Oracle® Communications
EAGLE Application Processor

Full Upgrade Guide

Release 16.1

E75563-12

June 2021

ORACLE®

CAUTION: Use only the guide downloaded from the Oracle Technology Network (OTN) (http://www.oracle.com/technetwork/indexes/documentation/oracle-comms-tekelec-2136003.html).
Before upgrading your system, access the My Oracle Support web portal (https://support.oracle.com) and review any Knowledge Alerts that may be related to the System Health Check or the Upgrade.

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

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1. INTRODUCTION

1.1 Purpose and Scope

This document is designed to detail the steps necessary to upgrade the functionality of the EPAP 15.0 and EPAP 16.0 on E5APPB-01/02 to the EPAP 16.1 on the E5APPB-01/02 cards. This document will serve as the instruction set for all EPAP architectures –

1. Mixed EPAP
2. Non-provisionable EPAP
3. Standalone PDB

To upgrade the SSD on E5APPB from 300G to 480G, refer to [5].
This work is to be performed within the limits of a normally scheduled maintenance window unless otherwise stated.

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

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

- Unix/Linux Admin
- VI Editor
- IP Networking

If you do not have these skills or if you are not completely comfortable working in a Unix or Linux system environment. Please call Oracle support.

STOP – DO NOT PROCEED

1.2 References

[1] *Formal Peer Review, PD001866, latest version*

[2] *Work Instruction Template, TM005023, latest version*

[3] *Tekelec Quality Manual, latest version*

[4] *TPD Initial Product Manufacture User's Guide, 909-2130-001, Latest revision, Tekelec*

[5] *EPAP SSD Upgrade Procedure, CGBU_018305, Latest version, Oracle*

[6] *EPAP Administration Manual for EPAP 16.1, Latest version, Oracle*

[7] *Oracle® Communications EAGLE Application Processor Alarms and Maintenance Guide, Release 16.1, E60144 Latest Revision, Oracle*

[8] *Oracle® Communications EAGLE Application Processor Incremental Upgrade/Installation Guide, Release 16.1, E60146, Latest Revision, Oracle*

1.3 Acronyms

Acronym	Description
BIOS	Basic Input Output System
DB	Database
E5-APP-B/E5APPB	E5 Based Application card including both E5APPB-01 and E5APPB-02
E5APPB-01	E5 Based Application card installed with **300**G SSD Hard Drive
E5APPB-02	E5 Based Application card installed with **480**G SSD Hard Drive
EPAP	EAGLE Provisioning Application Processor
IPM	Initial Product Manufacture
PDB	Provisioning Database
PDBI	Provisioning Database Interface
RTDB	Real-Time Database
SM	Service Module (that is E5-SM4G, E5-SM8G-B)
SMxG	Service Module 4/8 GB (Eagle card)
TPD	Tekelec Platform Distribution

Table 1: Acronyms

1.4 Definitions

Term	Definition
Provisionable EPAP	An EPAP site which houses either the Active or Standby PDB in addition to it's RTDBs.
Active PDB	The EPAP site that is currently used for provisioning through PDBI.
Standby PDB	The EPAP site that is NOT currently used for provisioning through PDBI.
Active RTDB	The RTDB which currently controls the sending of transaction data to the SM cards on the Eagle.
Standby RTDB	The RTDB which is NOT currently controlling the sending of transaction data to the SM cards on the Eagle.
Homing	Refers to the PDB (Active, Standby or Specific) that a non-Provisionable EPAP receives updates from.
Mixed EPAP	An EPAP where both PDB and RTDB databases reside.
Non-provisionable	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 Mixed

(Non-Prov) EPAP	EPAP or a single Standalone PDB from where they get their updates.
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.
System health Check	Procedure used to determine the health and status of the EPAP server, typically performed using the TPD syscheck utility.

