

**Oracle® Communications
EAGLE Application Processor**

Upgrade/Installation Guide

Release 16.0

E54203 Revision 3

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Before beginning this procedure, contact My Oracle Support and inform them of your upgrade plans. Refer to Appendix I for instructions on accessing My Oracle Support.

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1. INTRODUCTION

1.1 Purpose and Scope

This document describes methods utilized and procedures executed to perform the following tasks:

- a. An initial installation of the EPAP 16.0 application software if it is not currently installed on an in-service E5-APP-B system running a release of TPD 5.5.1.
- b. A major software upgrade on an in-service E5-APP-B system running a release equal to TPD 5.5 and EPAP Release 15.X.
- c. An incremental software upgrade on an in-service E5-APP-B system running a release equal to TPD 5.5.1 and EPAP Release 16.X.

Please note that the EPAP 16.0 cannot be upgraded from any EPAP release older than 15.0 or releases running on platform other than E5-APP-B. For these cases, migration to EPAP release 15.0 on an E5-APP-B has to be performed before they can be upgraded to EPAP 16.0.

The audience for this internal document consists of Oracle customers and the following groups: Software System, Product Verification, Documentation, and Customer Service including Software Operations and NPI. This document provides step-by-step instructions to execute any MPS upgrade or installation using an ISO image.

This document does not address requirements relating to the interaction, if any, between EAGLE and MPS upgrades. This document does not address feature activation.

1.2 References

1.2.1 External

- [1] *EAGLE Application Processor (EPAP) Administration Guide*, E54368-01, latest revision, Oracle
- [2] *EPAP 15.0 Administration Manual*, 910-6532-001, Oracle

1.2.2 Internal (Oracle Tekelec)

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

- [1] *TEKELEC Acronym Guide*, MS005077, revision 2.35, Tekelec, September 2005.
- [2] *Software Upgrade Procedure Template*, TM005074, Current Version, Tekelec
- [3] *Integrating MPS into the Customer Network*, TR005014, version 3.1, Tekelec, October 2009
- [4] *TPD Initial Product Manufacture – TPD 5.5*, 909-2229-001, Latest revision, Tekelec
- [5] *PFS EPAP 16.0*, PF006165, Latest revision, Tekelec
- [6] *Migration to Standalone PDB*, UP006326, Oracle

1.3 Software Release Numbering

Refer to Engineering Release Notes or other appropriate document with the most recent build numbers in order to identify the proper components (software loads, GPLs, etc.) that comprise the product's software release.

1.4 Acronyms

An alphabetized list of acronyms used in the document that are not included in [1]:

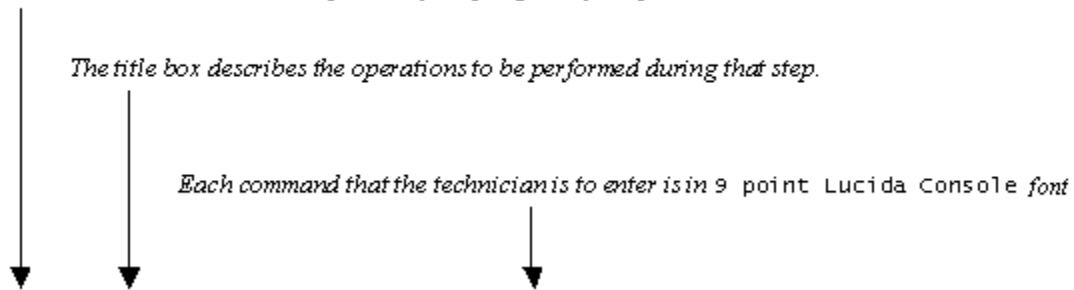
Table 1. Acronyms

AS	Application Server
E5-APP-B	E5 Based Application Card
EPAP	Eagle Provisioning Application Processor
GA	General Availability
IPM	Initial Product Manufacture
LA	Limited Availability
MPS	Multi-Purpose Server
NPI	New Product Introduction
SM	Service Module
TPD	Tekelec Platform Distribution

1.5 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:

Each step has a checkbox for every command within the step that the technician should check to keep track of the progress of the procedure.



1	MPS A: Verify all materials required are present	Materials are listed in Material List (Section 3.2)
---	--	---

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

Other terminology follows.

Table 2. Terminology

Accept major upgrade	The procedure performed after a major upgrade that re-mirrors disk partitions. This procedure must be run after a major upgrade (before the next major upgrade) and it prevents backout to the source release.
Backout (abort)	The process to take a system back to a Source Release prior to completion of upgrade to Target release. Includes preservation of databases and system configuration.
Incremental upgrade	Open Systems: An upgrade that takes a target system from any given release to another release but not necessarily from the shipping baseline to the target release.
Mixed EPAP	An EPAP where both PDB and RTDB databases reside.
Non-preserving upgrade	“Upgrade” that does not adhere to the standard goals of software upgrade methodology. The outcome of the execution is that the system is running on the Target Release, however the Source Release database is not preserved.
Non-provisionable (Non-prov) EPAP	An EPAP server hosting a Real Time DB without any provisioning interfaces to external provisioning applications. Non-Prov servers are connected to a pair of Provisionable EPAP from where they get their updates.
Provisionable EPAP	An EPAP server hosting PDB with provisioning interfaces to AS. Both Mixed EPAP and Standalone PDB are Provisionable EPAP.

Rollback	The process to take a system from a Target Release back to a Source Release including preservation of databases and system configuration.
Source release	Software release to upgrade from.
Split Mirror	Systems that use software RAID instead of hardware RAID can use the software RAID mirrors as a backout mechanism. Conceptually in a software RAID1 with two disks there are two sides to the mirror; let them be side A and side B. For a system with multiple software RAID devices, each device will have an A side and a B side. For an upgrade with a BACKOUT_TYPE=SPLIT_MIRROR the upgrade will break the mirrors at the beginning of the upgrade and perform the upgrade on the <i>Asides</i> of the mirrors. The other sides of the mirrors (<i>Bsides</i>) are left intact in their pre-upgrade state throughout the duration of the upgrade. When a backout is performed the system is rebooted into the same 'backout environment'. Inside this 'backout environment' the RAID mirrors are rebuilt from the <i>Bsides</i> of the arrays, thus restoring the system to the pre-upgrade state
Standalone PDB	Also known as 'PDB Only', this type of EPAP shall have PDB database only. No RTDB database shall exist on the standalone PDB site.
Target release	Software release to upgrade to.
Upgrade media	USB media or ISO image for E5-APP-B.

1.6 Recommendations

This procedure should be followed thoroughly utilizing the steps as written. **When planning to upgrade the server, contact Oracle's Tekelec Customer Care at least 48 hours before the upgrade process has been planned to be initiated.** In the event any unexpected results are returned while executing steps in this procedure halt the activity and contact Oracle's Tekelec Customer Care for assistance.

Please read the following notes on procedures:

- Any procedure completion times are estimates. Times may vary due to differences in database size, user experience, and user preparation.
- The shaded area within response steps must be verified in order to successfully complete that step.
- Output displayed in the procedures' response steps is presented. Actual output varies depending on system. Output is presented for reference only.
- Where possible, command response outputs are shown as accurately as possible. However, exceptions may include the following:
 - Information such as *time* and *date*.
 - ANY information marked with "XXXX." Where appropriate, instructions are provided to determine what output should be expected in place of "XXXX."
- After completing each step and **at each point where data is recorded from the screen, the technician performing the upgrade must check each step.** A checkbox has been provided beneath each step number for this purpose.
- Captured data is required for future support reference if Oracle's Tekelec Customer Care Center is not present during the upgrade.
- In procedures that require a command to be executed on a specific MPS, the command is prefaced with MPS A: or MPS B:
- User Interface menu items displayed in this document were correct at the time the document was published but may appear differently at time that this procedure is executed.

1.7 Requirements

- Screen logging is required throughout the procedure. These logs should be made available to Oracle's Tekelec Customer Care in the event their assistance is needed.
- Target-release USB media or ISO image

2. GENERAL DESCRIPTION

This document defines the step-by-step actions performed to execute a software upgrade of an in-service MPS running the EPAP application from the source release to the target release.

For the EPAP application, some steps in this procedure refer to the PDB application feature on the MPS A of the MPS pair. The EPAP application makes it optional for a newly installed MPS A node to be configured as a Provisioning (PDB) node (upgrades of MPS A nodes already configured as a provisioning node does not change this configuration).

The EPAP application can be installed and upgraded based on the table below.

Table 3. Install-Upgrade paths

TPD Release for IPM	EPAP Initial Installation Release
5.5.1-75.18.0 or later	16.0
Upgrade Source Release	Upgrade Destination Release
15.0	16.0
Upgrade Source Release	Upgrade Destination Release
16.0.x	16.0.y

The EPAP upgrade paths are shown in the figures below. The general timeline for all processes to perform a software upgrade, from pre-upgrade backups to a final system health check, is also included below.

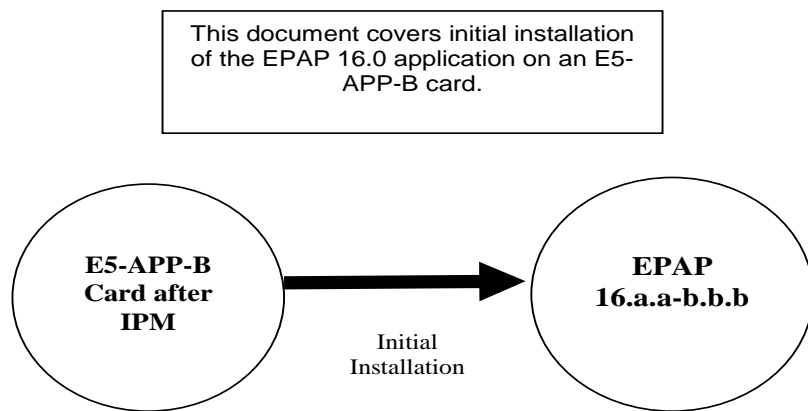


Figure 2: Initial Application Installation Path – Example shown

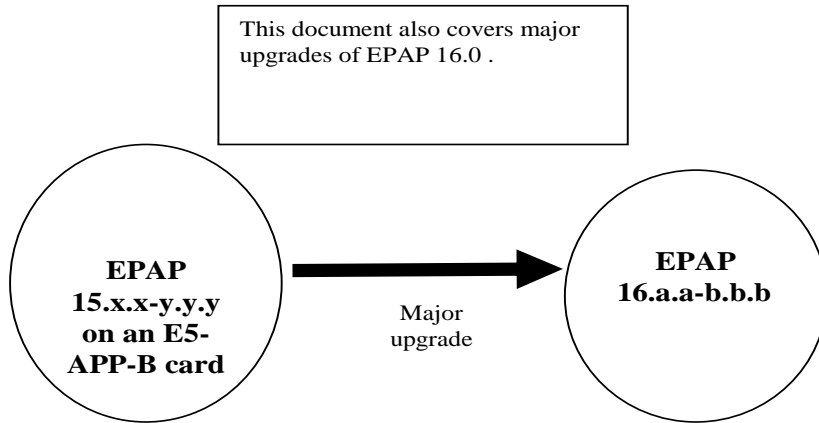


Figure 3: Major Upgrade Path - EPAP 15.x to 16.0

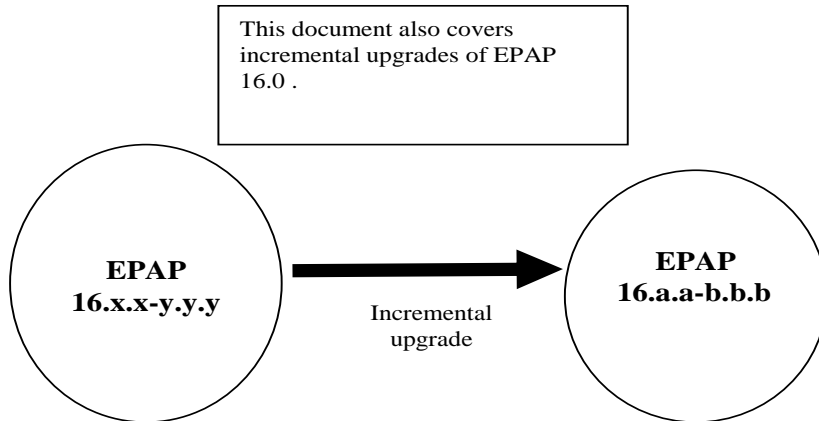


Figure 4: Incremental Upgrade Path - EPAP 16.0

2.1 Upgrading Provisionable EPAP Mated Pairs

Current deployments of the EPAP support two geographically separated EPAP systems that are “mated”, meaning they communicate and replicate PDB information between the two sites. An EPAP system is a pair of MPS servers (an **A** and a **B** node). So a mated pair of EPAP systems consists of four MPS servers, an **A** and a **B** node for each EPAP system (see Figure 5: EPAP Mated Pairs). EPAP allows more than two EPAP systems in a related configuration (up to 22 Non-Provisionable MPS servers).

This document describes upgrade (and, if necessary, backout) of the EPAP software on one system, that system consisting of two MPS servers (A and B). However, for mated pairs of EPAP systems, upgrades (and backouts) must be coordinated between both the local EPAP system and the remote EPAP system and performed during the same maintenance period.

Note: Based on the time taken for the PDB backup another maintenance window might be required to complete the upgrade.

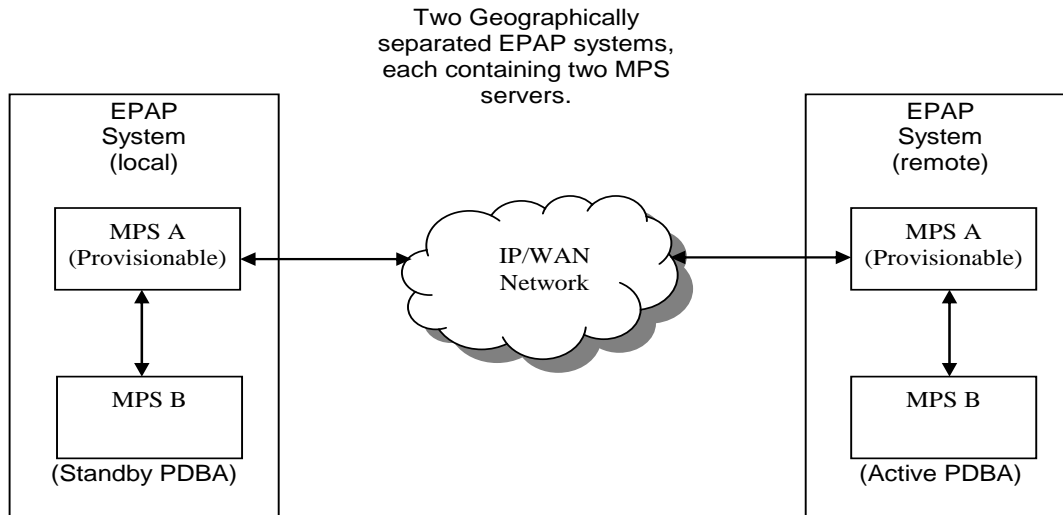


Figure 5: EPAP Mated Pairs

Upgrade of mated EPAP systems must be carried out in the following order:

1. **Ensure PDB databases are at the same level. Stop all provisioning to ensure that all PDB databases are in sync before proceeding. Also, ensure that no PDB/RTDB maintenance activity is in progress and clear all scheduled activities.**
2. Local MPS-B
3. Local MPS-A (Standby PDBA)
4. Remote MPS-B
5. Remote MPS-A (Active PDBA)

When upgrade is initiated on the local MPS-B, the scripts controlling the upgrade will cause the local MPS-B to communicate using Secure-Shell to both the local MPS-A and the remote MPS-A to stop the PDBA software. The PDBAs should be restarted only after both the local and remote EPAP systems have successfully completed upgrade.

NOTE: Since the PDBA software is not running immediately after an upgrade, the syscheck utility will alarm the fact that the PDBA is not running on the local and remote EPAP A-servers.

2.2 Backout Provisionable EPAP Mated Pairs

Backout of Provisionable EPAP Mated Pairs should be done in the reverse order that the upgrade was performed:

1. **Identify a PDB backup that was made prior to upgrade, on the EPAP release that backout will target. Note that backout always carries the risk of losing data, should a restore from database backup become necessary.**
2. Remote MPS-A (Active PDBA)
3. Remote MPS-B
4. Local MPS-A (Standby PDBA)
5. Local MPS-B

On the backout of a **major** upgrade, the servers will automatically reboot several times and then the user will get the login prompt. After these reboots, disk mirroring will continue in the background and no manual intervention is required to bring the server back into service. User should **not** reboot the server during disk mirroring. At this point you may move on to the next server.

On a backout of an **incremental** upgrade, the server will remain in runlevel 3 (no applications running) and no disk mirroring will occur. The user will be required to manually reboot the server to bring it back into service and a syscheck can be performed.

2.3 Upgrading EPAP Non-Provisionable MPS Servers

In EPAP release 16.0, Non-Provisional MPS pairs can connect to: Mixed EPAP or Standalone PDB.

2.3.1 Non-Provisional MPS pairs in Mixed EPAP configuration

EPAP provides the ability to expand the concept of a mated pair of EPAP systems to have up to 24 EPAP systems (48 MPS servers total) configured such that two of the MPS-A servers will run the PDBA software and handle provisioning (Provisionable nodes) and the other 24 MPS-B and 22 MPS-A servers will only run the RTDB software, taking their updates from the two Provisionable MPS-A servers. In such a configuration, it is required that the EPAP systems containing the Provisionable MPS-A servers be upgraded first, before any EPAP systems containing non-Provisionable MPS-A servers are upgraded.

An example showing 4 EPAP systems, two of which are provisioning nodes.

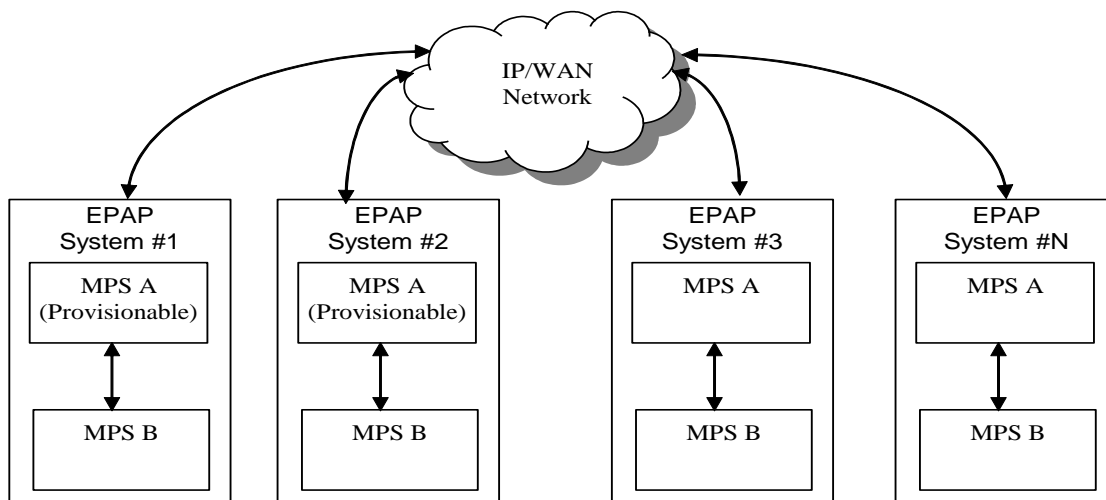


Figure 6: EPAP Mated Pairs with Non-Provisioning MPS Servers

2.3.2 Non-Provisional MPS pairs in Standalone PDB configuration

EPAP provides the ability to separate the RTDB from PDB to create two architectures: Standalone PDB running PDB process only and Non-Provisionals running RTDB only. Up to 22 Non-Provisional EPAP mated pairs are connected to 2 Standalone PDB that are configured as Active/Standby. In such a configuration, it is required that the Standalone PDB MPS servers be migrated first (see detail in [6]), before any EPAP systems containing non-Provisionable MPS-A servers are upgraded.

3. UPGRADE OVERVIEW

3.1 Upgrade Provisioning Rules

When a Provisionable EPAP mated pair is upgraded or backed out, the EPAP upgrade scripts disable provisioning when the upgrade is initiated on the first MPS server. The PDBA software remains disabled until the last server in the MPS in the mated pair has been upgraded or backed out. The user has to enable the PDBA software, allowing provisioning, after the upgrade/backout is complete on last MPS server in an EPAP mated pair. Provisioning is not disabled during the upgrade of a Non-Provisionable MPS.

Because EPAP MPS pairs are generally located at geographically distinct sites, significant time may elapse between the upgrade of the Provisionable EPAP pair and the upgrade of the Non-Provisionable EPAP pairs. Provisionable EPAP MPS pairs must always be upgraded before Non-Provisionable EPAP pairs.

3.2 Required Materials

- For Mixed EPAP or Non-Provisional EPAP: Two (2) target-release USB media or a target-release ISO file.
For Standalone PDB: One (1) target-release USB media or a target-release ISO file
- A terminal and null modem cable to establish a serial connection.
- Write down the system configuration information.

Description	Information
PROVISIONABLE (Yes/No)	
PDBA state (Active/Standby)	
Provisioning IP	
Provisioning Mask	
Provisioning Default Router IP	
NTP1 IP	
NTP2 IP	
NTP3 IP	
Local VIP	
Remote VIP	
Local PDBA IP	
Remote PDBA IP	
Remote PDBA B IP	
RTDB Homing	
Time Zone	
PDBA Proxy Feature	
Others	

Table 4: System Configuration Information

- Passwords for users on the local system:

EPAP USERS		
login	MPS A password	MPS B password
epapconfig		
epapdev (needed for backout only)		
syscheck		
root		
epapall (needed for GUI access)		

Table 5. User Password Table

3.3 Installation Phases

The following table illustrates the progression of the installation process by procedure with estimated times. The estimated times and the phases that must be completed may vary due to differences in typing ability and system configuration. The phases outlined in Table 6 and 7 are to be executed in the order they are listed.

Table 6 outlined the installation phases for Mixed EPAP or Non-Provisional EPAP.

Phase	Elapsed Time (Minutes)		Activity	Procedure
	This Step	Cum.		
Connectivity setup	15	15	Set up connectivity to the MPS Servers.	Procedure 1
Verify install	5	20	Verify this should be an install.	Procedure 2
Pre-upgrade check	15	35	Verify requirements for install are met.	Procedure 3
Pre-install health check	5	40	Run the syscheck utility to verify that all servers are operationally sound.	Procedure 5
Configure Server 1A	5	45	Set hostname, designation, function and time.	Procedure 8
Configure Server 1B	5	50	Set hostname, designation, function and time.	Procedure 9
Install Servers	30	80	Install software on sides 1A and 1B	Procedures 10 and 11
Configure Switches	30*	110*	Configure the Switches	Procedure 12
Post-install application processing	30	140	Perform first time configuration. Perform Procedure 14 only if the EPAP is configured as Provisionable.	Procedures 13, 14
Post-upgrade health check	5	145	Run the syscheck utility to verify all servers are operationally sound.	Procedure 5
The following steps only need to be performed on the customer site.				
Site Configuration	15	160	Perform site specific network configuration.	

Table 6. Installation Phases for Mixed EPAP and Non-Provisional EPAP

***NOTE:** If configuring 4 switches, add 30 minutes to the current setup

Table 7 outlined the installation phases for Standalone PDB.

Phase	Elapsed Time (Minutes)		Activity	Procedure
	This Step	Cum.		
Connectivity setup	15	15	Set up connectivity to the MPS Servers.	Procedure 1
Verify install	5	20	Verify this should be an install.	Procedure 2
Pre-upgrade check	15	35	Verify requirements for install are met.	Procedure 3
Pre-install health check	5	40	Run the syscheck utility to verify that all servers are operationally sound.	Procedure 5

Phase	Elapsed Time (Minutes)		Activity	Procedure
	This Step	Cum.		
Configure Server 1A	5	45	Set hostname, designation, function and time.	Procedure 8
Install Servers	30	75	Install software on sides 1A	Procedures 10
Post-install application processing	30	105	Perform first time configuration.	Procedures 13, 14
Post-upgrade health check	5	110	Run the syscheck utility to verify all servers are operationally sound.	Procedure 5
The following steps only need to be performed on the customer site.				
Site Configuration	15	125	Perform site specific network configuration.	

Table 7. Installation Phases for Standalone PDB

3.4 Major Upgrade Phases

The following table illustrates the progression of the upgrade process by procedure with estimated times and may vary due to differences in typing ability and system configuration. The phases outlined in Table 9 are to be executed in the order they are listed.

Note: Before proceeding with the upgrade process, refer to section 2.1 to get the overview of the EPAP setup and upgrade order.

Phase	Elapsed Time (Minutes)		Activity	Procedure
	This Step	Cum.		
Connectivity setup	15	15	Set up connectivity to the MPS servers.	Procedure 1
Verify Major upgrade	5	20	Verify this should be a major upgrade.	Procedure 2
Pre-upgrade check	15	35	Verify requirements for upgrade are met.	Procedure 3
Assess readiness for upgrade	15	50	Assess the server's readiness for upgrade.	Procedure 4
Pre-upgrade health check	5	55	Run the syscheck utility to verify the MPS server is operationally sound.	Procedure 5
Pre-upgrade Backup	*See notes below	*See notes below	Backup application databases and other pertinent information.	Procedure 6
Pre-upgrade system time check	5	60	Pre-upgrade system time check.	Procedure 7
Upgrade MPS B	30	90	Execute the upgrade procedure on MPS B.	Procedure 15
Upgrade MPS A	30	120	Execute the upgrade procedure on MPS A.	Procedure 16
Post-upgrade health check	5	125	Run the syscheck utility to verify the MPS server is operationally sound.	Procedure 5
Start the PDB software.	10	135	Step only necessary during upgrade of a Provisionable mated EPAP pair. Re-activate the PDB on the Provisionable MPS A servers. Note: Read the notes given in Section 7.3.1 before executing the procedure.	Procedure 19
Post-upgrade Backups	*See notes below	*See notes below	Backup application databases and other pertinent information.	Procedure 6
Accept Upgrade on MPS B	**60-120	195-255	Accept the major upgrade.	Procedure 27
Accept Upgrade on MPS A	**60-120	255-315	Accept the major upgrade.	Procedure 27
Post-remirroring health check	5	260-320	Run the syscheck utility to verify the MPS server is operationally sound.	Procedure 5

Table 8. Incremental Upgrade Phases

***NOTE:** The time needed to backup application data is dependent on the amount of application data. This procedure cannot specify an exact length of time since different customers have different amounts of application data.

****NOTE:** The re-mirroring of disks after accepting a major upgrade occurs automatically. The system is rebooted and the disk will be synced in the background; it takes between 1 to 2 hours to fully sync the disks but dependant on the

amount of application data. Once this activity has initiated, normal system functionality is not impacted. User should not reboot system or initiate another upgrade/backout until the process has completed.

3.5 Incremental Upgrade Phases

The following table illustrates the progression of the upgrade process by procedure with estimated times and may vary due to differences in typing ability and system configuration. The phases outlined in Table 9 are to be executed in the order they are listed.

Note: Before proceeding with the upgrade process, refer to section 2.1 to get the overview of the EPAP setup and upgrade order.

Phase	Elapsed Time (Minutes)		Activity	Procedure
	This Step	Cum.		
Connectivity setup	15	15	Set up connectivity to the MPS servers.	Procedure 1
Verify incremental upgrade	5	20	Verify this should be an incremental upgrade.	Procedure 2
Pre-upgrade check	15	35	Verify requirements for upgrade are met.	Procedure 3
Assess readiness for upgrade	15	50	Assess the server's readiness for upgrade.	Procedure 4
Pre-upgrade health check	5	55	Run the syscheck utility to verify the MPS server is operationally sound.	Procedure 5
Pre-upgrade Backup	*See notes below	*See notes below	Backup application databases and other pertinent information.	Procedure 6
Pre-upgrade system time check	5	60	Pre-upgrade system time check.	Procedure 7
Upgrade MPS B	30	90	Execute the upgrade procedure on MPS B.	Procedure 15
Upgrade MPS A	30	120	Execute the upgrade procedure on MPS A.	Procedure 16
Post-upgrade health check	5	125	Run the syscheck utility to verify the MPS server is operationally sound.	Procedure 5
Start the PDB software.	10	135	Step only necessary during upgrade of a Provisionable mated EPAP pair. Re-activate the PDB on the Provisionable MPS A servers. Note: Read the notes given in Section 7.3.1 before executing the procedure.	Procedure 19
Post-upgrade Backups	*See notes below	*See notes below	Backup application databases and other pertinent information.	Procedure 6

Table 9. Incremental Upgrade Phases

***NOTE:** The time needed to backup application data is dependent on the amount of application data. This procedure cannot specify an exact length of time since different customers have different amounts of application data.

3.6 Backout Phases

Note: Before proceeding with the backout process, refer to sections 7.1 and 7.2 to get the overview of the EPAP setup and the backout order.

Phase	Elapsed Time (Hours or Minutes)		Activity	Impact	Procedure
	This Step	Cu m.			
Determine state of system	15-30	15-30	Investigate and determine the state of the MPS system. This may take anywhere from 15 to 30 minutes.	Cannot proceed with backout until failure analysis is complete. Some hand-fixes may be required before proceeding with backout.	Contact the Technical Assistance Center following the instructions on the front page or the instructions on the Appendix I.
Backout MPS A	30	45-60	If required, backout MPS A.		Procedure 18
Re-mirroring of disks on MPS A	60-120*	105-180	Starts automatically after completion of backout of MPS A.	Occurs ONLY after backout of Major Upgrade. Backout of MPS B can begin as soon as this activity begins.	Starts Automatically Execute the command “cat /proc/mdstat” to get the disk-mirroring status.
Backout MPS B	30	135-210	Backout MPS B. If backout of MPS A has been done, then execute Procedure 19. Otherwise, if backout required only on MPS B, then execute Procedure 18.		Procedure 17 or 18
Re-mirroring of disks on MPS B	60-120*	295-430	Starts automatically after completion of backout of MPS B.	ONLY runs after backout of Major Upgrade.	Starts Automatically Execute the command “cat /proc/mdstat” to get the disk-mirroring status.
Post-backout health check	10	305-440	Run the syscheck utility to verify the MPS server is operationally sound.	Verify that the backout was successful.	Procedure 5
Start the PDBA software	5	310-445	Re-activate the PDB on the Provisionable MPS A servers. Note: Read the instructions given in Section 7.3.1 before executing the procedure.		Procedure 19

Table 10. Backout Procedure Overview

***NOTE:** The re-mirroring of disks after a backout of a major upgrade occurs automatically. The system is rebooted and the disk will be synced in the background; it takes between 1 to 2 hours to fully sync the disks but dependant on the amount of application data. Once this activity has initiated, normal system functionality is not impacted. User should not reboot system or initiate another upgrade until the process has completed.

3.7 Log Files

All commands executed during an upgrade or installation, are logged in the “/var/TKLC/log/upgrade/upgrade.log” file. 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 the “/var/TKLC/log/upgrade/ugwrap.log” file. This log file is rolled every time ugwrap is initiated. A total of up to five ugwrap log files are stored on the server.

4. UPGRADE PREPARATION

4.1 Environment Setup

Procedure 1: Setting up the upgrade environment

S T E P #	<p>This procedure sets up the upgrade environment. Windows are opened for both MPS servers.</p> <p>NOTE: Call Oracle's Tekelec Customer Care Center for assistance if modem access is the method use for upgrade.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT ORACLE'S TEKELEC CUSTOMER CARE CENTER AND ASK FOR UPGRADE ASSISTANCE.</p>	
1. <input type="checkbox"/>	Establish a connection to MPS A.	<p>If access to the MPS servers is not available through an IP network, connect to the E5-APP-B card via the serial port.</p> <p>For connecting the E5-APP-B A card, disconnect the console cable from the serial port on the E5-APP-B B card's adapter. The cable should be disconnected at the point where it connects to the serial port labeled 'S1' on the E5-APP-B B card's adapter and use it for serial access. Cable part numbers - 830-1220-xx</p>
2. <input type="checkbox"/>	On the workstation, open one terminal window in preparation for establishing remote connections to the MPS servers.	Create a terminal window
3. <input type="checkbox"/>	Create a terminal window for MPS A.	Create a terminal window and give it a title of " MPS A "
4. <input type="checkbox"/>	MPS A: Enable capture file and verify the correspondent file is created.	Enable the data capture and verify that the data capture file is created at the path specified.
5. <input type="checkbox"/>	Log into MPS A.	<hostname> console login: root password: <password>
6. <input type="checkbox"/>	MPS A: Start screen Session.	<p>Execute the following command to start screen and establish a console session with MPS A. # screen -L</p> <p>If for Standalone PDB, the procedure is complete. Otherwise, continue with the next step.</p>
7. <input type="checkbox"/>	Establish a connection to MPS B.	<p>If access to the MPS servers is not available through an IP network, connect to the E5-APP-B card via the serial port.</p> <p>For connecting the E5-APP-B B card, disconnect the console cable from the serial port on the E5-APP-B A card's adapter. The cable should be disconnected at the point where it connects to the serial port labeled 'S1' on the E5-APP-B A card's adapter and use it for serial access. Cable part numbers - 830-1220-xx</p>
8. <input type="checkbox"/>	Create a terminal window for MPS B.	Create a terminal window and give it a title of " MPS B "
9. <input type="checkbox"/>	MPS B: Enable capture file and verify a correspondent file is created.	Enable the data capture and verify that the data capture file is created at the path specified.

Procedure 1: Setting up the upgrade environment

10. <input type="checkbox"/>	Log into MPS B.	<hostname> console login: root password: <password>
11. <input type="checkbox"/>	MPS B: Start screen Session.	Execute the following command to start screen and establish a console session with MPS B. # screen -L

4.2 Software Upgrade Preparation

4.2.1 Upgrade/Installation Determination and Readiness Assessment

Procedure 2: Determine if upgrade or installation is required

S T E P #	This procedure executes the steps required to determine if an upgrade of the system is required or an initial application installation is required.	
	Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.	
	IF THIS PROCEDURE FAILS, CONTACT TECELEC TECHNICAL SERVICES AND ASK FOR UPGRADE ASSISTANCE.	
	1. <input type="checkbox"/>	MPS A: Log in as the user "root". If not already logged-in, login at MPS A as 'root'. <hostname> console login: root password: <password>
	2. <input type="checkbox"/>	MPS A: Verify the hardware type. Execute the following command to source in the hardware module: # . /usr/TKLC/plat/lib/TKLChardware.sh Execute the following command and examine the output: [root@MPS-A ~]# getHardwareID The output will be: E5APPB[root@MPS-A ~]# If the output of the above query is E5APPB, then proceed to the next step. Otherwise, this is not the correct hardware for the install/upgrade of EPAP 16.0. Contact the Technical Assistance Center following the instructions on the front page or the instructions on the Appendix I.
3. <input type="checkbox"/>	MPS B: Log in as the user "root". If not already logged-in, login at MPS B as 'root'. <hostname> console login: root password: <password>	
4. <input type="checkbox"/>	MPS B: Determine if the application is currently installed on the servers. (MPS B will be used to determine the current state of the servers. We will assume that the state of the A server is the same). Execute an rpm query command and examine the output: # rpm -qi TKLCepap	

Procedure 2: Determine if upgrade or installation is required

<p>5. <input type="checkbox"/></p>	<p>MPS B: Observe the output from the rpm query.</p>	<p>The following is an example of what the output may look like:</p> <pre># rpm -qi TKLCepap Name : TKLCepap Relocations: (not relocatable) Version : 150.0.23 Vendor: Tekelec Release : 15.0.2_150.27.0 Build Date: Tue 02 Jul 2013 11:10:55 AM EDT Install Date: Tue 20 May 2014 01:19:16 PM EDT Build Host: diablo-1.tekelec.com Group : Development/Build Source RPM: TKLCepap-150.0.23-15.0.2_150.27.0.src.rpm Size : 50964107 License: © TEKELEC 2005-2013 Signature : (none) Packager : <@tekelec.com> URL : http://www.tekelec.com/ Summary : Tekelec EPAP Package Description :</pre> <p>This is the Tekelec EPAP Package. The package installs EPAP software. Eagle Provisioning Application Processor (EPAP) provides Provisioning Database Application (PDBA on A side) and Real Time Database (RTDB).</p> <p>If the output similar to the above example is displayed, then skip to step 7. Otherwise, proceed to the next step.</p>
<p>6. <input type="checkbox"/></p>	<p>MPS B: Installation is required if the application is not present on the server, else upgrade is required.</p>	<p>If the application is not currently installed, output similar to the example below will be returned from the rpm -qi command in the previous step. If this is the case, then an application installation is required. Refer to section 3.3 to perform EPAP installation.</p> <pre># rpm -qi TKLCepap package TKLCepap is not installed</pre> <p>Skip to step 11.</p>
<p>7. <input type="checkbox"/></p>	<p>MPS B: Determine which version of the application is present.</p>	<p>Write Down the Release Number:</p> <p>Release Number: _____</p> <p>If the release number on the MPS is less than the release number on the upgrade media, then an upgrade is required.</p>
<p>8. <input type="checkbox"/></p>	<p>Determine if it is an Major Upgrade.</p>	<p>If the current release is 15.x.x and target release is 16.y.y, it is a Major Upgrade.</p> <p>Write Down the Upgrade Type before the upgrade:</p> <p>UPGRADE TYPE: _____</p>
<p>9. <input type="checkbox"/></p>	<p>Determine if it is an Incremental Upgrade.</p>	<p>If the current release is 16.x.x and target release is 16.y.y (x.x is less than the number y.y on the upgrade media), it is an INCREMENTAL Upgrade.</p> <p>Write Down the Upgrade Type before the upgrade:</p> <p>UPGRADE TYPE: _____</p>
<p>10. <input type="checkbox"/></p>	<p>MPS A: Determine if it is Provisionable or Non-Provisionable EPAP setup.</p>	<p>Execute the following command to determine if the EPAP is Provisionable or Non-Provisionable.</p> <pre># uiEdit grep PROVISIONABLE</pre> <pre>[root@MPS A]# uiEdit grep PROVISIONABLE "PROVISIONABLE_MPS" is set to "YES"</pre>

Procedure 2: Determine if upgrade or installation is required

		If the above output contains “YES”, then the EPAP is Provisionable. Otherwise, the EPAP is Non-Provisionable. Write down this information. EPAP setup type: _____
11. <input type="checkbox"/>	MPS A and B: Procedure Complete.	This procedure is complete.

Procedure 3: Verifying Pre-Upgrade Requirements and Capturing Upgrade Data

S T E P #	This procedure verifies that all pre-upgrade requirements have been met. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT ORACLE’S TEKELEC CUSTOMER CARE CENTER AND ASK FOR <u>UPGRADE ASSISTANCE</u> .	
1. <input type="checkbox"/>	Verify all required materials are present.	Verify that the materials listed in Upgrade Material List (Section 3.2) are present.
2. <input type="checkbox"/>	Verify the availability of passwords for MPS systems.	Refer to Table 5 for the list of users.
3. <input type="checkbox"/>	Review provisioning rules.	Please review the Provisioning information as defined in Section 3.1. If you do not understand the information provided in this section, contact the Technical Assistance Center following the instructions on the front page or the instructions on the Appendix I.

Procedure 4: Assess the MPS Server’s Readiness for Upgrade

S T E P #	This procedure executes the steps required to assess the readiness of a system to be upgraded. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT TECELEC TECHNICAL SERVICES AND ASK FOR <u>UPGRADE ASSISTANCE</u> .	
1. <input type="checkbox"/>	MPS B: Log in as the user “root”.	If not already logged-in, then log in. <hostname> console login: root password: <password>
2. <input type="checkbox"/>	MPS B: Display the /etc/hosts configuration for the pdb entities.	If upgrading the first MPS B of a Provisionable mated pair, execute the following command to display the configuration of pdb entries: # grep pdb /etc/hosts Otherwise, skip to step 4.
3. <input type="checkbox"/>	MPS B: Verify the correct configuration for pdb entities in the /etc/hosts file.	Below is an example of the output of the grep command: 192.168.55.176 host1-a pdba 192.168.61.76 host2-a prova-ip pddb If the command output contains 2 entries (pdba and pddb are both configured), continue to the next step . If the command output does not contain unique entries for pdba and pddb, contact the Technical Assistance Center following the instructions on the front page or the

Procedure 4: Assess the MPS Server's Readiness for Upgrade

		instructions on the Appendix I.
4. <input type="checkbox"/>	MPS B: Determine the mysqld multi log file permissions are correct.	Execute the following command to display the file properties of the mysqld_multi log file: # ls -l /var/TKLC/epap/db/mysqld_multi.log
5. <input type="checkbox"/>	MPS B: Verify the file permissions.	If the ownerships & permissions are not set mysql:mysql and 664, as illustrated below, contact the Technical Assistance Center following the instructions on the front page or the instructions on the Appendix I. -rw-rw-r-- 1 mysql mysql XXXXX MMM dd HH:MM /var/TKLC/epap/db/mysqld_multi.log
6. <input type="checkbox"/>	MPS B: Display the contents of the /var/TKLC/upgrade directory.	Execute the following command to display the presence of EPAP software ISO images: # ls -la /var/TKLC/upgrade
7. <input type="checkbox"/>	MPS B: Delete old ISO images.	Below is an example of the output of the 'ls -la' command: total 1548424 dr-xr-xr-x 2 root root 4096 May 20 15:27 . dr-xr-xr-x 22 root root 4096 May 20 13:25 .. -rw-r--r-- 1 root root 942241792 May 20 15:27 872-2712-101-16.0.0_160.8.0-EPAP-x86_64.iso Remove any ISO images that are not the target software ISO image using the following command: # rm -f /var/TKLC/upgrade/<filename>
8. <input type="checkbox"/>	MPS B: Determine when last reboot occurred. For any server up longer than 180 days would be a candidate for reboot during a maintenance window.	# uptime 15:19:34 up 23 days, 3:05, 2 users, load average: 0.10, 0.13, 0.09
9. <input type="checkbox"/>	MPS B: Disk Integrity step: Executing self test on the disk.	Execute the following command: # smartctl -t short /dev/sda The output on E5-APP-B card would be like: smartctl 5.42 2011-10-20 r3458 [x86_64-linux-2.6.18-308.11.1.el5prere15.5.1_75.14.0] (local build) Copyright (C) 2002-11 by Bruce Allen, http://smartmontools.sourceforge.net === START OF OFFLINE IMMEDIATE AND SELF-TEST SECTION === Sending command: "Execute SMART Short self-test routine immediately in off-line mode". Drive command "Execute SMART Short self-test routine immediately in off-line mode" successful. Testing has begun. Please wait 1 minutes for test to complete. Test will complete after Tue May 27 06:36:51 2014 Use smartctl -X to abort test.

