/mysql/db.MYI' 1467008173::myisamchk: error: 140 when opening MyISAM-table '/var/TKLC/appl/db/appconfig/mysql/event.MYI'

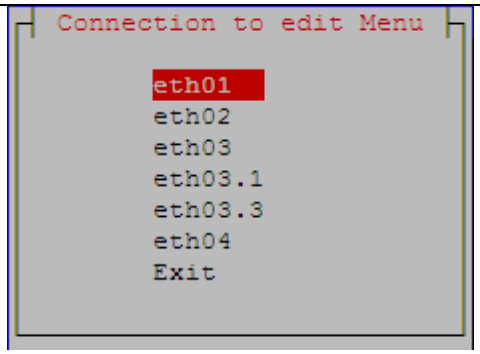
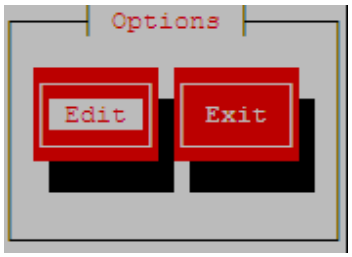
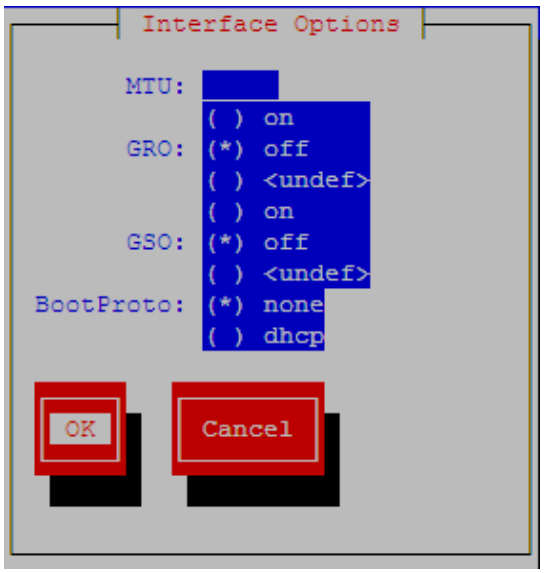
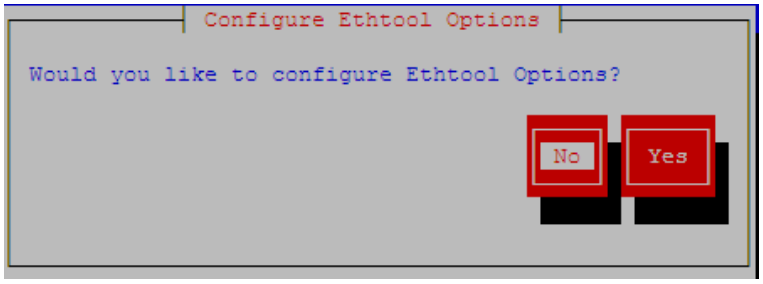
				## Several other errors related to myisamchk are also observed that needs to be ignored. All those messages are expected, and therefore aren't considered errors. **NOTE: After ELAP is installation is complete, the below mentioned logging is observed on ELAP CLI. These errors can be ignored and they will 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' & '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*`
11.	☐	☐	**MPS X:** Verify ELAP release.	`# rpm -qi TKLCelap` Name : TKLCelap Relocations: (not relocatable) Version : 5.0.44 Vendor: Tekelec Release : 10.2.0.0.0_102.1.0 Build Date: Thu 21 Jan 2021 02:17 PM EST Install Date: Fri 22 Jan 2021 10:49:00 AM EST Build Host: coach-4.tekelec om Group : Development/Build Source RPM: TKLCelap-5.0.44-10.2. .0_102.1.0.src.rpm Size : 149012560 License: © TEKELEC 2018 Signature : (none) Packager : <@tekelec.com> URL : http://www.tekelec.com/ Summary : Oracle Communications ELAP Package Description :

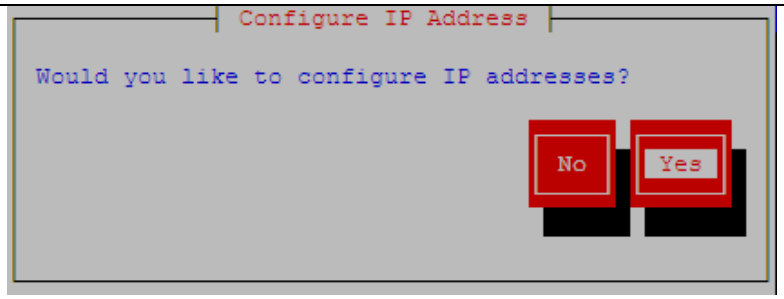
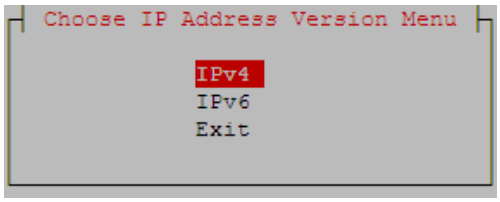
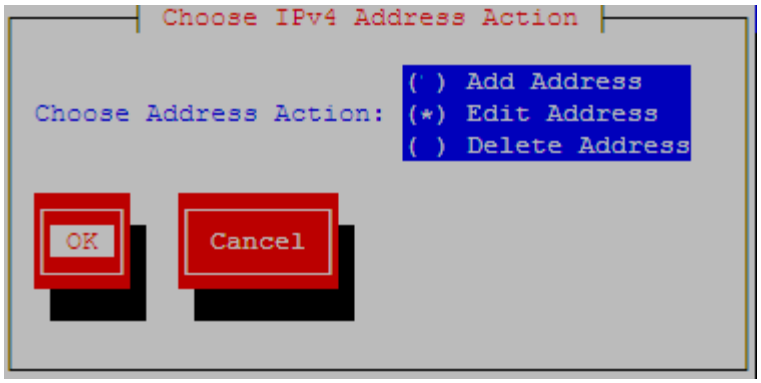
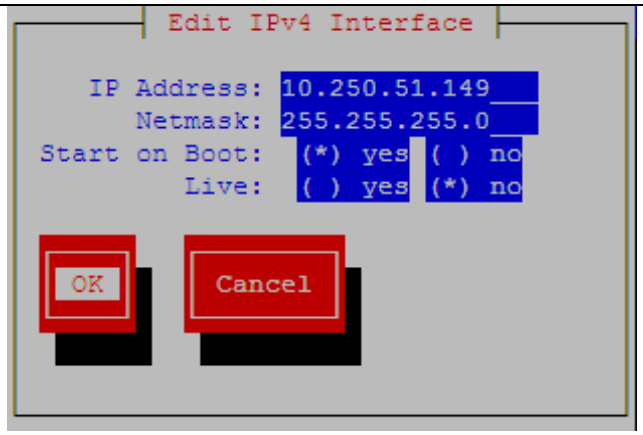
				This is the Oracle Communications EAGLE LNP Application Processor(ELAP) packa The package installs ELAP software. Eagle LNP Application Processor (ELAP) provides REALLY INCREDIBLE Database (RIDB). ELAP provides the LNP feature.
12.	☐	☐	**MPS X:** Note down the timestamp in log.	Run the following command `$ date`
13.	☐	☐	**MPS X:** Update sshd_config to disable MD5 and MAC algorithm for security	Perform following steps to disable unsecure algorithm for ssh: `$ 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` `$ sudo rcstool co /etc/ssh/sshd_config` `$ sed -i -e '$ a MACs hmac-sha2-256,hmac-sha2-512' /etc/ssh/sshd_config` `$ sudo rcstool ci /etc/ssh/sshd_config` `$ sudo service sshd restart`

This procedure is complete!

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`
3.	☐	**MPS B:** Configure Network Interface	  

			 
4.	☐	**MPS B:** Select Interface Options	 

			  
5.	☐	**MPS B:** Input the Interface Address	

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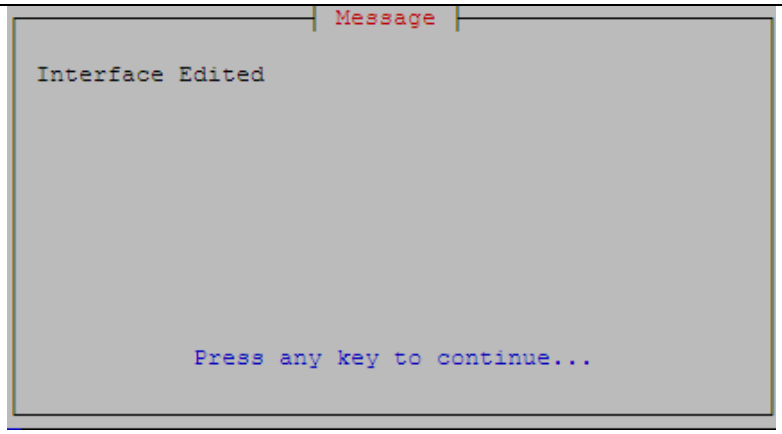
<td> 