Table 2: Definitions

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:

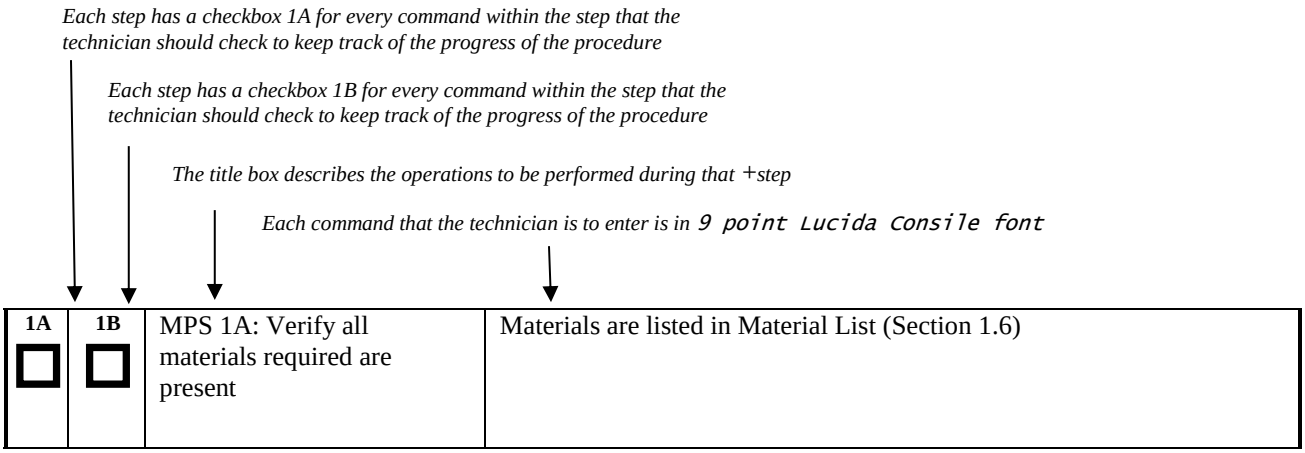


Figure 1. Example of a step that indicates the Server on which it needs to be executed

Procedure to upgrade EPAP can be executed in one of the following three access methods.

1. Direct SSH: Access EPAP through a Putty session.
2. GUI: Access EPAP through the GUI using http/https in IE or lynx browser.
3. Console: Access EPAP through terminal server.
   Minicom mate: Login to one server and do a "minicom mate" to reach the mate server e.g. open a puTTY session for A server, Then minicom mate to reach the B server and vice-verse.

Other terminology follows.

Backout (abort)	The process to take a system back to the Source Release prior to completion of upgrade to Target release. Includes preservation of databases and system configuration.
Incremental upgrade	An upgrade that takes a target system from any given release to another release that is from the same baseline.
Major upgrade	An upgrade that takes a target system from any given release to another release that is not from the same baseline.
Rollback	The process to take a system from a Target Release back to a Source Release including preservation of databases and system configuration. Similar to Backout.
Source release	Software release to upgrade from.
Target release	Software release to upgrade to.
Upgrade media	USB media or ISO image for E5-APP-B.

Table 3. Terminology

1.6 Required Materials

When the upgrade is carried out from remote location, it is assumed that one person will be physically present near the EPAP servers for tasks like putting the USB in the E5-APP-B card, pulling out the USB after the IPM is complete etc.

- Two (2) target-release USBs or a target release ISO file.
- Two (2) source-release USBs or a source release ISO file.
- A terminal and null modem cable to establish a serial connection.
- Identify if the EPAP pair is connected to the SM Cards, or a mixture of SM4G and SM8G-B Cards.

  Write down the Eagle Cards type.

  Type of Eagle Cards: _____
- EuiDB, PDB, and RTDB Backups taken from source release system.
- For transfer of Backups to remote server, the connectivity link between EPAP and the remote server should have at least 100Mbps network bandwidth and remote server should have100G diskspace.
- System configuration information like NTP Server IP, Provisional Ips etc.

  Write down the system configuration information.