Procedure 4: Assess the MPS Server's Readiness for Upgrade

		Note: Please wait for 5 minutes for the test to complete.
10. <input type="checkbox"/>	MPS B: Disk Integrity step. Contact the Technical Assistance Centre if the output shows any error/failure.	Execute the following command: # smartctl -l selftest /dev/sda The output on E5-APP-B card would be like: smartctl 5.42 2011-10-20 r3458 [x86_64-linux-2.6.18-308.11.1.e15prere15.5.1_75.14.0] (local build) Copyright (C) 2002-11 by Bruce Allen, http://smartmontools.sourceforge.net === START OF READ SMART DATA SECTION === SMART Self-test log structure revision number 1 Num Test_Description Status Remaining LifeTime(hours) LBA_of_first_error # 1 Vendor (0x42) Completed without error 00% 6997 -
11. <input type="checkbox"/>	MPS B: Disk Integrity step Contact the Technical Assistance Center if any output shows "Completed: read failure" or "Error: UNC xxx sectors" .	Execute the following command: # smartctl -a /dev/sda grep -i LBA The output would be like: 241 Total_LBAs_Written 0x0032 100 100 000 Old_age Always - 340851 242 Total_LBAs_Read 0x0032 100 100 000 Old_age Always - 1689714 Num Test_Description Status Remaining LifeTime(hours) LBA_of_first_error SPAN MIN_LBA MAX_LBA CURRENT_TEST_STATUS
12. <input type="checkbox"/>	MPS B: Disk Integrity Test.	Repeat steps 9 to 11 for the following disk drive on E5-APP-B card: a. /dev/sdb
13. <input type="checkbox"/>	MPS A: Log in to the server as user "root".	If not already logged-in, login at MPS A as 'root'. <hostname> console login: root password: <password>
14. <input type="checkbox"/>	MPS A: Repeat checks on Server A.	Repeat steps 2 - 12 on MPS A.
15. <input type="checkbox"/>	MPS A: Verify that HTTPS has been Enabled for a Major Upgrade.	If this is for a Major Upgrade, verify if HTTPS has been enabled. # uiEdit grep HTTPS_ENABLED "HTTPS_ENABLED" is set to "Yes" CAUTION: HTTPS must be enable before a Major upgrade. If "HTTPS_ENABLED" is set to "No", follow the procedure in 7.3.1Appendix D to enable HTTPS before proceeding to the Major Upgrade.
16. <input type="checkbox"/>	Procedure Complete.	This procedure is complete.

4.2.2 Pre and Post Upgrade Health Check

Procedure 5: Pre and Post Upgrade Health Check

S T	This procedure determines the health of the MPS System before beginning an upgrade.
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Procedure 5: Pre and Post Upgrade Health Check

E P #	Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.	
	IF THIS PROCEDURE FAILS, CONTACT ORACLE'S TEKELEC CUSTOMER CARE CENTER AND ASK FOR UPGRADE ASSISTANCE.	
	1. <input type="checkbox"/>	MPS A: Verify health of MPS A. Execute Appendix A.1 on MPS A to verify the health of MPS A.
	2. <input type="checkbox"/>	MPS B: Verify health of MPS B. Execute Appendix A.1 on MPS B to verify the health of MPS B.
3. <input type="checkbox"/>	Procedure Complete. This procedure is complete.	

4.2.3 Pre and Post Upgrade Backups

Procedure 6: Pre and Post Upgrade Backups

S T E P #	This procedure performs the pre and post upgrade backups.	
	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'S TEKELEC CUSTOMER CARE CENTER AND ASK FOR UPGRADE ASSISTANCE.	
	1. <input type="checkbox"/>	MPS A: Backup system configuration on MPS A. Execute Appendix A.3 to backup the system configuration on MPS A.
	2. <input type="checkbox"/>	MPS B: Backup system configuration on MPS B. Execute Appendix A.3 to backup the system configuration on MPS B.
	3. <input type="checkbox"/>	MPS B: Backup RTDB database. Execute Appendix A.5 to backup the RTDB database on MPS B.
	4. <input type="checkbox"/>	MPS A: Backup PDB database (EPAP only). Execute Appendix A.4 to backup the PDB on MPS A of the Active PDBA. NOTE: Only execute this step if the MPS-A is configured as a Provisionable node. Check the output of Procedure 2, step 10 to verify if MPS A is Provisionable or not.
5. <input type="checkbox"/>	MPS A: Backup user database. Execute Appendix A.6 to backup the user database on MPS A.	
6. <input type="checkbox"/>	MPS A: Procedure Complete. This procedure is complete.	

4.2.4 Pre-Upgrade System Date/Time Check

Procedure 7: Pre-Upgrade System Time Check

S T E P #	This procedure performs the pre-upgrade system time check.
	Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.
	IF THIS PROCEDURE FAILS, CONTACT ORACLE'S TEKELEC CUSTOMER CARE CENTER AND ASK FOR UPGRADE ASSISTANCE.
<p>The MPS servers make use of NTP to keep time synchronized between servers. Under some circumstances, either at initial installation in the customer's network or due to power interruption and battery failure, it is possible for an MPS server to have a system date/time value too large for NTP to correct. If the system time is 20 minutes or more off from the real time, NTP cannot correct it.</p> <p>Check the date/time on <i>both</i> MPS-A and MPS-B servers, and correct the system time on any server off by more than 15 minutes from the real time.</p>	

1. <input type="checkbox"/>	MPS A: Login as the user "root".	If not already logged-in, then login at MPS A: <hostname> console login: root password: <password>
2. <input type="checkbox"/>	MPS A: Execute the "date" command.	Execute the "date" command and examine the result. # ssh mate date; date Thu May 22 11:36:43 EDT 2014 Thu May 22 11:36:43 EDT 2014
3. <input type="checkbox"/>	MPS A: Compare result to the real time.	Compare the result from the "date" command in the previous step to the real time. If the difference is 15 minutes or less, then this procedure is complete, Otherwise if the difference exceeds 15 minutes, contact the Oracle's Tekelec Customer Care Center following the instructions on the front page or the instructions on the Appendix I.
4. <input type="checkbox"/>	MPS A: Procedure Complete.	This procedure is complete

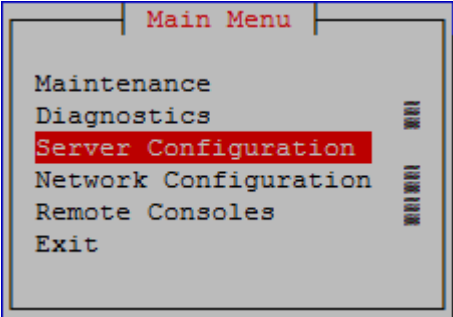
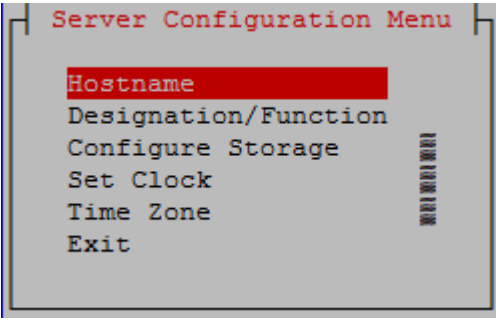
5. SOFTWARE INSTALLATION PROCEDURES

Pre install configuration (Section 5.1) and initial installation of EPAP (Section 5.2) can be done on any of the server in the mated pair in any order. These operations can be done simultaneously on both the servers.

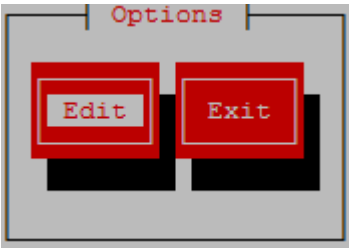
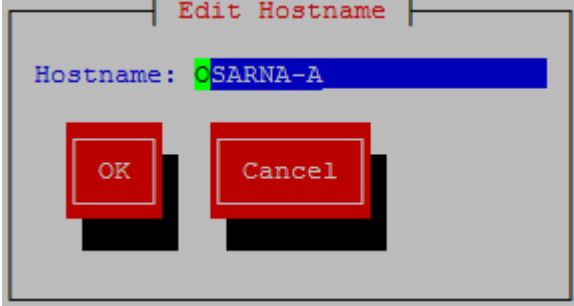
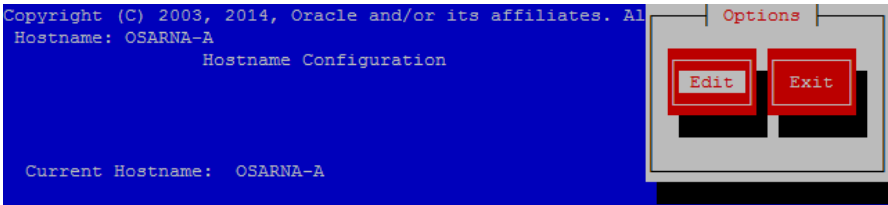
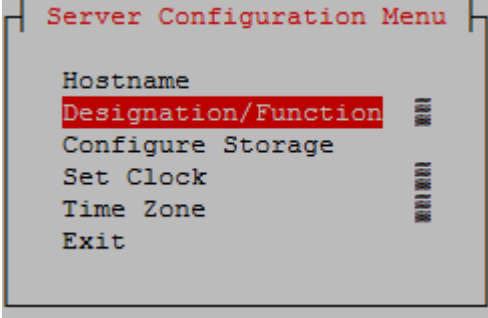
5.1 Pre Installation Configuration

5.1.1 Server A

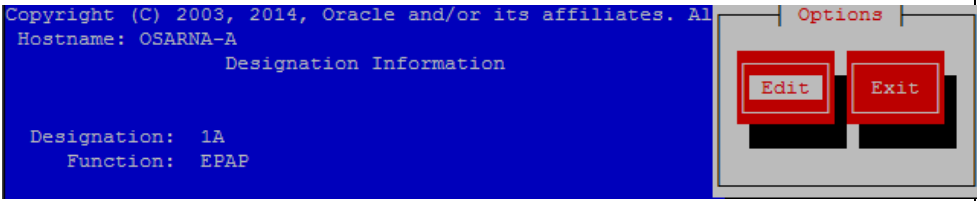
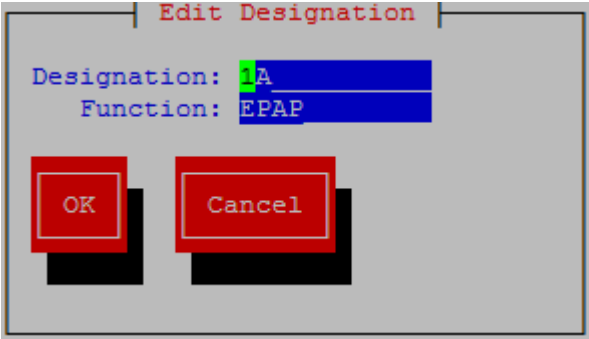
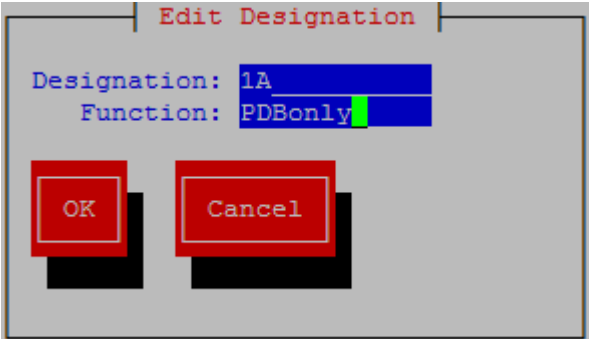
Procedure 8: Set up hostname, Server Designation and Time on Server A

S T E P #	<p>This procedure provides instructions to perform pre configuration for an initial install of the application.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT ORACLE'S TEKELEC CUSTOMER CARE CENTER AND ASK FOR ASSISTANCE.</p>	
<p>IMPORTANT: Installation of the Operating System on a Oracle's Tekelec Application Server should be completed before starting installation procedure. Refer to [4] for TPD installation guide.</p>		
1. <input type="checkbox"/>	Connect to the Server.	<p>If not already connected, connect to the E5-APP-B card via the serial port.</p> <p>For connecting the E5-APP-B A card, disconnect the console cable from the serial port on the E5-APP-B B card's adapter. The cable should be disconnected at the point where it connects to the serial port labeled 'S1' on the E5-APP-B B card's adapter and use it for serial access. Cable part numbers - 830-1220-xx</p>
2. <input type="checkbox"/>	Log in as "root" user.	<p>If not already logged in, then login as "root": [hostname] consolelogin: root password: <i>password</i></p>
3. <input type="checkbox"/>	Start platcfg utility.	# su - platcfg
4. <input type="checkbox"/>	Navigate to the Server Configuration screen.	<p>Select Server Configuration and press [ENTER]</p>  <p>The screenshot shows a terminal window titled "Main Menu" with the following options: Maintenance, Diagnostics, Server Configuration (highlighted in red), Network Configuration, Remote Consoles, and Exit. There are vertical bars on the right side of the menu.</p>
5. <input type="checkbox"/>	Navigate to the Hostname screen.	<p>Select Hostname and press [ENTER]</p>  <p>The screenshot shows a terminal window titled "Server Configuration Menu" with the following options: Hostname (highlighted in red), Designation/Function, Configure Storage, Set Clock, Time Zone, and Exit. There are vertical bars on the right side of the menu.</p>

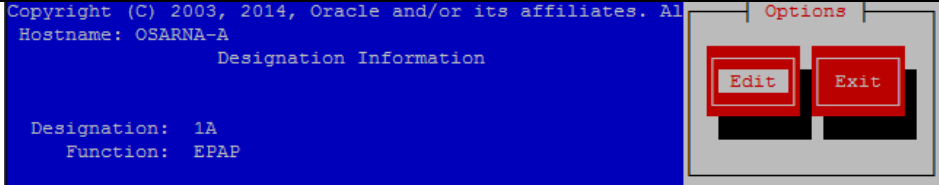
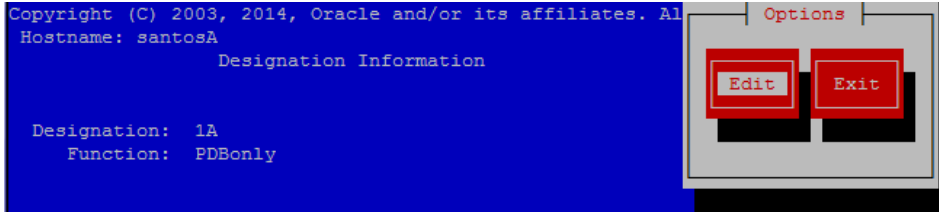
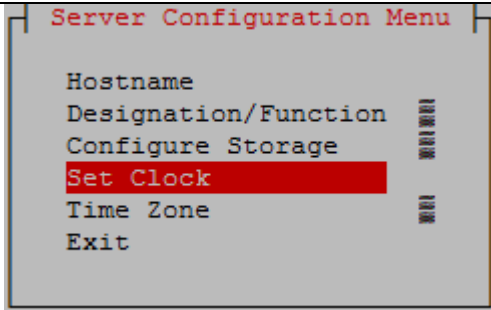
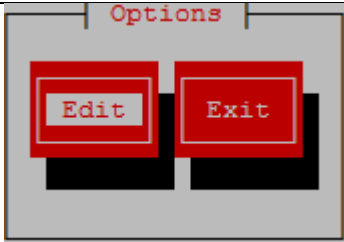
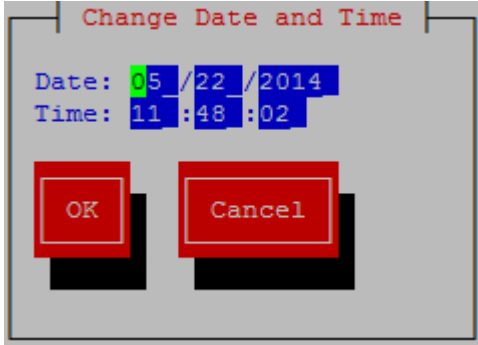
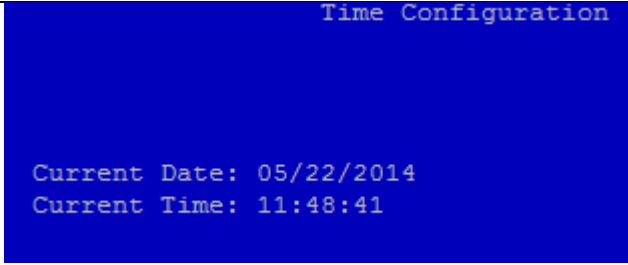
Procedure 8: Set up hostname, Server Designation and Time on Server A

<p>6. <input type="checkbox"/></p>	<p>Select Edit to edit the hostname.</p>	<p>Select Edit and press [ENTER]</p> 
<p>7. <input type="checkbox"/></p>	<p>Enter the hostname and press ok.</p>	<p>Delete the default entry and enter the Hostname as mps-xxxx-a where xxxx is the last 4 digits of server serial number. Press OK when done.</p> 
<p>8. <input type="checkbox"/></p>	<p>Exit Back to the Server Configuration Menu.</p>	<p>Select EXIT to exit back to the Server Configuration Menu. Verify that the hostname has been properly set.</p> 
<p>9. <input type="checkbox"/></p>	<p>Navigate to the Designation/Function menu option.</p>	<p>Select Designation/Function and press [ENTER]</p> 
<p>10. <input type="checkbox"/></p>	<p>View the current designation and function.</p>	<p>The screen will show the current designation and function setting. On initial install, these fields are blank.</p>

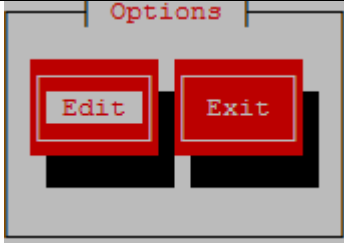
Procedure 8: Set up hostname, Server Designation and Time on Server A

		 <p>Copyright (C) 2003, 2014, Oracle and/or its affiliates. All rights reserved. Hostname: OSARNA-A Designation Information Designation: 1A Function: EPAP</p> <p>If not blank, the values should be as follows for Mixed EPAP or Non-Provisional EPAP.</p> <ol style="list-style-type: none"> 1. The Designation is “1A” for the A server 2. The Function field should be set to EPAP. <p>If not blank, the values should be as follows for Standalone PDB.</p> <ol style="list-style-type: none"> 1. The Designation is “1A” for the A server 2. The Function field should be set to PDBOnly. <p>If both the fields are blank or either value is not correct, then select Edit and press [ENTER]. If both values are correct, select Exit, press [ENTER] and skip the next step.</p>
<p>11. <input type="checkbox"/></p>	<p>View the current designation and function.</p>	<p>Skip to Step 13 if Exit was selected in the previous step, otherwise if Edit was selected, delete the current designation and function if already set, and type in the desired values. Enter the appropriate designation in the Designation field (Note: the designation must be capitalized). Select OK and press [ENTER].</p> <p>For Mixed EPAP or Non-Provisional EPAP, the following is a correct example:</p>  <p>For Standalone PDB, the following is a correct example:</p> 
<p>12.</p>	<p>Verify that the Designation and</p>	<p>For Mixed EPAP or Non-Provisional EPAP, the following is a correct example:</p>

Procedure 8: Set up hostname, Server Designation and Time on Server A

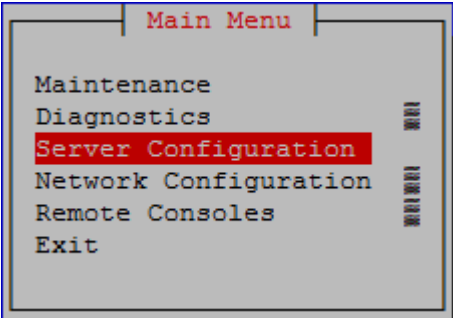
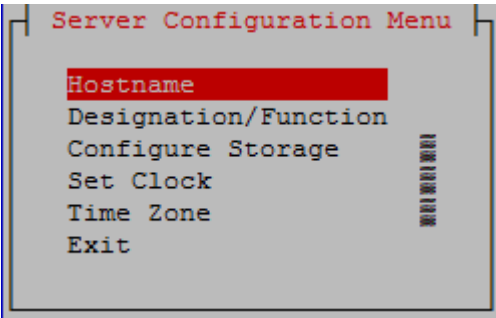
<input type="checkbox"/>	<p>Function information is correct then select and press “Exit”.</p>	 <p>Copyright (C) 2003, 2014, Oracle and/or its affiliates. All rights reserved. Hostname: OSARNA-A Designation Information Designation: 1A Function: EPAP</p> <p>Options Edit Exit</p> <p>For Standalone PDB, the following is a correct example:</p>  <p>Copyright (C) 2003, 2014, Oracle and/or its affiliates. All rights reserved. Hostname: santosA Designation Information Designation: 1A Function: PDBOnly</p> <p>Options Edit Exit</p>
<p>13.</p> <input type="checkbox"/>	<p>Select “Set Clock” Menu.</p>	 <p>Server Configuration Menu Hostname Designation/Function Configure Storage Set Clock Time Zone Exit</p>
<p>14.</p> <input type="checkbox"/>	<p>1) Select “Edit” from the options dialogue box.</p> <p>2) Using an NTP source, set the Date/Time to be correct for the Eastern Time zone (GMT -5) and press “OK”.</p> <p>NOTE: All systems default to Eastern time post IPM. It is important to set the time for the Eastern Time zone at this time.</p>	 <p>Options Edit Exit</p>  <p>Change Date and Time Date: 05 / 22 / 2014 Time: 11 : 48 : 02 OK Cancel</p>
<p>15.</p> <input type="checkbox"/>	<p>Verify that the Date and Time is correct then select and press “Exit”.</p>	 <p>Time Configuration Current Date: 05/22/2014 Current Time: 11:48:41</p>

Procedure 8: Set up hostname, Server Designation and Time on Server A

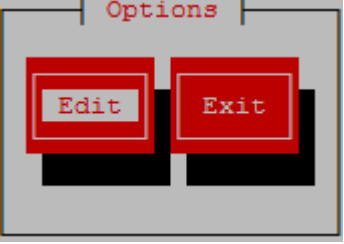
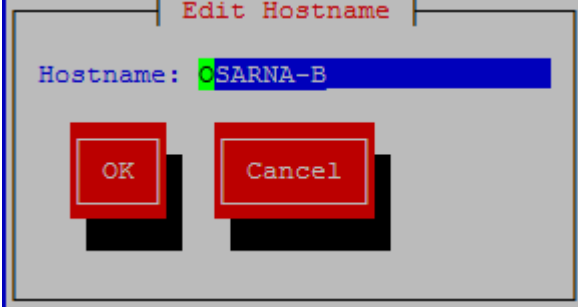
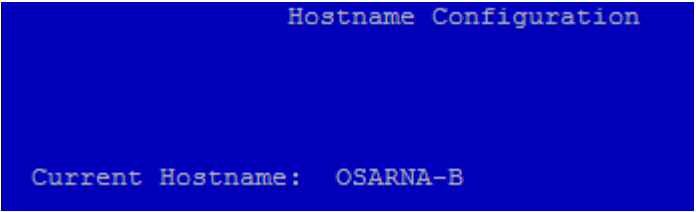
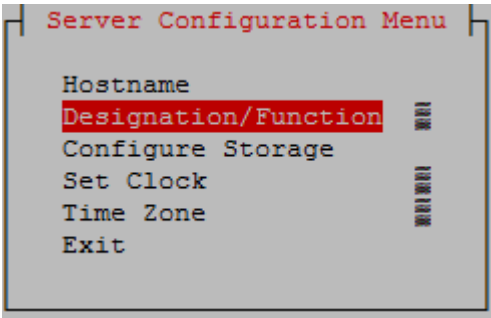
		
16. <input type="checkbox"/>	Exit from platcfg menu.	Select EXIT until the platcfg menu is closed and the command line is displayed.
17. <input type="checkbox"/>	Reboot the Server.	# reboot
18. <input type="checkbox"/>	Procedure complete.	Procedure is complete.

5.1.2 Server B

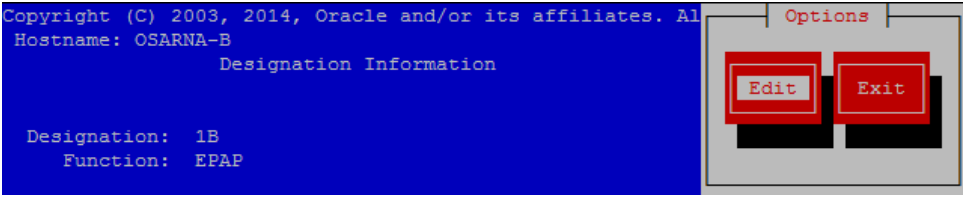
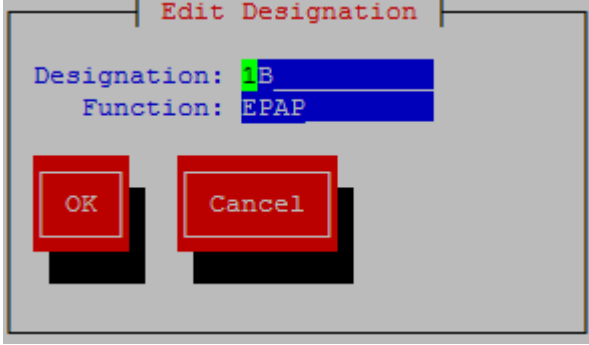
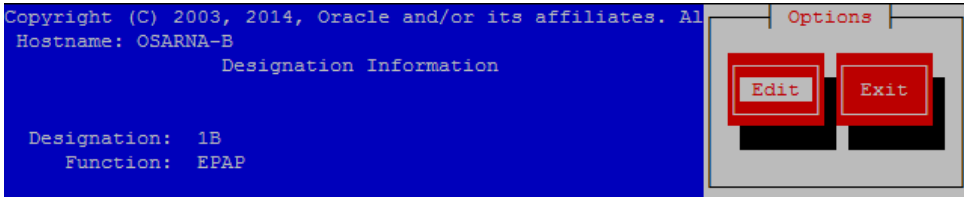
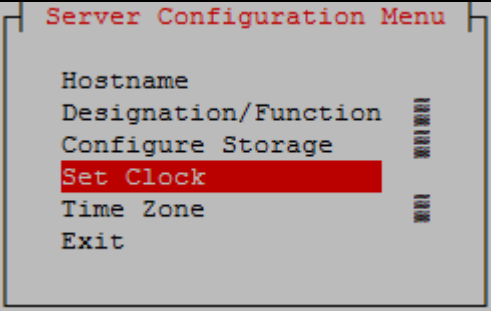
Procedure 9: Set up hostname, Server Designation and Time on Server B

S T E P #	<p>This procedure provides instructions to perform pre configuration for an initial install of the application.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT ORACLE'S TEKELEC CUSTOMER CARE CENTER AND ASK FOR ASSISTANCE.</p>	
<p>IMPORTANT: Installation of the Operating System on a Oracle's Tekelec Application Server should be completed before starting installation procedure. Refer to [4] for TPD installation.</p>		
1. <input type="checkbox"/>	Connect to the Server.	<p>If not already connected, connect to the E5-APP-B card via the serial port.</p> <p>For connecting the E5-APP-B B card, disconnect the console cable from the serial port on the E5-APP-B A card's adapter. The cable should be disconnected at the point where it connects to the serial port labeled 'S1' on the E5-APP-B A card's adapter and use it for serial access. Cable part numbers - 830-1220-xx</p>
2. <input type="checkbox"/>	Log in as "root" user.	<p>If not already logged in, then login as 'root':</p> <pre>[hostname] consolelogin: root password: password</pre>
3. <input type="checkbox"/>	Start platcfg utility.	<pre># su - platcfg</pre>
4. <input type="checkbox"/>	Navigate to the Server Configuration screen.	<p>Select Server Configuration and press [ENTER]</p>  <p>The screenshot shows a terminal window titled 'Main Menu' with the following options: Maintenance, Diagnostics, Server Configuration (highlighted with a red bar), Network Configuration, Remote Consoles, and Exit. There are vertical bars on the right side of the menu.</p>
5. <input type="checkbox"/>	Navigate to the Hostname screen.	<p>Select Hostname and press [ENTER]</p>  <p>The screenshot shows a terminal window titled 'Server Configuration Menu' with the following options: Hostname (highlighted with a red bar), Designation/Function, Configure Storage, Set Clock, Time Zone, and Exit. There are vertical bars on the right side of the menu.</p>
6. <input type="checkbox"/>	Select Edit to edit the hostname.	<p>Select Edit and press [ENTER]</p>

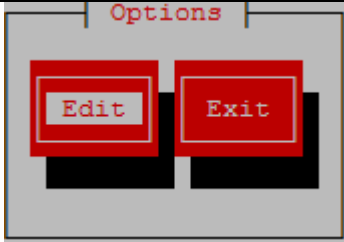
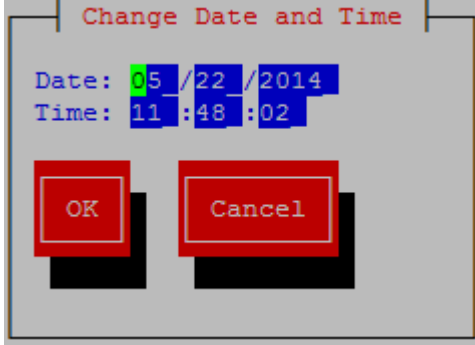
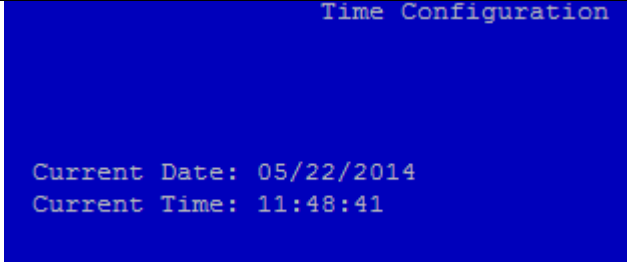
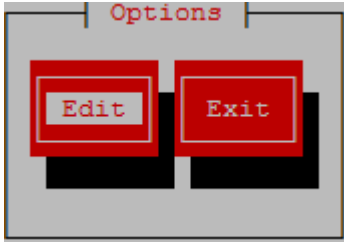
Procedure 9: Set up hostname, Server Designation and Time on Server B

		
<p>7. <input type="checkbox"/></p>	<p>Enter the hostname and press ok.</p>	<p>Delete the default entry and enter the Hostname as mps-xxxx-b where xxxx is the last 4 digits of server serial number. Press OK when done.</p> 
<p>8. <input type="checkbox"/></p>	<p>Exit Back to the Server Configuration Menu.</p>	<p>Select EXIT to exit back to the Server Configuration Menu. Verify that the hostname has been properly set.</p> 
<p>9. <input type="checkbox"/></p>	<p>Navigate to the Designation/Function menu option.</p>	<p>Select Designation/Function and press [ENTER]</p> 
<p>10. <input type="checkbox"/></p>	<p>View the current designation and function.</p>	<p>The screen will show the current designation and function setting. On initial install, these fields are blank.</p>

Procedure 9: Set up hostname, Server Designation and Time on Server B

		 <p>Copyright (C) 2003, 2014, Oracle and/or its affiliates. All rights reserved. Hostname: OSARNA-B Designation Information Designation: 1B Function: EPAP</p> <p>If not blank the values should be as follows.</p> <ol style="list-style-type: none"> 1. The Designation is “1B” for the B server 2. The Function field should be set to EPAP. <p>If either value is not correct, then select Edit and press [ENTER]. If both values are correct, select Exit, press [ENTER] and skip the next step.</p>
<p>11. <input type="checkbox"/></p>	<p>View the current designation and function.</p>	<p>Skip to Step 13 if Exit was selected in the previous step, otherwise if Edit was selected, delete the current designation and function if already set, and type in the desired values. Enter the appropriate designation in the Designation field (Note: The designation must be capitalized). Select OK and press [ENTER].</p> 
<p>12. <input type="checkbox"/></p>	<p>Verify that the Designation and Function information is correct then select and press “Exit”.</p>	
<p>13. <input type="checkbox"/></p>	<p>Select “Set Clock” Menu.</p>	

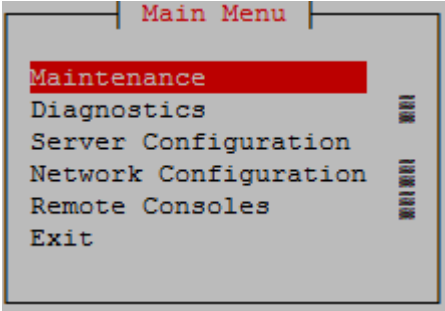
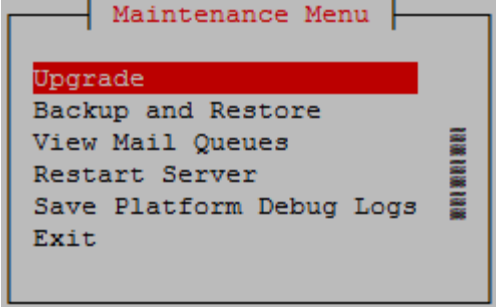
Procedure 9: Set up hostname, Server Designation and Time on Server B

<p>14. <input type="checkbox"/></p>	<p>1) Select "Edit" from the options dialogue box.</p> <p>2) Using an NTP source, set the Date/Time to be correct for the Eastern Time zone (GMT -5) and press "OK".</p> <p>NOTE: All systems default to Eastern time post IPM. It is important to set the time for the Eastern Time zone at this time.</p>	 
<p>15. <input type="checkbox"/></p>	<p>Verify that the Date and Time is correct then select and press "Exit".</p>	 
<p>16. <input type="checkbox"/></p>	<p>Exit from platcfg menu.</p>	<p>Select EXIT until the platcfg menu is closed and the command line is displayed.</p>
<p>17. <input type="checkbox"/></p>	<p>Reboot the Server.</p>	<p># reboot</p>
<p>18. <input type="checkbox"/></p>	<p>Procedure complete.</p>	<p>Procedure is complete.</p>

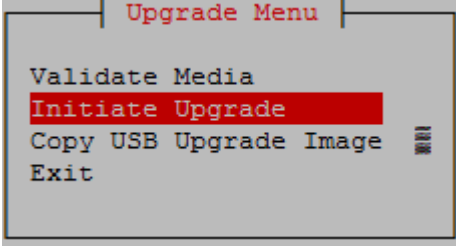
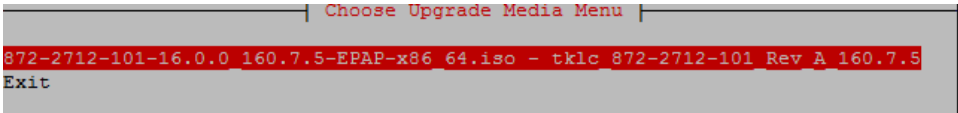

5.2 Install the Application

5.2.1 Installing the Application on Side 1A

Procedure 10: Install the Application on side 1A

S T E P #	<p>This procedure installs the application on the server.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT ORACLE'S TEKELEC CUSTOMER CARE CENTER AND ASK FOR ASSISTANCE.</p>	
1. <input type="checkbox"/>	MPS A: Install EPAP on 1A.	Perform Procedure in B.1 or copy EPAP 16.0 ISO to /var/TKLC/upgrade directory.
2. <input type="checkbox"/>	Create a terminal window and log into MPS A.	<p>If not already connected, connect to the E5-APP-B card via the serial Port.</p> <p>For connecting the E5-APP-B A card, disconnect the console cable from the serial port on the E5-APP-B B card's adapter. The cable should be disconnected at the point where it connects to the serial port labeled 'S1' on the E5-APP-B B card's adapter and use it for serial access. Cable part numbers - 830-1220-xx</p>
3. <input type="checkbox"/>	MPS A: Login prompt is displayed.	<pre><hostname> console login:</pre> <p>Note: Hit enter if no login prompt is displayed.</p>
4. <input type="checkbox"/>	MPS A: log in as "root" user.	<pre>[hostname] consolelogin: root password: password</pre>
5. <input type="checkbox"/>	MPS A: Start platcfg utility.	<pre># su - platcfg</pre>
6. <input type="checkbox"/>	MPS A: Select the Maintenance submenu.	<p>The platcfg Main Menu appears. On the Main Menu, select Maintenance and press [ENTER].</p>  <pre> Main Menu ----- Maintenance Diagnostics Server Configuration Network Configuration Remote Consoles Exit </pre>
7. <input type="checkbox"/>	MPS A: Navigate to the Initiate Upgrade menu.	<p>Select the Upgrade menu and press [ENTER].</p>  <pre> Maintenance Menu ----- Upgrade Backup and Restore View Mail Queues Restart Server Save Platform Debug Logs Exit </pre> <p>Select the Initiate Upgrade menu and press [ENTER].</p>

Procedure 10: Install the Application on side 1A

		
<p>8. <input type="checkbox"/></p>	<p>MPS A: Select the Upgrade Media.</p>	<p>The screen displays a message that it is searching for upgrade media. When the upgrade media is found, an Upgrade Media selection menu appears similar to the example below. Select the desired upgrade media and press [ENTER]. There should only be one selection available, as in the example below.</p> 
<p>9. <input type="checkbox"/></p>	<p>MPS A: Upgrade proceeds.</p>	<p>The screen displays the output like following, indicating that the upgrade software is first validating the media, and then proceeding with the upgrade.</p> <pre> Initializing Upgrade Wrapper ... Validating packages ... </pre>
<p>10. <input type="checkbox"/></p>	<p>MPS A: Upgrade proceeds.</p>	<p>Many informational messages appear on the terminal screen as the upgrade proceeds. The messages are not shown here for clarity sake. When installation is complete, the server reboots.</p>
<p>11. <input type="checkbox"/></p>	<p>MPS A: Upgrade completed.</p>	<p>After the final reboot, the screen displays the login prompt as in the example below.</p> 
<p>12. <input type="checkbox"/></p>	<p>MPS A: log in as "root" user.</p>	<pre> [hostname] consolelogin: root password: password </pre>
<p>13. <input type="checkbox"/></p>	<p>MPS A: Check the</p>	<p>Examine the upgrade logs in the directory /var/TKLC/log/upgrade and verify that no</p>

Procedure 10: Install the Application on side 1A

<input type="checkbox"/>	<p>Upgrade log.</p>	<p>errors and warnings were reported.</p> <pre># grep -i error /var/TKLC/log/upgrade/upgrade.log</pre> <p>Check the output of the upgrade log, Contact the Technical Assistance Center following the instructions on the front page or the instructions on the Appendix I, if the output contains any errors beside the following:</p> <ol style="list-style-type: none"> 1. Variable and RPMs that might contain the word error in them <p>Example:</p> <pre>1340737587::Error: No supported management controller found 1340738300::perl-Class-ErrorHandler ##### 1340738322::Checking perl-Class-ErrorHandler-0.01-15.0.0_150.3.0.noarch.rpm: PASSED</pre> <p>All those messages are expected, and therefore aren't considered errors. Also note that sometime a carriage return is inserted in the log file causing some of the error messages to appear truncated. This is acceptable and should be ignored.</p> <pre># grep -i warning /var/TKLC/log/upgrade/upgrade.log</pre> <p>Examine the output of the above command to determine if any warnings were reported. Contact the Technical Assistance Center following the instructions on the front page or the instructions on the Appendix I, if the output contains any warnings beside the following:</p> <pre>1399366635::2014-05-06 04:57:15 0 [warning] TIMESTAMP with implicit DEFAULT value is deprecated. Please use --explicit_defaults_for_timestamp server option (see documentation for more details). 1399366636::2014-05-06 04:57:16 15078 [warning] InnoDB: New log files created, LSN=45781 1399366636::2014-05-06 04:57:16 15078 [warning] InnoDB: Creating foreign key constraint system tables. 1399366638::2014-05-06 04:57:17 0 [warning] TIMESTAMP with implicit DEFAULT value is deprecated. Please use --explicit_defaults_for_timestamp server option (see documentation for more details). 1399366640::WARNING: Default config file /etc/my.cnf exists on the system 1399366641::useradd: warning: the home directory already exists. 1399366643::WARNING: could not write to config file /usr/my-new.cnf: Permission denied 1399366644::Installing MySQL system tables...2014-05-06 04:57:23 15817 [warning] Buffered warning: Changed limits: max_open_files: 1024 (requested 5000) 1399366644::2014-05-06 04:57:23 15817 [warning] Buffered warning: Changed limits: max_connections: 214 (requested 300) 1399366644::2014-05-06 04:57:23 15817 [warning] Buffered warning: Changed limits: table_cache: 400 (requested 2000) 1399367124::2014-05-06 05:05:23 15817 [warning] InnoDB: New log files created, LSN=45783 1399367124::2014-05-06 05:05:23 15817 [warning] InnoDB: Creating foreign key constraint system tables. 1399367126::Filling help tables...2014-05-06 05:05:25 16826 [warning] Buffered warning: Changed limits: max_open_files: 1024 (requested 5000) 1399367126::2014-05-06 05:05:25 16826 [warning] Buffered warning: Changed limits: max_connections: 214 (requested 300) 1399367126::2014-05-06 05:05:25 16826 [warning] Buffered warning: Changed limits: table_cache: 400 (requested 2000) 1399367128::WARNING: Could not copy config file template /usr/share/mysql/my-default.cnf to 1399367128::WARNING: Default config file /etc/my.cnf exists on the system 1399367129::WARNING: Could not write to config file /usr/my-new.cnf: Permission denied 1399367130::Installing MySQL system tables...2014-05-06 05:05:30 0 [warning] TIMESTAMP with implicit DEFAULT value is deprecated. Please use --explicit_defaults_for_timestamp server option (see documentation for more details). 1399367130::2014-05-06 05:05:30 17618 [warning] Buffered warning: Changed limits: max_open_files: 1024 (requested 5000) 1399367130::2014-05-06 05:05:30 17618 [warning] Buffered warning: Changed limits: table_cache: 431 (requested 2000) 1399367131::2014-05-06 05:05:31 17618 [warning] InnoDB: New log files created, LSN=45781 1399367131::2014-05-06 05:05:31 17618 [warning] InnoDB: Creating foreign key constraint system tables. 1399367133::Filling help tables...2014-05-06 05:05:33 0 [warning] TIMESTAMP</pre>
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Procedure 10: Install the Application on side 1A

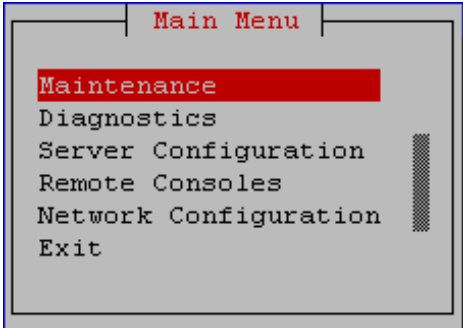
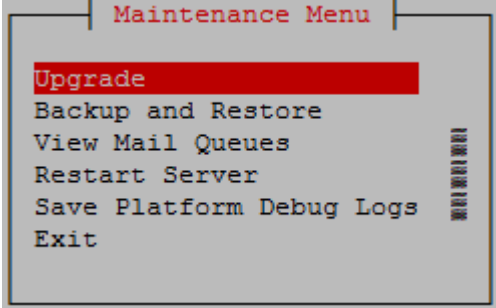
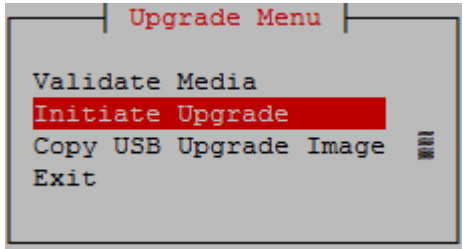
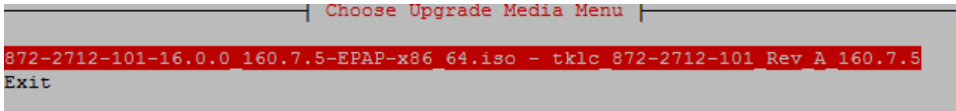
		<p>with implicit DEFAULT value is deprecated. Please use --explicit_defaults_for_timestamp server option (see documentation for more details) 1399367133::2014-05-06 05:05:33 17647 [warning] Buffered warning: Changed limits: max_open_files: 1024 (requested 5000) 1399367133::2014-05-06 05:05:33 17647 [warning] Buffered warning: Changed limits: table_cache: 431 (requested 2000) 1399367135::WARNING: Could not copy config file template /usr/share/mysql/my-default.cnf to 1399367135::WARNING: Default config file /etc/my.cnf exists on the system 1399367159::WARNING: A new file was added to xml alarm files...reparsing xml... 1399367159::WARNING: FILE: /usr/TKLC/plat/etc/alarms/alarms_mps.xml 1399367166::TKLCepap-HA #####warning: group root} does not exist - using root 1399367181::WARNING: Stale PID file /var/TKLC/run/RunAndLog/13373.pid detected!</p> <p>Refer to section 3.7 to know more about logging.</p>
<input type="checkbox"/>	MPS A: Check that the upgrade completed successfully.	# grep "UPGRADE IS COMPLETE" /var/TKLC/log/upgrade/upgrade.log
<input type="checkbox"/>	MPS A: Select the most recent upgrade log.	<p>Verify that the message "UPGRADE IS COMPLETE" is displayed. If it is not, contact the Technical Assistance Center following the instructions on the front page or the instructions on the Appendix I.</p> <p>1399367207:: UPGRADE IS COMPLETE</p>
<input type="checkbox"/>	MPS A: Fix mysql System Table not found issue.	Execute Appendix F to fix MySQL System Table not found issue.
<input type="checkbox"/>	MPS A: Install Complete.	Install Procedure is complete.