Select “Exit” until you exit from the platcfg utility.</td>
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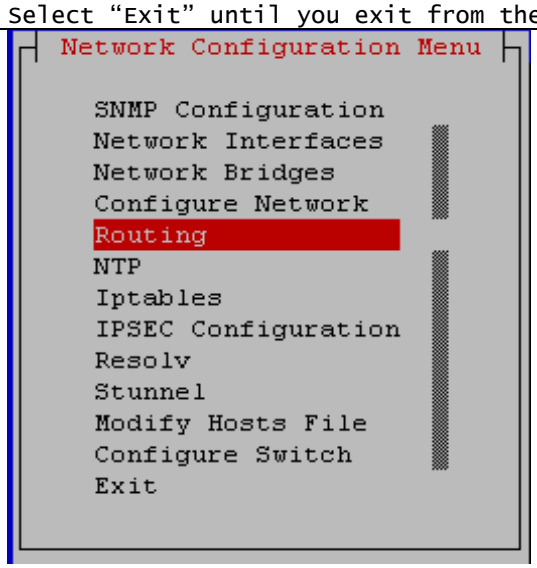
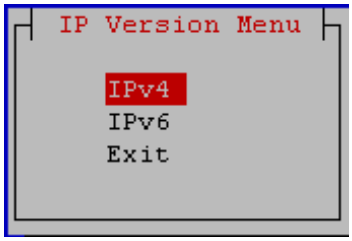
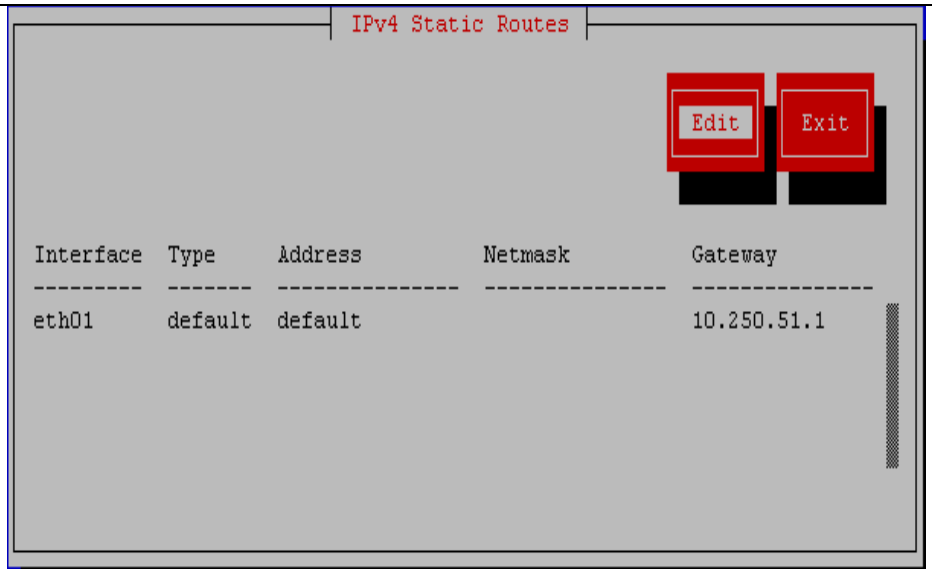
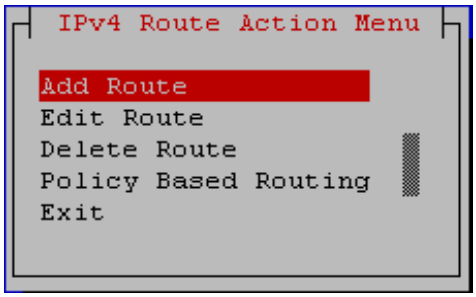
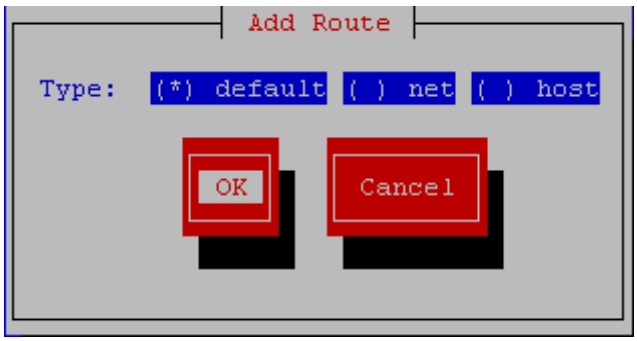
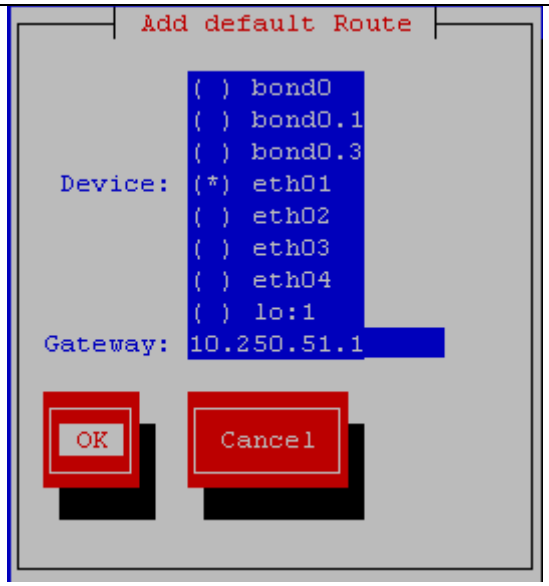
<td>6.</td>
<td>☐</td>
<td>MPS B:
Configure default route.</td>
<td> 


</td>
</tr>
</table>


IPv4 Static Routes
Edit
Exit
Interface Type Address Netmask Gateway
eth01 default default 10.250.51.1


IPv4 Route Action Menu
Add Route
Edit Route
Delete Route
Policy Based Routing
Exit


Add Route
Type: (*) default ( ) net ( ) host
OK
Cancel

			  Select “Exit” until you exit from the platcfg utility.
7.	☐	**MPS B:** Note down the timestamp in log.	Run the following command $ date

2.5 Initial Configuration on E5APPB

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.

Procedure 11 CONFIGURE NTP SERVERS

S T E P #	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...
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
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...
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 ntpserver1 <NTP_server_IP_Addr> Press return to continue...
7. ☐	**MPS A:** The ELAP Configure NTP Server Menu is displayed. Select choice, Exit. Otherwise, if more NTP 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

8. ☐	**MPS A: Run the following command.**	`# ntpq -p` `remote refid st t when poll reach delay offset jitter` `==============================================================================` ` ntpserver1 .INIT. 16 - - 512 0 0.000 0.000 0.000` `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.**	`# service ntpd stop` `Shutting down ntpd: [ OK ]` `# /usr/sbin/ntpdate ntpserver1` `20 Apr 01:56:45 ntpdate[23597]: no servers can be used, exiting` `# service ntpd start` `Starting ntpd: [ OK ]`
10. ☐	**MPS A**: Note down the timestamp in log.	`Run the following command` `$ date`

This procedure is complete!

Procedure 12 INITIAL NETWORK CONFIGURATION

S T E P #	This procedure configures the network interfaces and makes the E5APPB 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 |` `|---|---------------------------------|`

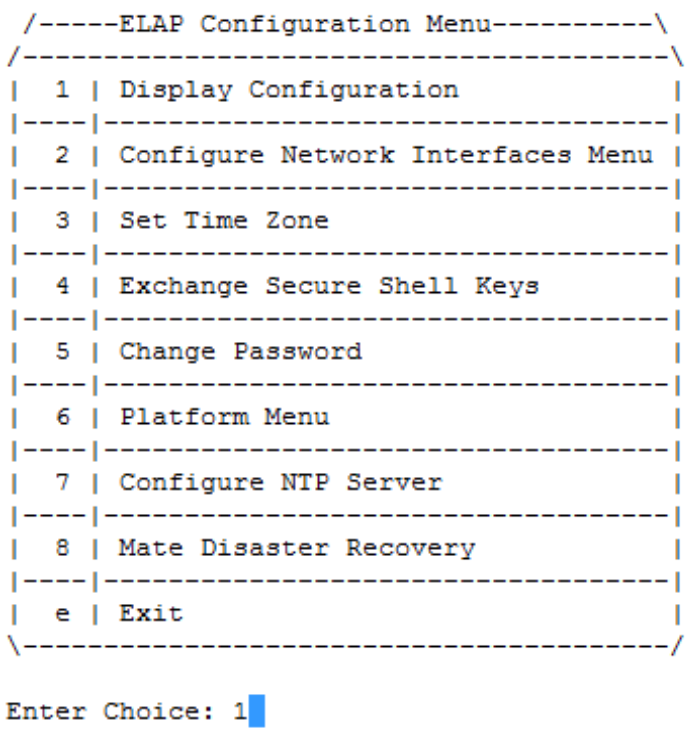
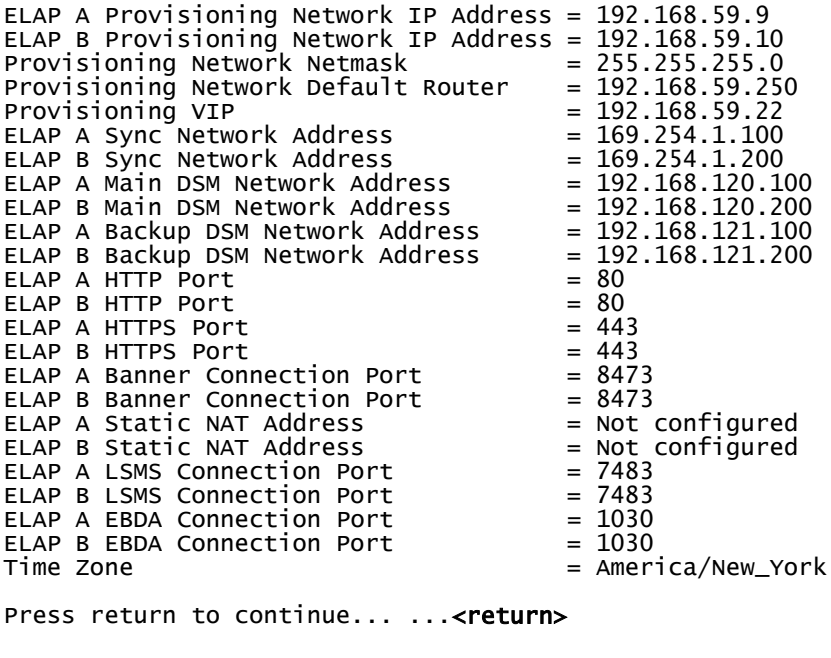
		| e | Exit | \----------/ Enter Choice: 2
4. ☐	**MPS A:** Configure Network Interfaces Menu is displayed. Select choice 1, Configure Provisioning Network Menu.	/-----Configure Network Interfaces Menu-\ /----------\ | 1 | Configure Provisioning Network | |---|---------| | 2 | Configure DSM Network | |---|---------| | 3 | Configure Forwarded Ports | |---|---------| | 4 | Configure Static NAT Addresses | |---|---------| | e | Exit | \----------/ Enter Choice: 1
5. ☐	**MPS A:** Enter the IP addresses, subnet mask, default gateway and Virtual IP address when prompted.	Verifying connectivity with mate... ELAP A provisioning network IP Address [192.168.61.104]: ELAP B provisioning network IP Address [192.168.61.105]: ELAP provisioning network netmask [255.255.255.0]: ELAP provisioning network default router: ELAP local provisioning Virtual IP Address [192.168.61.100]: Please Wait, this may take a while...
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**
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

This procedure is complete!

Procedure 13 VERIFY CONFIGURATIONS

S T E P #	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**

3. ☐	**MPS A:** Enter option 1 to display the current configuration.	
4. ☐	**MPS A:** Verify the configuration data with the data recorded earlier Press Return to continue.	

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

This procedure is complete!

2.6 Data Migration

This section lists the procedures, in order, that must be performed to bring the E5APPB ELAP into service.

Procedure 14 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.

STEP #	A	B	This procedure transfers the database backup from the one ELAP to the E5APPB ELAP or remote server. Estimated time: 30-60 minutes	
1.	☐	☐	**MPS X:** Login as elapdev.	login: **elapdev** Password: **<epapdev_password>**
2.	☐	☐	**MPS X**: Verify Connectivity with the E5APPB card. If the E5APPB card cannot be pinged, verify the network connectivity.	**$ ping <E5APPB 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.tar npdbBackup_xxxxx-a_xxxxxxxx.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.tar** **#chown elapdev:elap npdbBackup_xxxxx-a_xxxxxxxx.sql.gz** **#su – elapdev** # **cd /var/TKLC/elap/free**
5.	☐	☐	**MPS X**: Copy the EuiDB Backup File to the third party server. **NOTE: This backup will be used in case the full upgrade is not successful.**	**$ scp -p** *npdbBackup_xxxxx-a_xxxxxxxx.tar* **elapdev@**<E5APPB X IP>**:/var/TKLC/elap/free** **Or** **$ sftp elapdev@<E5APPB X IP>** Connecting to <E5APPB A IP>... The authenticity of host '<E5APPB 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 '<E5APPB A IP>' (DSA) to the list of known hosts. elapdev<E5APPB A IP>'s password: sftp> cd /var/TKLC/elap/free sftp> put ***npdbBackup_xxxxx-a_xxxxxxxx.tar*** Uploading *npdbBackup_xxxxx-a_xxxxxxxx.tar* to *npdbBackup_xxxxx-a_xxxxxxxx.tar* sftp> bye
6.	☐	☐	**MPS X**: Copy the EuiDB mysqldump Backup File to the third party server.	**$ scp -p** *npdbBackup_xxxxx-a_xxxxxxxx.sql.gz* **elapdev@**<E5APPB A IP>**:/var/TKLC/elap/free** **Or** **$ sftp elapdev@<E5APPB A IP>** Connecting to <E5APPB A IP>... The authenticity of host '<E5APPB 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.