  Provisionable Ips: _____

  Provisionable Gateway:_____

  NTP Server Ips: _____

  Other Ips required: _____
- Passwords for users on the local system:

EPAP USERS		
login	**MPS A password**	**MPS B password**
epapconfig		
epapdev		
syscheck		
root		
epapall (needed for GUI access)		
mysql(EuiDB) root user		
mysql(pdb) root user		
admusr		

Table 4: User Password Table

1.7 E5APPB Server (Rear)

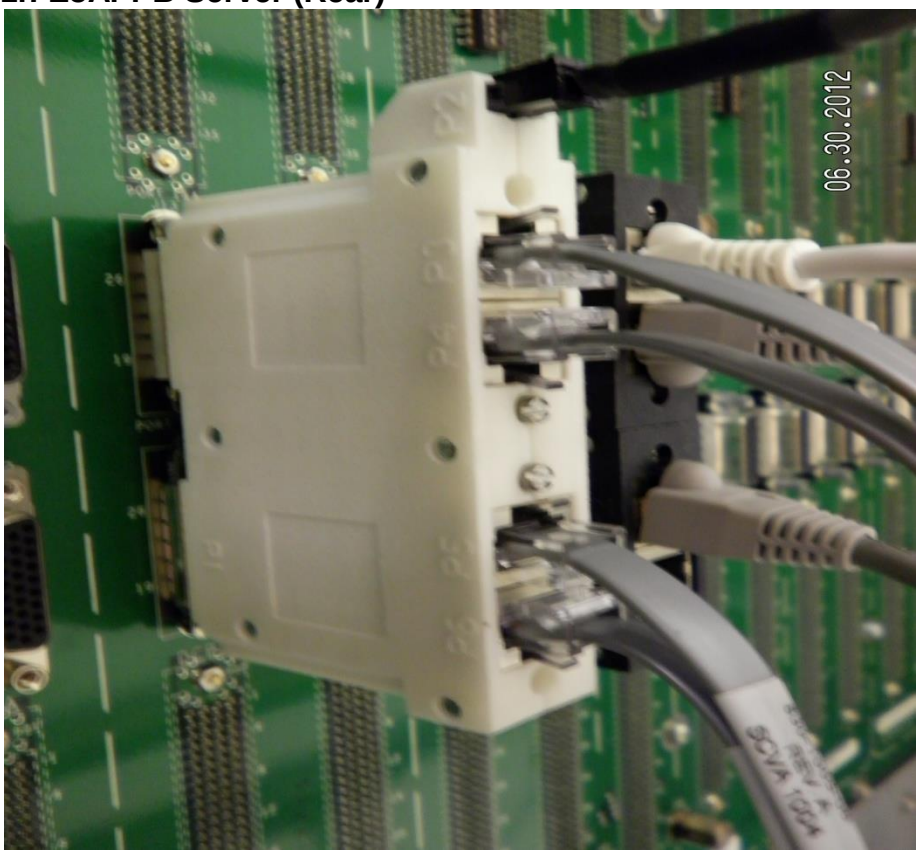


Figure 2. E5-APP-B Server (Rear)

1.8 Telco T5C-24GT Switch (Front)

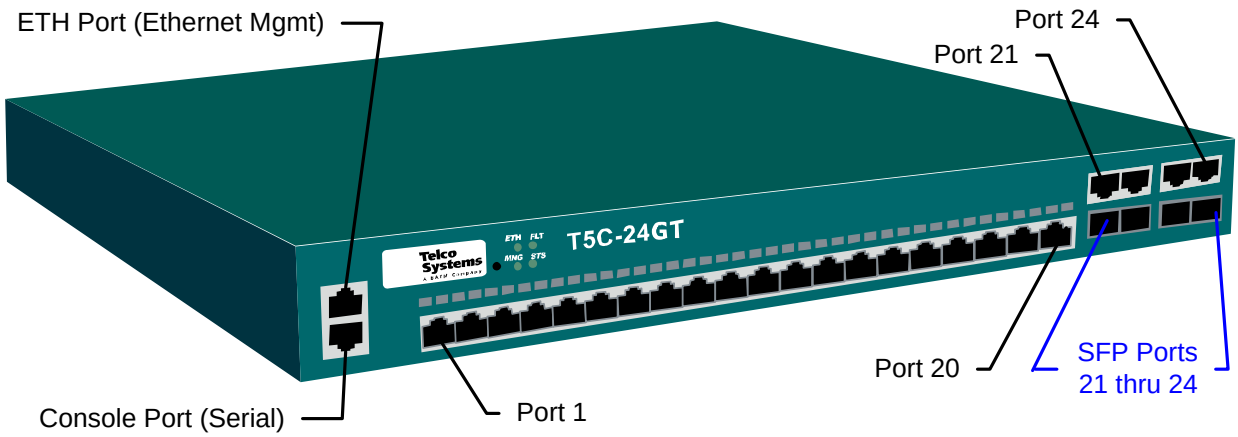


Figure 3. Telco Switch

1.9 Database Backup and Restore

The PDB backup for this procedure will be a cold backup of the active provisioning database without any subscriber provisioning running. The PDB will be unavailable for database read/write transactions until the upgraded E5-APP-B comes online.