5.2.2 Installing the Application on Side 1B

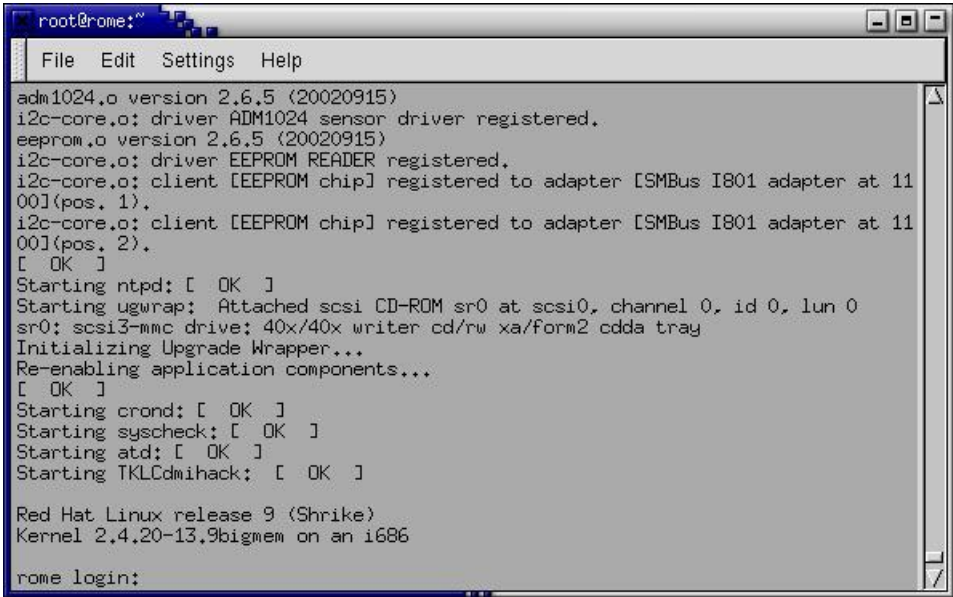
Procedure 11: Install the Application on side 1B

S T E P #	<p>This procedure installs the application on the server.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT ORACLE'S TEKELEC CUSTOMER CARE CENTER AND ASK FOR ASSISTANCE.</p>	
<input type="checkbox"/>	1. MPS B: Install 1B.	Perform Procedure in B.1 or copy EPAP 16.0 ISO to /var/TKLC/upgrade directory.
<input type="checkbox"/>	2. Create a terminal window log into MPS B.	<p>If not already connected, connect to the E5-APP-B card via the serial port.</p> <p>For connecting the E5-APP-B B card, disconnect the console cable from the serial port on the E5-APP-B A card's adapter. The cable should be disconnected at the point where it connects to the serial port labeled 'S1' on the E5-APP-B A card's adapter and use it for serial access. Cable part numbers - 830-1220-xx</p>
<input type="checkbox"/>	3. MPS B: Login prompt is displayed.	<p><hostname> console login:</p> <p>Note: Hit enter if no login prompt is displayed.</p>
<input type="checkbox"/>	4. MPS B: log in as "root" user.	<p>[hostname] consolelogin: root</p> <p>password: password</p>

Procedure 11: Install the Application on side 1B

5.	<input type="checkbox"/> MPS B: Start platcfg utility.	<pre># su - platcfg</pre>
6.	<input type="checkbox"/> MPS B: Select the Maintenance submenu.	<p>The platcfg Main Menu appears. On the Main Menu, select Maintenance and press [ENTER].</p>  <pre> Main Menu ----- Maintenance Diagnostics Server Configuration Remote Consoles Network Configuration Exit </pre>
7.	<input type="checkbox"/> MPS B: Navigate to the Initiate Upgrade menu.	<p>Select the Upgrade menu and press [ENTER].</p>  <pre> Maintenance Menu ----- Upgrade Backup and Restore View Mail Queues Restart Server Save Platform Debug Logs Exit </pre> <p>Select the Initiate Upgrade menu and press [ENTER].</p>  <pre> Upgrade Menu ----- Validate Media Initiate Upgrade Copy USB Upgrade Image Exit </pre>
8.	<input type="checkbox"/> MPS B: Select the Upgrade Media.	<p>The screen displays a message that it is searching for upgrade media. When the upgrade media is found, an Upgrade Media selection menu appears similar to the example below. Select the desired upgrade media and press [ENTER]. There should only be one selection available, as in the example below.</p>  <pre> Choose Upgrade Media Menu ----- 872-2712-101-16.0.0 160.7.5-EPAP-x86 64.iso - tk1c 872-2712-101 Rev A 160.7.5 Exit </pre>
9.	<input type="checkbox"/> MPS B: Upgrade proceeds.	<p>The screen displays the following, indicating that the upgrade software is first validating the media, and then proceeding with the upgrade.</p> <pre> Initializing Upgrade Wrapper ... Validating packages ... </pre>

Procedure 11: Install the Application on side 1B

<p>10. <input type="checkbox"/></p>	<p>MPS B: Upgrade proceeds.</p>	<p>Many informational messages appear on the terminal screen as the upgrade proceeds. The messages are not shown here for clarity sake.</p> <p>When installation is complete, the server reboots.</p>
<p>11. <input type="checkbox"/></p>	<p>MPS B: Upgrade completed.</p>	<p>After the final reboot, the screen displays the login prompt as in the example below.</p>  <p>The screenshot shows a terminal window titled 'root@rome:~'. The menu bar includes 'File Edit Settings Help'. The output of the boot process includes: 'adm1024.o version 2.6.5 (20020915)', 'i2c-core.o: driver ADM1024 sensor driver registered.', 'eeprom.o version 2.6.5 (20020915)', 'i2c-core.o: driver EEPROM READER registered.', 'i2c-core.o: client [EEPROM chip] registered to adapter [SMBus I801 adapter at 1100](pos. 1).', 'i2c-core.o: client [EEPROM chip] registered to adapter [SMBus I801 adapter at 1100](pos. 2).', '[OK]', 'Starting ntpd: [OK]', 'Starting ugwrap: Attached scsi CD-ROM sr0 at scsi0, channel 0, id 0, lun 0', 'sr0: scsi3-mmc drive: 40x/40x writer cd/rw xa/form2 cdda tray', 'Initializing Upgrade Wrapper...', 'Re-enabling application components...', '[OK]', 'Starting crond: [OK]', 'Starting syscheck: [OK]', 'Starting atd: [OK]', 'Starting TKLcdmihack: [OK]', 'Red Hat Linux release 9 (Shrike)', 'Kernel 2.4.20-13.9bigmem on an i686', and 'rome login:'.</p>
<p>12. <input type="checkbox"/></p>	<p>MPS B: log in as "root" user.</p>	<p>[hostname] consolelogin: root password: password</p>
<p>13. <input type="checkbox"/></p>	<p>MPS B: Check the Upgrade log.</p>	<p>Examine the upgrade logs in the directory /var/TKLC/log/upgrade and verify that no errors and warnings were reported.</p> <p># grep -i error /var/TKLC/log/upgrade/upgrade.log</p> <p>Check the output of the upgrade log, Contact the Technical Assistance Center following the instructions on the front page or the instructions on the Appendix I, if the output contains any errors beside the following:</p> <ol style="list-style-type: none"> 1. Variable and RPMs that might contain the word error in them <p>Example: 1340737587::Error: No supported management controller found 1340738300::perl-class-ErrorHandler ##### 1340738322::Checking perl-class-ErrorHandler-0.01-15.0.0_150.3.0.noarch.rpm: PASSED</p> <p>All those messages are expected, and therefore aren't considered errors. Also note that sometime a carriage return is inserted in the log file causing some of the error messages to appear truncated. This is acceptable and should be ignored.</p> <p># grep -i warning /var/TKLC/log/upgrade/upgrade.log</p> <p>Examine the output of the above command to determine if any warnings were reported. Contact the Technical Assistance Center following the instructions on the front page or the instructions on the Appendix I, if the output contains any warnings beside the following:</p>

Procedure 11: Install the Application on side 1B

		<pre> 1399366696::2014-05-06 04:58:16 0 [warning] TIMESTAMP with implicit DEFAULT value is deprecated. Please use --explicit_defaults_for_timestamp server option (see documentation for more details). 1399366697::2014-05-06 04:58:17 15219 [warning] InnoDB: New log files created, LSN=45781 1399366697::2014-05-06 04:58:17 15219 [warning] InnoDB: Creating foreign key constraint system tables. 1399366699::2014-05-06 04:58:19 0 [warning] TIMESTAMP with implicit DEFAULT value is deprecated. Please use --explicit_defaults_for_timestamp server option (see documentation for more details). 1399366702::WARNING: Default config file /etc/my.cnf exists on the system 1399366703::useradd: warning: the home directory already exists. 1399366705::WARNING: could not write to config file /usr/my-new.cnf: Permission denied 1399366706::Installing MySQL system tables...2014-05-06 04:58:25 15964 [warning] Buffered warning: Changed limits: max_open_files: 1024 (requested 5000) 1399366706::2014-05-06 04:58:25 15964 [warning] Buffered warning: Changed limits: max_connections: 214 (requested 300) 1399366706::2014-05-06 04:58:25 15964 [warning] Buffered warning: Changed limits: table_cache: 400 (requested 2000) 1399366769::2014-05-06 04:59:28 15964 [warning] InnoDB: New log files created, LSN=45782 1399366769::2014-05-06 04:59:28 15964 [warning] InnoDB: Creating foreign key constraint system tables. 1399366771::Filling help tables...2014-05-06 04:59:30 16131 [warning] Buffered warning: Changed limits: max_open_files: 1024 (requested 5000) 1399366771::2014-05-06 04:59:30 16131 [warning] Buffered warning: Changed limits: max_connections: 214 (requested 300) 1399366771::2014-05-06 04:59:30 16131 [warning] Buffered warning: Changed limits: table_cache: 400 (requested 2000) 1399366773::WARNING: could not copy config file template /usr/share/mysql/my- default.cnf to 1399366773::WARNING: Default config file /etc/my.cnf exists on the system 1399366774::WARNING: Could not write to config file /usr/my-new.cnf: Permission denied 1399366775::Installing MySQL system tables...2014-05-06 04:59:34 0 [warning] TIMESTAMP with implicit DEFAULT value is deprecated. Please use -- explicit_defaults_for_timestamp server option (see documentation for more details). 1399366775::2014-05-06 04:59:34 16922 [warning] Buffered warning: Changed limits: max_open_files: 1024 (requested 5000) 1399366775::2014-05-06 04:59:34 16922 [warning] Buffered warning: Changed limits: table_cache: 431 (requested 2000) 1399366776::2014-05-06 04:59:34 16922 [warning] InnoDB: New log files created, LSN=45781 1399366776::2014-05-06 04:59:34 16922 [warning] InnoDB: Creating foreign key constraint system tables. 1399366778::Filling help tables...2014-05-06 04:59:36 0 [warning] TIMESTAMP with implicit DEFAULT value is deprecated. Please use -- explicit_defaults_for_timestamp server option (see documentation for more details). 1399366778::2014-05-06 04:59:36 16952 [warning] Buffered warning: Changed limits: max_open_files: 1024 (requested 5000) 1399366778::2014-05-06 04:59:36 16952 [warning] Buffered warning: Changed limits: table_cache: 431 (requested 2000) 1399366780::WARNING: could not copy config file template /usr/share/mysql/my- default.cnf to 1399366780::WARNING: Default config file /etc/my.cnf exists on the system 1399366802::WARNING: A new file was added to xml alarm files...reparsing xml... 1399366803::WARNING: FILE: /usr/TKLC/plat/etc/alarms/alarms_mps.xml 1399366809::TKLCepap-HA #####warning: group root} does not exist - using root Refer to section 3.7 to know more about logging. </pre>
<p>14. <input type="checkbox"/></p>	<p>MPS B: Check that the upgrade completed successfully.</p>	<p># grep "UPGRADE IS COMPLETE" /var/TKLC/log/upgrade/upgrade.log</p>
<p>15. <input type="checkbox"/></p>	<p>MPS B: Select the most recent upgrade log.</p>	<p>Verify that the message “UPGRADE IS COMPLETE” is displayed. If it is not, contact the Technical Assistance Center following the instructions on the front page or the instructions on the Appendix I.</p> <p>1399367207:: UPGRADE IS COMPLETE</p>
<p>16. <input type="checkbox"/></p>	<p>MPS B: Fix mysql System Table not found</p>	<p>Execute Appendix F to fix MySQL System Table not found issue.</p>

Procedure 11: Install the Application on side 1B

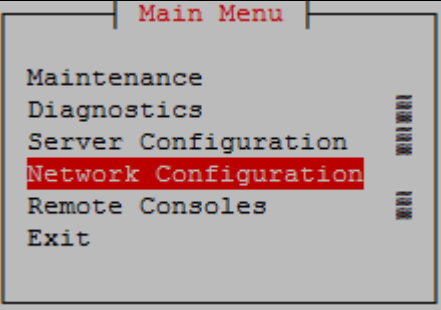
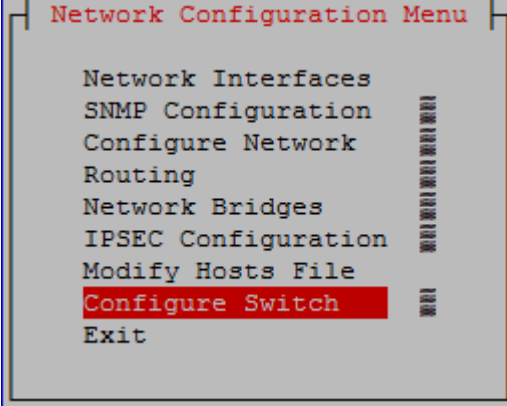
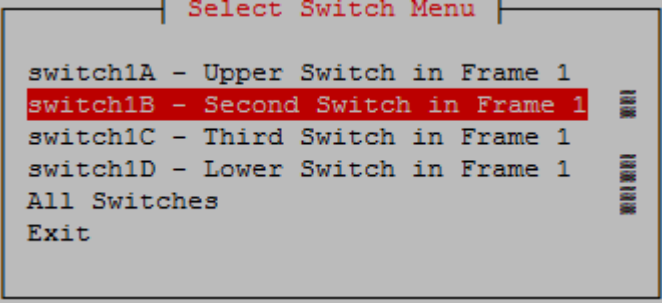
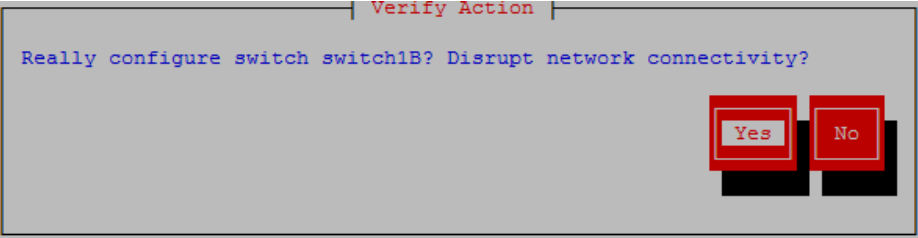
<input type="checkbox"/>	issue.	
17. <input type="checkbox"/>	MPS B: Install Complete.	Install Procedure is complete.

5.2.3 Switch Configuration


Procedure 12: Switch Configuration

S T E P #	This procedure Configures the Switches of a new Installed E5-APP-B EPAP 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 ORACLE'S TEKELEC CUSTOMER CARE CENTER AND ASK FOR ASSISTANCE.	
1. <input type="checkbox"/>	Make the cross-over cable connections.	<p style="text-align: center;">NOTE: THIS IS IMPORTANT</p> <p>CONNECT the cross-over cable from Port 1 of Switch1A to Port 1 of Switch1B.</p> <p>DISCONNECT the cross-over cable from Port 2 of Switch1A to Port 2 of Switch1B. Please make a note that the switch configuration should only be attempted by a skilled technician and not all.</p> <p>All uplinks should be removed while switch configuration.</p> <p>There should not be any loop in the switches during their configuration.</p>
2. <input type="checkbox"/>	MPS B: log in as "root" user.	[hostname] consolelogin: root password: <i>password</i>
3. <input type="checkbox"/>	MPS B: Set Telco Switch with non-default speed.	<p>Note: The default speed to be set on the switch is 100Mbps. However the setting can be changed. When the EPAP is connected with an Eagle running Release 46.0 or higher, the RTDB download from EPAP to the Eagle SM can be greatly enhanced by setting the IP connections between the Switch and the EAGLE cards to run at 1G bps. At the EAGLE end, the operator can set the IP LINK to 'auto'; and at the EPAP side, the Telco switch speed is set to 1000Mbps. To set to 1000Mbps speed, follow these steps. Otherwise proceed to step 4.</p> <p>To set the speed at 1000Mbps:</p> <pre># cd /usr/TKLC/plat/etc # cp vlan.1000.sm4g.e5appb.conf vlan.conf cp: overwrite `vlan.conf'? y</pre>
4. <input type="checkbox"/>	MPS B: Start platcfg utility.	# su - platcfg
5. <input type="checkbox"/>	MPS B: Navigate to the Network Configuration Menu.	On the platcfg Main Menu , select Network Configuration and press [ENTER].

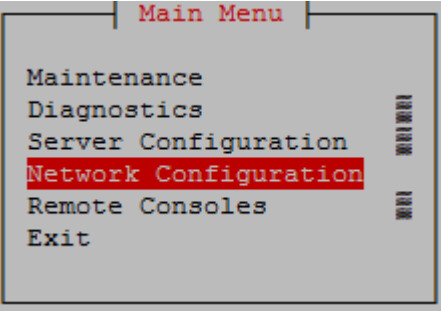
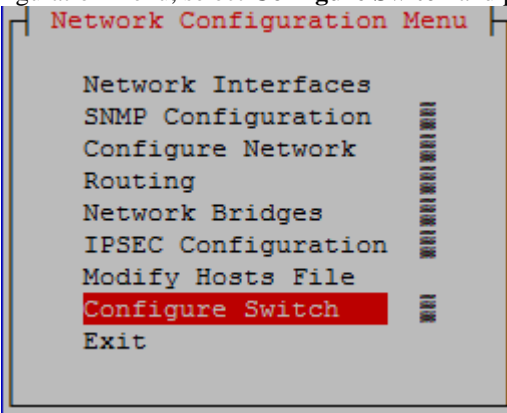
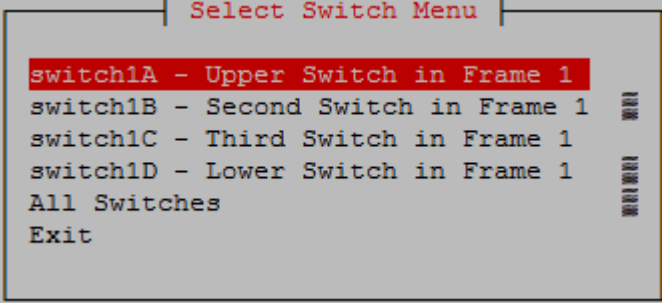
Procedure 12: Switch Configuration

		 <p>The screenshot shows a terminal window titled "Main Menu" with the following options: Maintenance, Diagnostics, Server Configuration, Network Configuration (highlighted in red), Remote Consoles, and Exit.</p>
<p>6. <input type="checkbox"/> MPS B: Navigate to the Configure Switch Menu.</p>	<p>On the Network Configuration menu, select Configure Switch and press [ENTER].</p>	 <p>The screenshot shows a terminal window titled "Network Configuration Menu" with the following options: Network Interfaces, SNMP Configuration, Configure Network, Routing, Network Bridges, IPSEC Configuration, Modify Hosts File, Configure Switch (highlighted in red), and Exit.</p>
<p>7. <input type="checkbox"/> MPS B: Select Switch1B.</p>	<p>On the Select Switch Menu, select Switch1B – Second Switch in Frame 1 and press [ENTER].</p>	 <p>The screenshot shows a terminal window titled "Select Switch Menu" with the following options: switch1A - Upper Switch in Frame 1, switch1B - Second Switch in Frame 1 (highlighted in red), switch1C - Third Switch in Frame 1, switch1D - Lower Switch in Frame 1, All Switches, and Exit.</p>
<p>8. <input type="checkbox"/> MPS B: Confirm Switch 1B Configuration.</p>	<p>Select Yes and press [ENTER] to configure Switch 1B.</p>	 <p>The screenshot shows a dialog box titled "Verify Action" with the text "Really configure switch switch1B? Disrupt network connectivity?". There are two buttons: "Yes" (highlighted in red) and "No".</p>
<p>9. <input type="checkbox"/> MPS B: Switch Configuration Screen.</p>	<p>Configuring the switch takes about 10 minutes, once complete press [ENTER] to continue.</p>	

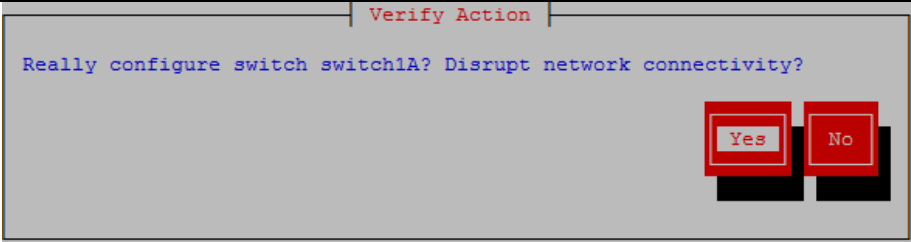
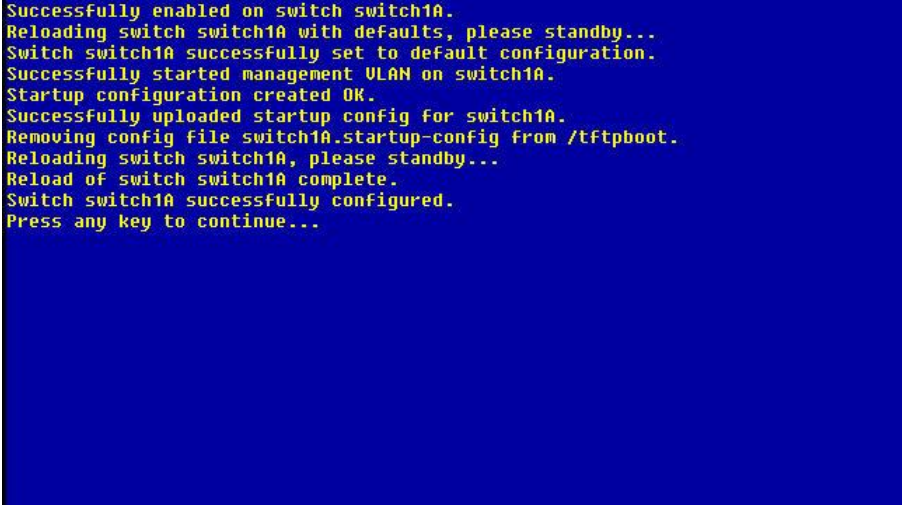

Procedure 12: Switch Configuration

		<pre>Successfully enabled on switch switch1B. Reloading switch switch1B with defaults, please standby... Switch switch1B successfully set to default configuration. Successfully started management VLAN on switch1B. Startup configuration created OK. Successfully uploaded startup config for switch1B. Removing config file switch1B.startup-config from /tftpboot. Reloading switch switch1B, please standby... Reload of switch switch1B complete. Switch switch1B successfully configured. Press any key to continue...</pre> 
<p>10. <input type="checkbox"/></p>	<p>MPS B: Exit out of platcfg.</p>	<p>Select Exit and press [ENTER] to return to the Network Configuration Menu. Select Exit and press [ENTER] to return to the Main Menu. Select Exit and press [ENTER] to exit out of platcfg.</p>
<p>11. <input type="checkbox"/></p>	<p>MPS A: Connect to Server 1A.</p>	<p>Now that Switch 1B is configured, we need to configure switch 1A. Connect to server 1A to configure switch 1A</p> <pre>[hostname] consolelogin: root password: password</pre>
<p>12. <input type="checkbox"/></p>	<p>MPS A: Set Telco Switch with non-default speed.</p>	<p>Note: The default speed to be set on the switch is 100Mbps. However the setting can be changed. When the EPAP is connected with an Eagle running Release 46.0 or higher, the RTDB download from EPAP to the Eagle SM can be greatly enhanced by setting the IP connections between the Switch and the EAGLE cards to run at 1G bps, and that typically the operator at the Eagle end would set the IP LINK to auto. On the EPAP side, the Telco switch speed is set to 1000Mbps or auto. To set to 1000Mbps or auto speed, follow these steps. Otherwise proceed to step 4.</p> <p>To set the speed at 1000Mbps:</p> <pre># cd /usr/TKLC/plat/etc # cp vlan.1000.sm4g.e5appb.conf vlan.conf cp: overwrite `vlan.conf'? y</pre> <p>To set the speed at auto:</p>

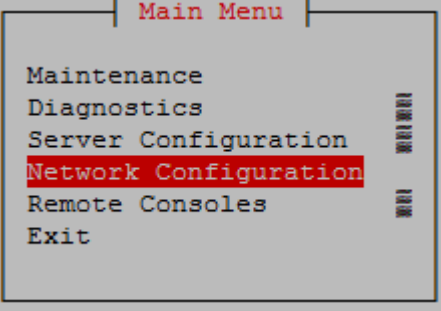
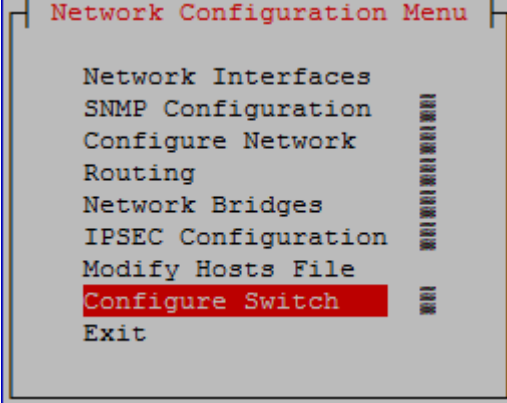
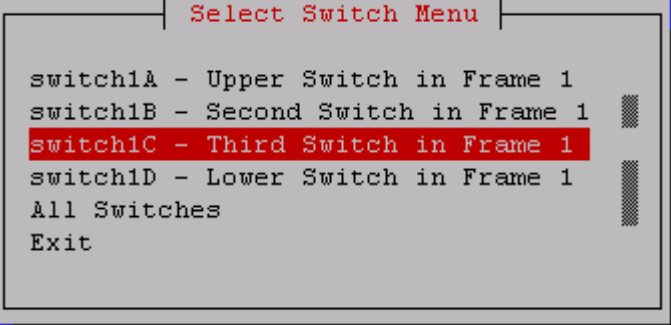
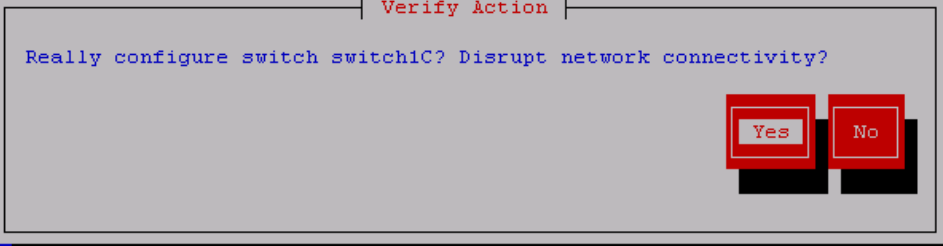
Procedure 12: Switch Configuration

		<pre># cd /usr/TKLC/plat/etc # cp vlan.auto.sm4g.e5appb.conf vlan.conf cp: overwrite `vlan.conf'? y</pre>
13.	<input type="checkbox"/> MPS A: Start platcfg utility	<pre># su - platcfg</pre>
14.	<input type="checkbox"/> MPS A: Navigate to the Network Configuration Menu.	<p>On the platcfg Main Menu, select Network Configuration and press [ENTER].</p>  <p>The screenshot shows a terminal window titled "Main Menu" with the following options: Maintenance, Diagnostics, Server Configuration, Network Configuration (highlighted in red), Remote Consoles, and Exit.</p>
15.	<input type="checkbox"/> MPS A: Navigate to the Configure Switch Menu.	<p>On the Network Configuration menu, select Configure Switch and press [ENTER].</p>  <p>The screenshot shows a terminal window titled "Network Configuration Menu" with the following options: Network Interfaces, SNMP Configuration, Configure Network, Routing, Network Bridges, IPSEC Configuration, Modify Hosts File, Configure Switch (highlighted in red), and Exit.</p>
16.	<input type="checkbox"/> MPS A: Select Switch1A.	<p>On the Select Switch Menu, select Switch1A – Upper Switch in Frame 1 and press [ENTER].</p>  <p>The screenshot shows a terminal window titled "Select Switch Menu" with the following options: switch1A - Upper Switch in Frame 1 (highlighted in red), switch1B - Second Switch in Frame 1, switch1C - Third Switch in Frame 1, switch1D - Lower Switch in Frame 1, All Switches, and Exit.</p>
17.	<input type="checkbox"/> MPS A: Confirm Switch 1A Configuration.	Select Yes and press [ENTER] to configure Switch 1A.

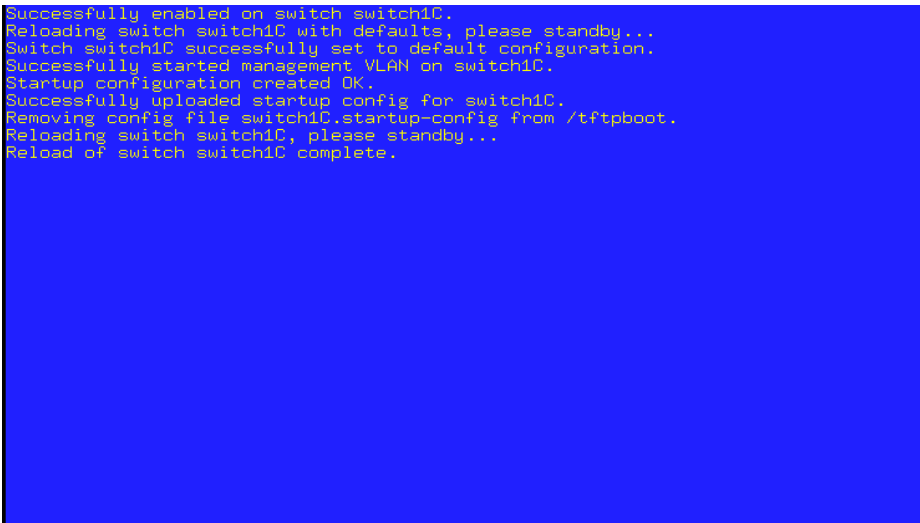

Procedure 12: Switch Configuration

		
<p>18. <input type="checkbox"/></p>	<p>MPS A: Navigate to the Configure Switch Menu.</p>	<p>Configuring the switch takes about 10 minutes, once complete press [ENTER] to continue.</p>  
<p>19. <input type="checkbox"/></p>	<p>MPS A: Exit out of platcfg.</p>	<p>Select Exit and press [ENTER] to return to the Network Configuration Menu. Select Exit and press [ENTER] to return to the Main Menu. Select Exit and press [ENTER] to exit out of platcfg.</p>
<p>20. <input type="checkbox"/></p>	<p>MPS A: Optional Configuration of Switch 1C.</p>	<p>If the system is installed with 4 switches, proceed with the next step, otherwise skip to step 37.</p>
<p>21. <input type="checkbox"/></p>	<p>Move Serial Cables.</p>	<p>On the front of switches 1A and 1B, unplug the serial cables connected to Console port and plug them in switches 1C and 1D Console port respectively.</p>
<p>22. <input type="checkbox"/></p>	<p>MPS A: Start platcfg utility.</p>	<pre># su - platcfg</pre>

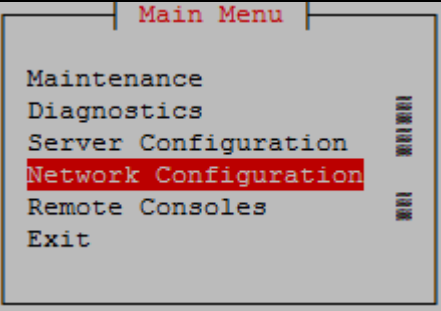
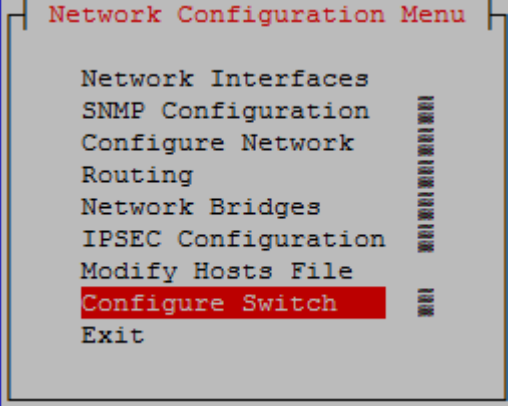
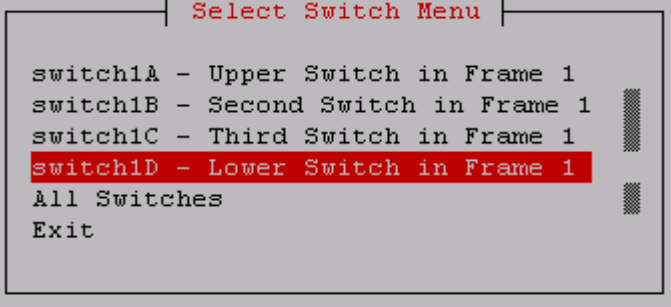
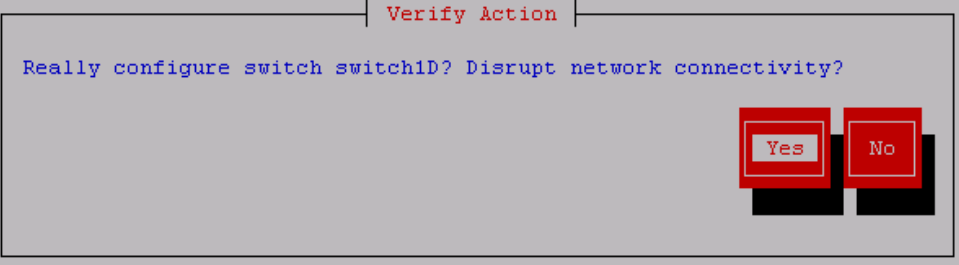
Procedure 12: Switch Configuration

<p>23. <input type="checkbox"/></p>	<p>MPS A: Navigate to the Network Configuration Menu.</p>	<p>On the platcfg Main Menu, select Network Configuration and press [ENTER].</p>  <p>The screenshot shows a terminal window titled "Main Menu" with the following options: Maintenance, Diagnostics, Server Configuration, Network Configuration (highlighted in red), Remote Consoles, and Exit.</p>
<p>24. <input type="checkbox"/></p>	<p>MPS A: Navigate to the Configure Switch Menu.</p>	<p>On the Network Configuration menu, select Configure Switch and press [ENTER].</p>  <p>The screenshot shows a terminal window titled "Network Configuration Menu" with the following options: Network Interfaces, SNMP Configuration, Configure Network, Routing, Network Bridges, IPSEC Configuration, Modify Hosts File, Configure Switch (highlighted in red), and Exit.</p>
<p>25. <input type="checkbox"/></p>	<p>MPS A: Select Switch1C.</p>	<p>On the Select Switch Menu, select Switch1C – Third Switch in Frame 1 and press [ENTER].</p>  <p>The screenshot shows a terminal window titled "Select Switch Menu" with the following options: switch1A - Upper Switch in Frame 1, switch1B - Second Switch in Frame 1, switch1C - Third Switch in Frame 1 (highlighted in red), switch1D - Lower Switch in Frame 1, All Switches, and Exit.</p>
<p>26. <input type="checkbox"/></p>	<p>MPS A: Confirm Switch 1C Configuration.</p>	<p>Select Yes and press [ENTER] to configure Switch 1C</p>  <p>The screenshot shows a dialog box titled "Verify Action" with the text "Really configure switch switch1C? Disrupt network connectivity?". There are two buttons: "Yes" (highlighted in red) and "No".</p>
<p>27. <input type="checkbox"/></p>	<p>MPS A: Navigate to the</p>	<p>Configuring the switch takes about 10 minutes, once complete press [ENTER] to</p>

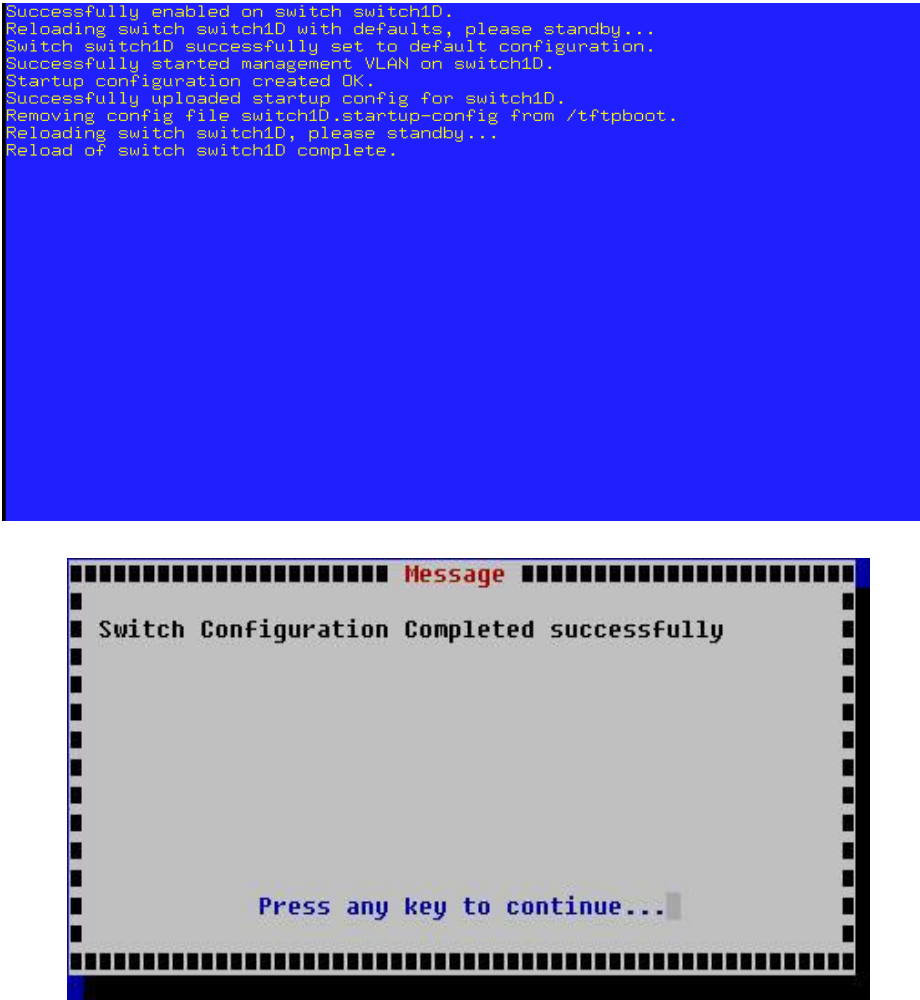
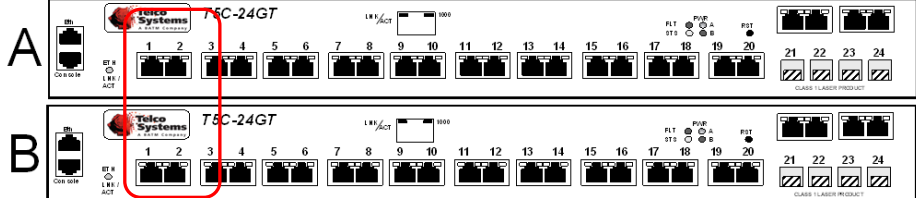
Procedure 12: Switch Configuration

<input type="checkbox"/>	Configure Switch Menu.	<p>continue.</p>  <pre> Successfully enabled on switch switch1C. Reloading switch switch1C with defaults, please standby... Switch switch1C successfully set to default configuration. Successfully started management VLAN on switch1C. Startup configuration created OK. Successfully uploaded startup config for switch1C. Removing config file switch1C.startup-config from /tftpboot. Reloading switch switch1C, please standby... Reload of switch switch1C complete. </pre>  <pre> Message Switch Configuration Completed successfully Press any key to continue... </pre>
<input type="checkbox"/>	28. MPS A: Exit out of platcfg.	Select Exit and press [ENTER] to return to the Network Configuration Menu. Select Exit and press [ENTER] to return to the Main Menu. Select Exit and press [ENTER] to exit out of platcfg.
<input type="checkbox"/>	29. MPS B: Connect to Server 1B.	<pre> [hostname] consolelogin: root password: password </pre>
<input type="checkbox"/>	30. MPS B: Start platcfg utility.	<pre> # su - platcfg </pre>
<input type="checkbox"/>	31. MPS B: Navigate to the Network Configuration Menu.	On the platcfg Main Menu , select Network Configuration and press [ENTER].