			NOTE: This mysqldump of EuiDB will be used for restoring EuiDB after the full upgrade is successful.	Are you sure you want to continue connecting (yes/no)? yes Warning: Permanently added '<E5APPB A IP>' (DSA) to the list of known hosts. elapdev<E5APPB A IP>'s password: sftp> cd /var/TKLC/elap/free sftp> put *npdbBackup_xxxxx-a_xxxxxxxx.sql.gz* Uploading *npdbBackup_xxxxx-a_xxxxxxxx.sql.gz* to *npdbBackup_xxxxx-a_xxxxxxxx.sql.gz* sftp> bye
7.	☐	☐	**MPS X:** Note down the timestamp in log.	Run the following command $ date

This procedure is complete!

Procedure 15 RESTORE EUIDB

Now that the Databases have been copied over, it's time to 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**.**

S T E P #	This procedure migrates the EuiDB database to the E5APPB. **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_Natal-A_20210125053550.sql.gz** **NOTE: The ownership of file should be elapdev:elap. Please check and provide correct ownership of elapdev:elap, if not correct.**
3. ☐	**Active ELAP:** Restore EuiDB Euidb_migration.pl script takes two arguments, first is the EuiDB backup filename and second is the source release from where ELAP is migrating.	**$/usr/TKLC/elap/bin/Euidb_migration.pl <backup name>** **Example: $ /usr/TKLC/elap/bin/Euidb_migration.pl npdbBackup_Natal-A_20210125053550.sql.gz**

	Restore Output is displayed.	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 this EuiDB backup is from ELAP 10.1 release? (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 set 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**
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
7. ☐	**Active ELAP:** Enter the IP addresses, subnet mask, default gateway and Virtual IP address when prompted. (**Note**: If the IP addresses, subnet mask, default gateway and Virtual IP are same as previously entered, can avoid entering 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...
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**

9. ☐	**Active ELAP:** If configured, change "Pretty Name" to change the name on the ELAP GUI.	$ **uiEdit | grep -i PRETTY_NAME** "ELAP_A_PRETTY_NAME" is set to "ELAP_A_NAME" "ELAP_B_PRETTY_NAME" is set to "ELAP_B_NAME" For e.g., # **uiEdit ELAP_B_PRETTY_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 Procedure 13.
11. ☐	**Active ELAP:** Note down the timestamp in log.	Run the following command $ date

This procedure is complete!

Procedure 16 SSH KEY EXCHANGE BETWEEN THE ELAP AND LSMS

S T E 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.**	
1. ☐	**Active ELAP:** Login as root.	login: **root** Password: **<root_password>**
2. ☐	**Active ELAP:** Switch user to elapconfig.	**# su - elapconfig**
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
5. ☐	**Active ELAP:** Exchange SSH keys	**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.

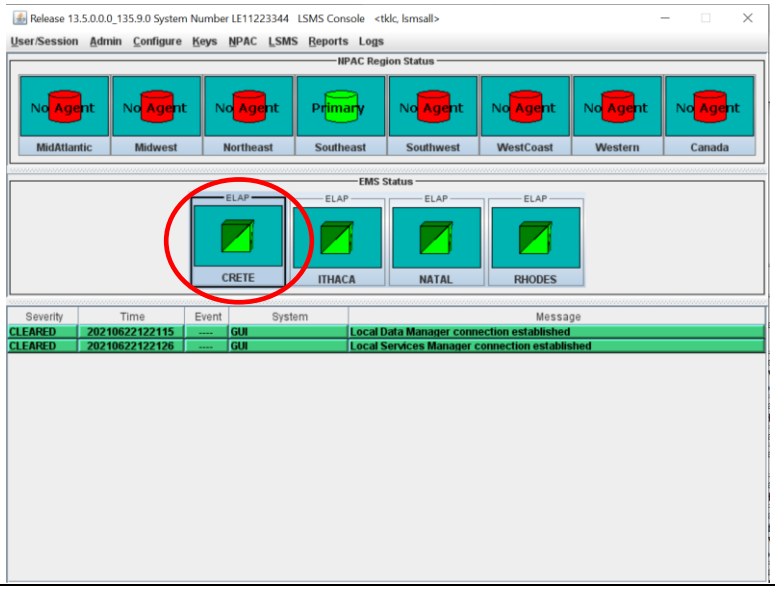
	with the **LSMS A** (**host lsmspri**) server. Enter "Y" and press Enter. Enter the **LSMS A** (**host lsmspri**) IP address and press Enter. Enter the LSMS "lsmsadm" user password and press Enter. Verify that keys were exchanged successfully for MPS A and **LSMS A**. Enter the LSMS "lsmsadm" user password and press Enter. Verify that keys were exchanged successfully for MPS B and **LSMS A**.	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
7. ☐	**Active ELAP:** Exchange SSH keys with the **LSMS B** (**host lsmssec**) server.	**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.

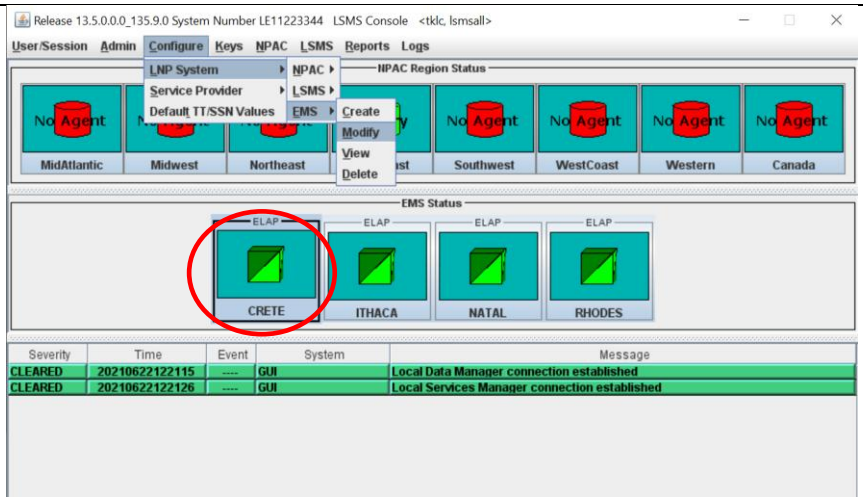
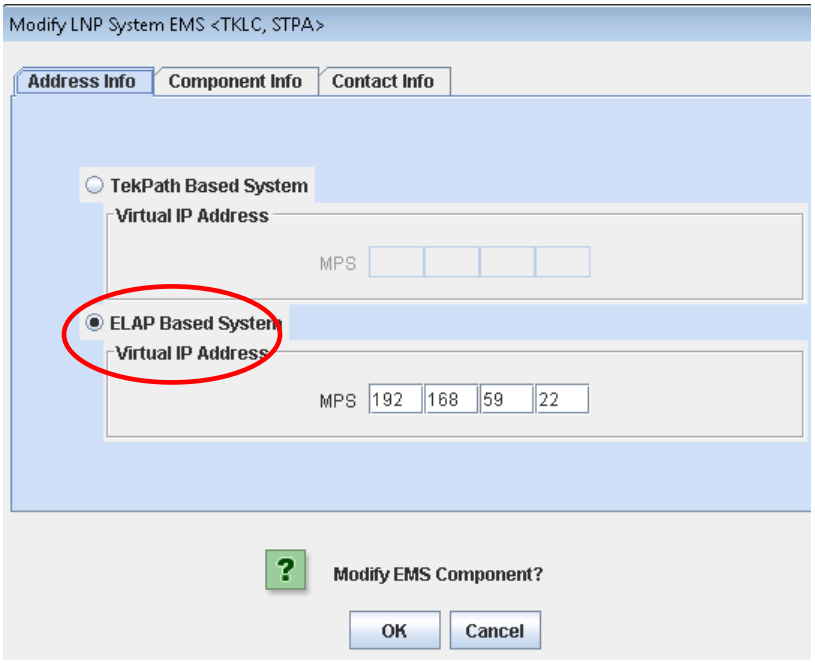
	Enter "Y" and press Enter. Enter the **LSMS B** (**host lsmssec**) IP address and press Enter. Enter the LSMS "lsmsadm" user password and press Enter. Verify that keys were exchanged successfully for MPS A and **LSMS B**. Enter the LSMS "lsmsadm" user password and press Enter. Verify that keys were exchanged successfully for MPS B and **LSMS B**.	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**

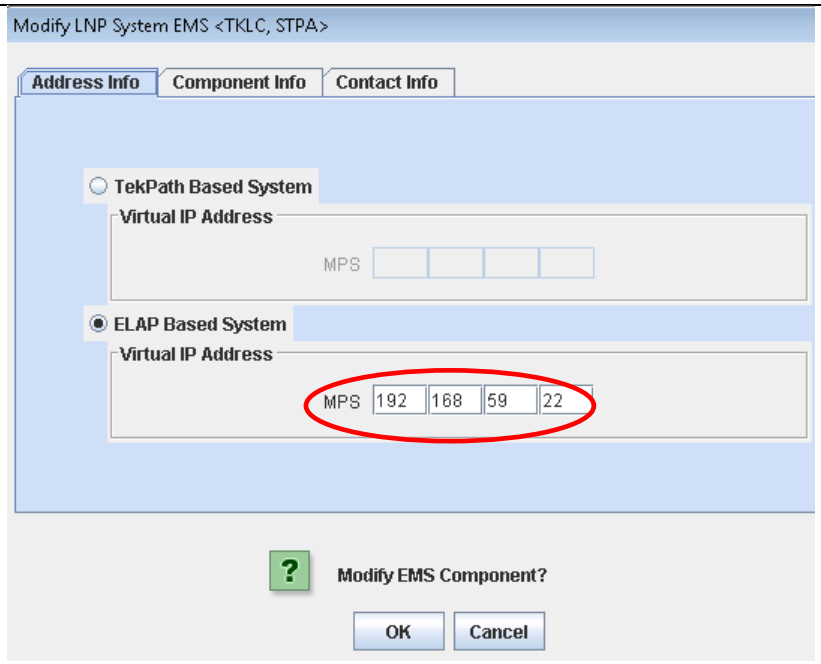
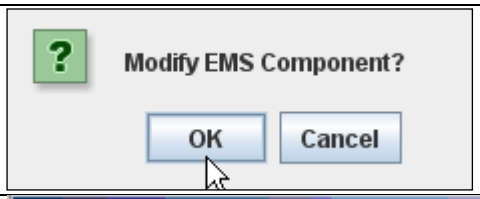
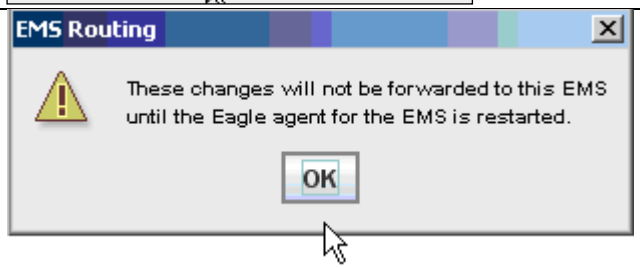
9. ☐	**Active ELAP:** Select option e to exit.	/-----Configure Network Interfaces Menu----\ /---\ | 1 | Configure Provisioning Network | |----|-------------------------------------| | 2 | Configure Sync Network | |----|-------------------------------------| | 3 | Configure DSM Network | |----|-------------------------------------| | 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
11. ☐	**ACTIVE ELAP:** Note down the timestamp in log.	Run the following command $ date

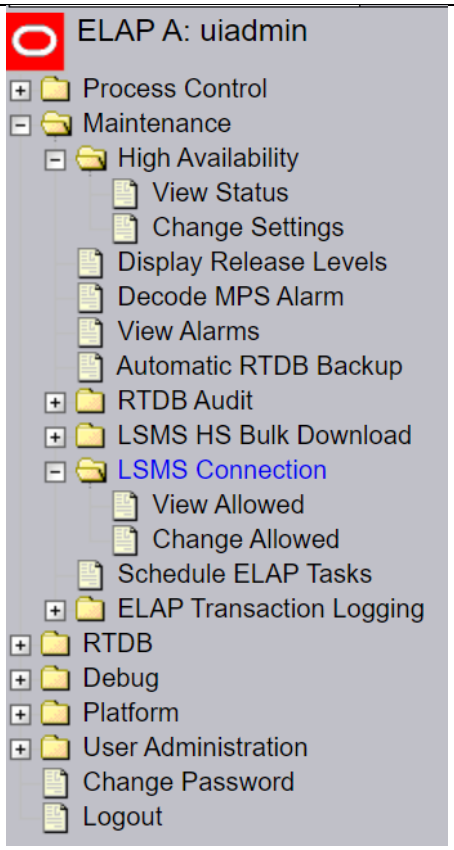
This procedure is complete!