Total Estimated time to complete forward full upgrade depends on the full upgrade path. No fallback estimate is included.

1.10 Fallback

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

1.11 Special Precaution during the document execution

Following are some of the salient points the installer has to take care during the execution of this document for EPAP 16.1 Full upgrade. These points are based on experience. This section mentions the procedures or steps that many Engineers or installers forget to execute or execute them incorrectly.One wrong step can ruin an entire Maintenance Window.

1. It is necessary to halt the provisioning activity during the execution of the procedures outlined herein for the entire duration of the Full upgrade.
   Normal provisioning can resume once the full upgrade is complete
2. Most of the procedures in the document are run on the Standby PDBA side. There are few procedures that will be run on the Active PDBA site A server. Those procedures are:
   - Procedure 5
   - Procedure 7
   - Part of Procedure 8, that is, step 7
   - Procedure 10
   - Part of Procedure 13, that is, steps 7-9

3. The PDB restore in the document is done by a CLI command in procedure 26. Do not use the GUI option to restore the PDB that we normally do in EPAP.
4. There are three types of backups to be performed and stored in remote machine before the servers are IPMed. Those are PDB backup, RTDB backup and MySQL backup. Make sure to perform all the 3 backups and transfer them to remote location before IPM. From experience, couple of times MySQL backup was not transferred to remote location before IPM. Entire Maintenance Window will be wasted if MySQL backup is not transferred to remote location before IPM.
5. Run the commands as per the user id mentioned in the procedure. Some procedures are run by user epapdev, some by user admusr and some by user root.
6. When changing a user using "su" in the command prompt, use the '–' key to load the user environment always
   su epapdev (Wrong)
   su – epapdev (Right)
7. Read the NOTES section at the beginning in every procedure carefully, before moving ahead to execute the procedure.
8. Ensure to capture logs (PuTTY Session) during upgrade server wise.
9. Do not change the wiring during the upgrade other than what is written in the document e.g. To access the serial console through another server, do not pull out the serial console to connect to another server.
10. If you need to do some work as admusr or root, make sure to come back to epapdev user immediately after completing your job. Remember that majority of the commands (90%+) are run through user epapdev.

It is advisable that, the installer should take a print out of these special precaution page and pin it in front of the desk so that none of the procedures are executed incorrectly. Also take a printout of the corresponding table (Table 7-12) for which type of EPAP (PROV, Non-PROV, PDBonly) the upgrade is being performed.

2. GENERAL DESCRIPTION

This document defines the step-by-step actions performed to execute a software full upgrade to E5APPB-02.

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

Table 5 Install-Full Upgrade paths for E5APPB-02

TPD Release for IPM	**EPAP Initial Installation Release**
7.0.x.0.0-86.40.0 or later	16.1
Upgrade Source Release	**Upgrade Destination Release**
15.x	16.1
16.0	16.1

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.