Procedure 12: Switch Configuration

		 <p>Main Menu</p> <pre> Maintenance Diagnostics Server Configuration Network Configuration Remote Consoles Exit </pre>
<p>32. <input type="checkbox"/> MPS B: Navigate to the Configure Switch Menu.</p>	<p>On the Network Configuration menu, select Configure Switch and press [ENTER].</p>	 <p>Network Configuration Menu</p> <pre> Network Interfaces SNMP Configuration Configure Network Routing Network Bridges IPSEC Configuration Modify Hosts File Configure Switch Exit </pre>
<p>33. <input type="checkbox"/> MPS B: Select Switch1D.</p>	<p>On the Select Switch Menu, select Switch1D – Lower Switch in Frame 1 and press [ENTER].</p>	 <p>Select Switch Menu</p> <pre> switch1A - Upper Switch in Frame 1 switch1B - Second Switch in Frame 1 switch1C - Third Switch in Frame 1 switch1D - Lower Switch in Frame 1 All Switches Exit </pre>
<p>34. <input type="checkbox"/> MPS B: Confirm Switch 1D Configuration.</p>	<p>Select Yes and press [ENTER] to configure Switch 1D.</p>	 <p>Verify Action</p> <p>Really configure switch switch1D? Disrupt network connectivity?</p> <p>Yes No</p>
<p>35. MPS B: Switch</p>	<p>Configuring the switch takes about 10 minutes, once complete press [ENTER] to continue.</p>	

Procedure 12: Switch Configuration

<input type="checkbox"/>	<p>Configuration Screen.</p>	 <p>Successfully enabled on switch switch1D. Reloading switch switch1D with defaults, please standby... Switch switch1D successfully set to default configuration. Successfully started management VLAN on switch1D. Startup configuration created OK. Successfully uploaded startup config for switch1D. Removing config file switch1D.startup-config from /tftpboot. Reloading switch switch1D, please standby... Reload of switch switch1D complete.</p> <p>Message</p> <p>Switch Configuration Completed successfully</p> <p>Press any key to continue...</p>
<input type="checkbox"/>	<p>36. MPS B: Exit out of platcfg.</p>	<p>Select Exit and press [ENTER] to return to the Network Configuration Menu. Select Exit and press [ENTER] to return to the Main Menu. Select Exit and press [ENTER] to exit out of platcfg.</p>
<input type="checkbox"/>	<p>37. Connect the cross-over cable from Port 2 of Switch1A to Port 2 of Switch1B.</p>	 <p>A</p> <p>B</p>
<input type="checkbox"/>	<p>38. Procedure complete.</p>	<p>Procedure is complete.</p>

5.3 Configuring the Application

Procedure 13: Configuring the Application

<p>S T</p>	<p>This procedure Configures the application on the server.</p>
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Procedure 13: Configuring the Application

E P #	Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. IF THIS PROCEDURE FAILS, CONTACT ORACLE'S TEKELEC CUSTOMER CARE CENTER AND ASK FOR ASSISTANCE.	
1. <input type="checkbox"/>	MPS A: Log on Server A.	<pre>[hostname] consolelogin: root password: password</pre>
2. <input type="checkbox"/>	MPS A: Switch user to epapconfig.	<pre># su - epapconfig</pre>
3. <input type="checkbox"/>	MPS A: A note of caution appears. Evaluate the conditions listed. When all the conditions are satisfied, press Return to continue.	<p>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.</p> <ol style="list-style-type: none"> 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 epapdev user on the mate MPS server. 5. You must be prepared to designate this MPS as provisionable or non-provisionable. <p>Press return to continue...</p>
4. <input type="checkbox"/>	MPS A: Upon pressing Return you can now abort or proceed with the initial configuration. To continue with the configuration, enter Y.	<pre>Are you sure you wish to continue? [N]: Y</pre>
5. <input type="checkbox"/>	MPS A: For Mixed EPAP or Non-Provisionable EPAP: You are prompted for the epapdev and root user password on the mate MPS server in order to confirm the secure shell keys are successfully exchanged. The example shows the output generated when the correct password is entered, the secure shell keys are successfully exchanged, and the UI database is set up on MPS A and MPS B at this site. Type Y if this site is Provisionable , otherwise Type N . For Standalone PDB:	<pre>Password for epapdev: <epapdev_password> Could not get authorized keys file from host... Continuing... ssh is working correctly. Password for root: <root_password> Could not get authorized keys file from host... Continuing... ssh is working correctly. Building the initial database on side A. Stopping local slave Stopping remote slave No preexisting EuiDB database was detected. Enabling replication: deleting old binary logs on local server resetting local slave. deleting old binary logs on remote server resetting remote slave Starting local slave Starting remote slave</pre> <p>The provisioning architecture of the EPAP software allows for exactly 2 customer provisionable sites. Additional sites that are to receive the data provisioned to the provisionable sites should answer 'N' here.</p> <p>If there are only 2 mated sites, it is safe to answer `Y' here.</p> <pre>Is this site provisionable? [Y]: Y</pre> <p>Building the initial database on side A.</p>

Procedure 13: Configuring the Application

	<p>You are prompted for the System Number and Network Configuration Type.</p>	<pre>Stopping local slave No preexisting EuiDB database was detected. Starting local slave Set EPAP System Number: ES12121212 Enter the Network Configuration Type (1 for single, 2 for Segmented): 1</pre>
<p>6. <input type="checkbox"/></p>	<p>MPS A: The EPAP Configuration Menu is displayed. Select choice 2, Configure Network Interfaces Menu.</p>	<pre> /-----EPAP 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 PDB Configuration Menu 9 Security 10 Configure EMS Server 11 Configure Alarm Feed 12 Configure Query Server 13 Configure Query Server Alarm Feed 14 Configure SNMP Agent Community e Exit \-----/ Enter Choice: 2</pre>
<p>7. <input type="checkbox"/></p>	<p>MPS A: The Configure Network Interfaces Menu is displayed. Select choice 1, Configure Provisioning Network.</p>	<pre> Configuration Menu for Mixed EPAP and Non-Provisionable EPAP: /-----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: 1 Configuration Menu for Standalone PDB: /-----Configure Network Interfaces Menu-----\</pre>

Procedure 13: Configuring the Application

		<pre> 1 Configure Provisioning Network ----- 2 Configure Backup Provisioning Network ----- 3 Configure Forwarded Ports ----- 4 Configure Static NAT Addresses ----- e Exit ----- \-----/ Enter Choice: 1 </pre>
<p>8. <input type="checkbox"/></p>	<p>MPS A: The submenu for configuring communications networks and other information is displayed.</p>	<p>Example output for Mixed EPAP and Non-Provisionable EPAP:</p> <pre> Verifying connectivity with mate... EPAP A provisioning network IP Address [192.168.61.104]: 192.168.61.48 EPAP B provisioning network IP Address [192.168.61.105]: 192.168.61.49 EPAP provisioning network netmask [255.255.255.0]: EPAP provisioning network default router [192.168.61.250]: 192.168.61.250 </pre> <p>Note: The Configure Provisioning Network lets you accept the default IP address values presented by the configuration software (by pressing Return) for EPAP A and EPAP B provisioning network and network netmask, or to enter specific IP values previously received from the customer for the MPS.</p> <p>Example output Standalone PDB:</p> <pre> EPAP A provisioning network IP Address [10.250.51.130]: EPAP provisioning network netmask [255.255.255.0]: EPAP provisioning network default router [10.250.51.1]: </pre>
<p>9. <input type="checkbox"/></p>	<p>MPS A: The Configure Network Interfaces menu is displayed. Select choice e, Exit.</p>	<p>Configuration Menu for Mixed EPAP and Non-Provisionable EPAP:</p> <pre> /-----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 </pre> <p>Configuration Menu for Standalone PDB:</p> <pre> /-----Configure Network Interfaces Menu-----\ 1 Configure Provisioning Network 2 Configure Backup Provisioning Network 3 Configure Forwarded Ports 4 Configure Static NAT Addresses </pre>

Procedure 13: Configuring the Application

		<pre> e Exit ----- Enter Choice: e </pre>
<p>10. <input type="checkbox"/></p>	<p>MPS A: The EPAP Configuration Menu is displayed. Select choice 3, Set Time Zone.</p>	<pre> /-----EPAP 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 PDB Configuration Menu ----- 9 Security ----- 10 Configure EMS Server ----- 11 Configure Alarm Feed ----- 12 Configure Query Server ----- 13 Configure Query Server Alarm Feed ----- 14 Configure SNMP Agent Community ----- e Exit ----- Enter Choice: 3 </pre>
<p>11. <input type="checkbox"/></p>	<p>MPS A: An important Caution statement is displayed. After noting the caution, press Return to continue.</p> <p>You are prompted for confirmation on setting the time zone for the MPS A and MPS B at this site for Mixed EPAP or Non-provisionable EPA. For Standalone PDB, timezone for MPS A is prompted only. Enter y to confirm the change. (Pressing Return accepts the default of 'N' (no), cancels the action and you are returned to the EPAP Configuration Menu). Type Y to set the time zone.</p>	<pre> Caution: This action requires a reboot of the affected MPS servers to activate the change. Operation of the EPAP software before the MPS servers are rebooted may have unpredictable consequences. Press return to continue...<return> Are you sure you wish to change the timezone for MPS A and B? [N]: Y </pre>
<p>12. <input type="checkbox"/></p>	<p>MPS A: The following prompt is displayed. If</p>	<pre> Enter a time zone: </pre>

Procedure 13: Configuring the Application

	<p>the time zone is known, it can be entered at the prompt. If the exact time zone value is not known, press Return, and a list of the valid names is displayed.</p>	
<p>13. <input type="checkbox"/></p>	<p>If an incorrect time zone is entered or if only the Return key is pressed, a list of all available time zone values is displayed.</p> <p>Note: The time zone change does not take effect until the next time the MPS is rebooted.</p>	<pre>Valid time zone files are: Australia/Broken_Hill Australia/LHI Australia/NSW Australia/Queensland Australia/North Australia/Victoria Australia/South Australia/Tasmania Australia/West Australia/Yancowinna Australia/ACT Brazil/DeNoronha Brazil/East Canada/Atlantic Canada/Central Saskatchewan Canada/Eastern Canada/Mountain Canada/Newfoundland Canada/Pacific Canada/Yukon Chile/Continental Chile/EasterIsland Etc/GMT -----Sample Output continues----- -----End of output below----- MST MST7MDT NZ NZ-CHAT PRC PST8PDT Poland Portugal ROC ROK Singapore Turkey W-SU WET africa asia australasia backward etcetera europe factory northamerica pacificnew solar87 solar88 solar89 southamerica GB-Eire GMT GMT+0 GMT+1 GMT+10 GMT+11 GMT+12 GMT+13 GMT+2 GMT+3 GMT+4 GMT+5 GMT+6 GMT+7 GMT+8 GMT+9 GMT-0 GMT-1 GMT-10 GMT-11 GMT-12 GMT-2 GMT-3 GMT-4 GMT-5 GMT-6 GMT-7 GMT-8 GMT-9 Greenwich Jamaica Navajo UTC Universal Zulu Enter a time zone file (relative to /usr/share/lib/zoneinfo): US/Eastern</pre>
<p>14. <input type="checkbox"/></p>	<p>NOTE: If an NTP server does not need to be added at this time, you can skip all steps related to option 7 Configure NTP Server Menu, and proceed to the PDB Configuration Menu at step 20.</p> <p>SERVER A: Enter choice 7, Configure NTP Server Menu.</p>	<pre>-----EPAP 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 PDB Configuration Menu -----</pre>

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		<pre> 9 Security 10 Configure EMS Server 11 Configure Alarm Feed 12 Configure Query Server 13 Configure Query Server Alarm Feed 14 Configure SNMP Agent Community e Exit ----- Enter Choice: 7 </pre>
<p>15. <input type="checkbox"/></p>	<p>MPS A: The EPAP Configure NTP Server Menu is displayed. Enter choice 2, Add External NTP Server.</p>	<pre> /-----EPAP Configure NTP Server Menu-----\ 1 Display External NTP Server 2 Add External NTP Server 3 Remove External NTP Server e Exit ----- Enter Choice: 2 </pre>
<p>16. <input type="checkbox"/></p>	<p>MPS A: You are prompted to confirm the action of adding a new NTP Server. (Pressing Return would accept the default of 'N' or 'no', and would cancel the action to add an external NTP server.) Type Y and press return.</p> <p>NOTE: All NTP Server IP addresses shown are only examples.</p>	<pre> Are you sure you wish to add new NTP Server? [N]: Y Enter the EPAP NTP Server IP Address: <NTP_server_IP_Addr> External NTP Server [<NTP_server_IP_Addr>] has been added. Press return to continue...<return> </pre>
<p>17. <input type="checkbox"/></p>	<p>MPS A: The EPAP Configure NTP Server Menu is displayed. Enter choice 1, Display External NTP Server.</p>	<pre> /-----EPAP Configure NTP Server Menu-----\ 1 Display External NTP Server 2 Add External NTP Server 3 Remove External NTP Server e Exit ----- Enter Choice: 1 </pre>
<p>18. <input type="checkbox"/></p>	<p>MPS A: Verify the External NTP Server IP address is correct and press Return.</p> <p>NOTE: All NTP Server</p>	<pre> ntpserver1 <Ipaddress> Press return to continue...<return> </pre>

Procedure 13: Configuring the Application

	<p>IP addresses shown are only examples.</p>	
<p>19. <input type="checkbox"/></p>	<p>MPS A: The EPAP Configure NTP Server Menu is displayed. Select choice e, Exit.</p>	<pre> /-----EPAP Configure NTP Server Menu-----\ 1 Display External NTP Server --- ----- 2 Add External NTP Server --- ----- 3 Remove External NTP Server --- ----- e Exit \-----/ Enter Choice: e </pre>
<p>20. <input type="checkbox"/></p>	<p>MPS A: The EPAP Configuration Menu is displayed. Select choice 8, PDB Configuration Menu.</p> <p>Note: Execute the PDB Configuration Menu (except step 26) even if the EPAP is to be configured as Non-Provisionable.</p>	<pre> /-----EPAP 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 PDB Configuration Menu --- ----- 9 Security --- ----- 10 Configure EMS Server --- ----- 11 Configure Alarm Feed --- ----- 12 Configure Query Server --- ----- 13 Configure Query Server Alarm Feed --- ----- 14 Configure SNMP Agent Community --- ----- e Exit \-----/ Enter Choice: 8 </pre>
<p>21. <input type="checkbox"/></p>	<p>MPS A: The Configure PDB Menu is displayed. Select choice 1.</p>	<p>Configuration Menu for Mixed EPAP and Non-Provisionable EPAP:</p> <pre> /-----Configure PDB Menu-----\ 1 Configure PDB Network --- ----- 2 RTDB Homing Menu --- ----- 3 Change MPS Provisionable State --- ----- 4 Create PDB --- ----- 5 Change Auto DB Recovery State --- ----- 6 Change PDBA Proxy State --- ----- e Exit \-----/ </pre>

Procedure 13: Configuring the Application

		<p>Enter Choice: 1</p> <p>Configuration Menu for Standalone PDB:</p> <pre> /-----Configure PDB Menu-----\ 1 Configure PDB Network 2 Create PDB 3 Change Auto DB Recovery State e Exit \-----\ </pre> <p>Enter Choice: 1</p>
<p>22. <input type="checkbox"/></p>	<p>MPS A: Provide the IP address of the MPS A on Eagle A and the IP address for the MPS A on Eagle B where the remote PDBA database is to reside. Enter the password for MPS A on Eagle B. If configuration of the PDB network is successful, the output confirms the secure shell keys are successfully exchanged, as shown in the output for Provisionable MPSs</p> <p>Note: If the default values shown are correct press return to accept them. Otherwise, enter the values and press Return.</p> <p>In case of Non-Provisionable EPAP provide the IP address of Active and Standby PDBA.</p> <p>In case of Standalone PDB, provide remote PDBA IP address.</p>	<p>Following is the output on Mixed EPAP.</p> <pre> Verifying connectivity with mate... This MPS is configured to be provisionable. The EPAP local PDBA address is <IP>. EPAP remote PDBA IP Address [0.0.0.0]: <IP Address> EPAP remote PDBA B Address: <IP Address> The authenticity of host '<host>' can't be established. RSA key fingerprint is 66:a8:f9:04:ca:44:3f:01:93... Are you sure you want to continue connecting (yes/no)? yes epapdev@mate's password: </pre> <p>Following is the output on Non-Provisionable EPAP.</p> <pre> Verifying connectivity with mate... This MPS is configured to be non-provisionable. You will be prompted for both of the remote PDBA addresses. Order does not matter. Enter one of the two PDBA IP addresses [0.0.0.0]: <IP Address> Enter the other of the two PDBA IP addresses [0.0.0.0]: <IP Address> </pre> <p>Following is the output on Standalone PDB.</p> <pre> This MPS is configured to be provisionable. The EPAP local PDBA address is currently set to <IP>. The EPAP local PDBA IP Address is 10.250.51.130. EPAP remote PDBA IP Address [0.0.0.0]: </pre>
<p>23. <input type="checkbox"/></p>	<p>MPS A: Press Return to return to the Configure PDB Menu.</p> <p>Enter choice 2, RTDB Homing Menu.</p>	<p>Skip this step if EPAP configured as Standalone PDB.</p> <pre> /-----Configure PDB Menu-----\ 1 Configure PDB Network 2 RTDB Homing Menu 3 Change MPS Provisionable State \-----\ </pre>

Procedure 13: Configuring the Application

		<pre> 4 Create PDB ----- 5 Change Auto DB Recovery State ----- 6 Change PDBA Proxy State ----- e Exit \-----/ Enter Choice: 2 </pre>
<p>24. <input type="checkbox"/></p>	<p>MPS A: The RTDB Homing Menu is displayed. Enter choice 3, Configure Standby RTDB Homing.</p>	<p>Skip this step if for Standalone PDB.</p> <pre> /-----RTDB Homing Menu-----\ 1 Configure Specific RTDB Homing ----- 2 Configure Active RTDB Homing ----- 3 Configure Standby RTDB Homing ----- e Exit \-----/ Enter Choice: 3 In the event that the Standby PDB is unavailable, should updates be allowed to the RTDBs from the Active MPS? [Y]:Y The RTDBs will home to the Standby and will allow updates from the Active PDB. Press return to continue...<return> </pre>
<p>25. <input type="checkbox"/></p>	<p>MPS A: The RTDB Homing Menu is displayed. Enter e to exit.</p>	<p>Skip this step if for Standalone PDB.</p> <pre> /-----RTDB Homing Menu-----\ 1 Configure Specific RTDB Homing ----- 2 Configure Active RTDB Homing ----- 3 Configure Standby RTDB Homing ----- e Exit \-----/ Enter Choice: e </pre>
<p>26. <input type="checkbox"/></p>	<p>MPS A: Enter choice 4, Create PDB.</p> <p>NOTE: It may be asked to stop the EPAP software if it is running. Stop it by answering 'Y'.</p>	<p>Note: Perform this step only for the Provisionable EPAP. Skip this step if the EPAP is configured as Non-Provisionable.</p> <p>The Menu for Mixed EPAP.</p> <pre> /-----Configure PDB Menu-----\ 1 Configure PDB Network ----- 2 RTDB Homing Menu ----- 3 Change MPS Provisionable State ----- 4 Create PDB ----- 5 Change Auto DB Recovery State ----- 6 Change PDBA Proxy State ----- </pre>

Procedure 13: Configuring the Application

		<pre> e Exit \-----/ Enter Choice: 4 The Menu for Mixed EPAP. /-----Configure PDB Menu-----\ 1 Configure PDB Network 2 Create PDB 3 Change Auto DB Recovery State e Exit \-----/ Enter Choice: 2 localIp = 192.168.61.48 localName=mps-0566-a remoteIp = 192.168.61.50 remoteName=mps-cyclops-a remoteBIP = 192.168.61.51 mysqld is alive ERROR 1049 (42000): Unknown database 'pdb' Local PDB database does not exist. Creating the local database ~~ /etc/init.d/Pdba stop ~~ PDBA application stopped. mysqld is alive ERROR 1049 (42000): Unknown database 'pdb' Remote PDB database does exist. ~~ /etc/init.d/Pdba stop ~~ PDBA application stopped. Creating the remote database Waiting for mysqlpdb to stop... done Copying data to remote database not necessary mysqld is already running. Exiting. myisamchk: error: File '/var/TKLC/epap/db/pdb' doesn't exist myisamchk: error: File '/var/TKLC/epap/db/pdb' doesn't exist ----- MyISAM file: /var/TKLC/epap/db/pdb/mysql/columns_priv.MYI is already checked ----- MyISAM file: /var/TKLC/epap/db/pdb/mysql/db.MYI is already checked ----- MyISAM file: /var/TKLC/epap/db/pdb/mysql/func.MYI is already checked -----</pre>
27.	NOTE:	TRUNCATED OUTPUT

Procedure 13: Configuring the Application

<input type="checkbox"/>	<p>The example output to the right has been truncated for brevity.</p>	<pre>MyISAM file: /var/TKLC/epap/db/pdb/stats/pdbaStats.MYI is already checked Waiting for mysqlpdb to start done Removing local pdba status file. Removing remote pdba status file.</pre>
<p>28.</p> <input type="checkbox"/>	<p>MPS A: The Configure PDB Menu is displayed. Enter choice e, Exit. The Configure PDB Menu is displayed. Enter choice e, Exit.</p>	<p>The Configure PDB Menu for Mixed EPAP:</p> <pre>/-----Configure PDB Menu-----\ 1 Configure PDB Network ----- 2 RTDB Homing Menu ----- 3 Change MPS Provisionable State ----- 4 Create PDB ----- 5 Change Auto DB Recovery State ----- 6 Change PDBA Proxy State ----- e Exit \-----/</pre> <p>Enter Choice: e</p> <p>The Configure PDB Menu for Standalone PDB:</p> <pre>/-----Configure PDB Menu-----\ 1 Configure PDB Network ----- 2 Create PDB ----- 3 Change Auto DB Recovery State ----- e Exit \-----/</pre> <p>Enter Choice: e</p>
<p>29.</p> <input type="checkbox"/>	<p>MPS A: The EPAP Configuration Menu is displayed. Enter choice 1, Display Configuration.</p>	<pre>/-----EPAP 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 PDB Configuration Menu ----- 9 Security ----- 10 Configure EMS Server ----- 11 Configure Alarm Feed ----- 12 Configure Query Server ----- 13 Configure Query Server Alarm Feed \-----/</pre>

Procedure 13: Configuring the Application

		<pre> 14 Configure SNMP Agent Community e Exit ----- Enter Choice: 1 </pre>
<p>30. <input type="checkbox"/></p>	<p>MPS A: The configuration information is displayed. Verify that the configuration data displayed is correct.</p>	<p>FOR Mixed EPAP and Non-Provisionable EPAP, the configuration data shall look like:</p> <pre> EPAP A Provisioning Network IP Address = 192.168.61.48 EPAP B Provisioning Network IP Address = 192.168.61.49 Provisioning Network Netmask = 255.255.255.0 Provisioning Network Default Router = 192.168.61.250 EPAP A Backup Prov Network IP Address = Not configured EPAP B Backup Prov Network IP Address = Not configured Backup Prov Network Netmask = Not configured Backup Prov Network Default Router = Not configured EPAP A Sync Network Address = 192.168.2.100 EPAP B Sync Network Address = 192.168.2.200 EPAP A Main DSM Network Address = 192.168.120.100 EPAP B Main DSM Network Address = 192.168.120.200 EPAP A Backup DSM Network Address = 192.168.121.100 EPAP B Backup DSM Network Address = 192.168.121.200 EPAP A HTTP Port = 80 EPAP B HTTP Port = 80 EPAP A HTTP SuExec Port = 8001 EPAP B HTTP SuExec Port = 8001 EPAP A Banner Connection Port = 8473 EPAP B Banner Connection Port = 8473 EPAP A Static NAT Address = Not configured EPAP B Static NAT Address = Not configured PDBI Port = 5873 Remote MPS A Static NAT Address = Not configured Remote MPS A HTTP Port = 80 Local Provisioning VIP = 0.0.0.0 Remote Provisioning VIP = 0.0.0.0 Local PDBA Address = 192.168.61.48 Remote PDBA Address = 192.168.61.50 Remote PDBA B Address = 192.168.61.51 Time Zone = America/New_York PDB Database = Exists Preferred PDB = 192.168.61.48 Allow updates from alternate PDB = Yes Auto DB Recovery Enabled = No PDBA Proxy Enabled = No Press return to continue ...<return> </pre> <p>FOR Standalone PDB, the configuration data shall look like:</p> <pre> EPAP A Provisioning Network IP Address = 10.250.51.130 Provisioning Network Netmask = 255.255.255.0 Provisioning Network Default Router = 10.250.51.1 EPAP A Backup Prov Network IP Address = Not configured </pre>

Procedure 13: Configuring the Application

		<pre> Backup Prov Network Netmask = Not configured Backup Prov Network Default Router = Not configured Network Configuration Type = SINGLE EPAP A HTTP Port = 80 EPAP A HTTP SuExec Port = 8001 EPAP A Banner Connection Port = 8473 EPAP A Static NAT Address = Not configured PDBI Port = 5873 Remote MPS A Static NAT Address = Not configured Remote MPS A HTTP Port = Not configured Local PDBA Address = 10.250.51.130 Remote PDBA Address = 0.0.0.0 Time Zone = US/Eastern PDB Database = Exists Auto DB Recovery Enabled = No </pre> <p>Press return to continue... <return></p>
<p>31. <input type="checkbox"/></p>	<p>MPS A: The EPAP Configuration Menu is displayed. Select choice 6, Platform Menu.</p>	<pre> /-----EPAP 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 PDB Configuration Menu 9 Security 10 Configure EMS Server 11 Configure Alarm Feed 12 Configure Query Server 13 Configure Query Server Alarm Feed 14 Configure SNMP Agent Community e Exit \-----\ </pre> <p>Enter Choice: 6</p>
<p>32. <input type="checkbox"/></p>	<p>MPS A: The Platform Menu is displayed. Enter Choice 2, Reboot MPS.</p>	<p>Menu for Mixed EPAP and Non-Provisionable EPAP:</p> <pre> /-----EPAP Platform Menu-----\ 1 Initiate Upgrade 2 Reboot MPS 3 MySQL Backup 4 RTDB Backup 5 PDB Backup e Exit \-----\ </pre> <p>Enter Choice: 2</p> <p>Menu for Standalone PDB:</p>

Procedure 13: Configuring the Application

		<pre> /-----EPAP Platform Menu-----\ 1 Initiate Upgrade 2 Reboot MPS 3 MySQL Backup 4 PDB Backup e Exit \-----\ Enter Choice: 2 </pre>
33. <input type="checkbox"/>	<p>MPS A: For Mixed EPAP and Non-Provisionable EPAP you are prompted whether MPS A, MPS B or BOTH sides are to be rebooted. Select the default value of BOTH by pressing Return.</p> <p>In case of the Standalone PDB, no prompt is given and the server goes down for a reboot.</p>	<p>For Mixed EPAP and Non-Provisionable EPAP, a prompt is displayed:</p> <pre>Reboot MPS A, MPS B or [BOTH]: <return></pre> <p>For Standalone PDB, the following is displayed.</p> <pre>Reboot local MPS... Broadcast message from root (pts/1) (Thu May 29 16:13:51 2014): The system is going down for reboot NOW!</pre>
34. <input type="checkbox"/>	<p>MPS A: The console logon appears at the system prompt signifying the EPAP initial configuration is completed.</p>	<p><hostname> login:</p> <p>Note: The console logon will be preceded by many lines of reboot output.</p>
35. <input type="checkbox"/>	<p>Reconnect console cables.</p>	<p>On E5-APP-B card, reconnect the console cable between the serial port labeled 'S0' on E5-APP-B B card's adapter and the serial port labeled 'S1' on the E5-APP-B A card's adapter and the console cable between the serial port labeled 'S0' on E5-APP-B A card's adapter and the serial port labeled 'S1' on the E5-APP-B B card's adapter. Cable part numbers - 830-1220-xx</p>
36. <input type="checkbox"/>	<p>Procedure complete.</p>	<p>Procedure is complete.</p>

Procedure 14: PDB Configuration (Active Provisionable Site as designated by customer)

S T E P #	<p>This procedure configuring the PDB databases on Active Site</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT ORACLE'S TEKELEC CUSTOMER CARE CENTER AND ASK FOR ASSISTANCE.</p>	
	1. <input type="checkbox"/>	<p>Access the EPAP GUI by opening a web browser</p> <p>The GUI screen on Mixed EPAP should look like:</p>

Procedure 14: PDB Configuration (Active Provisionable Site as designated by customer)

(Preferably IE) via HTTPS and providing the IP address of Server A.

The EPAP LOGIN screen should appear.



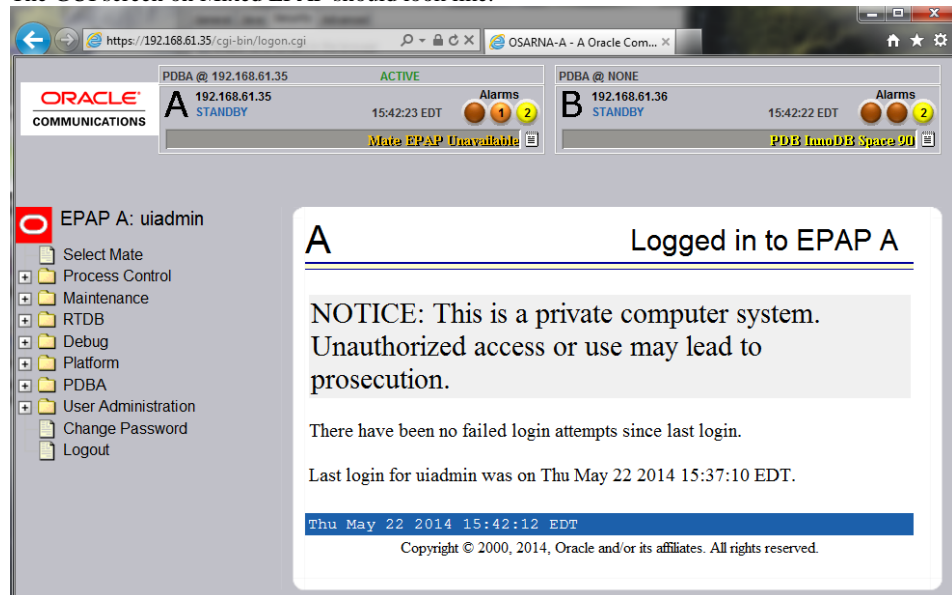
The GUI screen on Standalone PDB should look like:



2.
□

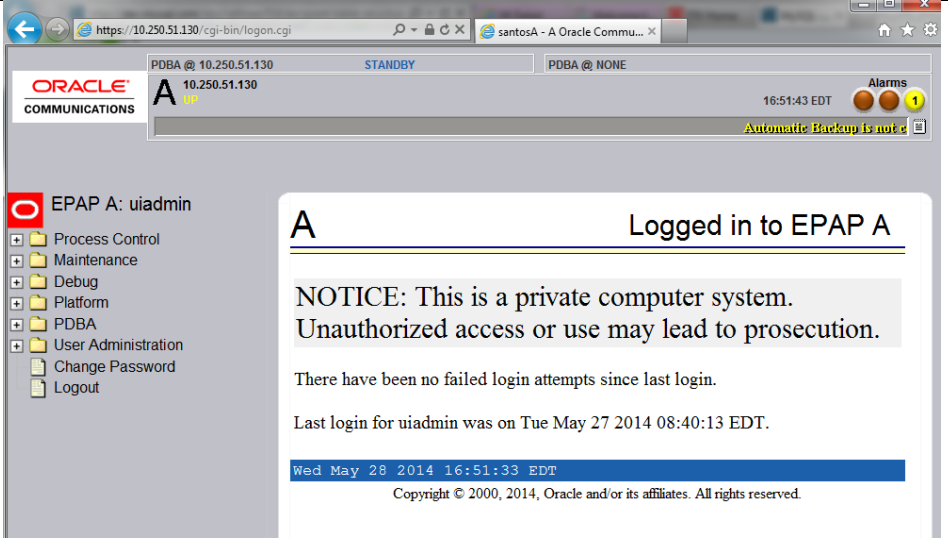
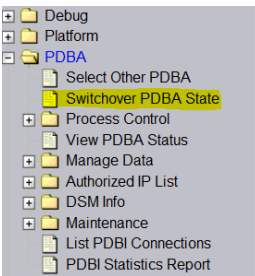
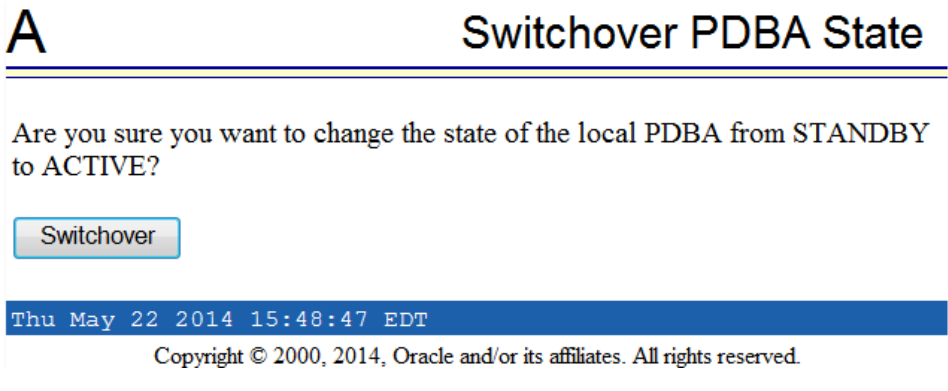


Login as uiadmin.

The GUI screen on Mixed EPAP should look like:

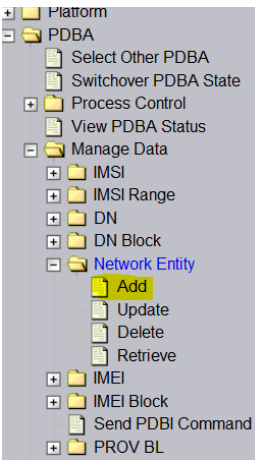
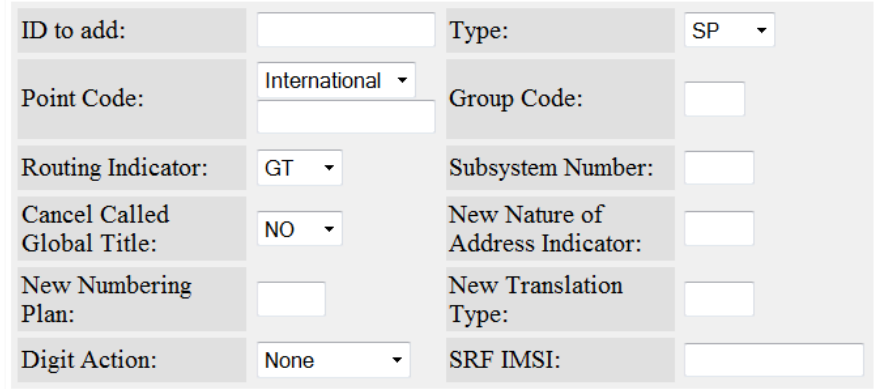

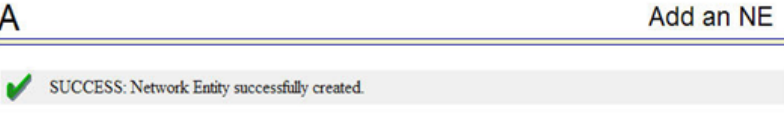
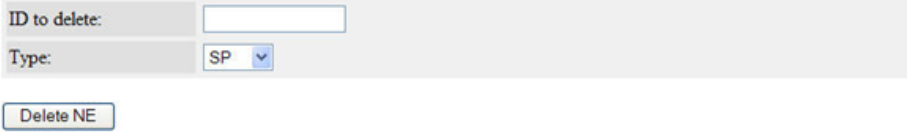


The GUI screen on Standalone PDB should look like:

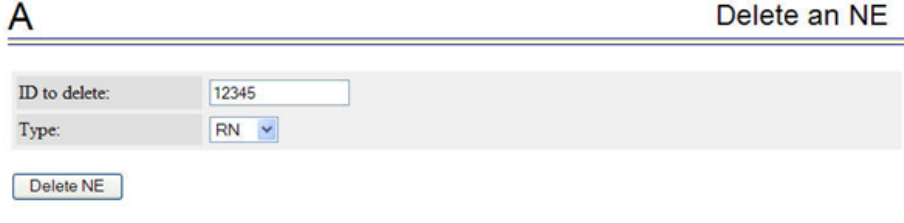
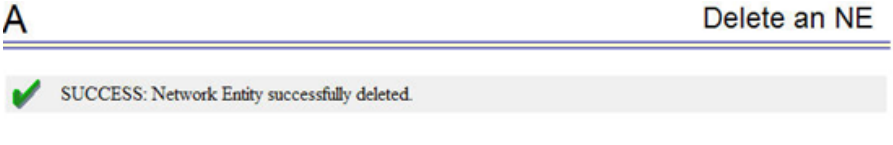
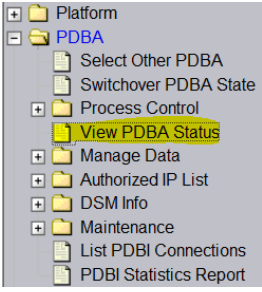
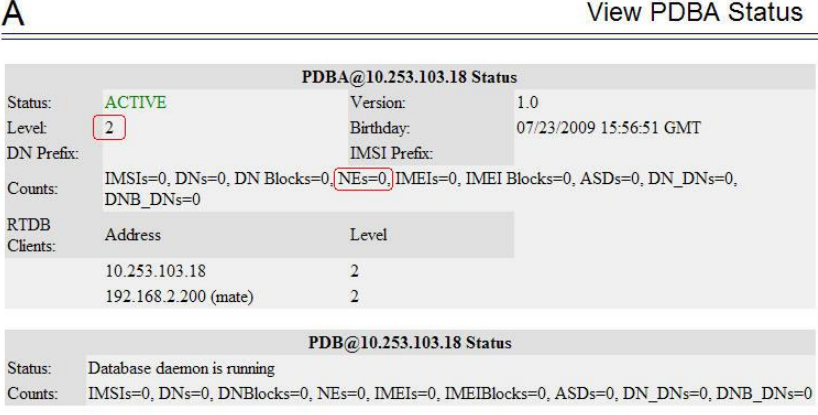
Procedure 14: PDB Configuration (Active Provisionable Site as designated by customer)

		
<p>3. <input type="checkbox"/></p>	<p>On the Site designated by the customer Active PDB GUI select “Switchover PDBA State” to make the PDBA Active.</p> 	<p>The screen should look like:</p> 
<p>4. <input type="checkbox"/></p>	<p>Click on the “Switchover” button.</p>	<p>The screen should look like:</p> 
<p>5. <input type="checkbox"/></p>	<p>PDBA should become ACTIVE.</p>	<p>The screen should look like:</p> 
<p>6. <input type="checkbox"/></p>	<p>On the ACTIVE PDBA</p>	<p>The screen should look like:</p>

Procedure 14: PDB Configuration (Active Provisionable Site as designated by customer)

<input type="checkbox"/>	<p>site, select PDBA→Manage Data→Network Entity→Add</p> 	 <p style="text-align: right;">Add an NE</p> <p>Thu May 22 2014 15:51:04 EDT</p> <p style="text-align: center;">Copyright © 2000, 2014, Oracle and/or its affiliates. All rights reserved.</p>
<p>7.</p> <input type="checkbox"/>	<p>Enter ID as “12345”, select Type “RN” and select Point Code as “None”.</p>	<p>The screen should look like:</p>  <p style="text-align: right;">Add an NE</p> <p>Add NE</p>
<p>8.</p> <input type="checkbox"/>	<p>Click on the “Add NE” button. Network Entity should be successfully added.</p>	<p>The screen should look like:</p>  <p style="text-align: right;">Add an NE</p> <p>✓ SUCCESS: Network Entity successfully created.</p>
<p>9.</p> <input type="checkbox"/>	<p>Select PDBA→Manage Data→Network Entity→Delete</p>	<p>The screen should look like:</p>  <p style="text-align: right;">Delete an NE</p> <p>Delete NE</p>
<p>10.</p> <input type="checkbox"/>	<p>Enter ID as “12345” and select Type “RN”.</p>	<p>The screen should look like:</p>

Procedure 14: PDB Configuration (Active Provisionable Site as designated by customer)

		
<p>11. <input type="checkbox"/></p>	<p>Click on the “Delete NE” button. Network Entity should be successfully deleted.</p>	<p>The screen should look like:</p> 
<p>12. <input type="checkbox"/></p>	<p>View PDBA Status</p> 	<p>The screen should look like:</p> 
<p>13. <input type="checkbox"/></p>	<p>Procedure complete</p>	<p>Procedure is complete.</p>

6. SOFTWARE UPGRADE PROCEDURE

6.1 Upgrade MPS B

Procedure 15: Upgrade MPS B

S T E P #	<p>This procedure upgrades MPS B server.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT ORACLE'S TEKELEC CUSTOMER CARE CENTER AND ASK FOR <u>UPGRADE ASSISTANCE</u>.</p>	
1.	<p><input type="checkbox"/> Notify potential users not to start the PDBA software during the duration of the upgrade.</p> <p>It is required that the Provisionable EPAP mated pair be upgraded first, before any Non-Provisionable EPAP systems. Refer to section 2.3 for more details on upgrading non-provisional EPAP systems.</p>	
2.	<p><input type="checkbox"/> Have the customer notify all web browser users who are using the EPAP Web GUI to logoff and exit their web browser for the duration of the upgrade.</p> <p>Only after successful upgrade of BOTH the MPS-A and MPS-B servers, the customer web browser users may then restart their web browser and access the EPAP Web GUI.</p>	
3.	<p><input type="checkbox"/> MPS B: Determine media available for upgrade.</p>	<p>Perform procedure in Appendix B.1 or use an EPAP ISO image to perform upgrade.</p>
4.	<p><input type="checkbox"/> Establish a connection to MPS B.</p>	<p>If access to the MPS servers is not available through an IP network, connect to the E5-APP-B card via the serial port.</p> <p>For connecting the E5-APP-B B card, disconnect the console cable from the serial port on the E5-APP-B A card's adapter. The cable should be disconnected at the point where it connects to the serial port labeled 'S1' on the E5-APP-B A card's adapter and use it for serial access. Cable part numbers - 830-1220-xx</p> <p>Skip to step 8, if connected through serial console.</p>
5.	<p><input type="checkbox"/> Create a terminal window and establish a connection by logging into MPS A.</p> <p>Log in to MPS A.</p>	<p>In a newly created terminal window labeled "MPS B – from MPS A", connect directly into MPS A.</p> <p># ssh root@<MPS A> Password: <password></p>
6.	<p><input type="checkbox"/> MPS A: Start screen session.</p> <p>MPS A: Connect to the console of MPS B.</p>	<p>Execute the following commands to start screen and establish a console session to MPS B.</p> <p># screen -L</p> <p>Execute the following command on E5-APP-B:</p> <p># minicom mate OR # cu -l /dev/ttys1 -s 115200</p>
7.	<p><input type="checkbox"/> MPS B: Login prompt is displayed.</p>	<p><hostname> console login:</p> <p>Note: Hit enter if no login prompt is displayed.</p>

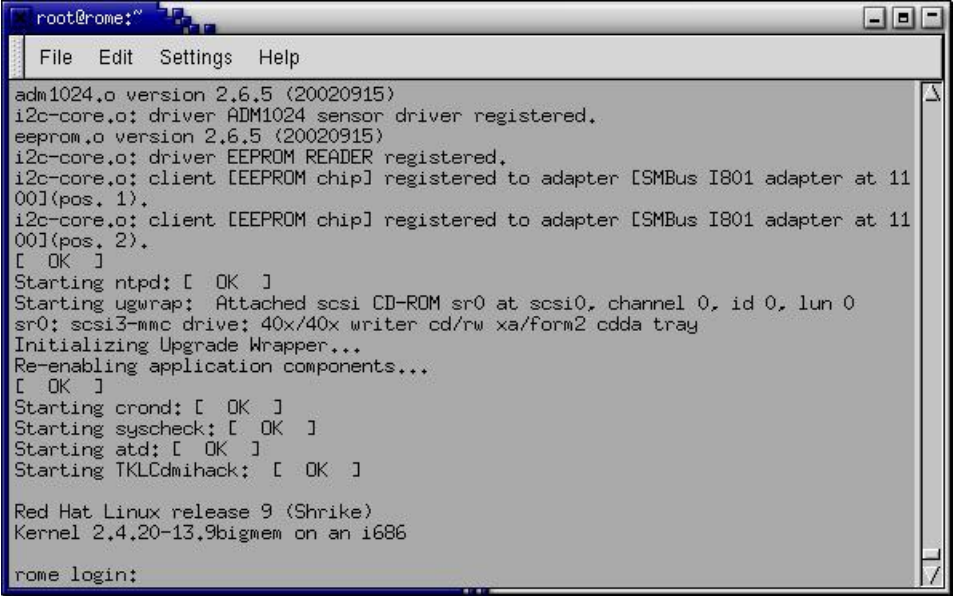
Procedure 15: Upgrade MPS B

8. <input type="checkbox"/>	MPS B: Log in to the server as the user “root”.	<code><hostname> console login: root password: <password></code>
9. <input type="checkbox"/>	MPS B: Disable syscheck fs module.	Execute the following command to disable the syscheck fs module. <code># syscheckAdm --disable disk fs</code>
10. <input type="checkbox"/>	MPS B: Determine if it is a Major or an Incremental Upgrade.	Check Procedure 2, Step 8 and 9. If the upgrade type is Major upgrade, proceed with the following step. If it’s Incremental, proceed to step 14.
11. <input type="checkbox"/>	MPS B: Check the HA status	Execute the following command: <code># hastatus</code>
12. <input type="checkbox"/>	MPS B: : Observe output of hastatus	Check the output of the “hastatus” command, if “hastatus” returns: UNINITIALIZED: continue with step 13. ACTIVE: stop and contact the Technical Assistance Center following the instructions on the front page or the instructions on the Appendix I. STANDBY: ensure that the file “/usr/TKLC/plat/etc/HA/state.d/.haTransitionInProgress” does not exist by running <code># ls -a /usr/TKLC/plat/etc/HA/state.d/.haTransitionInProgress</code> If it exists then it has to be removed by running the following command: <code># rm -f /usr/TKLC/plat/etc/HA/state.d/.haTransitionInProgress</code>
13. <input type="checkbox"/>	MPS B: Create upgrade.conf for splitting mirrors.	Create a file and add the line “SPLIT_MIRRORS=1” (to trigger the split mirror upgrade) by executing the following command: <code># echo "SPLIT_MIRRORS=1" >/usr/TKLC/plat/etc/upgrade/upgrade.conf</code> Execute the following command to verify that the above command has been executed successfully: <code># cat /usr/TKLC/plat/etc/upgrade/upgrade.conf</code> The output should be: [root@MPS-B ~]# cat /usr/TKLC/plat/etc/upgrade/upgrade.conf SPLIT_MIRRORS=1 NOTE: Not performing this step will prevent any successful backout.
14. <input type="checkbox"/>	MPS B: Validate media	Execute 7.3.1A.2 to validate the media.
15. <input type="checkbox"/>	MPS B: Execute the platcfg menu.	<code># su - platcfg</code>
16. <input type="checkbox"/>	MPS B: Select the submenu.	The platcfg Main Menu appears. On the Main Menu , select Maintenance and press [ENTER].