Procedure 17 RE-POINT LSMS TO ELAP VIP

S T E P #	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	
2. ☐	**LSMS:** Select the EMS being fully upgraded to 10.2.	

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.**	
4. ☐	**LSMS:** Select the **ELAP-Based System "Virtual IP Address"** radio button.	
5. ☐	**LSMS:** Enter the **Virtual IP Address** for the MPS as configured.	

		
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 13, login to Active ELAP.	
9. ☐	**Active ELAP GUI:** 1) Expand the "Maintenance → LSMS Connection" folder.	

	2) Select the "Change Allowed" link.	
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!

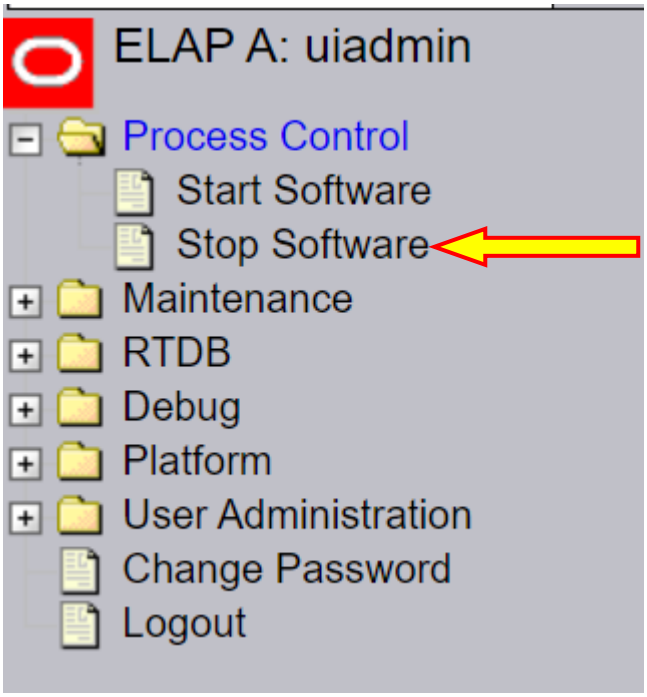
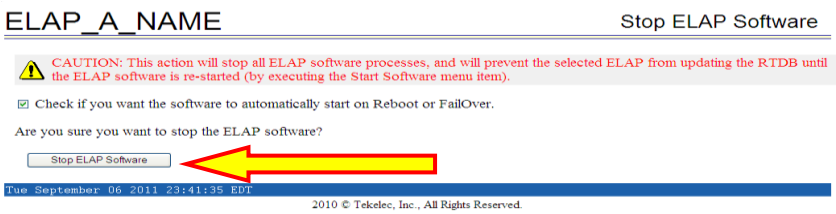
Procedure 18 TRANSFER SERVDI BACKUP TO ELAP

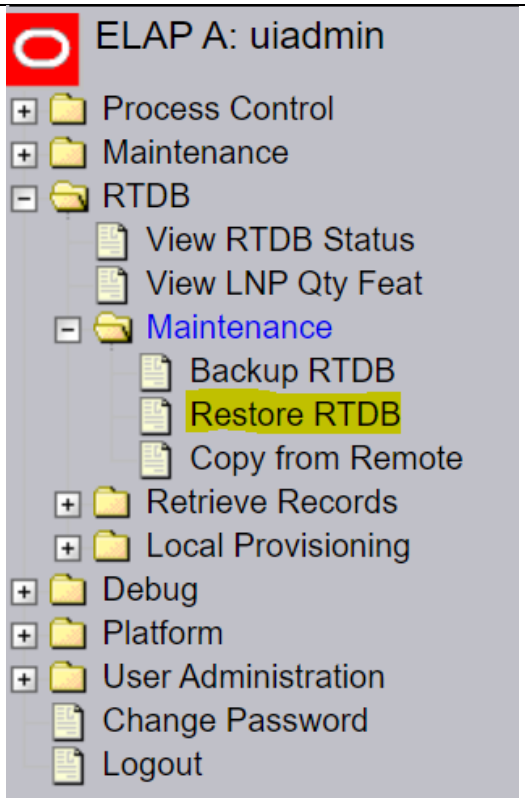
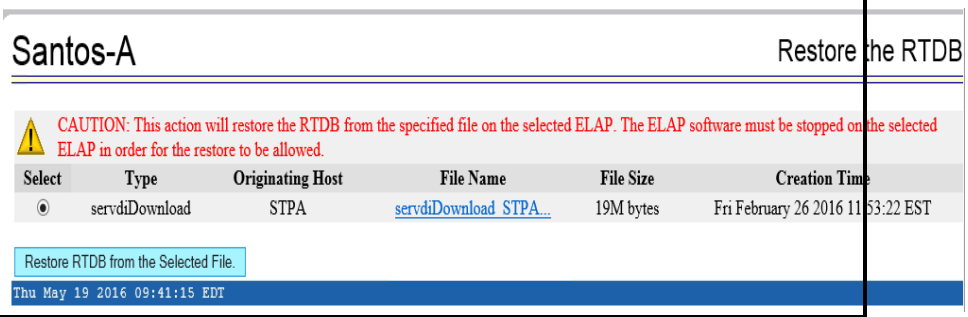
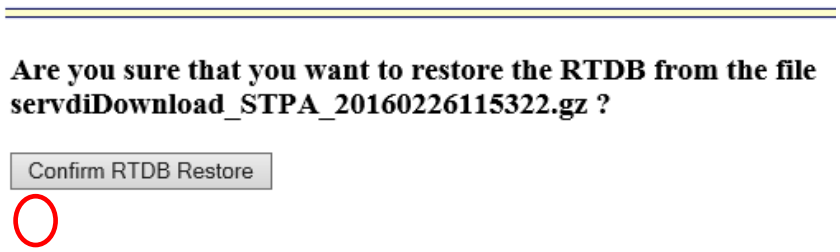
STEP #	This procedure transfers the servdi backup from the LSMS to the E5APPB ELAP. Estimated time: 5 minutes	
1. ☐	**LSMS Standby Server:** Login as root.	Login: **root** Password: **<root_password>**
2. ☐	**LSMS Standby Server:** Change directory to the /var/TKLC/lsms/free/data/servdi directory	$ cd /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
4. ☐	**LSMS Standby Server:** Copy the servdi Backup File to local E5APPB card.	# scp -p servdiDownload_STPA_20160226115322.gz elapdev@<E5APPB A IP>:/var/TKLC/elap/free/backup Or # sftp elapdev@<E5APPB A IP> Connecting to <E5APPB A IP>... The authenticity of host '<E5APPB 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 '<E5APPB A IP>' (DSA) to the list of known hosts. elapdev<E5APPB A IP>'s password: sftp> cd /var/TKLC/elap/free/backup sftp> put servdiDownload_STPA_20160226115322.gz Uploading servdiDownload_STPA_20160226115322.gz to servdiDownload_STPA_20160226115322.gz sftp> bye
5. ☐	**LSMS Standby Server:** Note down the timestamp in log.	Run the following command $ date

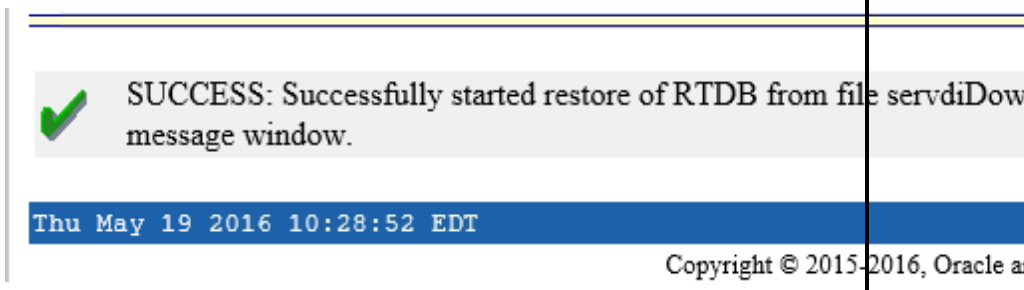
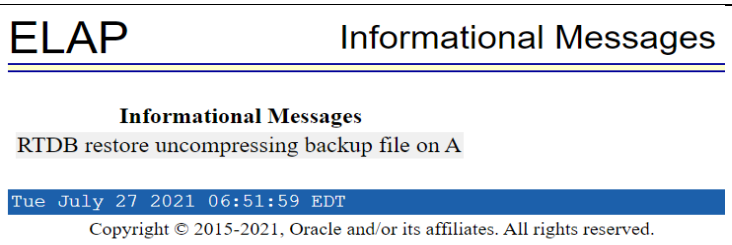
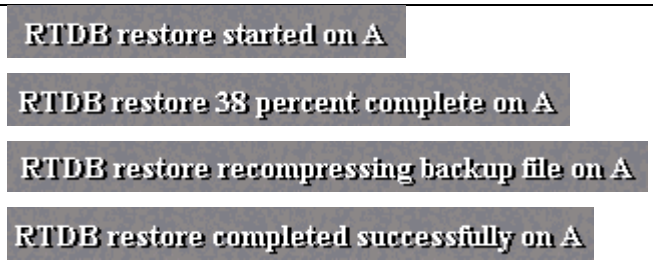
This procedure is complete!