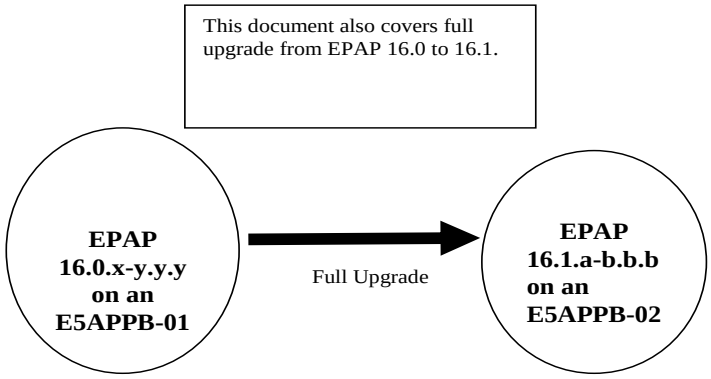


Figure 4: Full Upgrade Path – EPAP 16.0 to 16.1

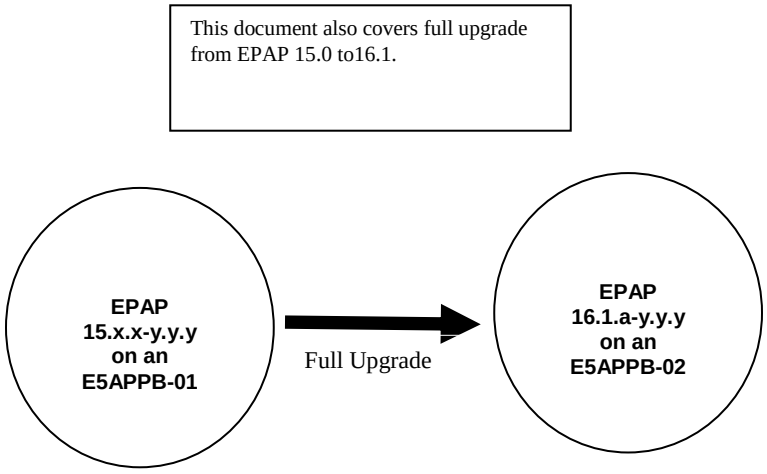


Figure 5: Full Upgrade Path – EPAP 15.0 to 16.1

Note: EPAP 16.1 still supports the E5-APP-B-01 (300GB disk) if the customer does not need 240M + 240M Data Capacity.

3. FULL UPGRADE PROCEDURES

3.1 Procedure Execution Order

Table 6: Section execution table for full upgrade to EPAP 16.1

Section	PROVISIONABLE	NON-PROVISIONABLE	Standalone PDB*
3.2.	**Procedure 1** **Procedure 2** **Procedure 4**	**Procedure 1** **Procedure 2** **Procedure 4**	**Procedure 1** **Procedure 3** **Procedure 4**
3.3.	**Procedure 5** **Procedure 6** **Procedure 7** **Procedure 8** **Procedure 9** **Procedure 10** **Procedure 11** **Procedure 12** **Procedure 13**	**Procedure 8** **Procedure 9** **Procedure 11** **Procedure 12** **Procedure 13**	**Procedure 5** **Procedure 7** **Procedure 8** **Procedure 9** **Procedure 10** **Procedure 13**
3.4.	**Procedure 14** **Procedure 15** **Procedure 16**	**Procedure 14** **Procedure 15** **Procedure 16**	**Procedure 14** **Procedure 15** **Procedure 16**
3.5.	**Procedure 17** **Procedure 18** **Procedure 19** **Procedure 20** **Procedure 21** **Procedure 22** **Procedure 23** **Procedure 24** **Procedure 25**	**Procedure 17** **Procedure 18** **Procedure 19** **Procedure 20** **Procedure 22** **Procedure 23** **Procedure 25**	**Procedure 18** **Procedure 19** **Procedure 20** **Procedure 21** **Procedure 22** **Procedure 23** **Procedure 24** **Procedure 25**
3.6.	**Procedure 26** **Procedure 27** **Procedure 28** **Procedure 29** **Procedure 30** **Procedure 31** **Procedure 32** **Procedure 33** **Procedure 35** **Procedure 37** **Procedure 38** **Procedure 39** **Procedure 40**	**Procedure 27** **Procedure 28** **Procedure 29** **Procedure 33** **Procedure 34**	**Procedure 26** **Procedure 30** **Procedure 32** **Procedure 33** **Procedure 35** **Procedure 38** **Procedure 39** **Procedure 40**
3.7.	**Procedure 41**	**Procedure 41**	**N/A**
	Appendix B in Reference [8]	**Appendix B in Reference [8]**	**N/A**

*** Some procedures are common for all EPAP architectures, that is, PROV, Non-PROV, Standalone PDB. PROV and Non-PROVs have 1A and 1B server where as Standalone PDB has 1A server only. In these procedures, there will be places where both 1A and 1B will be referred. If the upgrade is performed on Standalone setup, ignore the steps that are to be executed on 1B server.**

3.1.1 Upgrade Timeline for Provisionable Mixed EPAP pair

This timeline describe the steps required to upgrade a pair of Provisionable EPAPs. The table lists the steps for the currently Standby EPAP (1A) on the left side of the table and the steps for the other EPAP (1B) on the right side. The center column shows the expected start time of the task in that row.