Procedure 15: Upgrade MPS B

		<div data-bbox="769 170 1214 485" data-label="Image"> <pre> Main Menu ----- Maintenance Diagnostics Server Configuration Network Configuration Remote Consoles Exit </pre> </div> <p>Select the Upgrade menu and press [ENTER].</p> <div data-bbox="745 548 1235 852" data-label="Image"> <pre> Maintenance Menu ----- Upgrade Backup and Restore View Mail Queues Restart Server Save Platform Debug Logs Exit </pre> </div>
<p>17. <input type="checkbox"/></p>	<p>MPS B: Select Initiate Upgrade.</p>	<p>Select the Initiate Upgrade menu and press [ENTER].</p> <div data-bbox="800 930 1183 1182" data-label="Image"> <pre> Upgrade Menu ----- Validate Media Initiate Upgrade Exit </pre> </div>
<p>18. <input type="checkbox"/></p>	<p>MPS B: Select the Upgrade Media.</p>	<p>The screen will display a message that it is searching for upgrade media. Once the upgrade media is found, an Upgrade Media selection menu will be displayed similar to the example shown below.</p> <p>Select the upgrade media on ISO image. There should only be one selection available, as shown in the example below. If there is more than one selection available, contact the Technical Assistance Center following the instructions on the front page or the instructions on the Appendix I.</p> <div data-bbox="516 1472 1451 1623" data-label="Image"> <pre> Choose Upgrade Media Menu ----- 872-2712-101-16.0.0_160.8.0-EPAP-x86_64.iso - tklc 872-2712-101 Rev A 160.8.0 Exit </pre> </div>
<p>19. <input type="checkbox"/></p>	<p>MPS B: Upgrade proceeds.</p>	<p>The screen displays the following, indicating that the upgrade software is first validating the media, and then proceeding with the upgrade.</p> <pre> Initializing Upgrade Wrapper ... Validating packages ... </pre>
<p>20. <input type="checkbox"/></p>	<p>MPS B: Upgrade proceeds.</p>	<p>Many informational messages will come across the terminal screen as the upgrade</p>

Procedure 15: Upgrade MPS B

<input type="checkbox"/>		<p>proceeds.</p> <p>Finally, after upgrade is complete, the server will reboot.</p>
<p>21.</p> <input type="checkbox"/>	<p>MPS B: Upgrade completed.</p>	<p>After the final reboot, the screen will display the login prompt, as shown in the example below.</p>  <p>The screenshot shows a terminal window with the following text:</p> <pre> root@rome:~# File Edit Settings Help adm1024.o version 2.6.5 (20020915) i2c-core.o: driver ADM1024 sensor driver registered. eeprom.o version 2.6.5 (20020915) i2c-core.o: driver EEPROM READER registered. i2c-core.o: client [EEPROM chip] registered to adapter [SMBus I801 adapter at 1100](pos. 1). i2c-core.o: client [EEPROM chip] registered to adapter [SMBus I801 adapter at 1100](pos. 2). [OK] Starting ntpd: [OK] Starting ugwwrap: Attached scsi CD-ROM sr0 at scsi0, channel 0, id 0, lun 0 sr0: scsi3-mmc drive: 40x/40x writer cd/rw xa/Form2 cdda tray Initializing Upgrade Wrapper... Re-enabling application components... [OK] Starting crond: [OK] Starting syscheck: [OK] Starting atd: [OK] Starting TKLcdmihack: [OK] Red Hat Linux release 9 (Shrike) Kernel 2.4.20-13.9bigmem on an i686 rome login: </pre>
<p>22.</p> <input type="checkbox"/>	<p>MPS B: Log in to the server as the user “root”.</p>	<p><hostname> console login: root password: <password></p>
<p>23.</p> <input type="checkbox"/>	<p>MPS B: Verify the Upgrade.</p>	<p>Examine the upgrade logs in the directory /var/TKLC/log/upgrade and verify that no errors and warnings were reported.</p> <p># grep -i error /var/TKLC/log/upgrade/upgrade.log</p> <p>Examine the output of the above command to determine if any errors were reported.</p> <p>No errors are expected for major upgrade. Contact Oracle’s Tekelec Customer Care Center following the instructions on the front page or the instructions on the Appendix I, if the output contains any error.</p> <p>Also note that sometime a carriage return is inserted in the log file causing some of the error messages to appear truncated. This is acceptable and should be ignored.</p> <p>The followings are the expected errors from an Incremental Upgrade:</p> <pre> 1402041608::Error : Table 'mysql.innodb_index_stats' doesn't exist 1402041608::Error : Table 'mysql.innodb_table_stats' doesn't exist 1402041608::Error : Table 'mysql.slave_master_info' doesn't exist 1402041608::Error : Table 'mysql.slave_relay_log_info' doesn't exist 1402041608::Error : Table 'mysql.slave_worker_info' doesn't exist 1402041608::ERROR: TKLCepap-160.0.10-16.0.0_160.10.0: ERROR: problem running mysql_upgrade <password> 1402041609::ERROR: TKLCepap-160.0.10-16.0.0_160.10.0: ERROR: Unable to fix the mysql privilege table </pre> <p>Proceed to next Step to fix the mysql issues.</p> <p># grep -i warning /var/TKLC/log/upgrade/upgrade.log</p>

Procedure 15: Upgrade MPS B

		<p>Examine the output of the above command to determine if any warnings were reported. Contact Oracle’s Tekelec Customer Care Center following the instructions on the front page or the instructions on the Appendix, if the output contains any warnings beside the following:</p> <pre> 1400785048::WARNING: Source file does not exist...cannot get diff! 1400785048::WARNING: SOURCE: /var/lib/misc/prelink.force 1400785815::pam warning: /etc/pam.d/system-auth created as /etc/pam.d/system-auth.rpmnew 1400785847::glibc warning: /etc/localtime created as /etc/localtime.rpmnew 1400785869::initscripts ###warning: /etc/sysctl.conf created as /etc/sysctl.conf.rpmnew 1400785929::WARNING: /usr/TKLC/plat/etc/alarms/alarms_mps.xml has been updated...reparsing xml... 1400785991::smartmontools warning: /etc/smartd.conf created as /etc/smartd.conf.rpmnew 1400786013::TKLCepap-HA #####warning: group root} does not exist - using root 1400786145::WARNING: Use of uninitialized value in list assignment at /mnt/upgrade/upgrade/lib/Methods/Parse_Chunk_List.pm line 485. 1400786145::WARNING: Use of uninitialized value in list assignment at /mnt/upgrade/upgrade/lib/Methods/Parse_Chunk_List.pm line 485. 1400786145::WARNING: Use of uninitialized value in list assignment at /mnt/upgrade/upgrade/lib/Methods/Parse_Chunk_List.pm line 485. 1400786145::WARNING: Use of uninitialized value in list assignment at /mnt/upgrade/upgrade/lib/Methods/Parse_Chunk_List.pm line 485. 1400786158::WARNING: This capability is not defined in the capabilities template. 1400786158::WARNING: Nor is it defined in the current hardware ID's capabilities. 1400786158::WARNING: CAPABILITY: service__disabled </pre> <p>Refer to section 3.7 to know more about logging.</p>
<p>24. <input type="checkbox"/></p>	<p>MPS B: Fix mysql upgrade issue for an Incremental Upgrade.</p>	<p>Execute the Appendix F only if errors found in above step in an Incremental Upgrade.</p>
<p>25. <input type="checkbox"/></p>	<p>MPS B: Verify the Upgrade.</p>	<p># grep "UPGRADE IS COMPLETE" /var/TKLC/log/upgrade/upgrade.log</p> <p>Verify that the message “UPGRADE IS COMPLETE” is displayed. If it is not, contact the Technical Assistance Center following the instructions on the front page or the instructions on the Appendix I.</p> <pre> 1400786220:: UPGRADE IS COMPLETE </pre>
<p>26. <input type="checkbox"/></p>	<p>MPS B: Enable syscheck fs module.</p>	<p>Execute the following command to enable the syscheck fs module.</p> <pre> # syscheckAdm --enable disk fs </pre>
<p>27. <input type="checkbox"/></p>	<p>MPS B: Upgrade is complete. Verify Health of MPS B.</p>	<p>Execute Appendix A.1 on MPS B to verify the health of MPS B.</p> <p>If this is a Major Upgrade, the syscheck utility will report the “3000000000000002 – Server Internal Disk Error” alarm as the disk mirroring is in progress. The alarm will be cleared after the completion of disk mirroring.</p> <p>Also, the syscheck utility will report the “5000000000000002 - Server Application Process Error” alarm as the Epap processes are not running after the upgrade.</p> <p>Verify that no unexpected alarms are noted.</p>
<p>28. <input type="checkbox"/></p>	<p>MPS B: Remove upgrade.conf after major upgrade is successful.</p>	<p>If it is a major upgrade and the upgrade has successfully completed, remove the file using the following command:</p> <pre> # rm -f /usr/TKLC/plat/etc/upgrade/upgrade.conf </pre>

Procedure 15: Upgrade MPS B

		Otherwise, all upgrades afterwards will split the mirrors.
29. <input type="checkbox"/>	Reconnect console cable.	On E5-APP-B card, reconnect the console cable between the serial port labeled 'S0' on E5-APP-B B card's adapter and the serial port labeled 'S1' on the E5-APP-B A card's adapter. Cable part numbers - 830-1220-xx
30. <input type="checkbox"/>	Procedure complete.	Procedure is complete.

6.2 Upgrade MPS A

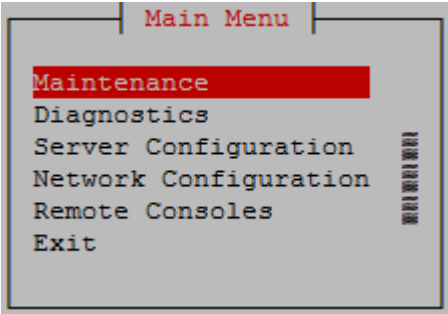
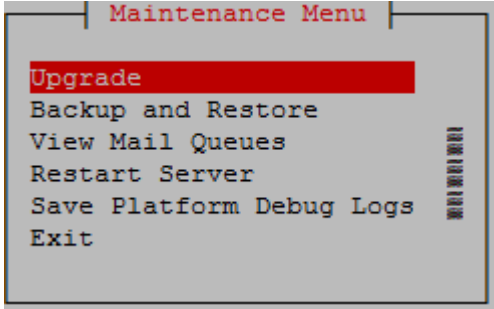
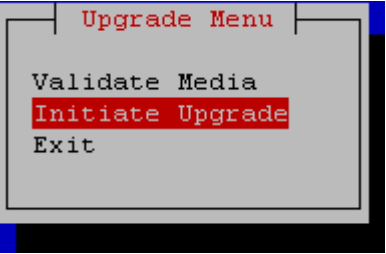
Procedure 16: Upgrade MPS A

S T E P #	<p>This procedure upgrades the MPS-A server in the EPAP System.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT ORACLE’S TEKELEC CUSTOMER CARE CENTER AND ASK FOR <u>UPGRADE ASSISTANCE</u>.</p>	
1. <input type="checkbox"/>	<p>MPS A: Determine media available for upgrade.</p>	<p>Perform procedure in Appendix B.1 or use an EPAP ISO image to perform upgrade.</p>
2. <input type="checkbox"/>	<p>Establish a connection to MPS A.</p>	<p>If access to the MPS servers is not available through an IP network, connect to the E5-APP-B card via the serial port.</p> <p>For connecting the E5-APP-B A card, disconnect the console cable from the serial port on the E5-APP-B B card’s adapter. The cable should be disconnected at the point where it connects to the serial port labeled ‘S1’ on the E5-APP-B B card’s adapter and use it for serial access. Cable part numbers - 830-1220-xx</p> <p>Skip to step 6, if connected through serial console.</p>
3. <input type="checkbox"/>	<p>Create a terminal window and establish a connection by logging into MPS B.</p> <p>Log in to MPS B.</p>	<p>In a newly created terminal window labeled “MPS B”, connect directly into MPS B.</p> <p># ssh root@<MPS B> Password: <password></p>
4. <input type="checkbox"/>	<p>MPS B: Start screen session.</p> <p>MPS B: Connect to the console of MPS A.</p>	<p>Execute the following commands to start screen and establish a console session to MPS A.</p> <p># screen -L</p> <p>Execute the following command on E5-APP-B:</p> <p># minicom mate OR # cu -l /dev/ttyS1 -s 115200</p>
5. <input type="checkbox"/>	<p>MPS A: Login prompt is displayed.</p>	<p><hostname> console login:</p> <p>Note: Hit enter if no login prompt is displayed.</p>
6. <input type="checkbox"/>	<p>MPS A: Log in to the server as the user “root”.</p>	<p><hostname> console login: root password: <password></p>
7. <input type="checkbox"/>	<p>MPS A: Disable syscheck fs module.</p>	<p>Execute the following command to disable the syscheck fs module.</p> <p># syscheckAdm --disable disk fs</p>
8. <input type="checkbox"/>	<p>MPS A: Determine if it is a Major or an Incremental Upgrade.</p>	<p>Check Procedure 2, Step 8 and 9. If the upgrade type is Major upgrade, proceed with the following step. If it’s Incremental, proceed to step 16.</p>
9. <input type="checkbox"/>	<p>MPS A: Check the HA status.</p>	<p>Execute the following command:</p> <p># hastatus</p>

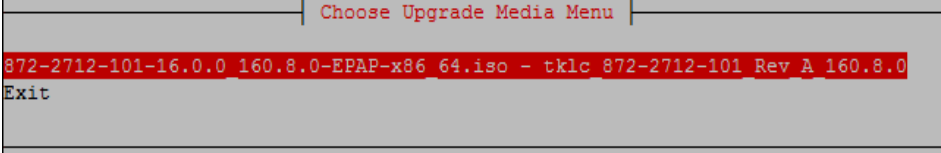

Procedure 16: Upgrade MPS A

<input type="checkbox"/>	MPS A: Observe output of hastatus	<p>Check the output of the “hastatus” command, if “hastatus” returns:</p> <ol style="list-style-type: none"> 1. UNINITIALIZED: continue with step 15. 2. STANDBY: stop and contact the Technical Assistance Center following the instructions on the front page or the instructions on the Appendix I. 3. ACTIVE: proceed with the next step.
<input type="checkbox"/>	MPS A: failover	<p>Execute the following command</p> <pre># /usr/TKLC/plat/sbin/hafailover --gostandby</pre>
<input type="checkbox"/>	MPS A: check for the ha state file on Both Servers	<p>Wait one minute and execute the following command on Server A</p> <pre># rm -f /usr/TKLC/plat/etc/HA/state.d/.haTransitionInProgress</pre> <p>Execute the following command on server B:</p> <pre># rm -f /usr/TKLC/plat/etc/HA/state.d/.haTransitionInProgress</pre>
<input type="checkbox"/>	MPS A: Check the ha status again	<p>Execute the following command:</p> <pre># hastatus</pre> <p>Verify that the output is STANDBY</p>
<input type="checkbox"/>	MPS A: inhibit failovers on Both Servers	<p>Execute the following command:</p> <pre># /usr/TKLC/plat/sbin/hafailover --inhibit</pre> <p>Execute the following command on Server A:</p> <pre># rm -f /usr/TKLC/plat/etc/HA/state.d/.haTransitionInProgress</pre> <p>Execute the following command on server B:</p> <pre># rm -f /usr/TKLC/plat/etc/HA/state.d/.haTransitionInProgress</pre> <p>Now Execute the following command on Server A:</p> <pre># hastatus</pre> <p>Verify the output is UNINITIALIZED “INHIBITED”. If the output returned is different, stop and contact the Technical Assistance Center following the instructions on the front page or the instructions on the Appendix I</p>
<input type="checkbox"/>	MPS A: Create upgrade.conf for splitting mirrors if this is a Major upgrade.	<p>Only execute this step if the upgrade is a Major upgrade.</p> <p>Create a file and add the line “SPLIT_MIRRORS=1” (to trigger the split mirror upgrade) by executing the following command:</p> <pre># echo "SPLIT_MIRRORS=1" >/usr/TKLC/plat/etc/upgrade/upgrade.conf</pre> <p>Execute the following command to verify that the above command has been executed successfully:</p> <pre># cat /usr/TKLC/plat/etc/upgrade/upgrade.conf</pre>

Procedure 16: Upgrade MPS A

		<p>The output should be: <pre>[root@MPS-B ~]# cat /usr/TKLC/plat/etc/upgrade/upgrade.conf SPLIT_MIRRORS=1</pre></p> <p>NOTE: Not performing this step will prevent any successful backout.</p>
16.	MPS A: Validate media	Execute 7.3.1A.2 to validate the media.
17.	MPS A: Execute the platcfg menu.	# su - platcfg
18.	MPS A: Select the submenu.	<p>The platcfg Main Menu appears. On the Main Menu, select Maintenance and press [ENTER].</p>  <p>Select the Upgrade menu and press [ENTER].</p> 
19.	MPS A: Select Initiate Upgrade.	<p>Select the Initiate Upgrade menu and press [ENTER].</p> 
20.	MPS A: Select the Upgrade Media.	<p>The screen will display a message that it is searching for upgrade media. Once the upgrade media is found, an Upgrade Media selection menu will be displayed similar to the example shown below.</p> <p>Select the upgrade media on ISO image. There should only be one selection available, as shown in the example below. If there is more than one selection available, contact the Technical Assistance Center following the instructions on the front page or the</p>

Procedure 16: Upgrade MPS A

		<p>instructions on the Appendix I.</p> 
21.	<input type="checkbox"/> MPS A: Upgrade proceeds.	<p>The screen displays the following, indicating that the upgrade software is first validating the media, and then proceeding with the upgrade.</p> <pre>Initializing Upgrade Wrapper ... Validating packages ...</pre>
22.	<input type="checkbox"/> MPS A: Upgrade proceeds.	<p>Many informational messages will come across the terminal screen as the upgrade proceeds.</p> <p>Finally, after upgrade is complete, the server will reboot.</p>
23.	<input type="checkbox"/> MPS A: Upgrade completed.	<p>After the final reboot, the screen will display the login prompt, as shown in the example below.</p> 
24.	<input type="checkbox"/> MPS A: Log in to the server as the user "root".	<pre><hostname> console login: root password: <password></pre>
25.	<input type="checkbox"/> MPS A: Verify the Upgrade.	<p>Examine the upgrade logs in the directory <code>/var/TKLC/log/upgrade</code> and verify that no errors and warnings were reported.</p> <pre># grep -i error /var/TKLC/log/upgrade/upgrade.log</pre> <p>No errors are expected for major upgrade. Contact Oracle's Tekelec Customer Care Center following the instructions on the front page or the instructions on the Appendix I, Also note that sometime a carriage return is inserted in the log file causing some of the error messages to appear truncated. This is acceptable and should be ignored.</p> <p>The followings are the expected errors from an Incremental Upgrade:</p>

Procedure 16: Upgrade MPS A

		<pre> 1402041608::Error : Table 'mysql.innodb_index_stats' doesn't exist 1402041608::Error : Table 'mysql.innodb_table_stats' doesn't exist 1402041608::Error : Table 'mysql.slave_master_info' doesn't exist 1402041608::Error : Table 'mysql.slave_relay_log_info' doesn't exist 1402041608::Error : Table 'mysql.slave_worker_info' doesn't exist 1402041608::ERROR: TKLCepap-160.0.10-16.0.0_160.10.0: ERROR: problem running mysql_upgrade <password> 1402041609::ERROR: TKLCepap-160.0.10-16.0.0_160.10.0: ERROR: Unable to fix the mysql privilege table Proceed to next Step to fix the mysql issues. # grep -i warning /var/TKLC/log/upgrade/upgrade.log Examine the output of the above command to determine if any warnings were reported. Contact Oracle’s Tekelec Customer Care Center following the instructions on the front page or the instructions on the Appendix I, if the output contains any warnings beside the following: 1400792652::WARNING: Source file does not exist...cannot get diff! 1400792667::WARNING: SOURCE: /var/lib/misc/prelink.force 1400793380::pam warning: /etc/pam.d/system-auth created as /etc/pam.d/system-auth.rpmnew 1400793410::glibc warning: /etc/localtime created as /etc/localtime.rpmnew 1400793432::initscripts ###warning: /etc/sysctl.conf created as /etc/sysctl.conf.rpmnew 1400793486::warning: Using a password on the command line interface can be insecure. 1400793531::WARNING: /usr/TKLC/plat/etc/alarms/alarms_mps.xml has been updated...reparsing xml... 1400793590::smartmontools warning: /etc/smartd.conf created as /etc/smartd.conf.rpmnew 1400793610::TKLCepap-HA #####warning: group root} does not exist - using root 1400793739::WARNING: Use of uninitialized value in list assignment at /mnt/upgrade/upgrade/lib/Methods/Parse_Chunk_List.pm line 485. 1400793739::WARNING: Use of uninitialized value in list assignment at /mnt/upgrade/upgrade/lib/Methods/Parse_Chunk_List.pm line 485. 1400793739::WARNING: Use of uninitialized value in list assignment at /mnt/upgrade/upgrade/lib/Methods/Parse_Chunk_List.pm line 485. 1400793739::WARNING: Use of uninitialized value in list assignment at /mnt/upgrade/upgrade/lib/Methods/Parse_Chunk_List.pm line 485. 1400793752::WARNING: This capability is not defined in the capabilities template. 1400793752::WARNING: Nor is it defined in the current hardware ID's capabilities. 1400793752::WARNING: CAPABILITY: service__disabled Refer to section 3.7 to know more about logging. </pre>
<p>26. <input type="checkbox"/></p>	<p>MPS A: Fix mysql upgrade issue for an Incremental Upgrade.</p>	<p>Execute the Appendix F only if errors found in above step in an Incremental Upgrade.</p>
<p>27. <input type="checkbox"/></p>	<p>MPS A: Verify the Upgrade.</p>	<pre> # grep "UPGRADE IS COMPLETE" /var/TKLC/log/upgrade/upgrade.log Verify that the message "UPGRADE IS COMPLETE" is displayed. If it is not, contact the Technical Assistance Center following the instructions on the front page or the instructions on the Appendix I. 1400793814:: UPGRADE IS COMPLETE </pre>
<p>28. <input type="checkbox"/></p>	<p>MPS A: Verify the Upgrade.</p>	<p>Check Procedure 2, Step 8. If the upgrade type is Major, execute the following command to allow failovers to occur. Otherwise, skip this step and proceed to step 30.</p> <pre> # /usr/TKLC/plat/sbin/hafailover --noinhibit </pre>

Procedure 16: Upgrade MPS A

29. <input type="checkbox"/>	MPS A: Enable syscheck fs module.	Execute the following command to enable the syscheck fs module. # syscheckAdm --enable disk fs
30. <input type="checkbox"/>	MPS A: Upgrade is complete. Verify Health of MPS A.	Execute Appendix A.1 on MPS A to verify the health of MPS A. On a Provisionable MPS, expect that the syscheck utility will alarm the fact that the PDBA software is not running. This will appear as a “5000000000000002 – Server Application Process Error” alarm. If this is a Major Upgrade, the syscheck utility will report the “3000000000000002 – Server Internal Disk Error” alarm as the disk mirroring is in progress. The alarm will be cleared after the completion of disk mirroring. Verify that no unexpected alarms are noted.
31. <input type="checkbox"/>	MPS A: Remove upgrade.conf after major upgrade is successful.	If it is a major upgrade and the upgrade has successfully completed, remove the file using the following command: # rm -f /usr/TKLC/plat/etc/upgrade/upgrade.conf Otherwise, all upgrades afterwards will split the mirrors.
32. <input type="checkbox"/>	MPS A: Reset MySQL database Replication.	If it is a major upgrade, follow Appendix C to reset replication.
33. <input type="checkbox"/>	Reconnect console cable.	On E5-APP-B card, reconnect the console cable between the serial port labeled 'S0' on E5-APP-B A card's adapter and the serial port labeled 'S1' on the E5-APP-B B card's adapter. Cable part numbers - 830-1220-xx
34. <input type="checkbox"/>	Reboot Eagle Cards.	If the DB levels on EPAP and Eagle matches and there is no alarm on Eagle related to “RTDB reload is required”, go to step 35. Reboot 1 SM card on the Eagle and verify that it comes back to an IS-NR/Active state. If this is a Non-Provisionable EPAP, boot the rest of the Eagle SM cards over 4 batches (booting 1/4 of the cards at a single time). You may continue onto step 35 without waiting for all cards to load to an IS-NR/Active state (verify at a later time). If this is a Provisionable EPAP, and the second MPS A on which backout has been executed, reboot the rest of the cards on both local and remote sides over 4 batches (booting 1/4 of the cards at a single time).
35. <input type="checkbox"/>	Procedure is complete.	Procedure is complete. Note: If upgrading an EPAP Provisionable mated pair and you have just completed this procedure for the Local MPS A and MPS B. Repeat the same procedures to upgrade the Remote Pair. See Section 2.1 for more information.

THIS COMPLETES THE UPGRADE

7. RECOVERY PROCEDURES

Execute this section only if there is a problem and it is desired to revert back to the pre-upgrade version of the software.

Warning: Do not attempt to perform these backout procedures without first contacting the Tekelec Customer Care Center at 1-888-FOR-TKLC or 1-888-367-8552; or for international callers 1-919-460-2150.

NOTE: These recovery procedures are provided for the backout of an Upgrade ONLY (i.e., from a failed 16.x release to the previously installed 15.a release, or from an incremental upgraded system). Backout of an initial installation is not supported.

7.1 Backout Setup

The reason to execute a backout has a direct impact on any backout preparation that must be done. Since the reason cannot be known ahead of time, no definitive procedure can be written.

Tekelec Customer Support personnel will have to have login access to the affected MPS server, probe the server for the root cause of the problem, and execute whatever setup or cleanup is necessary in order to prepare the MPS server for backout.

7.2 Perform Backout

No matter the initial cause of the upgrade problem, once all necessary corrective steps have been taken to prepare for the backout, then the following procedure can be executed to perform a backout. Refer to section 2.2 for the Backout process overview.

7.2.1 Backout - MPS B Server Only

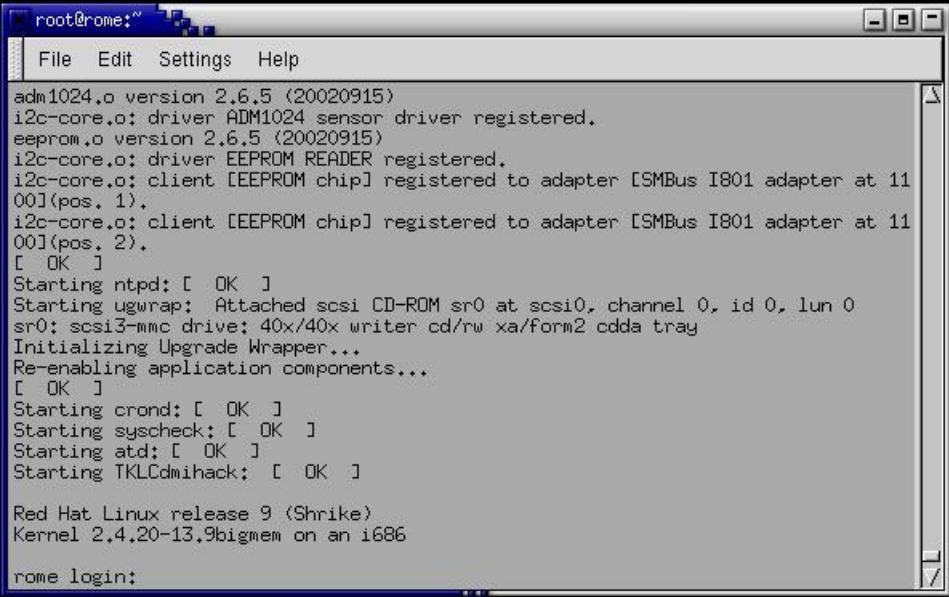
Procedure 17: MPS B Only Backout Procedure

S T E P #	<p>This procedure provides instructions to perform backout on MPS B server.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>Note: Execute this procedure if only MPS B has been upgraded or partially upgraded and MPS A is still at the pre-upgrade release. Note if the upgrade type was major and the major upgrade has been accepted, this procedure cannot be executed.</p>	
1. <input type="checkbox"/>	<p>Terminate all previous connections (ssh).</p>	<p>If not already connected, connect to the E5-APP-B card via the serial port.</p> <p>For connecting the E5-APP-B B card, disconnect the console cable from the serial port on the E5-APP-B A card's adapter. The cable should be disconnected at the point where it connects to the serial port labeled 'S1' on the E5-APP-B A cards adapter and use it for serial access. Cable part numbers - 830-1220-xx</p> <p>Skip to step 5, if connected through serial console.</p>
2. <input type="checkbox"/>	<p>Create a terminal window and establish a connection by logging into MPS A.</p> <p>Log in to MPS A.</p>	<p>In a newly created terminal window labeled "MPS B – from MPS A", connect directly into MPS A.</p> <p># ssh root@<MPS A> Password: <password></p>
3. <input type="checkbox"/>	<p>MPS A: Start screen session</p> <p>MPS A: Connect to the console of MPS B.</p>	<p>Execute the following commands to start screen and establish a console session to MPS B.</p> <p># screen -L</p> <p>Execute the following command on E5-APP-B:</p> <p># minicom mate OR # cu -l /dev/ttyS1 -s 115200</p>
4. <input type="checkbox"/>	<p>MPS B: Login prompt is displayed.</p>	<p><hostname> console login:</p> <p>Note: Hit enter if no login prompt is displayed.</p>
5. <input type="checkbox"/>	<p>MPS B: Log in to the server as user "root".</p>	<p>If not already logged-in, then log in.</p> <p><hostname> console login: root Password: <password></p>
6. <input type="checkbox"/>	<p>MPS B: Change directory.</p>	<p>Change to the backout directory.</p> <p># cd /var/TKLC/backout</p>
7. <input type="checkbox"/>	<p>MPS B: Execute the backout.</p>	<p>Execute the following command to initiate the backout:</p> <p># ./backout_server</p> <p>NOTE: When backout operation asks if you would like to proceed with backout, answer "Y".</p>

Procedure 17: MPS B Only Backout Procedure

<p>8. <input type="checkbox"/></p>	<p>MPS B: Backout proceeds.</p>	<p>Many informational messages will come across the terminal screen as the backout proceeds.</p> <p>Finally, after backout is complete, a message will be displayed stating that a reboot is required.</p> <p>If this is a backout of a <i>major</i> upgrade, skip to step 12. DO NOT INITIATE A REBOOT MPS-B at this time.</p> <p>If this is a backout of an <i>incremental</i> upgrade, the server will be at runlevel 3 and no applications are running. Proceed to the next step to verify the backout and manually reboot the server.</p>
<p>9. <input type="checkbox"/></p>	<p>MPS B: Verify the Backout</p>	<p>Examine the upgrade logs in the directory <code>/var/TKLC/log/upgrade</code> and verify that no errors were reported.</p> <pre># grep -i error /var/TKLC/log/upgrade/upgrade.log # grep -i error /var/TKLC/log/upgrade/ugwrap.log</pre> <p>Examine the output of the above commands to determine if any errors were reported.</p> <p>Refer to section 3.7 to know more about logging.</p>
<p>10. <input type="checkbox"/></p>	<p>MPS B: Verify the Backout.</p>	<p>If the backout was <i>not</i> successful and errors were recorded in the logs, then contact the Technical Assistance Center following the instructions on the front page or the instructions on the Appendix I for further instructions.</p> <p>If the backout <i>was</i> successful, then continue with the following step.</p>
<p>11. <input type="checkbox"/></p>	<p>MPS B: Reboot the MPS.</p>	<p>Only perform this step on a backout of an incremental upgrade.</p> <p>Perform the following commands to reboot the MPS:</p> <pre># init 6</pre>
<p>12. <input type="checkbox"/></p>	<p>MPS B: Reboot completed.</p>	<p>On a backout of a major upgrade, the server will reboot several times as part of backout. Re-mirroring of the disks will occur in the background – do not initiate a reboot until this process has completed.</p> <p>On a backout of an incremental upgrade, the user has initiated a reboot.</p> <p>After the reboot, the screen will display the login prompt, as shown in the example below.</p>

Procedure 17: MPS B Only Backout Procedure

		
<input type="checkbox"/>	13. MPS B: Login to MPS B.	<p>If the login prompt appears, continue on to step 16</p> <p>If the login prompt does not appear due to disconnect, go to step 14.</p>
<input type="checkbox"/>	<p>14. Create a terminal window and establish a connection by logging into MPS A.</p> <p>Log into MPS A.</p>	<p>In a newly created terminal window labeled “MPS B – from MPS A”, connect directly into MPS A.</p> <pre># ssh root@<MPS A> Password: <password></pre>
<input type="checkbox"/>	15. MPS A: Rejoin previous screen session on MPS B.	<p>Execute the following command to disconnect and then rejoin previous screen session:</p> <pre># screen -dr</pre>
<input type="checkbox"/>	16. MPS A: Remove upgrade.conf after backout of major upgrade is successful.	<p>If it is a backout of a major upgrade, remove the file using the following command:</p> <pre># rm -f /usr/TKLC/plat/etc/upgrade/upgrade.conf</pre> <p>Otherwise, all upgrades afterwards will split the mirrors.</p>
<input type="checkbox"/>	17. MPS B: Verify Health of MPS B.	<p>Execute Appendix A.1 on MPS B to verify the health of MPS B.</p>
<input type="checkbox"/>	18. MPS B: Clear MySQL replication error banner message, if any	<p>Execute the following command to check for MySQL replication error:</p> <pre># manageBannerInfo -l</pre> <p>Examine the output of the above command to determine if any errors were reported related to MySQL replication such as:</p> <pre>MySQL data replication error detected; Attempting to restart Attempt to restart MySQL replication failed</pre> <p>Execute the following command to copy the EuiDB database from B server to A server to clear any of the above observed MySQL replication error:</p> <pre># /usr/TKLC/epap/config/resetReplication</pre> <p>Resetting MySql Replication This script will fix EuiDB replication by copying the database from one side of the pair to the other side and then resetting the MySql</p>

Procedure 17: MPS B Only Backout Procedure

		<pre> replication pointers. Are you sure you want to reset replication? (y/n) y Which side do you want to copy FROM? (A/B) [B]: B Copy the EuiDB from B to A? (y/n) y Removing the index and info files from EPAP A Replication files successfully removed from the mate server. Connecting to local DB Connecting to mate DB Copying EuiDB to mate Stopping local slave Stopping mate slave Resetting local master Resetting mate master Resetting local slave Resetting mate slave Starting local slave Starting mate slave Resetting MySQL Replication Completed Execute the following command to verify that the banner messages related to the replication error are cleared after some time. # manageBannerInfo -1 </pre>
19.	<input type="checkbox"/> MPS B: Verify Health of MPS B	<p>Execute Appendix A.1 on MPS B to verify the health of MPS B</p> <p>If backout of major upgrade was performed, the syscheck utility will report the “300000000000002 – Server Internal Disk Error” alarm as the disk mirroring is in progress. The alarm will be cleared after the completion of disk mirroring.</p>
20.	<input type="checkbox"/> Reconnect console cable.	On E5-APP-B card, reconnect the console cable between the serial port labeled 'S0' on E5-APP-B B card's adapter and the serial port labeled 'S1' on the E5-APP-B A card's adapter. Cable part numbers - 830-1220-xx
21.	<input type="checkbox"/> Procedure complete.	This procedure is complete.