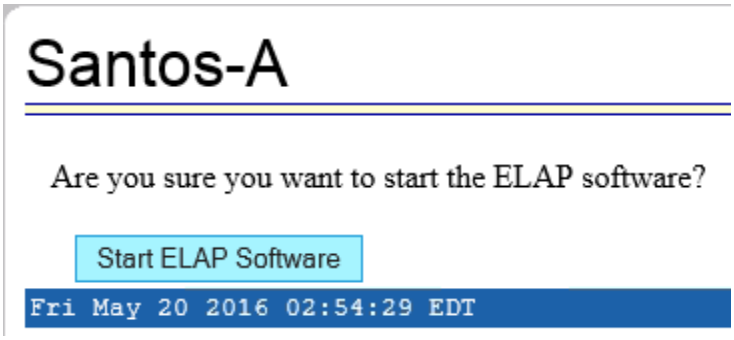
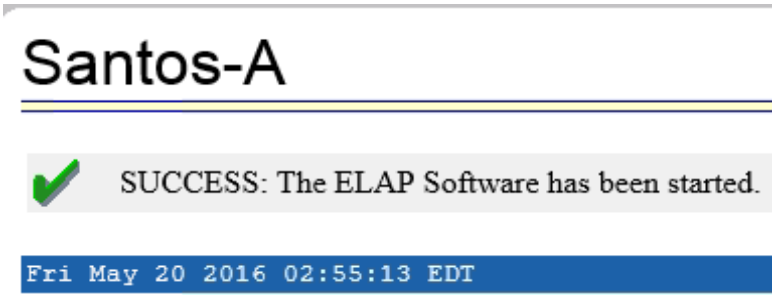
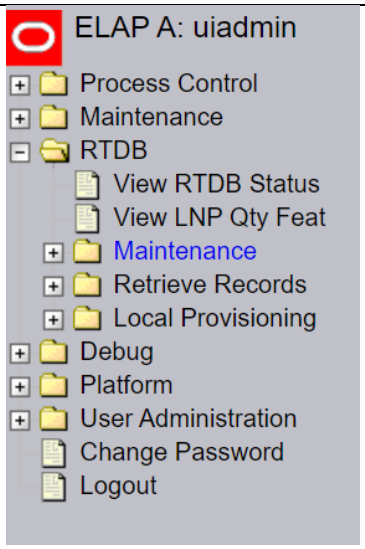
Procedure 19 RESTORE SERVDI BACKUP

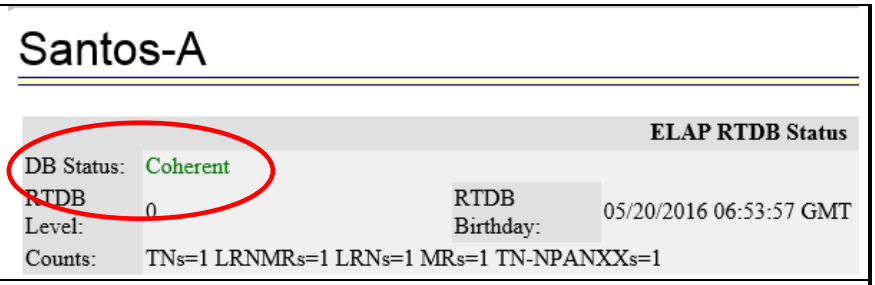
STEP #	This procedure restores the SERVDI Backup to the ELAP. **Note: Estimated time of completion is 30 minutes.** Check off (√) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, Contact Oracle technical services and ask for **FULL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

1. ☐	**Active ELAP GUI:** Using the new Virtual IP address (VIP) configured in step [5] of Procedure 13, login to Active ELAP.	
2. ☐	**Active ELAP GUI:** 1) Expand the "Process Control" folder. 2) Select the "Stop Software" link.	
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.	

5. ☐	**ELAP-A GUI:** 1) Expand the "RTDB" folder. 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.	
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. ☐	**ELAP A GUI:** The GUI banner should begin displaying the message shown to the right.	
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 ELAP-A 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.`
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.	
16. ☐	**ELAP A GUI:** 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.	

		
18. ☐	**ELAP A GUI:** Record the "DB Status" and the "RTDB Level" shown in the previous STEP.	DB Status = _____ 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 10.2.	[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 10.2.	[lsmsadm@lsmspri ~]$ **eagle start ELAP21** eagle: Starting... eagle: eagleagent ELAP21 started at Wed Apr 27 17:43:48 2016
24.	**LSMS:** 1) Execute an **"eagle status"** command using the CLLI of the EMS site being fully upgraded to 10.2. 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

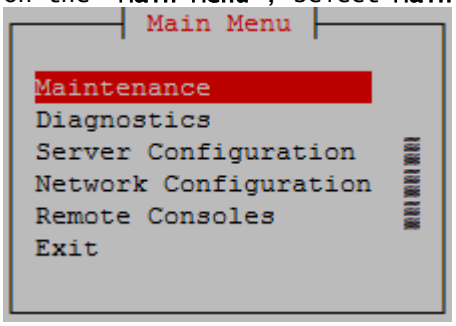
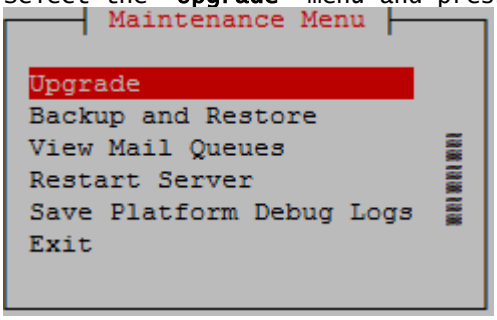
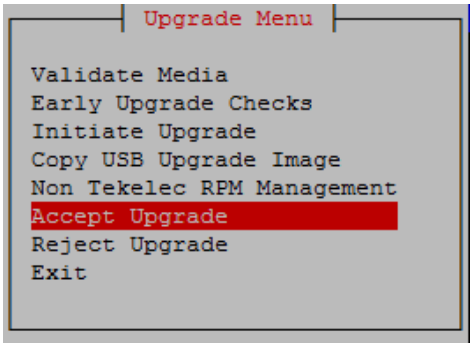
This procedure is complete!

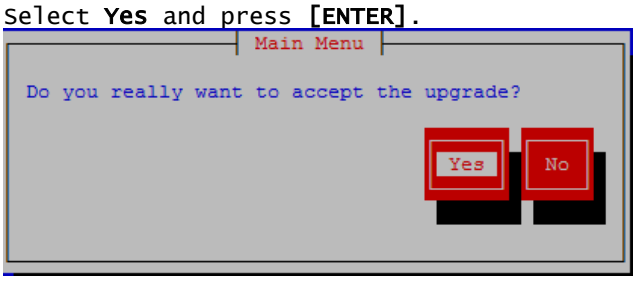
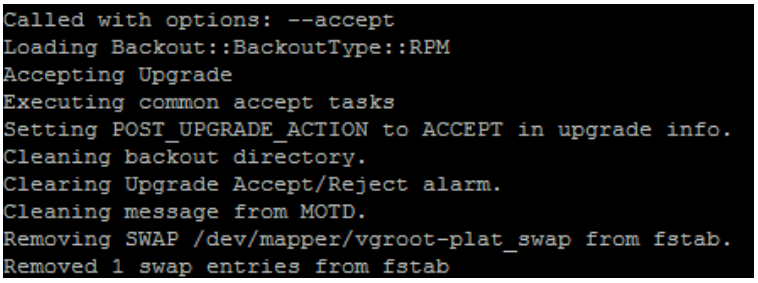
Procedure 20 POST FULL UPGRADE SYSCHECK

S T E P #	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**
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 syscheck@mate
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

This procedure is complete!

Procedure 21 ACCEPT THE UPGRADE

S T E P #	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**
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]**.  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.
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 to** Error! Reference source not found. **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 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!

2.7 SM Migration

Procedure 22 SM CARDS - CABLE MIGRATION AND DB RELOAD

S T E P #	This procedure initializes the SM cards to the RTDB databases on the E5APPB cards. **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:bpsubmask=eee.fff.ggg.hhh:loc=XXXX** **alw-card:loc=XXXX** (Where XXXX is the location of a replaced SM card)
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 47.0.0.0.0-78.10.0 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**
7.	**Eagle STP connected to ELAP servers**: Response to	cdsitu 13-02-11 15:32:46 EDT EAGLE5 47.0.0.0.0-78.10.0

☐	trouble command is displayed. Output can vary depending of EAGLE STP status.	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. ;
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 E5APPB The new database level on E5APPB 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**
10. ☐	**Eagle STP connected to ELAP servers**: Response to SCCP status command is displayed. Note card location of all SM cards: 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%

	SM _____ SM _____	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 ;
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.	Repeat steps [11] to [13] for the rest of 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.
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 E5APPB. The new database level on E5APPB 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 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
``` |
| 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.<br><br>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.
;
``` |