The nomenclature followed is –
1A – Standby PDBA MPS A
1B – Standby PDBA MPS B
2A – Active PDBA MPS A
2B – Active PDBA MPS B

3.1.1.1 Preparation phase

Note: Execute Table 7 before Maintenance Window

Table 7: Timeline table for full upgrade preparation

EPAP 1A				EPAP 1B		
Procedure	Task	1A	Task Start time (min)	1B	Task	Procedure
Procedure 1	Setup upgrade environment	5	0			
			5	5	Setup upgrade environment	Procedure 1
Procedure 2	Capture Current Configuration and Verify that local is Standby PDB	10	10			
Procedure 4Procedure 3	Pre-upgrade check	10	20			
			30			

3.1.1.2 Maintenance Window Tasks

All the procedures in the left side of the table below (where, in the Top row "EPAP 1A" is written), are to be executed in Standby PDBA A-server except the following four exceptions. The below mentioned 4 procedures will be executed in the Active PDBA A-Server (2A side).

1. **Procedure 7**
2. **Part of Procedure 8, that is, step 8**
2. **Procedure 10**
3. **Part of Procedure 13, that is, steps 7-9**

Table 8: Timeline table for full upgrade of Provisionable EPAP

EPAP 1A					EPAP 1B			
Procedure	Access Method	Task	1A	Task Start time (min)	1B	Task	Access Method	Procedure
Procedure 5, Procedure 6, Procedure 7, Procedure 8	Direct SSH	Disable VIP Stop PDB/EPAP Break remote PDB connection	15	0				
Procedure 9	Direct SSH	Backup EuiDB	5	15	45	IPM	Minicom mate	Procedure 14
Procedure 10	Direct SSH	Backup PDB	40	20				
Procedure 11, Procedure 12	Direct SSH	Backup RTDB, Stop MySQL Services	35	60				
					15	Install App	Minicom mate	Procedure 15, Procedure 16
					10	Configure Network for backup transfer	Minicom mate	Procedure 17
Procedure 13	Direct SSH	Transfer backups to Local 1B	5	95				
Procedure 14	Minicom mate	IPM	45	100	90	Restore and convert RTDB	Direct SSH	Procedure 27
Procedure 15, Procedure 16	Minicom mate	Install App	30	145		Transfer backups to another server while 1B is siting idle Note: Transfer backups can be transfer to remote server, when rtdb restore is going on 1B server	Direct SSH	Procedure 19
Procedure 18	Minicom mate	Initial Configuration	10	175	10	Transfer PDB and EuiDB backup to Local 1A server	Direct SSH	Procedure 19
Procedure 20	Minicom mate	Restore EuiDB	5	185				
Procedure 21,	Minicom	Additional	10	190		Conversion		

Procedure 22	mate	Configuration				complete		
Procedure 26	Minicom mate	Restore PDB	15	200				
Procedure 23,	Minicom mate	NTP configuration	10	215				
Procedure 29	Minicom mate	Remote RTDB Reload from 1B	10	225				
Procedure 25	Minicom mate	Reboot MPS	10	235				
Procedure 28	GUI	Verify the PDB and RTDB are in sync	5	245				
Procedure 41, Procedure 24 Procedure 30, Procedure 31, Procedure 32,	Direct SSH	Boot 1 SM in the connected Eagle Post configuration syscheck. Restore remote PDB connection	40	250				
Procedure 33, Procedure 35, Procedure 37, Procedure 38, Procedure 39, Procedure 40	Direct SSH	Restart Epap and Pdba service. Exchange Keys with all Non-Provisional Sites.	30	290				
		Upgrade Completed		320				

3.1.2 Upgrade Timeline for Standalone EPAP pair

This timeline describe the steps required to upgrade a pair of Provisionable PDBonly EPAPs. The table lists the steps for the currently Standby EPAP (1A). The last column shows the expected start time of the task in that row.