The application should now be running at the original software release level

7.2.2 Backout – Both MPS A and B Servers

Procedure 18: Both MPS A and B Backout Procedure

<p>S T E P #</p>	<p>This procedure provides instructions to perform backout on both MPS A and MPS B servers.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>Note: Execute this procedure only if both MPS A and MPS B have been upgraded or partially upgraded and you wish to backout both servers to the previous version.</p> <p>Note: If the major upgrade has been accepted, this procedure cannot be performed.</p>	
1.	<input type="checkbox"/> Terminate all previous connections (ssh).	<p>If not already connected, connect to the E5-APP-B card via the serial port.</p> <p>For connecting the E5-APP-B A card, disconnect the console cable from the serial port on the E5-APP-B B card's adapter. The cable should be disconnected at the point where</p>

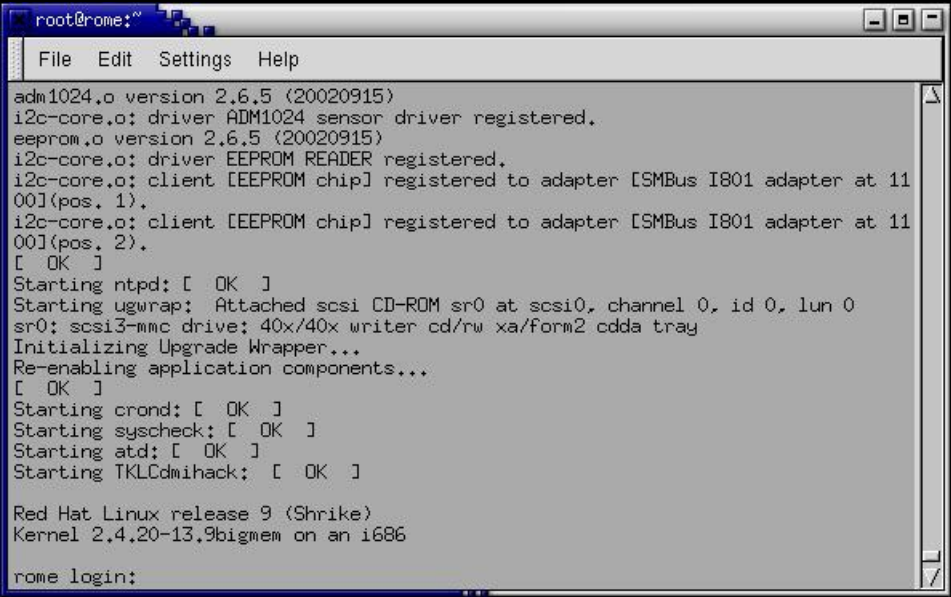
Procedure 18: Both MPS A and B Backout Procedure

		<p>it connects to the serial port labeled 'S1' on the E5-APP-B B card's adapter and use it for serial access. Cable part numbers - 830-1220-xx</p> <p>Skip to step 7, if connected through serial console.</p>
2.	<p><input type="checkbox"/> Create a terminal window and establish a connection by logging into MPS B.</p> <p>Log into MPS B.</p>	<p>In a newly created terminal window labeled "MPS A – from MPS B", connect directly into MPS B.</p> <p># ssh root@<MPS B> Password: <password></p>
3.	<p><input type="checkbox"/> MPS B: Start screen session.</p> <p>MPS B: Connect to the console of MPS A.</p>	<p>Execute the following commands to start screen and establish a console session to MPS A.</p> <p># screen -L</p> <p>Execute the following command on E5-APP-B:</p> <p># minicom mate OR # cu -l /dev/ttyS1 -s 115200</p>
4.	<p><input type="checkbox"/> MPS A: Login prompt is displayed.</p>	<p><hostname> console login:</p> <p>Note: Hit enter if no login prompt is displayed.</p>
5.	<p><input type="checkbox"/> MPS A: Log in to the server as user "root".</p>	<p>Log in as 'root'.</p> <p><hostname> console login: root Password: <password></p>
6.	<p><input type="checkbox"/> MPS A: Check if RTDB and PDBA databases are synchronized.</p>	<p>Execute the following command to check the RTDB and PDB database levels:</p> <p># dbstattool</p> <p>The outlook may look like:</p> <pre> DBSTATTOOL Platform=EPAP ----- pdb_birthdate = 1399621904 (Fri May 9 03:51:44 2014) pdb_level = 1 rtdb_pdb_birthdate = 1399621904 (Fri May 9 03:51:44 2014) rtdb_begin_dsm_level = 1 rtdb_end_dsm_level = 1 rtdb_dsm_birthdate = 1400784912 (Thu May 22 14:55:12 2014) rtdb_dsm_status = 1 rtdb_load_state = 0 eagle_fmt_pdb_birthdate = 2152386348 (eagle format - be careful!) eagle_fmt_rtdb_pdb_birthdate = 1981720860 (eagle format - be careful!) eagle_fmt_rtdb_dsm_birthdate = 4003650604 (eagle format - be careful!) pdba_last_upd_ipaddr = 0 pdba_last_upd_timestamp = 0 (Wed Dec 31 19:00:00 1969) dbstattool_pad1 = 0 dbstattool_pad2 = 0 dbstattool_pad3 = 0 dbstattool_pad4 = 0 dbstattool_timestamp = 0 (Wed Dec 31 19:00:00 1969) rtdb_version = 3 </pre> <p>Note down the RTDB and PDBA database levels. If they are not the same prior to</p>

Procedure 18: Both MPS A and B Backout Procedure

		backout, an RTDB reload from PDBA must be performed after backout!
7. <input type="checkbox"/>	MPS A: Change directory.	Change to the backout directory. # cd /var/TKLC/backout
8. <input type="checkbox"/>	MPS A: Execute the backout.	Execute the following command to initiate the backout: # ./backout_server NOTE: When backout operation asks if you would like to proceed with backout, answer “Y”.
9. <input type="checkbox"/>	MPS A: Backout proceeds.	Many informational messages will come across the terminal screen as the backout proceeds. Finally, after backout is complete, a message will be displayed stating that a reboot is required. If this is a backout of a <i>major</i> upgrade, skip to step 13. DO NOT INITIATE A REBOOT MPS-A at this time. If this is a backout of an <i>incremental</i> upgrade, the server will be at runlevel 3 and no applications are running. Proceed to the next step to verify the backout and manually reboot the server.
10. <input type="checkbox"/>	MPS A: Verify the Backout.	Examine the upgrade logs in the directory <code>/var/TKLC/log/upgrade</code> and verify that no errors were reported. # grep -i error /var/TKLC/log/upgrade/upgrade.log # grep -i error /var/TKLC/log/upgrade/ugwrap.log Examine the output of the above commands to determine if any errors were reported. Refer to section 3.7 to know more about logging.
11. <input type="checkbox"/>	MPS A: Verify the Backout.	If the backout was <i>not</i> successful and errors were recorded in the logs, then contact the Technical Assistance Center following the instructions on the front page or the instructions on the Appendix I for further instructions. If the backout <i>was</i> successful, then enter continue with the following steps:
12. <input type="checkbox"/>	MPS A: Reboot the MPS.	Perform this step only on a backout of an incremental upgrade. Perform the following commands to reboot the MPS: # init 6
13. <input type="checkbox"/>	MPS A: Backout completed.	On a backout of a major upgrade, the server will reboot several times as part of backout. Re-mirroring of the disks will occur in the background – do not initiate a reboot until this process has completed. On a backout of an incremental upgrade, the user has initiated a reboot. After the reboot, the screen will display the login prompt, as shown in the example below.

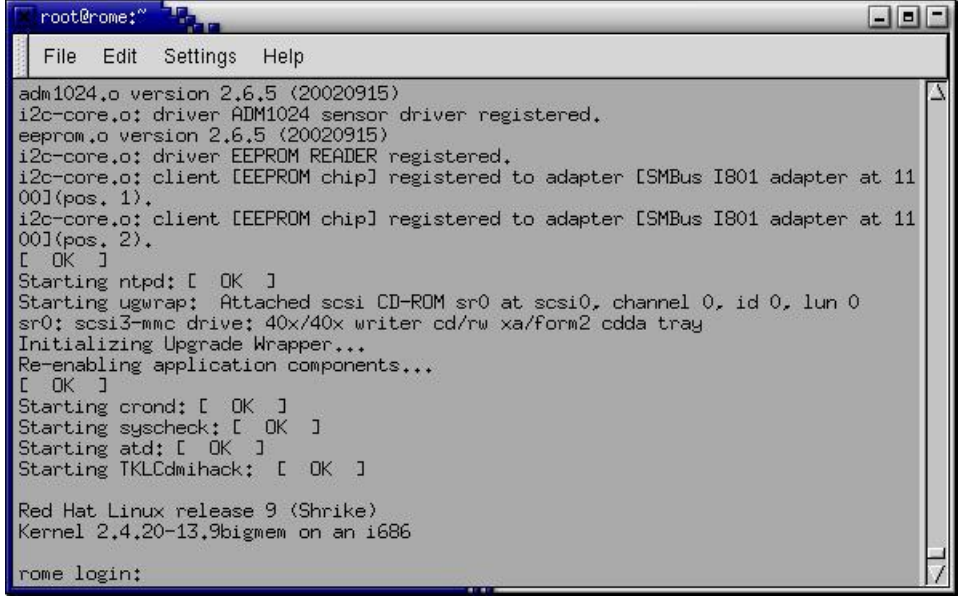
Procedure 18: Both MPS A and B Backout Procedure

		
<input type="checkbox"/> 14.	MPS A: Login to MPS A.	<p>If the login prompt appears, skip to step 17.</p> <p>If the login prompt does not appear due to disconnect, go to step 15.</p>
<input type="checkbox"/> 15.	<p>Create a terminal window and establish a connection by logging into MPS B.</p> <p>Log into MPS B.</p>	<p>In a newly created terminal window labeled “MPS A – from MPS B”, connect directly into MPS B.</p> <pre># ssh root@<MPS B> Password: <password></pre>
<input type="checkbox"/> 16.	MPS B: Rejoin previous screen session on MPS A.	<p>Execute the following command to disconnect and then rejoin previous screen session:</p> <pre># screen -dr</pre>
<input type="checkbox"/> 17.	MPS B: Remove upgrade.conf after backout of major upgrade is successful.	<p>If it is a backout of a major upgrade, remove the file using the following command:</p> <pre># rm -f /usr/TKLC/plat/etc/upgrade/upgrade.conf</pre> <p>Otherwise, all upgrades afterwards will split the mirrors.</p>
<input type="checkbox"/> 18.	MPS A: Verify Health of MPS A.	<p>Execute Appendix A.1 on MPS A to verify the health of MPS A</p> <p>If backout of major upgrade was performed, the syscheck utility will report the “3000000000000002 – Server Internal Disk Error” alarm as the disk mirroring is in progress.</p> <p>The alarm will be cleared after the completion of disk mirroring.</p> <p>Also, the syscheck utility may report the “5000000000000002 - Server Application Process Error” for PDBA, if the pdba software is not running.</p>
<input type="checkbox"/> 19.	Terminate all previous connections (ssh).	<p>If not already connected, connect to the E5-APP-B card via the serial port.</p> <p>For connecting the E5-APP-B B card, disconnect the console cable from the serial port on the E5-APP-B A card’s adapter. The cable should be disconnected at the point where it connects to the serial port labeled ‘S1’ on the E5-APP-B A cards adapter and use it for serial access.</p> <p>Skip to step 23, if connected through serial console.</p>

Procedure 18: Both MPS A and B Backout Procedure

<input type="checkbox"/> 20.	Create a terminal window and establish a connection by logging into MPS A. Log into MPS A.	In a newly created terminal window labeled “ MPS B – from MPS A ”, connect directly into MPS A. # ssh root@<MPS A> Password: <password>
<input type="checkbox"/> 21.	MPS A: Start screen session. MPS A: Connect to the console of MPS B.	Execute the following commands to start screen and establish a console session to MPS B. # screen -L Execute the following command on E5-APP-B: # minicom mate OR # cu -l /dev/ttyS1 -s 115200
<input type="checkbox"/> 22.	MPS B: Login prompt is displayed.	<hostname> console login: Note: Hit enter if no login prompt is displayed.
<input type="checkbox"/> 23.	MPS B: Log in to the server as user “root”.	<hostname> console login: root Password: <password>
<input type="checkbox"/> 24.	MPS B: Change directory.	Change to the backout directory. # cd /var/TKLC/backout
<input type="checkbox"/> 25.	MPS B: Execute the backout.	Execute the backout using the uwrap script. # ./backout_server NOTE: When backout operation asks if you would like to proceed with backout, answer “Y”.
<input type="checkbox"/> 26.	MPS B: Backout proceeds.	Many informational messages will come across the terminal screen as the backout proceeds. Finally, after backout is complete, a message will be displayed stating that a reboot is required. If this is a backout of a <i>major</i> upgrade, skip to step 30. DO NOT INITIATE A REBOOT MPS-B at this time. If this is a backout of an <i>incremental</i> upgrade, the server will be at runlevel 3 and no applications are running. Proceed to the next step to verify the backout and manually reboot the server.
<input type="checkbox"/> 27.	MPS B: Verify the Backout.	Only perform this step on a backout of an incremental upgrade. Examine the upgrade logs in the directory <code>/var/TKLC/log/upgrade</code> and verify that no errors were reported. # grep -i error /var/TKLC/log/upgrade/upgrade.log

Procedure 18: Both MPS A and B Backout Procedure

		<p># grep -i error /var/TKLC/log/upgrade/ugwrap.log</p> <p>Examine the output of the above command to determine if any errors were reported.</p> <p>Refer to section 3.7 to know more about logging.</p>
<p>28. <input type="checkbox"/></p>	<p>MPS B: Verify the Backout.</p>	<p>If the backout was <i>not</i> successful and errors were recorded in the logs, then contact the Technical Assistance Center following the instructions on the front page or the instructions on the Appendix for further instructions.</p> <p>If the backout <i>was</i> successful, then enter continue with the following steps:</p>
<p>29. <input type="checkbox"/></p>	<p>MPS B: Reboot the MPS.</p>	<p>Perform the following commands to reboot the MPS:</p> <p># init 6</p>
<p>30. <input type="checkbox"/></p>	<p>MPS B: Backout completed.</p>	<p>On a backout of a major upgrade, the server will reboot several times as part of backout. Re-mirroring of the disks will occur in the background – do not initiate a reboot until this process has completed.</p> <p>On a backout of an incremental upgrade, the user has initiated a reboot.</p> <p>After the final reboot, the screen will display the login prompt, as shown in the example below.</p>  <p>The screenshot shows a terminal window with the following text: root@rome:~ File Edit Settings Help adm1024.o version 2.6.5 (20020915) i2c-core.o: driver ADM1024 sensor driver registered. eeprom.o version 2.6.5 (20020915) i2c-core.o: driver EEPROM READER registered. i2c-core.o: client [EEPROM chip] registered to adapter [SMBus I801 adapter at 1100](pos. 1). i2c-core.o: client [EEPROM chip] registered to adapter [SMBus I801 adapter at 1100](pos. 2). [OK] Starting ntpd: [OK] Starting ugwrap: Attached scsi CD-ROM sr0 at scsi0, channel 0, id 0, lun 0 sr0: scsi3-mmc drive: 40x/40x writer cd/rw xa/form2 cdda tray Initializing Upgrade Wrapper... Re-enabling application components... [OK] Starting crond: [OK] Starting syscheck: [OK] Starting atd: [OK] Starting TKLcdmihack: [OK] Red Hat Linux release 9 (Shrike) Kernel 2.4.20-13.9bigmem on an i686 rome login:</p>
<p>31. <input type="checkbox"/></p>	<p>MPS B: Login to MPS B.</p>	<p>If the login prompt appears, skip to step 35.</p> <p>If the login prompt does not appear due to disconnect, go to step 32.</p>
<p>32. <input type="checkbox"/></p>	<p>Create a terminal window and establish a connection by logging into MPS A.</p> <p>Log into MPS A</p>	<p>In a newly created terminal window labeled “MPS B – from MPS A”, connect directly into MPS A.</p> <p># ssh root@<MPS A> Password: <password></p>
<p>33. <input type="checkbox"/></p>	<p>MPS A: Rejoin previous screen session on MPS B</p>	<p>Execute the following command to disconnect and then rejoin previous screen session:</p>

Procedure 18: Both MPS A and B Backout Procedure

		# screen -dr
34. <input type="checkbox"/>	MPS B: Log in to the server as user "root".	<hostname> console login: root Password: <password>
35. <input type="checkbox"/>	MPS B: : Remove upgrade.conf after backout of major upgrade is successful.	If it is a backout of a major upgrade, remove the file using the following command: # rm -f /usr/TKLC/plat/etc/upgrade/upgrade.conf Otherwise, all upgrades afterwards will split the mirrors.
36. <input type="checkbox"/>	MPS B: Clear MySQL replication error banner message, if any	Execute the following command to check for MySQL replication error: # manageBannerInfo -1 Examine the output of the above command to determine if any errors were reported related to MySQL replication such as: MySQL data replication error detected; Attempting to restart Attempt to restart MySQL replication failed Execute the following command to copy the EuiDB database from B server to A server to clear any of the above observed MySQL replication error: # /usr/TKLC/epap/config/resetReplication Resetting MySql Replication This script will fix EuiDB replication by copying the database from one side of the pair to the other side and then resetting the MySQL replication pointers. Are you sure you want to reset replication? (y/n) y Which side do you want to copy FROM? (A/B) [B]: B Copy the EuiDB from B to A? (y/n) y Removing the index and info files from EPAP A Replication files successfully removed from the mate server. Connecting to local DB Connecting to mate DB Copying EuiDB to mate Stopping local slave Stopping mate slave Resetting local master Resetting mate master Resetting local slave Resetting mate slave Starting local slave Starting mate slave Resetting MySql Replication Completed Execute the following command to verify that the banner messages related to the replication error are cleared after some time. # manageBannerInfo -1
37. <input type="checkbox"/>	MPS B: Verify Health of MPS B	Execute Appendix A.1 on MPS B to verify the health of MPS B. If backout of major upgrade was performed, the syscheck utility will report the "3000000000000002 – Server Internal Disk Error" alarm as the disk mirroring is in progress. The alarm will be cleared after the completion of disk mirroring.
38. <input type="checkbox"/>	MPS B: Observe output of hastatus	Connect to MPS A. Check the output of the "hastatus" command, if "hastatus" returns: 1. UNINITIALIZED "INHIBITED": continue with step 39. 2. UNINITIALIZED or ACTIVE: proceed with step 40. STANDBY: stop and contact the Technical Assistance Center following the instructions on the front page or the instructions on the Appendix I.

Procedure 18: Both MPS A and B Backout Procedure

39. <input type="checkbox"/>	MPS B: Uninhibit ha failovers	If it is a backout of Major upgrade, execute the following command to allow failovers to occur # /usr/TKLC/plat/sbin/hafailover --noinhibit
40. <input type="checkbox"/>	MPS A: Check RTDB and PDB database levels.	Check the result of Step 6. If the RTDB and PDBA database levels were NOT same prior to backout, execute Appendix A.7 to perform an RTDB reload from PDBA.
41. <input type="checkbox"/>	Reboot Eagle Cards.	If the DB levels on EPAP and Eagle matches and there is no alarm on Eagle related to “RTDB reload is required”, go to step 42. Reboot 1 SM card on the Eagle and verify that it comes back to an IS-NR/Active state. If this is a Non-Provisionable EPAP, boot the rest of the Eagle SM cards over 4 batches (booting 1/4 of the cards at a single time). You may continue onto step 42 without waiting for all cards to load to an IS-NR/Active state (verify at a later time). If this is a Provisionable EPAP, and the second MPS A on which backout has been executed, reboot the rest of the cards on both local and remote sides over 4 batches (booting 1/4 of the cards at a single time).
42. <input type="checkbox"/>	Procedure is complete.	This procedure is complete.

The application should now be running at the original software release level

7.3 Post Backout Procedures

7.3.1 Restart the PDBA Software (Post-Backout and Post-Upgrade)

When upgrade is initiated on the first MPS-B, the PDBA software process is stopped on the MPS-A servers configured as **Provisionable**. The PDBA software is intentionally left stopped, and so the operator performing the upgrade must restart the PDBA software after all MPS servers in a set of EPAP systems have been upgraded.

WARNING: If a backout of the MPS A and B units is conducted sometime after an upgrade has successfully completed and after Provisioning has been re-enabled, then the only method of PDB restoration is from backup file. In this case, any new data provisioned since the successful completion of the upgrade will be lost and will need to be re-provisioned.

Procedure 19: Restart the PDBA Software Post-Backout and Post-Upgrade

S T E P #	<p>This procedure restarts the PDBA software after upgrade of all associated MPS systems has been completed.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT ORACLE’S TEKELEC CUSTOMER CARE CENTER AND ASK FOR <u>UPGRADE ASSISTANCE</u>.</p>
<p>If backout has been performed, then execute this procedure ONLY after backout on all MPS servers in the entire set of EPAP systems. Otherwise, skip this procedure until all MPS servers have been backed out.</p>	
1.	Local MPS A: Log in to

Procedure 19: Restart the PDBA Software Post-Backout and Post-Upgrade

<input type="checkbox"/>	the server as user "root".	<hostname> console login: root Password: <password>
2. <input type="checkbox"/>	Local MPS A: Verify Health of MPS A.	<p>If not done already, execute Appendix A.1 on MPS A to verify the health of MPS A.</p> <p>Expect that the syscheck utility will report the 'Server Application Process Error' alarm for the fact that the PDBA software is not running. Besides the PDBA not running alarm, verify that no other abnormalities are noted.</p> <p>If a major upgrade was performed, the syscheck utility will report the "3000000000000002 – Server Internal Disk Error" alarm until the procedure to accept the upgrade has been performed.</p>
3. <input type="checkbox"/>	Local MPS A: Restart the PDBA software.	<p>Execute the command below to find if the pdba is running or not:</p> <pre># ps -aef grep pdba grep -v "grep"</pre> <p>If the output contains an entry for the pdba, as shown below, then skip to the next step.</p> <pre>[root@MPS A ~]# ps -aef grep pdba epapdev 23890 10248 0 Apr07 ? 00:01:18 /opt/TKLCappl/bin/pdba</pre> <p>Otherwise, execute the startPDBA script.</p> <pre># startPDBA</pre>
4. <input type="checkbox"/>	Local MPS A: Verify PDBA is running.	Execute Appendix A.1 on MPS A to verify the health of MPS A Verify that syscheck does <i>not</i> show that the PDBA is <i>not</i> running.
5. <input type="checkbox"/>	Remote MPS A: Log in to the server as user "root".	<hostname> console login: root Password: <password>
6. <input type="checkbox"/>	Remote MPS A: Verify Health of MPS A.	<p>Execute Appendix A.1 on MPS A to verify the health of MPS A.</p> <p>Expect that the syscheck utility will alarm the fact that the PDBA software is not running. This will appear as a "5000000000000002 -- Server Application Process Error" alarm. Besides the PDBA not running alarm, verify that no other abnormalities are noted.</p> <p>If a major upgrade was performed, the syscheck utility will report the "3000000000000002 – Server Internal Disk Error" alarm until the procedure to accept the upgrade has been performed.</p>
7. <input type="checkbox"/>	Remote MPS A: Restart the PDBA software.	<p>Execute the command below to find if the pdba is running or not:</p> <pre># ps -aef grep pdba grep -v "grep"</pre> <p>If the output contains an entry for the pdba, as shown below, then skip to the next step.</p> <pre>[root@MPS A ~]# ps -aef grep pdba epapdev 23890 10248 0 Apr07 ? 00:01:18 /opt/TKLCappl/bin/pdba</pre> <p>Otherwise, execute the startPDBA script.</p>

Procedure 19: Restart the PDBA Software Post-Backout and Post-Upgrade

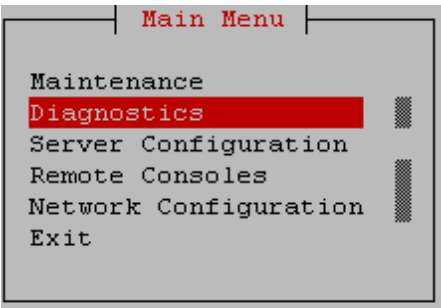
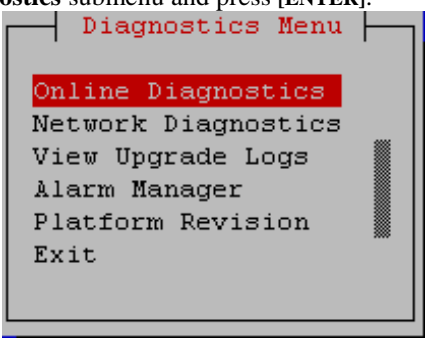
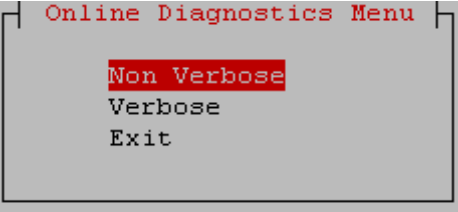
		# startPDBA
8. <input type="checkbox"/>	Remote MPS A: Verify PDBA is running.	Execute Appendix A.1 on MPS A to verify the health of MPS A. Verify that syscheck does <i>not</i> show that the PDBA is <i>not</i> running.
9. <input type="checkbox"/>	Procedure complete.	This procedure is complete.

THIS COMPLETES THE BACKOUT

APPENDIX A. GENERIC UPGRADE PROCEDURES

A.1 Perform System Health Check

Procedure 20: Perform System Health Check

S T E P #	<p>This procedure performs a system health check on any MPS server.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT ORACLE'S TEKELEC CUSTOMER CARE CENTER AND ASK FOR <u>UPGRADE ASSISTANCE</u>.</p>	
1. <input type="checkbox"/>	Log in as the root user.	<pre><hostname> console login: root Password: <password></pre>
2. <input type="checkbox"/>	Execute the platcfg menu.	<pre># su - platcfg</pre>
3. <input type="checkbox"/>	Select the Diagnostics submenu.	<p>The platcfg Main Menu appears. On the Main Menu, select Diagnostics and press [ENTER].</p>  <pre> Main Menu ----- Maintenance Diagnostics Server Configuration Remote Consoles Network Configuration Exit </pre>
4. <input type="checkbox"/>	Select the Online Diagnostics submenu.	<p>Select the Online Diagnostics submenu and press [ENTER].</p>  <pre> Diagnostics Menu ----- Online Diagnostics Network Diagnostics View Upgrade Logs Alarm Manager Platform Revision Exit </pre>
5. <input type="checkbox"/>	Select the Non-Verbose option.	<p>Select the Non-Verbose option and press [ENTER].</p>  <pre> Online Diagnostics Menu ----- Non Verbose Verbose Exit </pre>
6. <input type="checkbox"/>	Examine the output of the Online Diagnostics.	Example output shown below. Examine the actual output of the Online Diagnostics.

Procedure 20: Perform System Health Check

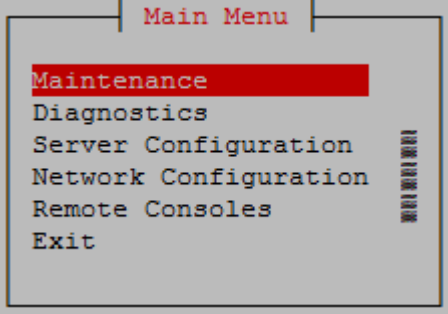
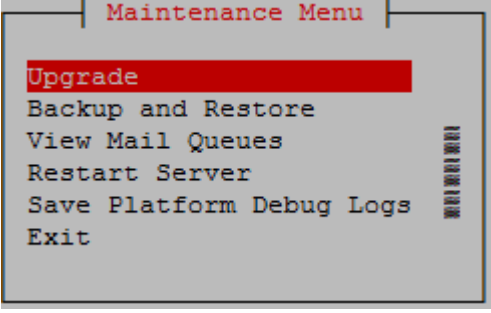
<input type="checkbox"/>		
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A.2 Validate Upgrade Media

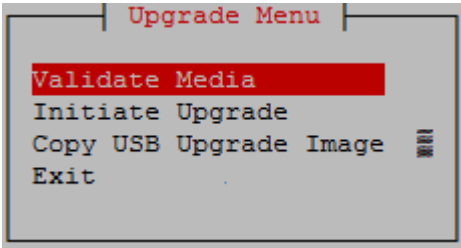
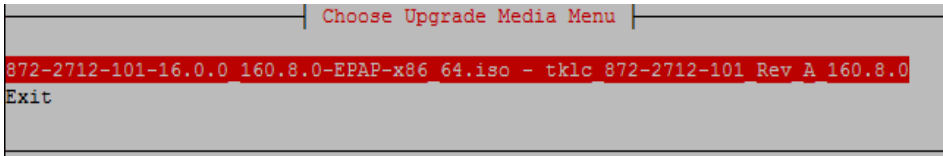
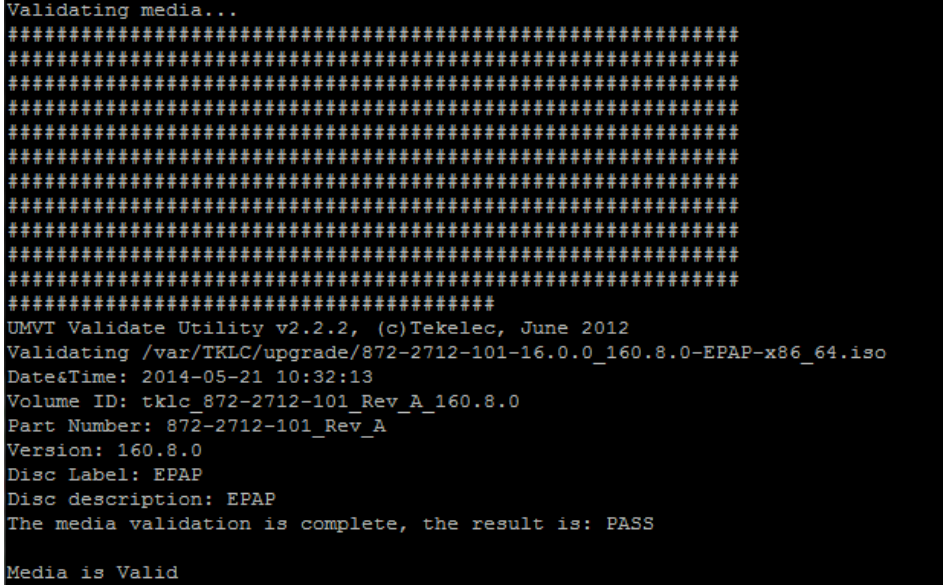
This procedure is used to execute a validation of the Upgrade Media (typically an ISO image) separately from executing an upgrade. The upgrade process automatically validates the upgrade media. However, sometime the user may wish to perform just a validation before proceeding with upgrade, thus the reason for this separate process.

Validation could be performed on MPS A or B, however, this procedure specifies MPS X for simplicity.

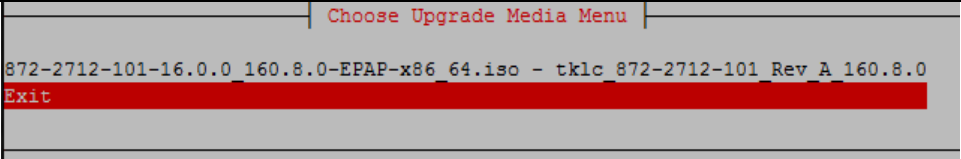
Procedure 21: Validate the Upgrade Media on MPS

S T E P #	<p>This procedure provides instructions to perform a validation of the upgrade media on the MPS X server. This procedure assumes that the E5-APP-B card IPM procedure has been executed and the user has an EPAP Upgrade ISO image available.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT ORACLE’S TEKELEC CUSTOMER CARE CENTER AND ASK FOR UPGRADE ASSISTANCE.</p>	
1. <input type="checkbox"/>	<p>MPS X: If necessary, log in to the server as the user “root”.</p>	<p>If not already logged in to the MPS server, then login as user “root”.</p> <pre><hostname> console login: root password: <password></pre>
2. <input type="checkbox"/>	<p>MPS X: Execute the platcfg menu.</p>	<pre># su - platcfg</pre>
3. <input type="checkbox"/>	<p>MPS X: Select the Maintenance submenu.</p>	<p>The platcfg Main Menu appears. On the Main Menu, select Maintenance and press [ENTER].</p>  <p>The screenshot shows a terminal window titled "Main Menu" with the following options: Maintenance (highlighted in red), Diagnostics, Server Configuration, Network Configuration, Remote Consoles, and Exit.</p>
4. <input type="checkbox"/>	<p>MPS X: Select the Upgrade submenu.</p>	<p>Select the Upgrade menu and press [ENTER].</p>  <p>The screenshot shows a terminal window titled "Maintenance Menu" with the following options: Upgrade (highlighted in red), Backup and Restore, View Mail Queues, Restart Server, Save Platform Debug Logs, and Exit.</p>

Procedure 21: Validate the Upgrade Media on MPS

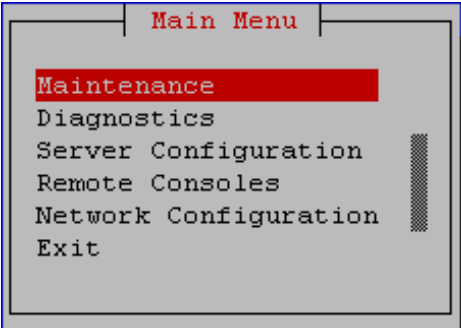
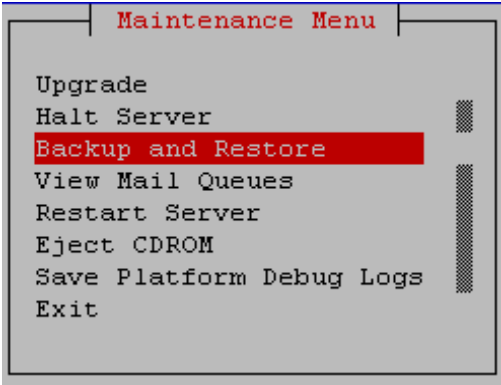
<p>5. <input type="checkbox"/></p>	<p>MPS X: Select the Validate Media selection.</p>	<p>Select the Validate Media menu and press [ENTER].</p> 
<p>6. <input type="checkbox"/></p>	<p>MPS X: Output from the Validate Media selection.</p>	<p>The screen will display a message that it is searching for upgrade media. Once the upgrade media is found, an Upgrade Media selection menu will be displayed similar to the example shown below.</p> <p>If the upgrade media is not found, follow B.1 to copy the upgrade ISO.</p> <p>Select the upgrade media or ISO image. There should only be one selection available, as shown in the example below. If there is more than one selection available, contact the Technical Assistance Center following the instructions on the front page or the instructions on the Appendix I.</p> 
<p>7. <input type="checkbox"/></p>	<p>MPS X: View the Validation results.</p>	<p>The results of the validation will be displayed, similar to the example below. Press the “enter” key to continue.</p> 
<p>8. <input type="checkbox"/></p>	<p>MPS X: Select the Exit option.</p>	<p>Select the Exit option, and keep selecting the Exit option, until you reach the command line prompt or you return to another menu that you wish to use.</p>

Procedure 21: Validate the Upgrade Media on MPS

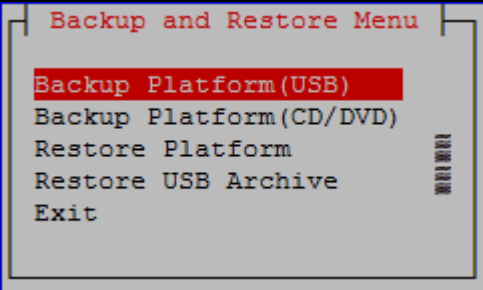
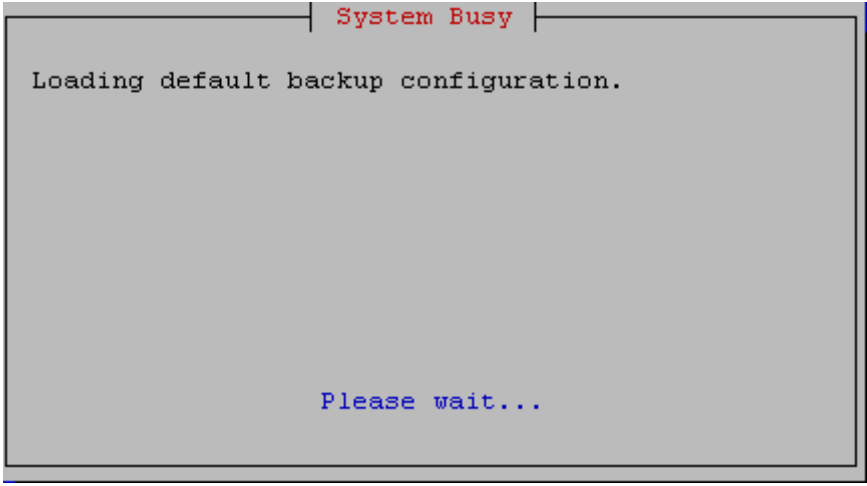
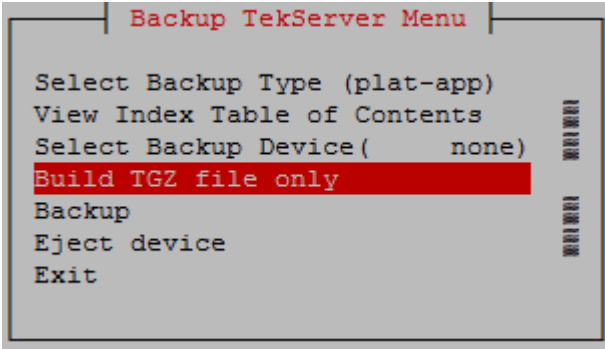
		
9. <input type="checkbox"/>	MPS X: Procedure complete.	Media Validation is complete. Return to the procedure that you came here from.

A.3 Perform System Configuration Backup

Procedure 22: System Configuration Backup

S T E P #	<p>This procedure performs configuration backup on an MPS Server.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT ORACLE'S TEKELEC CUSTOMER CARE CENTER AND ASK FOR <u>UPGRADE ASSISTANCE</u>.</p>	
1. <input type="checkbox"/>	<p>MPS X: If necessary, log in to the server as the user "root".</p>	<p>If not already logged in to the MPS server, then login as user "root".</p> <pre><hostname> console login: root password: <password></pre>
2. <input type="checkbox"/>	<p>MPS X: Execute the platcfg menu.</p>	<pre># su - platcfg</pre>
3. <input type="checkbox"/>	<p>MPS X: Select the Maintenance submenu.</p>	<p>The platcfg Main Menu appears. On the Main Menu, select Maintenance and press [ENTER].</p>  <p>The screenshot shows a terminal window titled "Main Menu" with the following options: Maintenance (highlighted in red), Diagnostics, Server Configuration, Remote Consoles, Network Configuration, and Exit.</p>
4. <input type="checkbox"/>	<p>MPS X: Select the Backup Platform submenu.</p>	<p>Select the Backup and Restore menu and press [ENTER].</p>  <p>The screenshot shows a terminal window titled "Maintenance Menu" with the following options: Upgrade, Halt Server, Backup and Restore (highlighted in red), View Mail Queues, Restart Server, Eject CDROM, Save Platform Debug Logs, and Exit.</p>
5. <input type="checkbox"/>	<p>MPS X: Select the Backup Platform submenu.</p>	<p>Select the Backup Platform (USB) submenu and press [ENTER].</p>

Procedure 22: System Configuration Backup

		
<p>6. <input type="checkbox"/> MPS X: Backup continues.</p>		<p>The backup continues. The following busy screen may appear.</p> 
<p>7. <input type="checkbox"/> MPS X: Select the Build TGZ file only selection.</p>		<p>Select the Build TGZ file only selection and press [ENTER].</p> 
<p>8. <input type="checkbox"/> MPS X: Backup complete – select exit.</p>		<p>Once the TGZ has been created, the “Backup TekServer Menu” will be displayed again. Select the Exit option, and keep selecting the Exit option, until you reach the command line prompt.</p>
<p>9. <input type="checkbox"/> MPS X: Transfer the backup file.</p>		<p>The backup file is in the /var/TKLC/bkp directory and will have a name like <hostname>-plat-app-[date][time].tgz</p> <p>Execute the following command to view the backup file: # ls -l /var/TKLC/bkp</p>
<p>10. <input type="checkbox"/> MPS X: Transfer file to remote machine.</p>		<p>Using SFTP (secure-FTP), transfer the ISO to a remote, customer-provided computer. Enter “yes” when prompted if you want to continue to connect.</p> <p># cd /var/TKLC/bkp</p>

Procedure 22: System Configuration Backup

		<pre> # sftp <IP address of remote computer> Connecting to <IP address of remote computer>... The authenticity of host '<IP address of remote computer>' can't be established. 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 <IP address of remote computer>' (DSA) to the list of known hosts. root@<IP address of remote computer>'s password: sftp> cd <target directory> sftp> put <hostname>-plat-app-[date][time].tgz Uploading <hostname>-plat-app-[date][time].tgz to <hostname>-plat- app-[date][time].tgz sftp> bye If no customer provided remote computer for backups exist, transfer the backup file to the mate using the following command: # scp /var/TKLC/bkp/<TGZ file> root@mate:/var/TKLC/epap/free/ </pre>
11. <input type="checkbox"/>	Procedure complete.	Return to the procedure that you came here from.

A.4 PDB Database Backup

Procedure 23: PDBA Database Backup

S T E P #	<p>This procedure performs a PDB backup on the EPAP server configured as a Provisionable node. This procedure should only be performed on the active PDBA.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT ORACLE'S TEKELEC CUSTOMER CARE CENTER AND ASK FOR UPGRADE ASSISTANCE.</p>	
1. <input type="checkbox"/>	MPS A: Log in to the server.	<p>If not already logged-in, then login at MPS A: <hostname> console login: root Password: <password></p>
2. <input type="checkbox"/>	Run syscheck.	<p>Execute the following Command:</p> <p># syscheck</p>
3. <input type="checkbox"/>	<p>Verify the System Check executed successfully.</p> <p>In particular, verify that the PDBA process is running by noting that syscheck does not generate an alarm against the PDBA process.</p>	<pre>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</pre> <p>The log is available at: -->/var/TKLC/log/syscheck/fail_log</p> <p>If the syscheck utility reports the “5000000000000002 – Server Application Process Error” alarm, restart the PDBA and execute syscheck again. The above alarm should be removed. If the above alarm is not removed, contact the Technical Assistance Center following the instructions on the front page or the instructions on the Appendix I.</p>
4. <input type="checkbox"/>	System Check Verifies that PDBA is running.	<p>If the syscheck does not report any errors, proceed to the next step. Otherwise, if any other failures were detected by System Check, contact the Technical Assistance Center following the instructions on the front page or the instructions on the Appendix I.</p>
5. <input type="checkbox"/>	Log into epapconfig.	# su - epapconfig
6. <input type="checkbox"/>	Main menu is displayed. Select Platform Menu.	<pre>/-----EPAP 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 PDB Configuration Menu 9 Security 10 Configure EMS Server 11 Configure Alarm Feed 12 Configure Query Server 13 Configure Query Server Alarm Feed</pre>

Procedure 23: PDBA Database Backup

		<pre> ----- 14 Configure SNMP Agent Community ----- e Exit ----- </pre> <p>Enter Choice: 6</p>
7. <input type="checkbox"/>	Platform menu is displayed. Select PDB Backup.	<pre> Menu for a Mixed EPAP: /-----EPAP Platform Menu-\ 1 Initiate Upgrade 2 Reboot MPS 3 MySQL Backup 4 RTDB Backup 5 PDB Backup e Exit \-----/ Enter Choice: 5 Menu for a Standalone PDB: /-----EPAP Platform Menu-\ 1 Initiate Upgrade 2 Reboot MPS 3 MySQL Backup 4 PDB Backup e Exit \-----/ Enter Choice: 4 </pre>
8. <input type="checkbox"/>	Menu will prompt for a “yes” to continue. Enter a Y.	<pre> Are you sure you want to backup the PDB to /var/TKLC/appl/free/pdbBackup_<hostname>_20140530151806_DDBirthdat e_20140530144717GMT_DBLevel_<DBLevel>.bkp.tar.gz? [N]: Y </pre>
9. <input type="checkbox"/>	While the backup is begin performed, the following output will be displayed to the screen.	<pre> Successfully started backup of PDB. Status will be displayed on the GUI banner. Press return to continue... </pre>
10. <input type="checkbox"/>	Exit this menu and return to the login prompt.	<pre> Enter Choice: e Enter Choice: e </pre>
11. <input type="checkbox"/>	Monitor GUI banner.	Monitor the GUI banner. When the backup has completed successfully, continue to the next step.
12. <input type="checkbox"/>	Use SFTP to transfer the backup file to a remote customer provided computer.	<pre> Using SFTP (secure-FTP), transfer the PDB backup file to a remote, customer-provided computer. Enter “yes” when prompted if you want to continue to connect. # cd /var/TKLC/epap/free # sftp <IP address of remote computer> Connecting to <IP address of remote computer>... The authenticity of host '<IP address of remote computer>' can't </pre>

Procedure 23: PDBA Database Backup

		<pre> 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 <IP address of remote computer>' (DSA) to the list of known hosts. root@<IP address of remote computer>'s password: sftp> cd <target directory> sftp> put pdbBackup_<hostname>_20140530151806_DBBirthdate_ 20140530144717GMT_DBLevel_<DBLevel>.bkp.tar.gz Uploading pdbBackup_<hostname>_20140530151806_DBBirthdate_ 20140530144717GMT_DBLevel_<DBLevel>.bkp.tar.gz to pdbBackup_<hostname>_ 20140530151806_DBBirthdate_20140530144717GMT_DBLevel_<DBLevel>.bkp .tar.gz sftp> bye </pre> <p>If no customer provided remote computer for backups exist, transfer the backup file to the mate using the following command</p> <pre> # scp /var/TKLC/epap/free/<pdb backup file> epapdev@mate:/var/TKLC/epap/free/ </pre>
13. <input type="checkbox"/>	Procedure complete.	Return to the procedure that you came here from.