This procedure is complete!
```

APPENDIX A. ISO IMAGE COPY FROM USB MEDIA

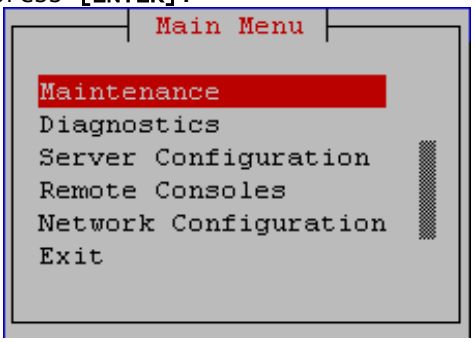
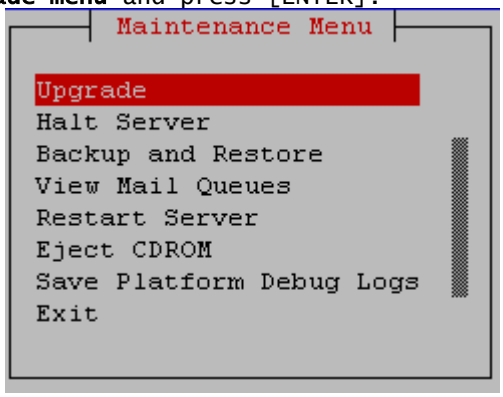
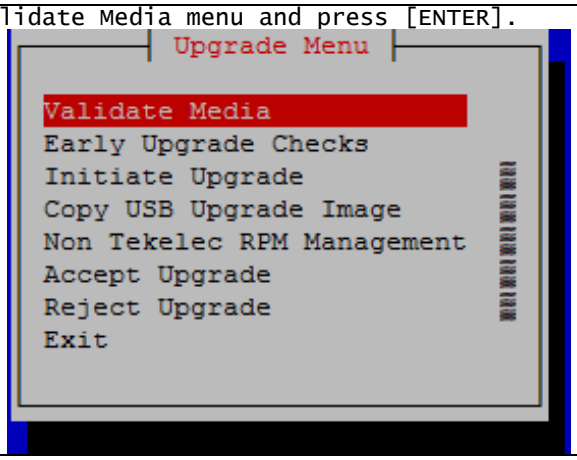
Assumption: The USB media contains the desired ELAP ISO.

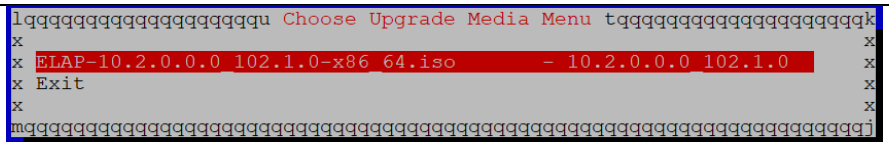
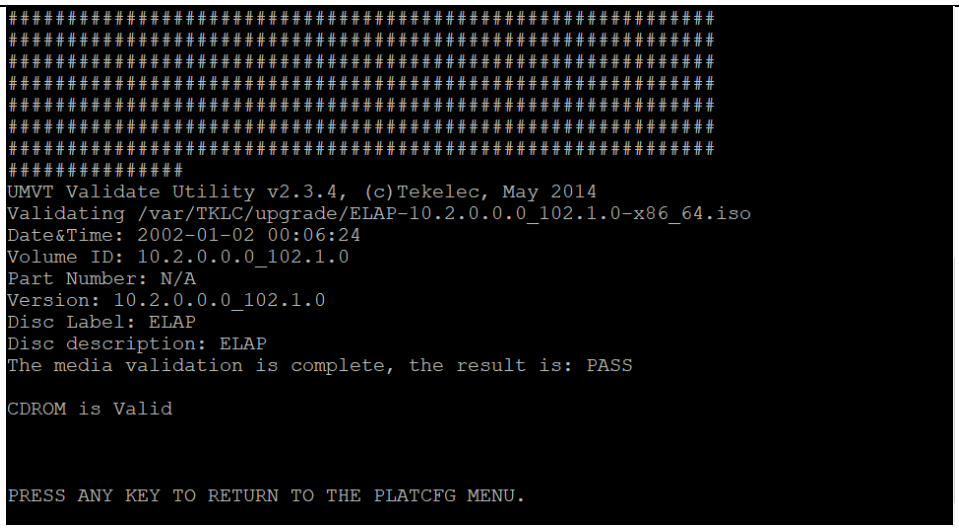
S T E P #	This procedure provides instructions to copy an ISO image from an USB media. Check off (√) each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT ORACLE TECHNICAL SERVICES AND ASK FOR UPGRADE ASSISTANCE.	
1. ☐	**MPS X:** Insert USB.	Insert media in 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.	Execute 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.	Execute 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>**
5. ☐	**MPS X:** Delete unwanted ISOs from USB media.	Execute the following command to create a directory to mount the USB media: **# sudo mkdir -p /mnt/usb** Execute 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 Execute the following command to mount the USB media using the USB drive name from the output above: **# sudo mount /dev/sdc1 /mnt/usb** Execute 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-10.2.0.0.0_102.1.0-x86_64.iso Only one ISO file should be listed, if additional files are listed, execute 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-10.2.0.0.0_102.1.0-x86_64.iso** Execute the following command to unmount the USB media: **# sudo umount /mnt/usb**
6. ☐	**MPS X:** Verify space exists for ISO.	Execute 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.	Execute the following command to copy ISO: **$ sudo cp /mnt/usb/<xyz.iso> /var/TKLC/upgrade/**
8. ☐	**MPS X:** Verify ISO image exists.	Execute 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 ELAP-10.2.0.0.0_102.1.0-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.	Execute the following command to unmount the USB media once iso copy is complete: **$ sudo umount /mnt/usb** Logout from the server by executing the following command: **# logout**
10. ☐	**MPS X:** Remove USB media.	Remove media from USB drive.

This procedure is complete!

APPENDIX B. 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]. 
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!

APPENDIX C. DISCONNECT NPAC FROM LSMS

S T E P #	This procedure disconnects NPAC from E5APPB 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	Execute 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. Execute 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. Execute the above command for all active regions.

This procedure is complete!

APPENDIX D. CONNECT NPAC TO LSMS

STEP #	This procedure connects NPAC to E5APPB 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:** 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. Execute 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. Execute the above command for all NPAC regions.

This procedure is complete!

APPENDIX E. REMOVE ACCEPT UPGRADE FAILURE ALARM

STEP #	This procedure is used to remove the false message of accept upgrade failure, when accept upgrade fails but disk redundancy is restored. Estimated time: 5 minutes	
3. ☐	**MPS X:** Log in to the server as the user "root".	Login: **root** Password: **<root_password>**
4. ☐	**MPS X:** Blankout the /etc/motd file.	Blankout the /etc/motd file **# >/etc/motd**
5. ☐	**MPS X:** Add an entry "export POST_UPGRADE_ACTION=done" in the upgrade configuration file.	Add an entry "export POST_UPGRADE_ACTION=done" in the upgrade configuration file. **/var/TKLC/log/upgrade/upgrade.conf**
6. ☐	**MPS X :** Clear the alarm manually.	Clear the false alarm "TKSPLATMI33". Following alarm is seen in alarmStatus. alarmMgr --alarmStatus SEQ: 7 UPTIME: 356 BIRTH: 1524100682 TYPE: SET ALARM: TKSPLATMI33|tpdServerUpgradePendingAccept|1.3.6.1.4.1.323.5.3.18.3.1.3.33|32532|Processing Error|Configuration Error To clear the alarm, run the following command: **# alarmMgr --clear TKSPLATMI33**

This procedure is complete!

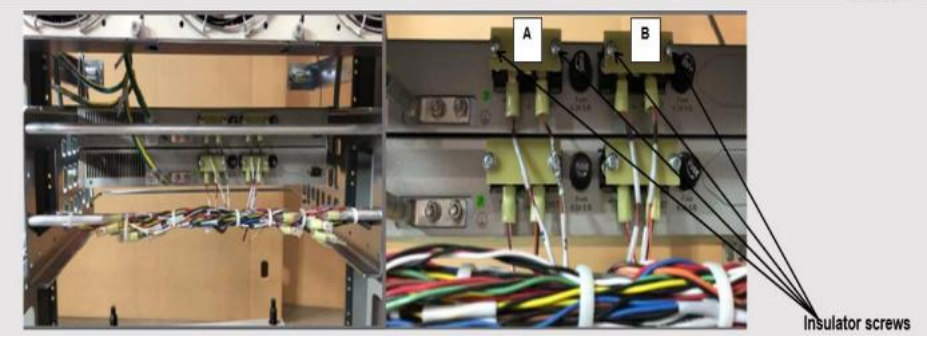
APPENDIX F. TELCO TO CISCO SWITCH REPLACEMENT

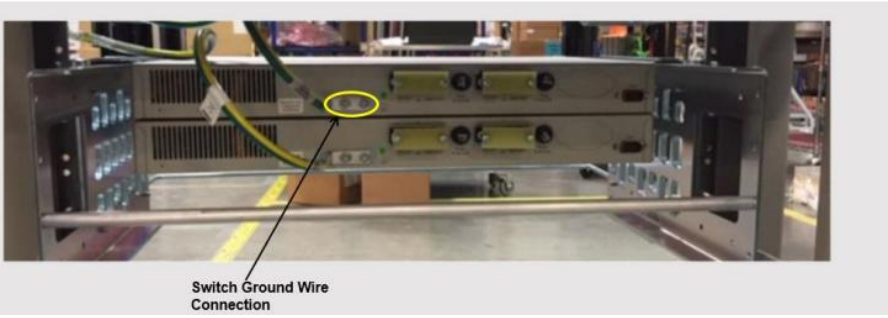
F.1 SWITCH REPLACEMENT

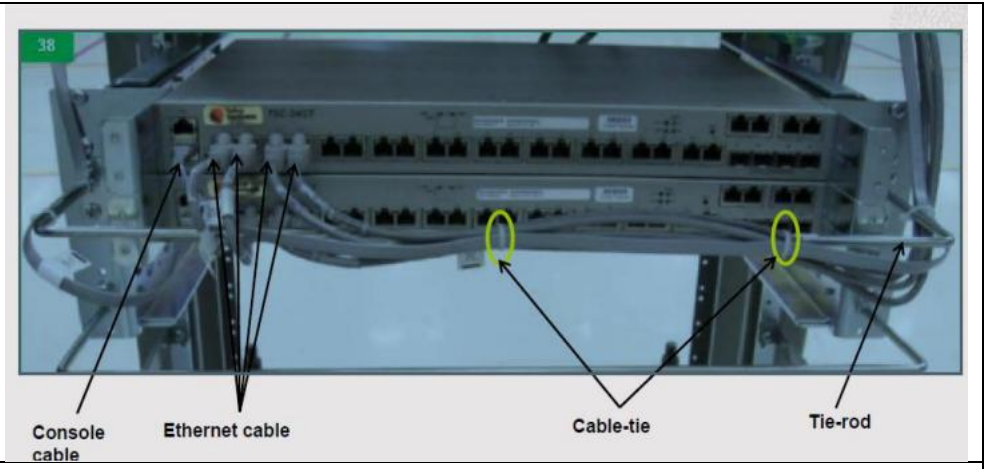
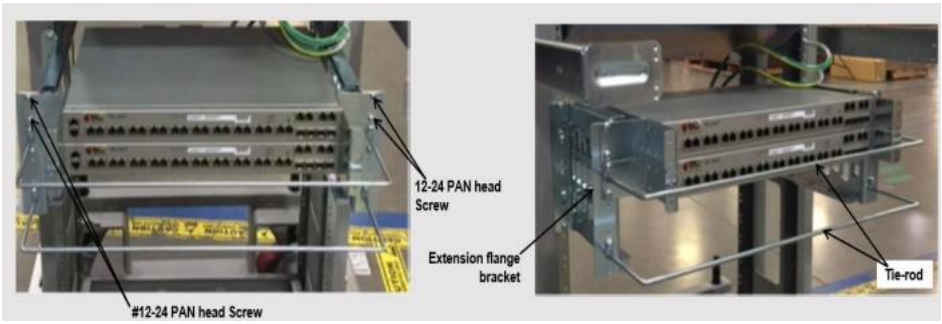
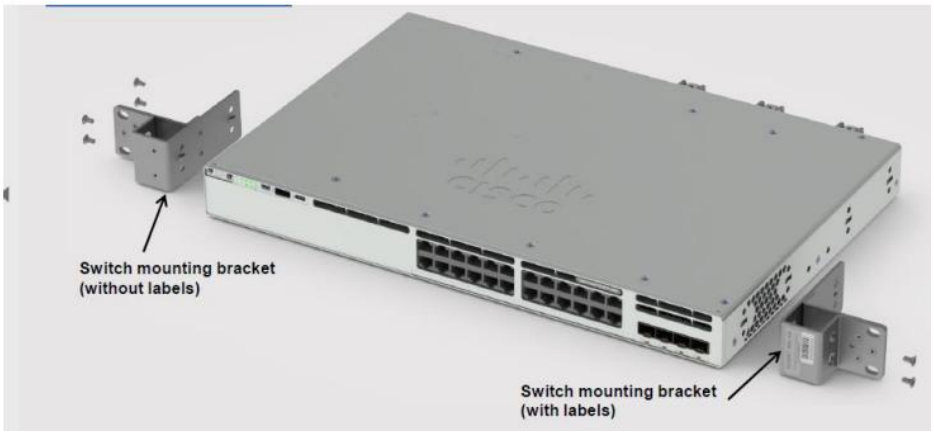
S T E P #	This procedure is for replacing the Telco switch with the Cisco switch. Check off (√) each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT MY ORACLE SUPPORT AND **ASK FOR <u>ASSISTANCE</u>.**

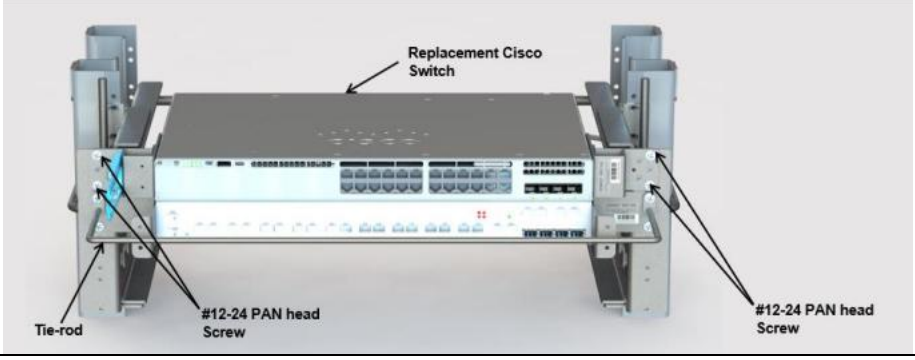
The following tools are required to perform this procedure:

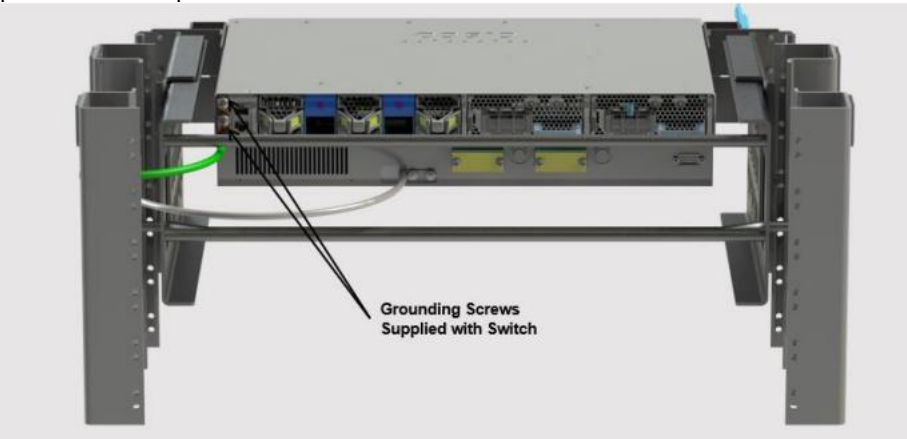
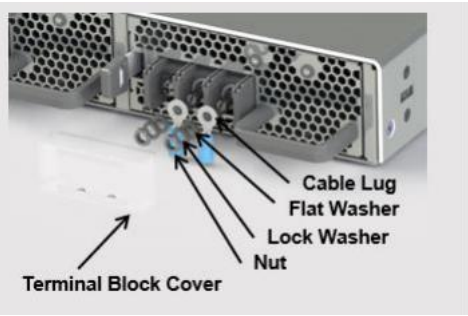
- Ground Strap (Wrist or Heel)
- #2 Phillips Screwdriver
- #3 Phillips Screwdriver
- 1/4” Nut Driver or Socket
- 5/16” Nut Driver or Socket
- Diagonal Wire Cutter (to cut Tie-wraps)
- Multi Meter
- Tie Wraps
- Electrical Tape
- Cable Tags/Marker (to label all cables)

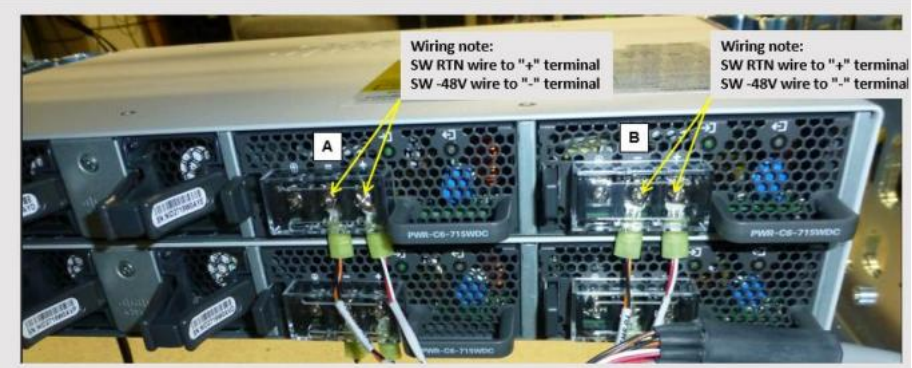
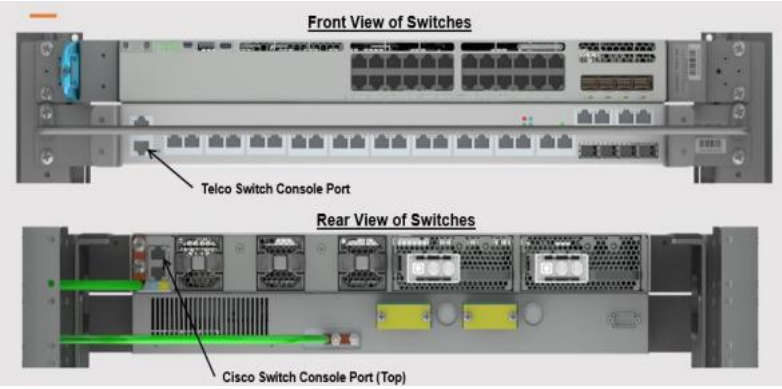
1. ☐	Disable and disconnect switch power	**Tools required:** Ground Strap, #2 Phillips Screwdriver, Multi Meter, and Diagonal Wire Cutter a. At the fuse panel, locate the fuse positions for the switch being removed. To power down the Switch, remove the fuses for both A and B feeds. b. Once the switch 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 cableties are cut from the Tie-rod. See Step 8.
1. ☐	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. 
2. ☐	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. a. 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. b. Disconnect the Console and Ethernet cables from Telco switch being replaced. Leave the cables dangling. c. (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 Tie-rod.

		
3. ☐	Remove the Switch being replaced	**Tools required:** Ground Strap and #3 Phillips Screwdriver a. 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. b. Remove the Switch from the Eagle rack. c. 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. 
4. ☐	Assemble the replacement Cisco Switch	**Tools required:** Ground Straps and #2 Phillips Screwdriver Attach the mounting brackets with Cisco switch assembly. a. Locate the supplied mounting brackets and screws from the Switch package 

		b. 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. c. Insert four screws, supplied with each switch, and tighten.   d. Repeat the steps b and c for the other side of the switch. e. Attach optional Cable Manager. I. Locate Cable Manager and Screw from replacement Switch packaging. II. Attach the Cable Manager to the rack mounting bracket using the supplied screw. 
5. ☐	Install replacement Cisco Switch	**Tools required:** Ground Straps and #3 Phillips Screwdriver a. Align Replacement Cisco Switch in the slot where the original switch was removed. 

		b. 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.
6. ☐	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. 
7. ☐	Connect power to the replacement Cisco Switch	**Tools required:** Ground Strap and 1/4" Nut Driver a. Remove terminal block cover.  b. Remove Nuts and Washers from studs on A feed terminal block. c. Install the lugs from the power cable (A) to switch terminal block A. d. Secure the nuts after inserting flat washer and lock washer on top of the cable lug.

		e. Ensure connections to terminal block are as follows: SW RTN wire to "+" terminal, SW -48V wire to "-" terminal.  f. Reattach protective cover. g. Repeat the above steps for the B feed connection.
8. ☐	Reattach Console Cable and Ethernet Cables	**Tools required:** Ground Strap a. 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.  b. Plug-in the Ethernet cables to Replacement Cisco Switch. Note: The Switch locations are marked on cable from Step 3.
9. ☐	Reapply power	a. Double check all the connections are in their proper place and are secure. b. Reinstall the A and B feed power fuses (removed in Step 1) one at a time. c. 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.
10. ☐	Configure the new Cisco Switch	Refer to the following procedure "Switch Configuration" to configure the new Cisco Switch.

F.2 SWITCH CONFIGURATION

S T E P #	This procedure configures the Cisco Switches on an Installed E5-APP-B 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 SUPPORT AND **ASK FOR <u>ASSISTANCE</u>.**	
1. ☐	Make the cross-over cable connections.	**NOTE: THIS IS IMPORTANT.** a. CONNECT the cross-over cable from **Port 1** of **Switch1A** to **Port 1** of **Switch1B**. b. DISCONNECT the cross-over cable from **Port 2** of **Switch1A** to **Port 2** of **Switch1B**. **Note:** • Switch configuration should only be attempted by a skilled technician and not by 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.
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@Arica-A elapall]#** **[root@Arica-A elapall]# minicom switch1B**
3.	**MPS X:** Do not enter in the initial	`Autoinstall will terminate if any input is detected on console`

☐	config dialog in the freshly connected Cisco switch.	`--- System Configuration Dialog ---` **Would you like to enter the initial configuration dialog? [yes/no]:no**
4. ☐	**MPS X:** Enter an Enable secret key :- "OracleSwitchC1"	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. --- The 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:OracleSwitchC1** **Confirm enable secret: OracleSwitchC1**
5. ☐	**MPS X:** Press 2 and enter	**The following configuration command script was created:** `enable secret 9 $9$TsBinkhqCyICKE$.kVHrY3IJTaqJEb.T9yJjjjmzcRSu426mSirX4U3a1k` `!` `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]: 2**
6. ☐	**MPS X:** Initial configuration building is done	Building configuration... [OK] Use the enabled mode 'configure' command to modify this configuration. Press RETURN to get started!
7. ☐	**MPS X:** Write "enable" and password set in step 3, which is "OracleSwitchC1"	Switch>enable Password:
8. ☐	**MPS X:** Once the switch is enabled to take configuration > sign changes to the # sign	Switch>enable Password: Password: Switch#
9. ☐	**MPS X:** Write command – "Configure terminal"	switch# configure terminal Enter configuration commands, one per line. End with CNTL/Z. switch(config)#
10 ☐	**MPS X:** Here are the attached configs to be used for ELAP	 Cisco1AElap.txt  Cisco1BElap.txt

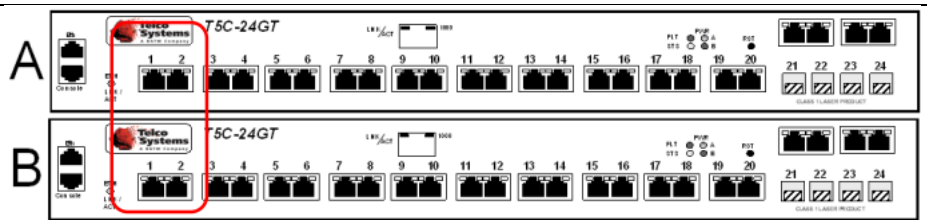
11 ☐	**MPS X:** Open the attached config in notepad for the switch you want to configure.	Open in notepad and press Ctrl+A and then Ctrl+C.
12 ☐	**MPS X:** Paste all the copied config to the switch. The shown example is for Switch1A.	Switch# configure terminal Enter configuration commands, one per line. End with CNTL/Z. Switch(config)#hostname switch1A switch1A(config)#enable secret EnAbLe switch1A(config)# switch1A(config)#$estamps log datetime msec localtime show timezone switch1A(config)#no service pad switch1A(config)#service timestamps debug uptime switch1A(config)#service timestamps log uptime switch1A(config)#service password-encryption switch1A(config)#no logging console switch1A(config)#logging on switch1A(config)#logging trap errors switch1A(config)#logging facility local6 switch1A(config)#line console 0 switch1A(config-line)#length 0 switch1A(config-line)#exit switch1A(config)# switch1A(config)#clock timezone gmt-5 -5 00 switch1A(config)# switch1A(config)# switch1A(config)#vlan 1 switch1A(config-vlan)# name default switch1A(config-vlan)# exit switch1A(config)# switch1A(config)#vlan 2 switch1A(config-vlan)# name dsm-a switch1A(config-vlan)# exit switch1A(config)#interface vlan 1 switch1A(config-if)#ip address 169.254.1.1 255.255.255.0 switch1A(config-if)#no shutdown switch1A(config-if)#exit switch1A(config)# switch1A(config)#interface gigabitEthernet1/0/1 switch1A(config-if)# switchport mode trunk switch1A(config-if)#switchport trunk allowed vlan add 1 switch1A(config-if)#switchport trunk allowed vlan add 2 switch1A(config-if)# channel-group 1 mode on

		Creating a port-channel interface Port-channel 1 switch1A(config-if)# description Link_to_Switch B switch1A(config-if)#shutdown switch1A(config-if)#no shutdown switch1A(config-if)# switch1A(config-if)#interface gigabitEthernet1/0/2 switch1A(config-if)# switchport mode trunk switch1A(config-if)#switchport trunk allowed vlan add 1 switch1A(config-if)#switchport trunk allowed vlan add 2 switch1A(config-if)# channel-group 1 mode on switch1A(config-if)# description Link_to_Switch B switch1A(config-if)#shutdown switch1A(config-if)#no shutdown switch1A(config-if)# switch1A(config-if)#interface gigabitEthernet1/0/3 switch1A(config-if)# switchport mode access switch1A(config-if)# switchport access vlan 2 switch1A(config-if)# description ELAP_A DSM A switch1A(config-if)#shutdown switch1A(config-if)#no shutdown switch1A(config-if)# switch1A(config-if)#interface gigabitEthernet1/0/4 switch1A(config-if)# switchport mode access switch1A(config-if)# switchport access vlan 2 switch1A(config-if)# description ELAP_B DSM A switch1A(config-if)#shutdown switch1A(config-if)#no shutdown switch1A(config-if)# switch1A(config-if)#interface gigabitEthernet1/0/5 switch1A(config-if)# switchport mode trunk switch1A(config-if)#switchport trunk allowed vlan add 1 switch1A(config-if)#switchport trunk allowed vlan add 2 switch1A(config-if)# description ELAP_A SYNC switch1A(config-if)#shutdown switch1A(config-if)#no shutdown switch1A(config-if)# switch1A(config-if)#interface gigabitEthernet1/0/6 switch1A(config-if)# switchport mode trunk switch1A(config-if)#switchport trunk allowed vlan add 1 switch1A(config-if)#switchport trunk allowed vlan add 2 switch1A(config-if)# description ELAP_B SYNC switch1A(config-if)#shutdown switch1A(config-if)#no shutdown