A.5 RTDB Database Backup

Procedure 24: RTDB Database Backup

S T E P #	<p>This procedure performs an RTDB backup on the EPAP server. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT ORACLE'S TEKELEC CUSTOMER CARE CENTER AND ASK FOR <u>UPGRADE ASSISTANCE</u>.</p>	
1. <input type="checkbox"/>	<p>MPS B: Log in to the server.</p>	<p>If not already logged-in, then login at the MPS B. <hostname> console login: root Password: <password></p>
2. <input type="checkbox"/>	<p>Enter the epapconfig menu.</p>	<p>Execute the following Command:</p> <p># su - epapconfig</p>
3. <input type="checkbox"/>	<p>Main menu is displayed. Select Platform Menu.</p>	<pre> /-----EPAP 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 PDB Configuration Menu 9 Security 10 Configure EMS Server 11 Configure Alarm Feed 12 Configure Query Server 13 Configure Query Server Alarm Feed 14 Configure SNMP Agent Community e Exit \-----\ </pre> <p>Enter Choice: 6</p>
4. <input type="checkbox"/>	<p>Platform menu is displayed. Select RTDB Backup.</p>	<pre> /-----EPAP Platform Menu-----\ 1 Initiate Upgrade 2 Reboot MPS 3 MySQL Backup 4 RTDB Backup 5 PDB Backup e Exit \-----\ </pre> <p>Enter Choice: 4</p>

Procedure 24: RTDB Database Backup

5. <input type="checkbox"/>	The Application software must be stopped.	If the EPAP application software is running, you will be prompted to stop the software for the RTDB backup. Select with a "Y". EPAP software is running. Stop it? [N]: Y
6. <input type="checkbox"/>	Menu will prompt for a "yes" to continue. Enter a Y.	Are you sure you want to backup the RTDB to /var/TKLC/appl/free/rtdbBackup_<hostname>_20140530151806.tar.gz? [N]: Y
7. <input type="checkbox"/>	While the backup is begin performed, the following output will be displayed to the screen.	Successfully started backup of RTDB. Status will be displayed on the GUI banner. Press return to continue...
8. <input type="checkbox"/>	Exit this menu and return to the login prompt. Continue exiting until you get to the login prompt.	Enter Choice: e Enter Choice: e
9. <input type="checkbox"/>	Monitor GUI banner.	Monitor the GUI banner. When the backup has completed successfully, continue to the next step.
10. <input type="checkbox"/>	Restart the EPAP Software.	Restart the EPAP application software. # /etc/init.d/Epap start
11. <input type="checkbox"/>	Use SFTP to transfer the backup file to a remote customer provided computer.	Using SFTP (secure-FTP), transfer the RTDB backup file to a remote, customer-provided computer. Enter "yes" when prompted if you want to continue to connect. # cd /var/TKLC/epap/free # sftp <IP address of remote computer> Connecting to <IP address of remote computer>... The authenticity of host '<IP address of remote computer>' can't be established. 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 '<IP address of remote computer>' (DSA) to the list of known hosts. root@<IP address of remote computer>'s password: sftp> cd <target directory> sftp> put rtdbBackup_<hostname>_20140530151806.tar.gz Uploading rtdbBackup_<hostname>_20140530151806.tar.gz to rtdbBackup_<hostname>_20140530151806.tar.gz sftp> bye If no customer provided remote computer for backups exist, transfer the backup file to the mate using the following command # scp /var/TKLC/epap/free/<rtdb backup file> epapdev@mate:/var/TKLC/epap/free
12. <input type="checkbox"/>	Procedure complete.	Return to the procedure that you came here from.

A.6 MySQL User Database Backup

Procedure 25: MySQL User Database Backup

S T E P #	<p>This procedure performs a backup of the User database on the MPS server.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT ORACLE'S TEKELEC CUSTOMER CARE CENTER AND ASK FOR <u>UPGRADE ASSISTANCE</u>.</p>	
1. <input type="checkbox"/>	MPS A: Log in to the server as user "root".	<hostname> console login: root Password: <password>
2. <input type="checkbox"/>	Enter the epapconfig menu.	Execute the following Command: # su - epapconfig
3. <input type="checkbox"/>	Master menu is displayed. Select Platform Menu.	<pre> /-----EPAP 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 PDB Configuration Menu 9 Security 10 Configure EMS Server 11 Configure Alarm Feed 12 Configure Query Server 13 Configure Query Server Alarm Feed 14 Configure SNMP Agent Community e Exit \-----/ Enter Choice: 6 </pre>
4. <input type="checkbox"/>	Platform menu is displayed. Select MySQL Backup.	<pre> /-----EPAP Platform Menu-----\ 1 Initiate Upgrade 2 Reboot MPS 3 MySQL Backup 4 RTDB Backup 5 PDB Backup e Exit \-----/ </pre>

Procedure 25: MySQL User Database Backup

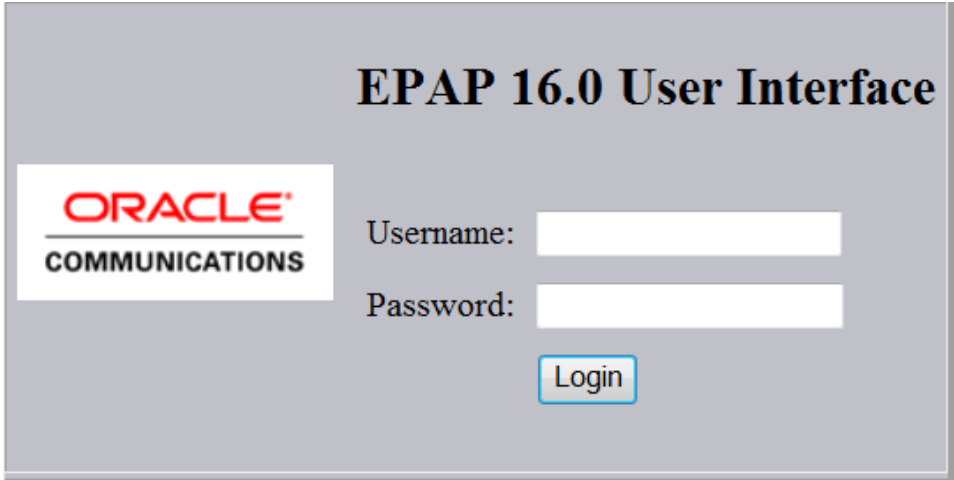
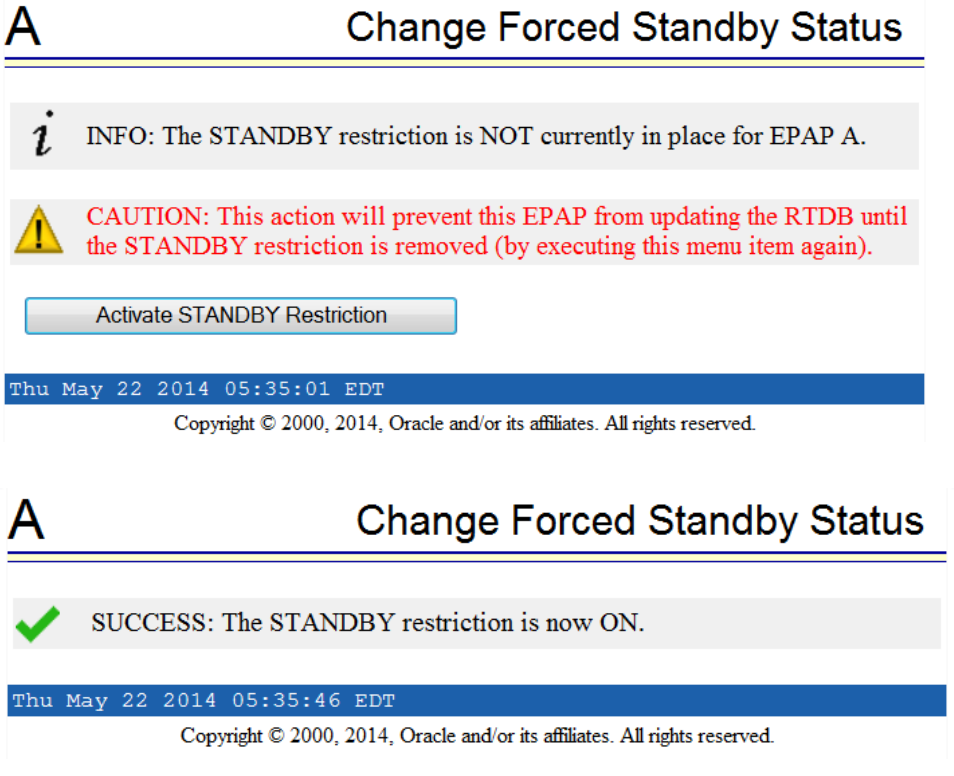
		Enter Choice: 3
5. <input type="checkbox"/>	You will then be prompted to verify that you want to backup the MySQL Database.	Are you sure you want to backup the MySQL database on MPS A? [N]:
6. <input type="checkbox"/>	Type "Y" and press enter.	Press Y
7. <input type="checkbox"/>	While the backup is begin performed, the following output will be displayed to the screen.	NPDB Backed up Successfully to /var/TKLC/appl/free/<file name>
8. <input type="checkbox"/>	Exit this menu and return to the Unix login prompt. Continue exiting until you get to the Unix login prompt.	Enter Choice: e Enter Choice: e
9. <input type="checkbox"/>	Use SFTP to transfer the backup file to a remote customer provided computer.	Using SFTP (secure-FTP), transfer the NPDB backup file to a remote, customer-provided computer. Enter "yes" when prompted if you want to continue to connect. # cd /var/TKLC/epap/free # sftp <IP address of remote computer> Connecting to <IP address of remote computer>... The authenticity of host '<IP address of remote computer>' can't be established. 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 '<IP address of remote computer>' (DSA) to the list of known hosts. root@<IP address of remote computer>'s password: sftp> cd <target directory> sftp> put npdbBackup_<hostname>_20140530151806.sql.gz Uploading npdbBackup_<hostname>_20140530151806.sql.gz to npdbBackup_<hostname>_20140530151806.sql.gz sftp> bye If no customer provided remote computer for backups exist, transfer the backup file to the mate using the following command # scp /var/TKLC/epap/free/<npdb backup file> root@mate:/var/TKLC/epap/free
10. <input type="checkbox"/>	Procedure complete.	Return to the procedure that you came here from.

A.7 RTDB Reload from PDBA




Procedure 26: RTDB Reload from PDBA

S T E P #	<p>This procedure provides instructions to reload RTDB from PDBA.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT ORACLE'S TEKELEC CUSTOMER CARE CENTER AND ASK FOR ASSISTANCE.</p>
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Procedure 26: RTDB Reload from PDBA

<p>1. <input type="checkbox"/></p>	<p>EPAP A: Log in to the web GUI as user "uiadmin".</p>	
<p>2. <input type="checkbox"/></p>	<p>EPAP A: Put EPAP in Force Standby Mode.</p> <p>Expand the "Maintenance" Folder.</p> <p>Expand the "Force Standby" Folder.</p> <p>Select the "Change Status" link..</p> <p>Click on "Activate STANDBY Restriction" Button.</p>	

Procedure 26: RTDB Reload from PDBA

<p>5. <input type="checkbox"/></p>	<p>EPAP A: Remove EPAP from Force Standby Mode.</p> <p>Expand the “Maintenance” Folder.</p> <p>Expand the “Force Standby” Folder.</p> <p>Select the “Change Status” link.</p> <p>Click on “Remove STANDBY Restriction” Button.</p>	<div style="border: 1px solid black; padding: 10px;"> <h2 style="text-align: right;">A Change Forced Standby Status</h2> <hr/> <div style="background-color: #f0f0f0; padding: 5px; margin-bottom: 10px;">  INFO: The STANDBY restriction is currently in place for EPAP A. </div> <div style="background-color: #fff9e6; padding: 5px; margin-bottom: 10px;">  CAUTION: This action will allow this EPAP to resume updating the RTDB. </div> <div style="text-align: center; margin-bottom: 10px;"> <input type="button" value="Remove STANDBY Restriction"/> </div> <div style="background-color: #005596; color: white; padding: 2px; text-align: center; font-size: small;">Thu May 22 2014 05:38:56 EDT</div> <p style="text-align: center; font-size: x-small;">Copyright © 2000, 2014, Oracle and/or its affiliates. All rights reserved.</p> </div>																												
<p>6. <input type="checkbox"/></p>	<p>EPAP A: Verify RTDB status.</p> <p>Expand the “RTDB” Folder.</p> <p>Select the “View RTDB Status” link.</p>	<div style="border: 1px solid black; padding: 10px;"> <h2 style="text-align: right;">A View RTDB Status</h2> <hr/> <div style="background-color: #f0f0f0; padding: 5px; margin-bottom: 10px;">  SUCCESS: The STANDBY restriction is now OFF. </div> <div style="background-color: #005596; color: white; padding: 2px; text-align: center; font-size: small;">Thu May 22 2014 05:39:46 EDT</div> <p style="text-align: center; font-size: x-small;">Copyright © 2000, 2014, Oracle and/or its affiliates. All rights reserved.</p> </div> <div style="border: 1px solid black; padding: 10px; margin-top: 10px;"> <h2 style="text-align: right;">A View RTDB Status</h2> <hr/> <div style="background-color: #f0f0f0; padding: 5px; margin-bottom: 10px;"> <p style="text-align: center;">Local RTDB Status</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">DB Status:</td> <td style="width: 20%; color: green;">Coherent</td> <td style="width: 30%;">Audit Enabled:</td> <td style="width: 20%;">Yes</td> </tr> <tr> <td>RTDB Level:</td> <td>1</td> <td>RTDB Birthday:</td> <td>05/22/2014 14:57:49 GMT</td> </tr> <tr> <td>PDB Level:</td> <td>1</td> <td>PDB Birthday:</td> <td>05/09/2014 07:51:44 GMT</td> </tr> <tr> <td>Counts:</td> <td colspan="3">IMSI=0, DNs=0, DN Blocks=0, NEs=1, ASDs=0</td> </tr> <tr> <td>Tables:</td> <td colspan="3">IMSI=0, DN=0, IMEI=0, ASD=0</td> </tr> <tr> <td>DB Size:</td> <td>3 M</td> <td>MinDsmSz:</td> <td>0 MB (0)</td> </tr> <tr> <td>Reload:</td> <td colspan="3">None</td> </tr> </table> </div> <p>The RTDB Status must be Coherent.</p> </div>	DB Status:	Coherent	Audit Enabled:	Yes	RTDB Level:	1	RTDB Birthday:	05/22/2014 14:57:49 GMT	PDB Level:	1	PDB Birthday:	05/09/2014 07:51:44 GMT	Counts:	IMSI=0, DNs=0, DN Blocks=0, NEs=1, ASDs=0			Tables:	IMSI=0, DN=0, IMEI=0, ASD=0			DB Size:	3 M	MinDsmSz:	0 MB (0)	Reload:	None		
DB Status:	Coherent	Audit Enabled:	Yes																											
RTDB Level:	1	RTDB Birthday:	05/22/2014 14:57:49 GMT																											
PDB Level:	1	PDB Birthday:	05/09/2014 07:51:44 GMT																											
Counts:	IMSI=0, DNs=0, DN Blocks=0, NEs=1, ASDs=0																													
Tables:	IMSI=0, DN=0, IMEI=0, ASD=0																													
DB Size:	3 M	MinDsmSz:	0 MB (0)																											
Reload:	None																													
<p>7. <input type="checkbox"/></p>	<p>Procedure complete.</p>	<p>Return to the procedure that you came here from.</p>																												

A.8 Accepting a Major Upgrade

Procedure 27: Accepting a Major Upgrade

S T E P #	<p>This procedure provides instructions to accept a major upgrade</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT ORACLE'S TEKELEC CUSTOMER CARE CENTER AND ASK FOR <u>UPGRADE ASSISTANCE</u>.</p>	
1 <input type="checkbox"/>	<p>MPS X: Log in to server as the user "root"</p>	<pre><hostname> console login: root password: <password></pre>
2 <input type="checkbox"/>	<p>MPS X: Execute the Major Upgrade Accept Script</p>	<pre># /var/TKLC/backout/accept</pre> <p>The system will reboot and the disk will be synced. EPAP will be down for 10-15 mins and the disk syncing will continue in the background. It takes between 1 to 2 hours to fully sync the disks but dependant on the amount of application data. Once this activity has initiated, normal system functionality is not impacted. User should not reboot system or initiate another upgrade/backout until the process has completed. To check the status of the sync execute the following command.</p> <pre># cat /proc/mdstat</pre>
3 <input type="checkbox"/>	<p>Procedure complete</p>	<p>Return to the next step in the procedure which referred you here. This procedure is complete.</p>

APPENDIX B. NON-USB UPGRADE/INSTALLATION INSTRUCTIONS

This procedure defines the steps to perform an upgrade or application installation using an ISO image of the USB rather than an actual USB.

B.1 ISO Image copy from USB Media

Assumption: The USB media contains the desired EPAP ISO.

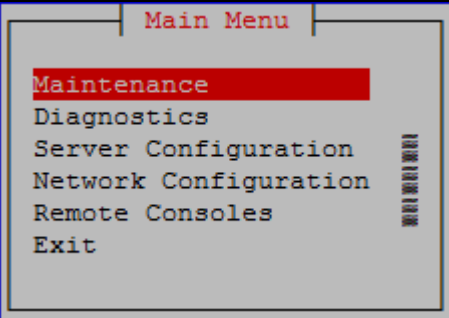
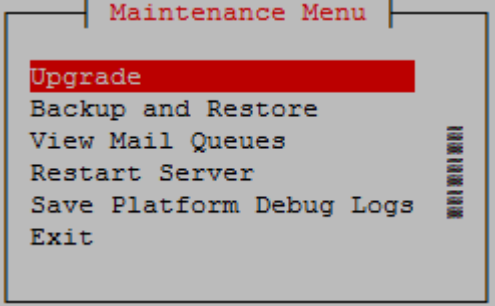
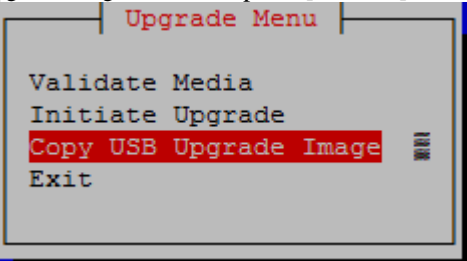
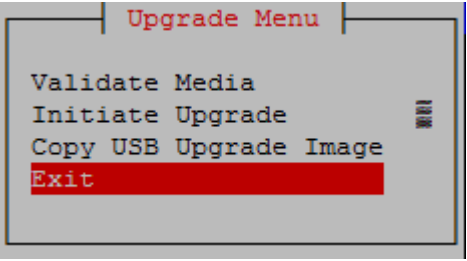
Procedure 28: ISO Image copy from USB media

S T E P #	<p>This procedure provides instructions to copy an ISO image from an USB media.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT ORACLE'S TEKELEC CUSTOMER CARE CENTER AND ASK FOR UPGRADE ASSISTANCE.</p>	
1. <input type="checkbox"/>	MPS X: Insert USB.	Insert media in USB drive
2. <input type="checkbox"/>	MPS X: Log in to the server as the "root" user.	[hostname] console login: root password: password
3. <input type="checkbox"/>	MPS X: Run syscheck to make sure there is no error.	<p>Execute the following command: # syscheck</p> <p>The output should look like:</p> <pre>[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</pre>
4. <input type="checkbox"/>	MPS X: Verify ISO image doesn't already exist.	<p>Execute the following command to perform directory listing: # ls -al /var/TKLC/upgrade</p> <p>The output should look like:</p> <pre>[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 ..</pre> <p>If an ISO image exists, remove it by executing the following command:</p> <p># rm -f /var/TKLC/upgrade/<ISO image></p>
5. <input type="checkbox"/>	MPS X: Delete unwanted ISOs from USB media.	<p>Execute the following command to create a directory to mount the USB media: # mkdir -p /mnt/usb</p> <p>Execute the following command to get the USB drive name: # fdisk -l grep FAT</p> <p>The output should look like:</p> <pre>/dev/sdc1 * 1 812 831472 6</pre>

Procedure 28: ISO Image copy from USB media

		<p>FAT16</p> <p>Execute the following command to mount the USB media using the USB drive name from the output above: # mount /dev/sdc1 /mnt/usb</p> <p>Execute the following command to perform directory listing and verify the file name format is as expected: # ls -al /mnt/usb</p> <p>The output should look like: <pre>[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 812068864 May 6 04:53 872-2712-101-16.0.0_160.7.5-EPAP-x86_64.iso</pre></p> <p>Only one ISO file should be listed, if additional files are listed, execute the following command to remove unwanted EPAP ISOs: # rm -f /mnt/usb/<ISO_NAME>.iso</p> <p>Execute the following command to unmount the USB media: # umount /mnt/usb</p>
<p>6. <input type="checkbox"/></p>	<p>MPS X: Verify space exists for ISO.</p>	<p>Execute the following command to verify the available disk space: # df -h /var/TKLC</p> <p>The output should look like: <pre>[root@hostname ~]# df -h /var/TKLC Filesystem Size Used Avail Use% Mounted on /dev/md7 3.9G 902M 2.8G 24% /var/TKLC</pre></p> <p>Verify that there is at least 620M in the Avail column. If not, clean up files until there is space available.</p> <p>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.</p>
<p>7. <input type="checkbox"/></p>	<p>MPS X: Start platcfg utility by logging in as user "platcfg".</p>	<p>Execute the following command to change the user: # su - platcfg</p>
<p>8. <input type="checkbox"/></p>	<p>MPS X: Select the Maintenance submenu.</p>	<p>On the Main Menu of the Platform Configuration Utility, select Maintenance and press [ENTER].</p>

Procedure 28: ISO Image copy from USB media

		
<p>9. <input type="checkbox"/></p>	<p>MPS X: Select the Upgrade submenu.</p>	<p>Select the Upgrade menu and press [ENTER].</p> 
<p>10. <input type="checkbox"/></p>	<p>MPS X: Select Copy USB Upgrade Image submenu.</p>	<p>Select the Copy USB Upgrade Image menu and press [ENTER].</p> 
<p>11. <input type="checkbox"/></p>	<p>MPS X: The EPAP ISO will be copied from the USB media to /var/TKLC/upgrade. Press any key to return to Upgrade menu.</p>	<p>Copying /mnt/upgrade/872-2712-101-16.0.0_160.7.5-EPAP-x86_64.iso...</p> <p>PRESS ANY KEY TO RETURN TO THE PLATCFG MENU.</p>
<p>12. <input type="checkbox"/></p>	<p>MPS X: Exit platcfg.</p>	<p>Select Exit and press [ENTER] repeatedly until the “platcfg” utility terminates.</p> 
<p>13. <input type="checkbox"/></p>	<p>MPS X: Verify ISO image exists.</p>	<p>Execute the following command to perform directory listing: # ls -al /var/TKLC/upgrade</p> <p>The output should look like:</p>

Procedure 28: ISO Image copy from USB media

		<pre>[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 May 6 04:53 872-2712-101- 16.0.0_160.7.5-EPAP-x86_64.iso</pre> <p>Repeat this procedure from step 5 if EPAP ISO file is not as expected.</p>
<input type="checkbox"/>	14. MPS X: Logout from server.	Logout from the server by executing the following command: # logout
<input type="checkbox"/>	15. MPS X: Remove USB media.	Remove media from USB drive.
<input type="checkbox"/>	16. MPS X: Validate ISO file.	Validate ISO file using procedure A.2.
<input type="checkbox"/>	17. Procedure complete.	This procedure is complete.

APPENDIX C. RESET MYSQL REPLICATION

Procedure 29: Reset MySQL Replication

S T E P #	<p>This procedure provides instructions to reset MySQL replication on the EPAP system.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT ORACLE'S TEKELEC CUSTOMER CARE CENTER AND ASK FOR UPGRADE ASSISTANCE.</p>	
1. <input type="checkbox"/>	MPS A: Log in to the server as the "root" user.	<pre>[hostname] consolelogin: root password: password</pre>
2. <input type="checkbox"/>	MPS A: Start mysql.	<pre># /bin/su -l mysql -c "/etc/init.d/mysqlapp start" # /etc/init.d/mysqlapp start</pre>
3. <input type="checkbox"/>	MPS B: Log in to the server as the "root" user.	<pre>[hostname] consolelogin: root password: password</pre>
4. <input type="checkbox"/>	MPS B: Start mysql.	<pre># /bin/su -l mysql -c "/etc/init.d/mysqlapp start" # /etc/init.d/mysqlapp start</pre>
5. <input type="checkbox"/>	MPS B: Reset MySQL database Replication.	<pre># /usr/TKLC/epap/config/resetReplication Resetting MySql Replication This script will fix EuiDB replication by copying the database from one side of the pair to the other side and then resetting the MySql replication pointers. Are you sure you want to reset replication? (y/n) y Which side do you want to copy FROM? (A/B) [B]: A Copy the EuiDB from A to B? (y/n) y Removing the index and info files from EPAP B Replication files successfully removed from the local server. Connecting to local DB Connecting to mate DB Copying EuiDB from mate mysqldump EuiDB successfully on the mate server. epapdev@mate's password: <enter password> scp EuiDB successfully to the local server. Import EuiDB to local Import EuiDB successfully on the local server. Stopping local slave Stopping mate slave Resetting local master Resetting mate master Resetting local slave Resetting mate slave Starting local slave Starting mate slave Resetting MySql Replication Completed</pre>
6. <input type="checkbox"/>	MPS X: Verify MySQL database Replication on both A and B.	<pre># mysql -uroot -p Enter password: <enter password> mysql> SHOW SLAVE STATUS\G ***** 1. row ***** Slave_IO_State: Waiting for master to send event Master_Host: mate</pre>

Procedure 29: Reset MySQL Replication

		<pre>Master_User: replicate Master_Port: 3306 Connect_Retry: 60 Master_Log_File: repl.000001 Read_Master_Log_Pos: 137228 Relay_Log_File: mysql-relay-bin.000003 Relay_Log_Pos: 137386 Relay_Master_Log_File: repl.000001 Slave_IO_Running: Yes Slave_SQL_Running: Yes Replicate_Do_DB: Replicate_Ignore_DB: Replicate_Do_Table: Replicate_Ignore_Table: Replicate_Wild_Do_Table: Replicate_Wild_Ignore_Table: Last_Errno: 0 Last_Error: Skip_Counter: 0 Exec_Master_Log_Pos: 137228 Relay_Log_Space: 137559 Until_Condition: None Until_Log_File: Until_Log_Pos: 0 Master_SSL_Allowed: No Master_SSL_CA_File: Master_SSL_CA_Path: Master_SSL_Cert: Master_SSL_Cipher: Master_SSL_Key: Seconds_Behind_Master: 0 Master_SSL_Verify_Server_Cert: No Last_IO_Errno: 0 Last_IO_Error: Last_SQL_Errno: 0 Last_SQL_Error: Replicate_Ignore_Server_Ids: Master_Server_Id: 1 Master_UUID: 4730edfa-e6bf-11e3-a385- 0000170ea69e Master_Info_File:</pre>
--	--	--


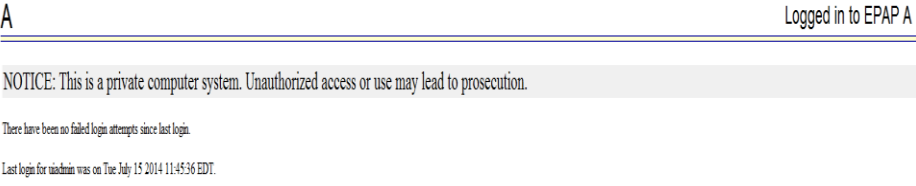

Procedure 29: Reset MySQL Replication

		<pre> /var/TKLC/epap/db/appconfig/master.info SQL_Delay: 0 SQL_Remaining_Delay: NULL Slave_SQL_Running_State: Slave has read all relay log; waiting for the slave I/O thread to update it Master_Retry_Count: 86400 Master_Bind: Last_IO_Error_Timestamp: Last_SQL_Error_Timestamp: Master_SSL_Crl: Master_SSL_Crlpath: Retrieved_Gtid_Set: Executed_Gtid_Set: Auto_Position: 0 1 row in set (0.00 sec) Check above output to verify that Slave_IO_Running and Slave_SQL_Running set to Yes and no IO or SQL error. </pre>
<p>7. <input type="checkbox"/></p>	<p>MPS A and B: Start Epap service</p>	<p>Verify that the Epap service is running on MPS A and B, using the following commands:</p> <pre> # service Epap status # ssh mate service Epap status </pre> <p>If Epap service is not running, start the service on MPS A using the following command:</p> <pre> # service Epap start </pre> <p>If Epap service is not running, Start the service on MPS B using the following command:</p> <pre> # ssh mate service Epap start </pre>
<p>8. <input type="checkbox"/></p>	<p>Procedure complete.</p>	<p>This procedure is complete.</p>

APPENDIX D. ENABLE HTTPS ON EPAP 15

Procedure 30: Enable HTTPS on EPAP 15.

Please also refer [2] on page 58, section "EPAP Support for HTTPS on GUI" on importing a Security Certificate.

This procedure configuring the HTTPS on Active Site	
<p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT ORACLE'S TEKELEC CUSTOMER CARE CENTER AND ASK FOR ASSISTANCE.</p>	
<p>Access the EPAP GUI by opening a web browser (Preferably IE) via HTTP and providing the IP address of Server A.</p> <p>The EPAP LOGIN screen should appear.</p>	<p>The GUI screen on Mixed EPAP should look like:</p> 
<p>Login as uiadmin.</p>	<p>Login should be successful.</p> 
<p>On the EPAP A site, select User Administration → HTTP(S) Support → Change Configuration</p>	<p>The screen should look like:</p> 

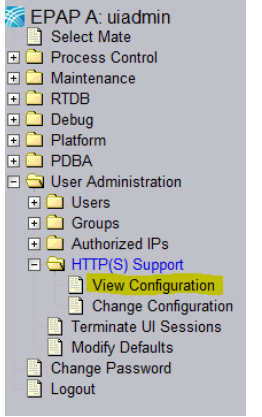
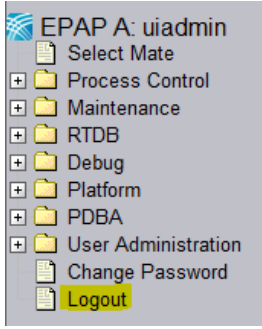
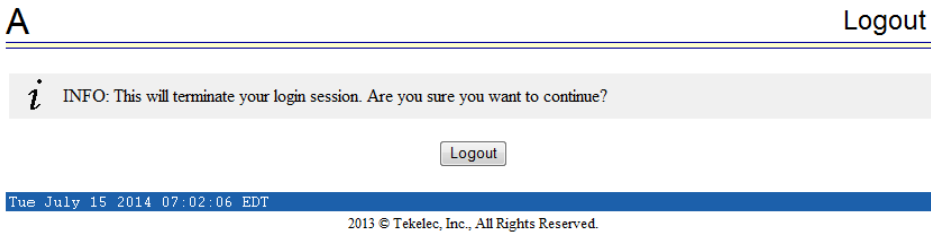
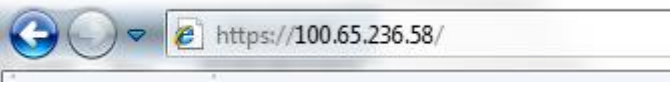
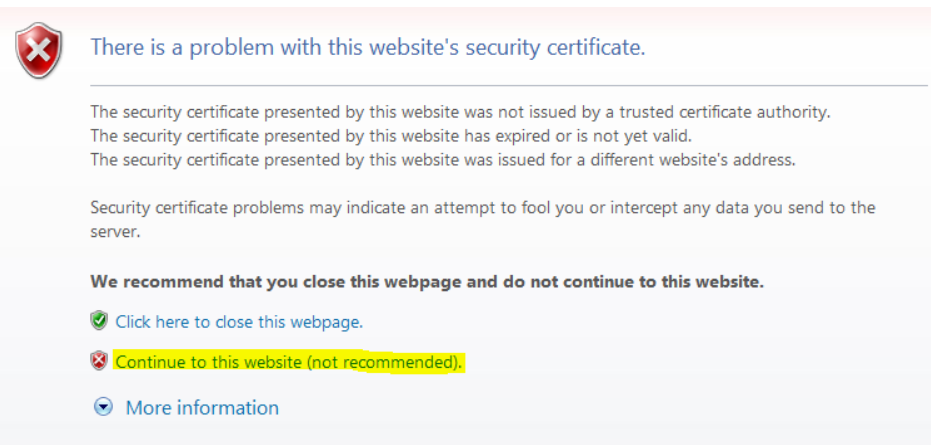
Procedure 30: Enable HTTPS on EPAP 15.

Please also refer [2] on page 58, section "EPAP Support for HTTPS on GUI" on importing a Security Certificate.

<p>Select the check box "HTTPS Enabled".</p>	<p>The screen should look like:</p>
<p>Click on the "Submit Changes" button. HTTPS should be successfully enabled.</p>	<p>The screen should look like:</p>
<p>Select User Administration → HTTP(S) Support → View Configuration</p>	<p>The screen should look like:</p>

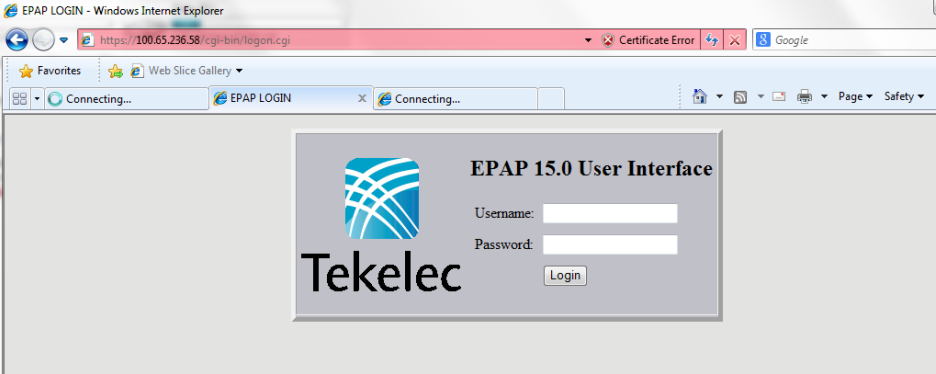
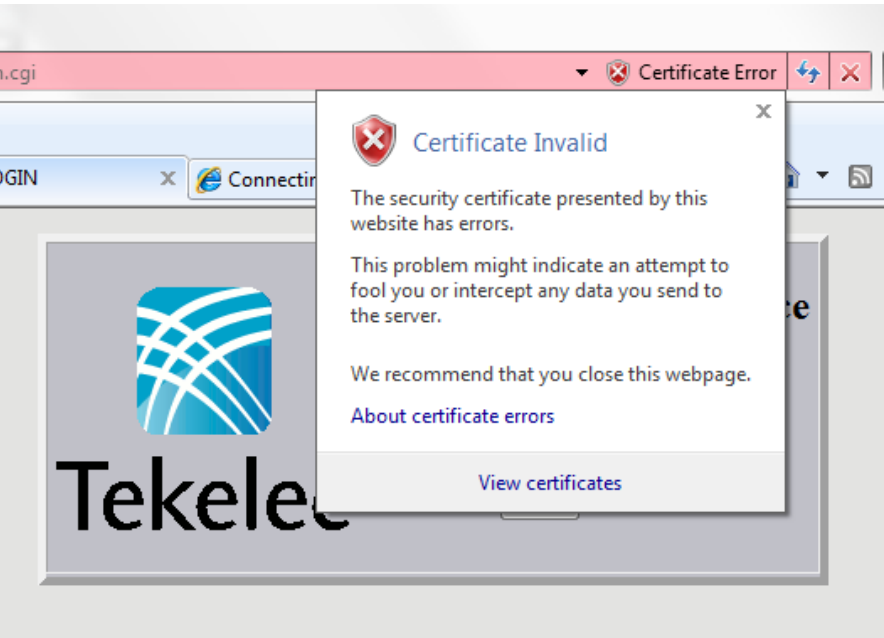
Procedure 30: Enable HTTPS on EPAP 15.

Please also refer [2] on page 58, section "EPAP Support for HTTPS on GUI" on importing a Security Certificate.

	
<p>Logout from the GUI.</p>  <p>Click on the Logout button.</p>	<p>The screen should look like:</p> 
<p>Access the EPAP GUI via HTTPS.</p>	<p>The address bar should look like:</p> 
<p>Click on "Continue to this website (not recommended)."</p>	<p>The screen should look like:</p> 

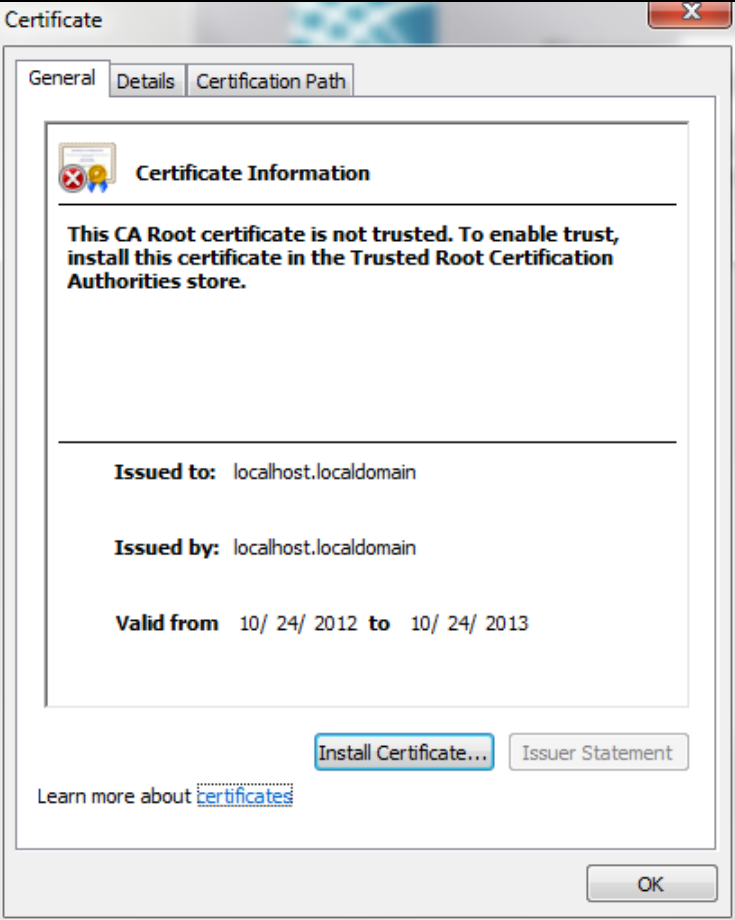
Procedure 30: Enable HTTPS on EPAP 15.

Please also refer [2] on page 58, section "EPAP Support for HTTPS on GUI" on importing a Security Certificate.

Login Page should display	<p>The screen should look like:</p> 
Click on Certificate Error.	<p>Invalid Certificate popup should be displayed.</p> 
Click on View certificates	The Certificate dialog is displayed

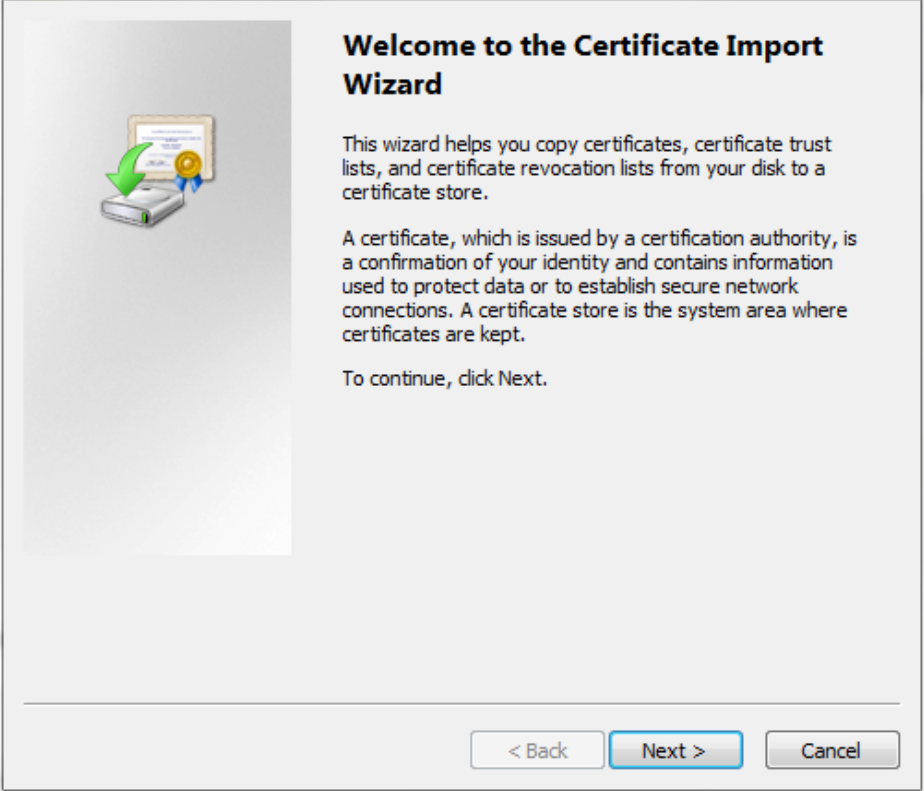
Procedure 30: Enable HTTPS on EPAP 15.

Please also refer [2] on page 58, section "EPAP Support for HTTPS on GUI" on importing a Security Certificate.

	
Click Install Certificate	The Certificate Import Wizard "Welcome" page is displayed.

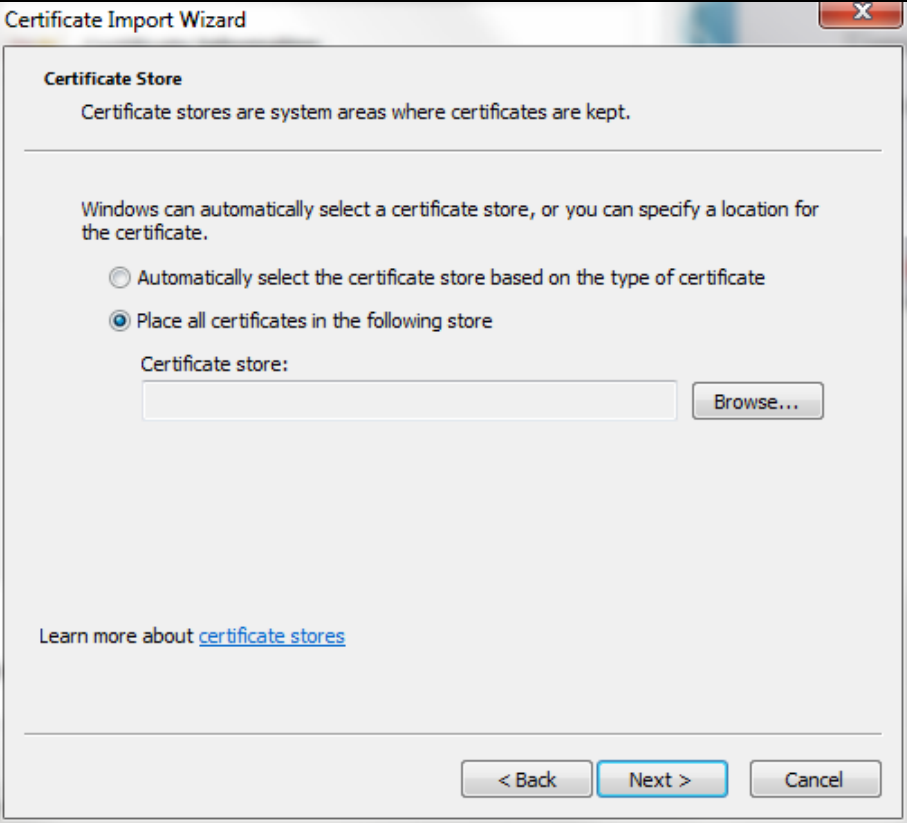
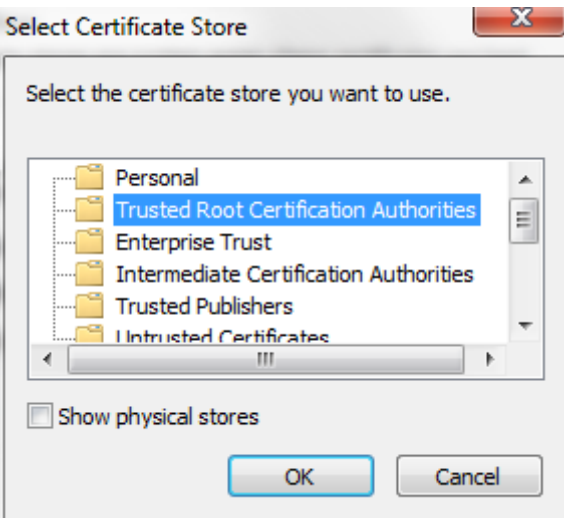
Procedure 30: Enable HTTPS on EPAP 15.

Please also refer [2] on page 58, section "EPAP Support for HTTPS on GUI" on importing a Security Certificate.

	
Click on Next	The Certificate Import Wizard "Certificate Store" page is displayed.

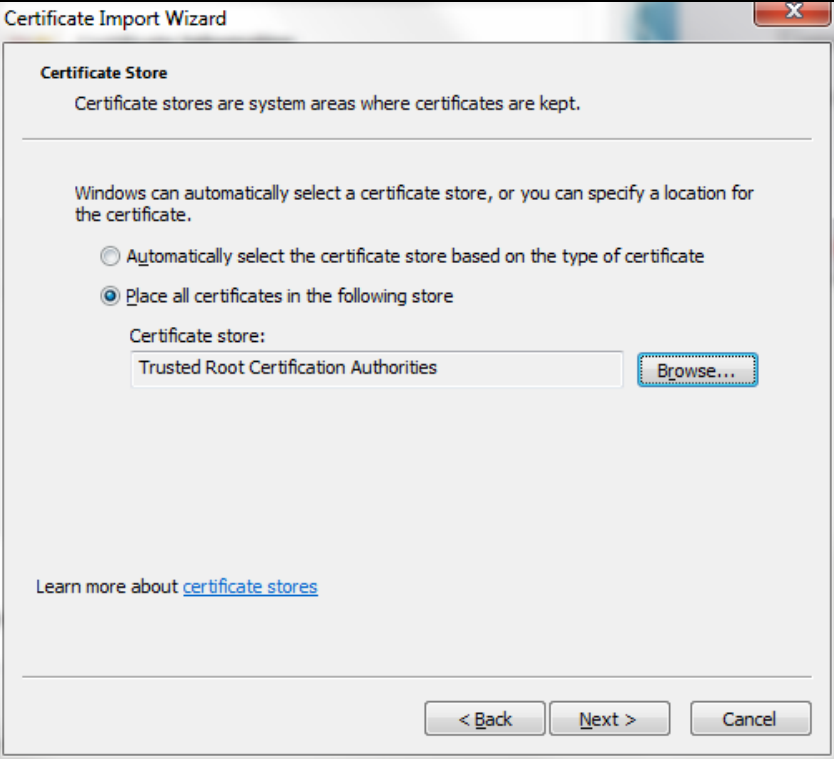
Procedure 30: Enable HTTPS on EPAP 15.

Please also refer [2] on page 58, section "EPAP Support for HTTPS on GUI" on importing a Security Certificate.

	 <p>The screenshot shows the 'Certificate Import Wizard' dialog box, specifically the 'Certificate Store' step. The title bar reads 'Certificate Import Wizard'. The main text says 'Certificate Store' and 'Certificate stores are system areas where certificates are kept.' Below this, it states 'Windows can automatically select a certificate store, or you can specify a location for the certificate.' There are two radio button options: 'Automatically select the certificate store based on the type of certificate' (which is unselected) and 'Place all certificates in the following store' (which is selected). Under the selected option, there is a text box labeled 'Certificate store:' and a 'Browse...' button. At the bottom, there are three buttons: '< Back', 'Next >', and 'Cancel'. A link 'Learn more about certificate stores' is also visible.</p>
<p>Select the "Place certificates in the following store" radio button.</p> <p>Click Browse.</p>	<p>The "Select Certificate Store" page is displayed.</p>  <p>The screenshot shows the 'Select Certificate Store' dialog box. The title bar reads 'Select Certificate Store'. The main text says 'Select the certificate store you want to use.' Below this is a list of certificate stores: 'Personal', 'Trusted Root Certification Authorities', 'Enterprise Trust', 'Intermediate Certification Authorities', 'Trusted Publishers', and 'Untrusted Certificates'. The 'Trusted Root Certification Authorities' folder is selected and highlighted in blue. Below the list is a checkbox labeled 'Show physical stores' which is unchecked. At the bottom, there are two buttons: 'OK' and 'Cancel'.</p>
<p>Select "Trusted Root Certification Authorities" option.</p> <p>Click OK</p>	<p>The "Certificate Store" page is displayed.</p>

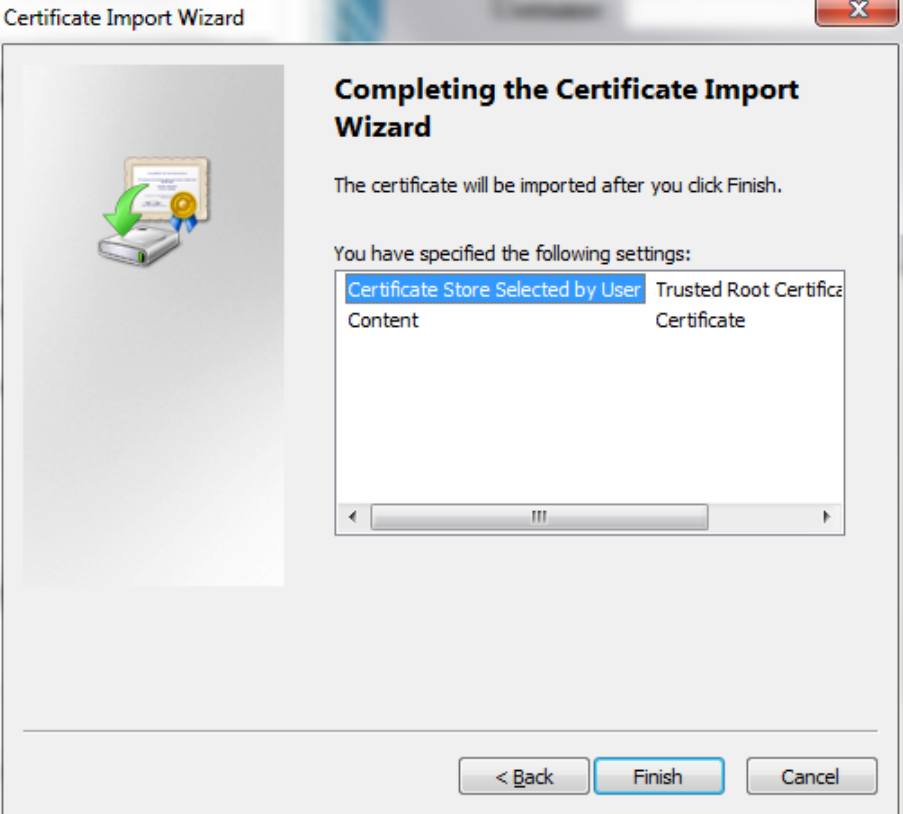
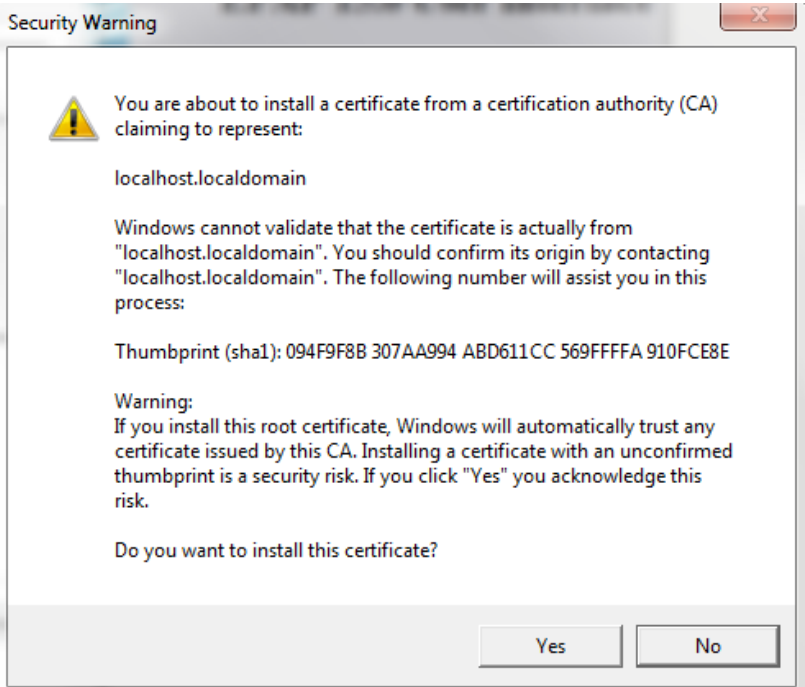
Procedure 30: Enable HTTPS on EPAP 15.

Please also refer [2] on page 58, section "EPAP Support for HTTPS on GUI" on importing a Security Certificate.

	
Click Next.	The Certificate Import Wizard “Completing the Certificate Import Wizard” page is displayed.

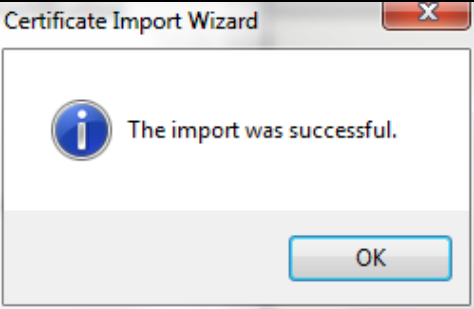
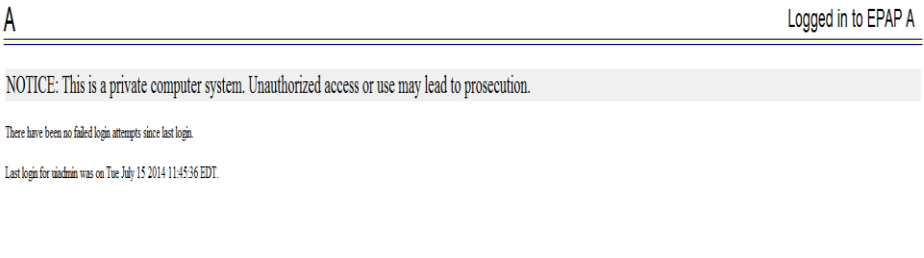
Procedure 30: Enable HTTPS on EPAP 15.

Please also refer [2] on page 58, section "EPAP Support for HTTPS on GUI" on importing a Security Certificate.

	 <p>The screenshot shows the 'Certificate Import Wizard' dialog box. The title bar reads 'Certificate Import Wizard'. The main area is titled 'Completing the Certificate Import Wizard'. Below the title, it says 'The certificate will be imported after you click Finish.' and 'You have specified the following settings:'. A list box shows 'Certificate Store Selected by User' with 'Trusted Root Certificate' selected. Below the list box is a scrollbar. At the bottom, there are three buttons: '< Back', 'Finish', and 'Cancel'.</p>
<p>Click Finish. A Security Warning dialog might be displayed.</p>	<p>A Security Warning dialog is displayed.</p>  <p>The screenshot shows a 'Security Warning' dialog box. It features a yellow warning triangle icon. The text reads: 'You are about to install a certificate from a certification authority (CA) claiming to represent: localhost.localdomain'. Below this, it says: 'Windows cannot validate that the certificate is actually from "localhost.localdomain". You should confirm its origin by contacting "localhost.localdomain". The following number will assist you in this process: Thumbprint (sha1): 094F9F8B 307AA994 ABD611CC 569FFFA 910FCE8E'. A 'Warning:' section follows: 'If you install this root certificate, Windows will automatically trust any certificate issued by this CA. Installing a certificate with an unconfirmed thumbprint is a security risk. If you click "Yes" you acknowledge this risk.' At the bottom, it asks 'Do you want to install this certificate?' and has 'Yes' and 'No' buttons.</p>
<p>Click Yes.</p>	<p>A success message "The import was successful" is displayed.</p>

Procedure 30: Enable HTTPS on EPAP 15.

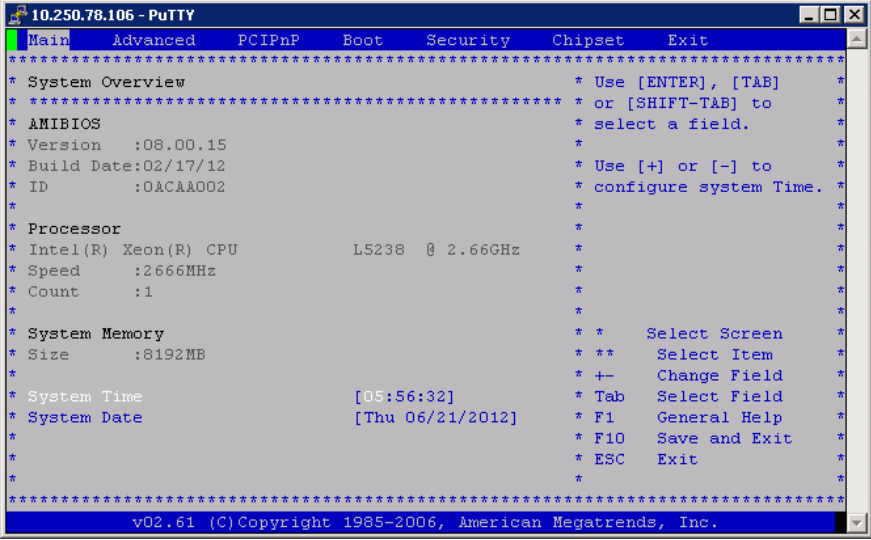
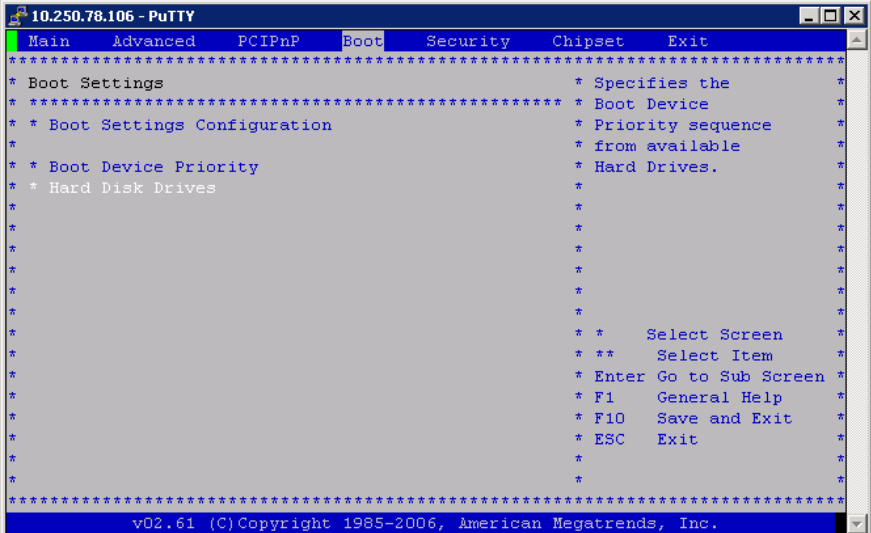
Please also refer [2] on page 58, section "EPAP Support for HTTPS on GUI" on importing a Security Certificate.

	
Click OK to close the Certificate Import Wizard.	
Login to EPAP GUI as uiadmin (or any other user).	<p>Login should be successful.</p> 
Ensure that all the GUI pages are opening successfully.	
Procedure complete	Procedure is complete.

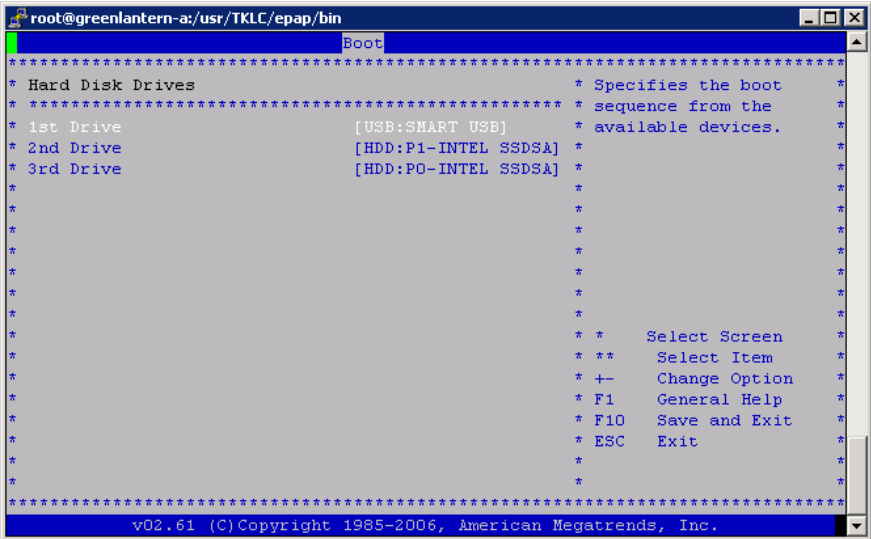
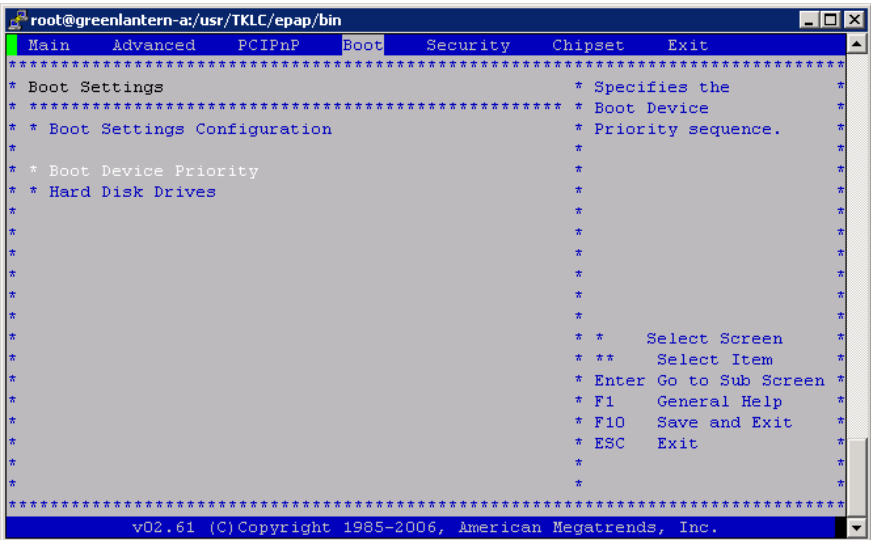
APPENDIX E. IPM MPS SERVER WITH TPD 5.5.1

Note: Both the MPS-A and MPS-B servers can be IPMed at the same time.

Procedure 31: IPM with TPD 5.5.1

S T E P #	<p>This procedure will remove the EPAP application and all the data from the server.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT ORACLE'S TEKELEC CUSTOMER CARE CENTER AND ASK FOR <u>UPGRADE ASSISTANCE</u>.</p>	
1. <input type="checkbox"/>	<p>MPS X: Insert TPD 5.5 USB media into the USB port (E5-APP-B)</p>	
2. <input type="checkbox"/>	<p>MPS X: If necessary, log in to the server as the user "root"</p>	<p>If not already logged in to the MPS server, then login as user "root".</p> <p>console login: root password: <root_password></p>
3. <input type="checkbox"/>	<p>MPS X: Press 'del' key to enter the BIOS, set System Time to GMT time, and System Date.</p>	
4. <input type="checkbox"/>	<p>MPS X: Select <i>Boot</i> → <i>Hard Disk Drives</i> option</p>	


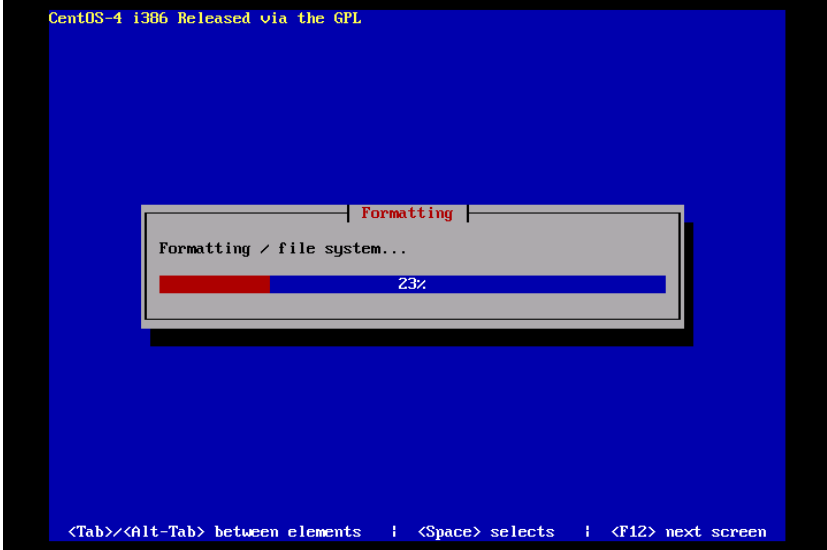
Procedure 31: IPM with TPD 5.5.1

<p>5. <input type="checkbox"/></p>	<p>MPS X: Press 'Enter' key and select USB as the 1st Drive</p>	
<p>6. <input type="checkbox"/></p>	<p>MPS X: Press 'Esc' key and select Boot Device Priority</p>	
<p>7. <input type="checkbox"/></p>	<p>MPS X: Verify that the 1st Boot Device is set to USB.</p>	

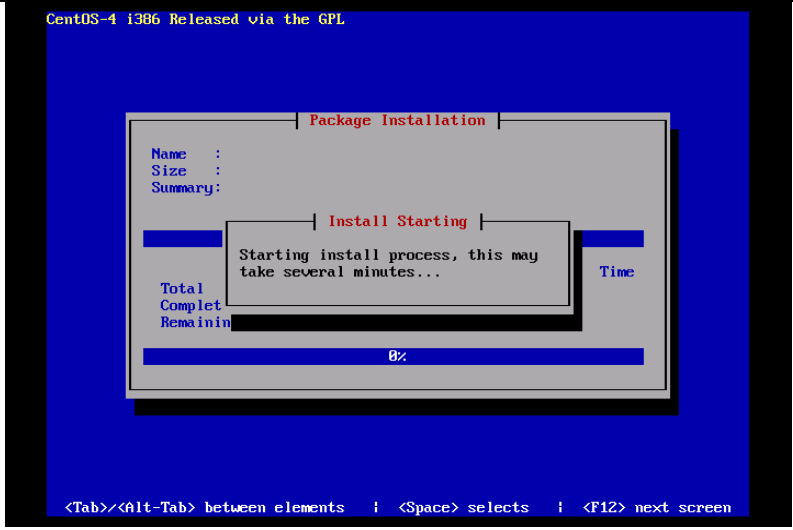
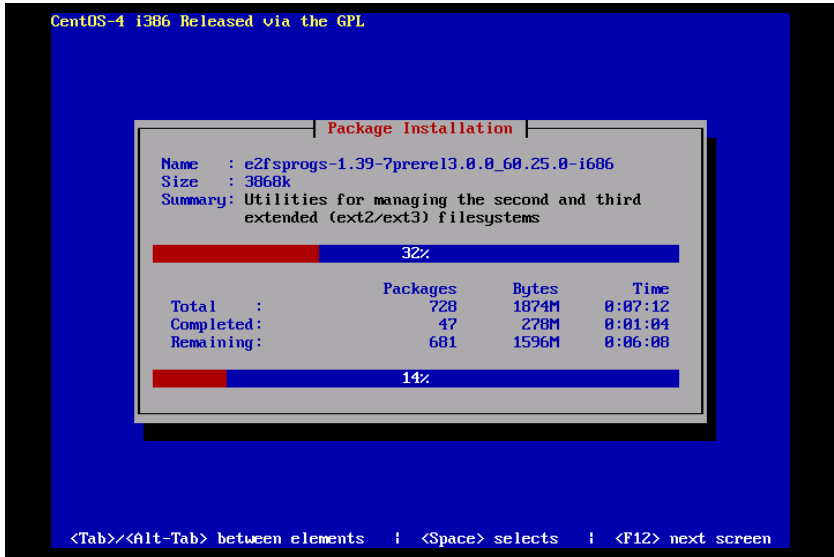
Procedure 31: IPM with TPD 5.5.1

<p>8. <input type="checkbox"/></p>	<p>MPS X: Press 'Esc' key and select <i>Exit</i> → <i>Save Changes and Exit</i> option</p>	
<p>9. <input type="checkbox"/></p>	<p>MPS X: Select [OK] to save the configuration changes. The server will reboot and TPD boot prompt will appear.</p>	


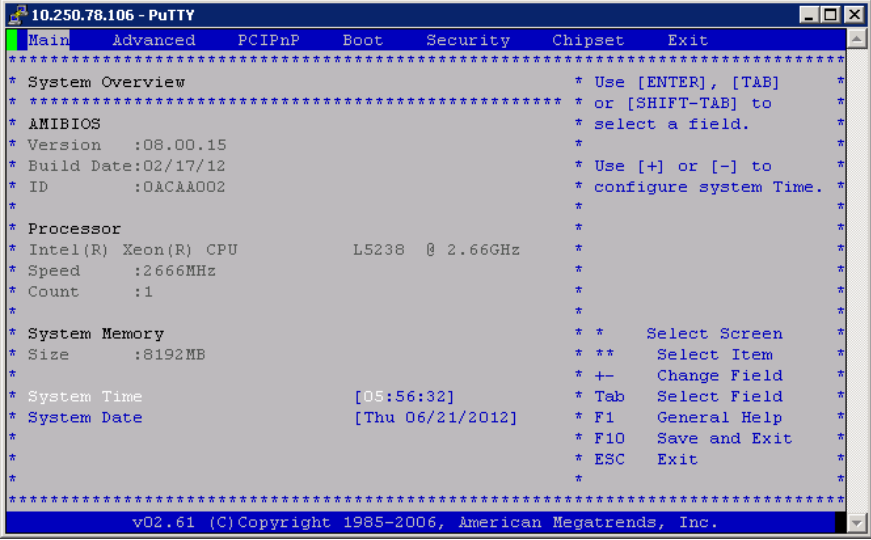

Procedure 31: IPM with TPD 5.5.1

<p>10. <input type="checkbox"/></p>	<p>MPS X: Start the IPM process by entering the TPD command at the boot prompt.</p>	<p>boot: TPD scrub</p>
<p>11. <input type="checkbox"/></p>	<p>MPS X: After entering the command to start the installation, the Linux kernel will load, as in the screenshot at right.</p>	 <pre> - To install with software RAID, type: TPD - To install on first device found, type: TPDnoraid - To install using the minimum disk space, type: TPDcompact - To install to one disk with blade partition config, type: TPDblade - To enable rescue mode, type: rescue * To install using a monitor and local keyboard, add: console=tty0 * To create partitions (and RAID devices, if appropriate) that are not used by the platform or included in the vgrout volume group, use the reserved option. E.g. to reserve 64MB and 1GB devices, add: reserved=64M,1G * To limit the installation to certain drive(s), use the drives option. E.g. to install to the 1st and 3rd SCSI drives, add: drives=sda,sdc boot: TPD scrub Loading vmlinuz..... Loading initrd.img..... Ready. Uncompressing Linux... Ok, booting the kernel. </pre>
<p>12. <input type="checkbox"/></p>	<p>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.</p>	 <p>CentOS-4 1386 Released via the GPL</p> <p>Formatting</p> <p>Formatting / file system...</p> <p>23%</p> <p><Tab>/<Alt-Tab> between elements <Space> selects <F12> next screen</p>
<p>13. <input type="checkbox"/></p>	<p>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</p>	

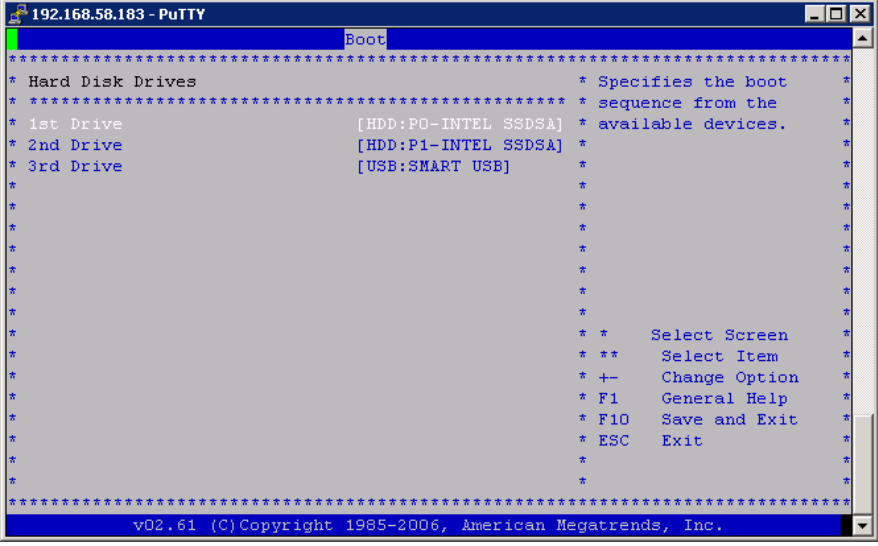
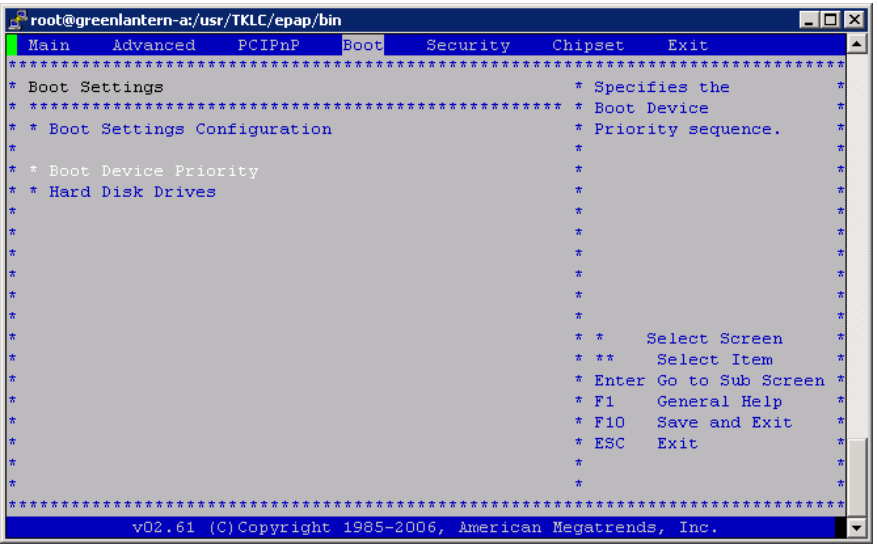
Procedure 31: IPM with TPD 5.5.1

<p>about to begin.</p>	 <p>The screenshot shows a terminal window titled 'CentOS-4 i386 Released via the GPL'. A window titled 'Package Installation' is open, displaying a dialog box 'Install Starting' with the message 'Starting install process, this may take several minutes...'. Below the dialog box, there is a progress bar at 0% and a table with columns 'Total', 'Completed', and 'Remaining'. At the bottom of the terminal window, navigation instructions are visible: '<Tab>/<Alt-Tab> between elements <Space> selects <F12> next screen'.</p>																
<p>14. <input type="checkbox"/> 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.</p>	 <p>The screenshot shows the 'Package Installation' window with a progress bar at 32% at the top and a cumulative progress bar at 14% at the bottom. In the center, there is a table with the following data:</p> <table border="1"> <thead> <tr> <th></th> <th>Packages</th> <th>Bytes</th> <th>Time</th> </tr> </thead> <tbody> <tr> <td>Total :</td> <td>728</td> <td>1874M</td> <td>0:07:12</td> </tr> <tr> <td>Completed:</td> <td>47</td> <td>278M</td> <td>0:01:04</td> </tr> <tr> <td>Remaining:</td> <td>681</td> <td>1596M</td> <td>0:06:08</td> </tr> </tbody> </table> <p>The terminal window also shows the package name 'e2fsprogs-1.39-7prere13.0.0_60.25.0-i686', size '3868k', and summary 'Utilities for managing the second and third extended (ext2/ext3) filesystems'. Navigation instructions are at the bottom: '<Tab>/<Alt-Tab> between elements <Space> selects <F12> next screen'.</p>		Packages	Bytes	Time	Total :	728	1874M	0:07:12	Completed:	47	278M	0:01:04	Remaining:	681	1596M	0:06:08
	Packages	Bytes	Time														
Total :	728	1874M	0:07:12														
Completed:	47	278M	0:01:04														
Remaining:	681	1596M	0:06:08														
<p>15. <input type="checkbox"/> MPS X: Once all the packages have been successfully installed, the screen at right will appear letting you know the installation process is complete. On E5-APP-B server remove the installation</p>																	

Procedure 31: IPM with TPD 5.5.1

	<p style="text-align: center;">Complete</p> <p style="text-align: center;">Congratulations, your CentOS installation is complete.</p> <p style="text-align: center;">Remove any media used during the installation process and press <Enter> to reboot your system.</p> <div style="text-align: center;">  </div>
<p>16. <input type="checkbox"/> MPS X: Press 'del' key to enter the BIOS, set correct System Time in GMT and System Date.</p>	
<p>17. <input type="checkbox"/> MPS X: Select <i>Boot</i> → <i>Hard Disk Drives</i> option</p>	
<p>18. <input type="checkbox"/> MPS X: Press 'Enter' key and select HDD:P0 as the 1st Drive</p>	

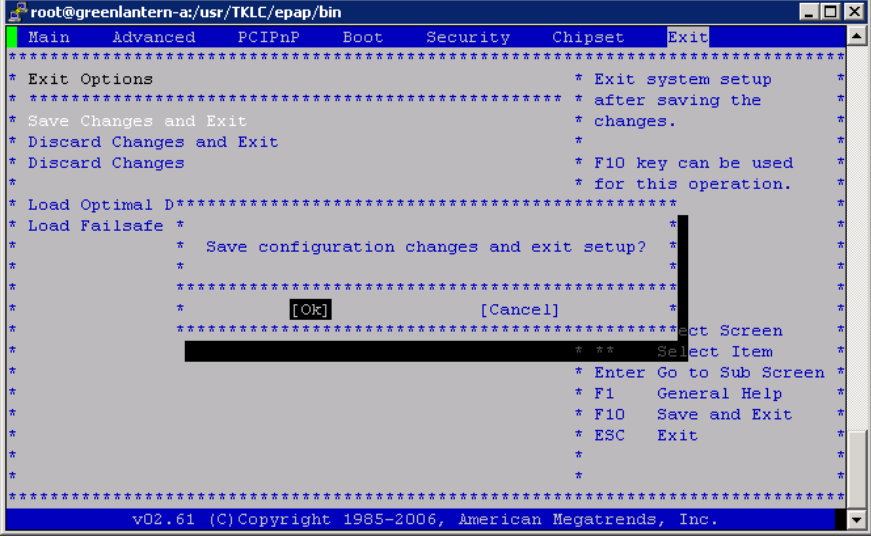
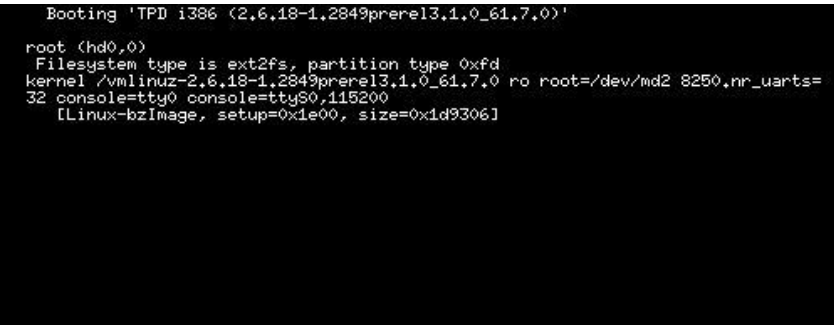
Procedure 31: IPM with TPD 5.5.1

		
<p>19. <input type="checkbox"/></p>	<p>MPS X: Press 'Esc' key and select Boot Device Priority</p>	
<p>20. <input type="checkbox"/></p>	<p>MPS X: Verify that the 1st Boot Device is set to HDD:P0.</p>	

Procedure 31: IPM with TPD 5.5.1

<p>21. <input type="checkbox"/></p>	<p>MPS X: Press 'Esc' key and select <i>Exit</i> → <i>Save Changes and Exit</i> option</p>	
<p>22. <input type="checkbox"/></p>	<p>MPS X: Select [OK] to save the configuration changes. The server will reboot. Remove USB media from USB drive.</p>	

Procedure 31: IPM with TPD 5.5.1

		
<p>23. <input type="checkbox"/></p>	<p>MPS X: After a few minutes, several messages will appear about each of the Ethernet ports in the system, and message printed by the boot loader, indicating that it is booting the new IPM load.</p>	
<p>24. <input type="checkbox"/></p>	<p>MPS X: Log in to the server as the user “root”</p>	<p>console login: root password: <root_password></p>
<p>25. <input type="checkbox"/></p>	<p>MPS X: Verify that the platform revision is same as the TPD DVD or ISO used.</p>	<p># getPlatRev 5.5.1-75.x.0</p>
<p>26. <input type="checkbox"/></p>	<p>Procedure complete.</p>	<p>Return to the procedure that you came here from.</p>

APPENDIX F. REPAIR MYSQL SYSTEM TABLE

Procedure 32: Repair MySQL System Table

S T E P #	<p>This procedure will repair MySQL InnoDB system table not found issues found in MySQL error log.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT ORACLE'S TEKELEC CUSTOMER CARE CENTER AND ASK FOR UPGRADE ASSISTANCE.</p>	
1. <input type="checkbox"/>	<p>MPS X: Login as root</p>	<pre>[hostname] console login: root password: password</pre>
2. <input type="checkbox"/>	<p>MPS X: Identify Error in MySQL error log</p>	<pre># grep Error /var/TKLC/epap/db/pdb/<hostname>.err 2014-06-11 08:19:51 2b116fe72940 InnoDB: Error: Table "mysql"."innodb_table_stats" not found. 2014-06-11 08:19:51 2b116fe72940 InnoDB: Error: Fetch of persistent statistics requested for table "pdb"."transLog" but the required system tables mysql.innodb_table_stats and mysql.innodb_index_stats are not present or have unexpected structure. Using transient stats instead. 2014-06-12 05:08:25 2b116f269940 InnoDB: Error: Table "mysql"."innodb_table_stats" not found. 2014-06-12 05:09:07 2b116f269940 InnoDB: Error: Table "mysql"."innodb_table_stats" not found.</pre>
3. <input type="checkbox"/>	<p>MPS X: Drop the not found tables in the mysql database.</p>	<pre># mysql -uroot -p<password> -S /var/TKLC/epap/db/pdb/mysql.sock mysql mysql> drop table innodb_index_stats ; ERROR 1051 (42S02): Unknown table 'mysql.innodb_index_stats' mysql> drop table innodb_table_stats; ERROR 1051 (42S02): Unknown table 'mysql.innodb_table_stats' mysql> drop table slave_master_info; ERROR 1051 (42S02): Unknown table 'mysql.slave_master_info' mysql> drop table slave_relay_log_info; ERROR 1051 (42S02): Unknown table 'mysql.slave_relay_log_info' mysql> drop table slave_worker_info; ERROR 1051 (42S02): Unknown table 'mysql.slave_worker_info'</pre> <p>Note : it is normal to get an error message : the drop will remove the frm file, that contains the table's definition. This file is read by mysqld to list the tables (show tables). It explains why the table is still visible while it "does not exist" because it does not exist in the InnoDB engine.</p>
4. <input type="checkbox"/>	<p>MPS X: Remove idb file.</p>	<pre># cd /var/TKLC/epap/db/pdb/mysql # ls -ltrh *.ibd -rw----- 1 mysql mysql 96K May 22 03:57 slave_worker_info.ibd -rw----- 1 mysql mysql 96K May 22 03:57 slave_relay_log_info.ibd -rw----- 1 mysql mysql 96K May 22 03:57 slave_master_info.ibd -rw----- 1 mysql mysql 96K May 22 03:57 innodb_table_stats.ibd -rw----- 1 mysql mysql 96K May 22 03:57 innodb_index_stats.ibd</pre> <p>If any above idb file exists, delete it.</p> <pre># rm -f slave_worker_info.ibd # rm -f slave_relay_log_info.ibd # rm -f slave_master_info.ibd # rm -f innodb_table_stats.ibd # rm -f innodb_index_stats.ibd</pre>
5. <input type="checkbox"/>	<p>MPS X: Run mysql upgrade.</p>	<pre># /usr/bin/mysql_upgrade --password=<password> -- socket=/var/TKLC/epap/db/pdb/mysql.sock --force</pre>

Procedure 32: Repair MySQL System Table

		<p>Check that there is no error at this point. If there is no error, then the database is repaired and you should not see this message :</p> <p>InnoDB: Error: Table "mysql"."innodb_table_stats" not found. Contact the Oracle's Tekelec Customer Care Center following the instructions on the front page or the instructions on the Appendix I, if the output contains any error.</p>
<p>6. <input type="checkbox"/></p>	<p>MPS X: Restart MySQL.</p>	<pre># /etc/init.d/mysqlpdb stop Waiting for mysqlpdb to stop done # /etc/init.d/mysqlpdb start MyISAM file: /var/TKLC/epap/db/pdb/mysql/columns_priv.MYI is already checked ----- (truncated output) MyISAM file: /var/TKLC/epap/db/pdb/pdb/requests.MYI is already checked Waiting for mysqlpdb to start done</pre>
<p>7.</p>	<p>Procedure complete.</p>	<p>This procedure is complete.</p>

APPENDIX H. CUSTOMER SIGN OFF

Sign-Off Record

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

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

Sign your name, showing approval of this procedure, and email this page and the above completed Table to Tekelec, email: upgrades@tekelec.com.

Customer: Company Name: _____ **Date:** _____

Site: Location: _____

Customer:(Print) _____ **Phone:** _____

Fax: _____

Start Date: _____

Completion Date: _____

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

Oracle Signature: _____ **Date:** _____

Customer Signature: _____ **Date:** _____

APPENDIX I. 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