```
switch1A(config-if)#
switch1A(config-if)#interface gigabitEthernet1/0/7
switch1A(config-if)# switchport mode access
switch1A(config-if)# switchport access vlan 2
switch1A(config-if)# description EAGLE_A_Ports
switch1A(config-if)#shutdown
switch1A(config-if)#no shutdown
switch1A(config-if)#
switch1A(config-if)#interface gigabitEthernet1/0/8
switch1A(config-if)# switchport mode access
switch1A(config-if)# switchport access vlan 2
switch1A(config-if)# description EAGLE_A_Ports
switch1A(config-if)#shutdown
switch1A(config-if)#no shutdown
switch1A(config-if)#
switch1A(config-if)#interface gigabitEthernet1/0/9
switch1A(config-if)# switchport mode access
switch1A(config-if)# switchport access vlan 2
switch1A(config-if)# description EAGLE_A_Ports
switch1A(config-if)#shutdown
switch1A(config-if)#no shutdown
switch1A(config-if)#
switch1A(config-if)#interface gigabitEthernet1/0/10
switch1A(config-if)# switchport mode access
switch1A(config-if)# switchport access vlan 2
switch1A(config-if)# description EAGLE_A_Ports
switch1A(config-if)#shutdown
switch1A(config-if)#no shutdown
switch1A(config-if)#
switch1A(config-if)#interface gigabitEthernet1/0/11
switch1A(config-if)# switchport mode access
switch1A(config-if)# switchport access vlan 2
switch1A(config-if)# description EAGLE_A_Ports
switch1A(config-if)#shutdown
switch1A(config-if)#no shutdown
switch1A(config-if)#
switch1A(config-if)#interface gigabitEthernet1/0/12
switch1A(config-if)# switchport mode access
switch1A(config-if)# switchport access vlan 2
switch1A(config-if)# description EAGLE_A_Ports
switch1A(config-if)#shutdown
switch1A(config-if)#no shutdown
switch1A(config-if)#
```

```
switch1A(config-if)#interface gigabitEthernet1/0/13
switch1A(config-if)# switchport mode access
switch1A(config-if)# switchport access vlan 2
switch1A(config-if)# description EAGLE_A_Ports
switch1A(config-if)#shutdown
switch1A(config-if)#no shutdown
switch1A(config-if)#
switch1A(config-if)#interface gigabitEthernet1/0/14
switch1A(config-if)# switchport mode access
switch1A(config-if)# switchport access vlan 2
switch1A(config-if)# description EAGLE_A_Ports
switch1A(config-if)#shutdown
switch1A(config-if)#no shutdown
switch1A(config-if)#
switch1A(config-if)#interface gigabitEthernet1/0/15
switch1A(config-if)# switchport mode access
switch1A(config-if)# switchport access vlan 2
switch1A(config-if)# description EAGLE_A_Ports
switch1A(config-if)#shutdown
switch1A(config-if)#no shutdown
switch1A(config-if)#
switch1A(config-if)#interface gigabitEthernet1/0/16
switch1A(config-if)# switchport mode access
switch1A(config-if)# switchport access vlan 2
switch1A(config-if)# description EAGLE_A_Ports
switch1A(config-if)#shutdown
switch1A(config-if)#no shutdown
switch1A(config-if)#
switch1A(config-if)#interface gigabitEthernet1/0/17
switch1A(config-if)# switchport mode access
switch1A(config-if)# switchport access vlan 2
switch1A(config-if)# description EAGLE_A_Ports
switch1A(config-if)#shutdown
switch1A(config-if)#no shutdown
switch1A(config-if)#
switch1A(config-if)#interface gigabitEthernet1/0/18
switch1A(config-if)# switchport mode access
switch1A(config-if)# switchport access vlan 2
switch1A(config-if)# description EAGLE_A_Ports
switch1A(config-if)#shutdown
switch1A(config-if)#no shutdown
switch1A(config-if)#
switch1A(config-if)#interface gigabitEthernet1/0/19
```

```
switch1A(config-if)# switchport mode access
switch1A(config-if)# switchport access vlan 2
switch1A(config-if)# description EAGLE_A_Ports
switch1A(config-if)#shutdown
switch1A(config-if)#no shutdown
switch1A(config-if)#
switch1A(config-if)#interface gigabitEthernet1/0/20
switch1A(config-if)# switchport mode access
switch1A(config-if)# switchport access vlan 2
switch1A(config-if)# description EAGLE_A_Ports
switch1A(config-if)#shutdown
switch1A(config-if)#no shutdown
switch1A(config-if)#
switch1A(config-if)#interface gigabitEthernet1/0/21
switch1A(config-if)# switchport mode access
switch1A(config-if)# switchport access vlan 2
switch1A(config-if)# description EAGLE_A_Ports
switch1A(config-if)#shutdown
switch1A(config-if)#no shutdown
switch1A(config-if)#
switch1A(config-if)#interface gigabitEthernet1/0/22
switch1A(config-if)# switchport mode access
switch1A(config-if)# switchport access vlan 2
switch1A(config-if)# description EAGLE_A_Ports
switch1A(config-if)#shutdown
switch1A(config-if)#no shutdown
switch1A(config-if)#
switch1A(config-if)#interface gigabitEthernet1/0/23
switch1A(config-if)# switchport mode access
switch1A(config-if)# switchport access vlan 2
switch1A(config-if)# description EAGLE_A_Ports
switch1A(config-if)#shutdown
switch1A(config-if)#no shutdown
switch1A(config-if)#
switch1A(config-if)#interface gigabitEthernet1/0/24
switch1A(config-if)# switchport mode access
switch1A(config-if)# switchport access vlan 2
switch1A(config-if)# description EAGLE_A_Ports
switch1A(config-if)#shutdown
switch1A(config-if)#no shutdown
switch1A(config-if)#
switch1A(config-if)#
switch1A(config-if)#no ip http server
```

		switch1A(config)# switch1A(config)#no cdp run switch1A(config)# switch1A(config)#line con 0 switch1A(config-line)# password <switch replacement password> switch1A(config-line)# login switch1A(config-line)#line vty 0 4 switch1A(config-line)#transport input telnet ssh switch1A(config-line)#password <switch replacement password> switch1A(config-line)# login switch1A(config-line)#line vty 5 15 switch1A(config-line)#transport input telnet ssh switch1A(config-line)#password <switch replacement password> switch1A(config-line)# login switch1A(config-line)# switch1A(config-line)# switch1A(config-line)#ntp server 169.254.1.100 switch1A(config)# switch1A(config)#logging host 169.254.1.100 switch1A(config)# switch1A(config)#end switch1A#
13 ☐	**MPS X:** Similarly, you need to configure all other connected Cisco switches.	Use the config attached in step 10 and repeat steps 2 to 12. Note: Make sure to select the exact same config from the step 10 as per the switch location.
14 ☐	**MPS X:** Connect the cross over cable from Port 2 of Switch1A to Port 2 of Switch1B.	
15 ☐	Ping to Confirm connectivity. Note: IP address 169.254.1.1 associated with Switch1A and IP address 169.254.1.2 associated with Switch1B.	Ping from all the newly connected switches to the mentioned IP address, whichever is connected (169.254.1.1, 169.254.1.12, 169.254.1.100, 169.254.1.200), until you see a 100% success rate. switch1A#ping 169.254.1.1 Type escape sequence to abort. Sending 5, 100-byte ICMP Echos to 169.254.1.1, timeout is 2 seconds: !!!!!

		Success rate is 100 percent (5/5), round-trip min/avg/max = 1/1/1 ms switch1A#ping 169.254.1.2 Type escape sequence to abort. Sending 5, 100-byte ICMP Echos to 169.254.1.2, timeout is 2 seconds: !!!!! Success rate is 100 percent (5/5), round-trip min/avg/max = 1/1/1 ms switch1A#ping 169.254.1.100 Type escape sequence to abort. Sending 5, 100-byte ICMP Echos to 169.254.1.100, timeout is 2 seconds: !!!!! Success rate is 100 percent (5/5), round-trip min/avg/max = 1/1/1 ms switch1A#ping 169.254.1.200 Type escape sequence to abort. Sending 5, 100-byte ICMP Echos to 169.254.1.200, timeout is 2 seconds: !!!!! Success rate is 100 percent (5/5), round-trip min/avg/max = 1/1/1 ms
16 ☐	Procedure complete	Procedure is complete.

APPENDIX G. MY ORACLE SUPPORT

 **CAUTION: Use only the guide downloaded from the Oracle Technology Network (OTN)** (http://www.oracle.com/technetwork/indexes/documentation/oracle-comms-tekelec-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.

Web portal (preferred option): My Oracle Support (MOS) (https://support.oracle.com/)

Phone: Contact your local Oracle Global Customer Support Center (http://www.oracle.com/support/contact.html)

Make the following selections on the Support telephone menu:

1. Select '**2**' for New Service Request
2. Select '**3**' for Hardware, Networking and Solaris Operating System Support
3. Select '**1**' for Technical Issues and when talking to the agent, please indicate that you are an existing Tekelec customer