The nomenclature followed is –
1A – Standby PDBA MPS A
2A – Active PDBA MPS A

3.1.2.1 Preparation phase

Note: Execute Table 9 before Maintenance Window

Table 9: Timeline table for full upgrade preparation of Standalone PDB

EPAP A			
Procedure	Task	A	Task Start time (min)
Procedure 1	Setup upgrade environment	5	0
Procedure 3	Capture Current Configuration and Verify that local is Standby PDB	10	10
Procedure 4	Pre-upgrade check	10	20
			30

3.1.2.2 Maintenance Window Tasks

Table 10: Timeline table for full upgrade of Standalone PDB

EPAP 1A				
Procedure	Access Method	Task	1A	Task Start time (min)
Procedure 5, Procedure 7, Procedure 8	Direct SSH	Stop PDB/EPAP Break remote PDB connection	15	0
Procedure 9	Direct SSH	Backup EuiDB	5	15
Procedure 10	Direct SSH	Backup PDB	40	20
Procedure 13	Direct SSH	Transfer backups to Remote Server	10	60
Procedure 14	Console	IPM	45	70
Procedure 15, Procedure 16	Console	Install App	30	115
Procedure 18	Console	Initial Configuration	10	145
Procedure 19	Direct SSH on Remote Server	Transfer PDB and EuiDB backup to upgraded 1A server	10	155
Procedure 20	Console	Restore EuiDB	5	165
Procedure 21, Procedure 22	Console	Additional Configuration	10	170
Procedure 26	Console	Restore PDB	15	180
Procedure 23, Procedure 24	Console	NTP configuration and Post configuration syscheck	10	195
Procedure 25	Console	Reboot MPS	10	205
Procedure 30, Procedure 32,	Direct SSH	Restore remote PDB connection	15	215
Procedure 33, Procedure 35, Procedure 38, Procedure 39, Procedure 40	Direct SSH	Restart Pdba service. Exchange Keys with all Non-Provisional Sites.	20	230
		Upgrade Completed		250

3.1.3 Upgrade Timeline for Non-Provisionable EPAP pair

This timeline describe the steps required to upgrade a pair of Non-Provisionable EPAPs. The table lists the steps for the EPAP-A on the left side of the table and the steps for the other EPAP-B on the right side. The center column shows the expected start time of the task in that row.

3.1.3.1 Preparation phase

Note: Execute Table 11 before Maintenance Window

Table 11: Timeline table for full upgrade preparation

EPAP A		EPAP B

Procedure	Task	A	Task Start time (min)	B	Task	Procedure
Procedure 1	Setup upgrade environment	5	0			
				5	Setup upgrade environment	Procedure 1
Procedure 2	Capture Current Configuration and Verify that local PDB is Standby PDB	10	10			
Procedure 4	Pre-upgrade check	10	20			
			30			

3.1.3.2 Maintenance Window Tasks

Table 12: Timeline table for full upgrade of Non-Provisionable EPAP

NOTE: Assumes that the Non-Provisionalble EPAP is connected to a Provisionable EPAP.

EPAP A					EPAP B			
Procedure	Access Method	Task	1A	Task Start time (min)	1B	Task	Access Method	Procedure
Procedure 5 Execute the whole procedure.	Direct SSH	Stop EPAP	5	0				
Procedure 7 Note: This Procedure is executed on the Prov and PDBonly setup. It is not to be run on the Non-Prov setup.	Direct SSH	Truncate replLog and stop both PDBAs	15	0				
Procedure 9	Direct SSH	Backup EuiDB	5	5	45	IPM	Minicom mate	Procedure 14
Procedure 11, Procedure 12	Direct SSH	Backup RTDB , Stop MySQL Services Note: Backup shall be taken on B server of Standby Prov Server	35	10				
				50	15	Install App	Minicom mate	Procedure 15, Procedure 16
				65	10	Configure Network for backup transfer	Minicom mate	Procedure 17
Procedure 13	Direct SSH	Transfer EuiDB, RTDB backup	5	75		Get RTDB backup from Prov server	Direct SSH	Procedure 19

		to Local 1B						
Procedure 14	Minicom mate	IPM	45	80	30	Restore RTDB	Direct SSH	Procedure 27
Procedure 15, Procedure 16	Minicom mate	Install App	30	125		Restore complete		
Procedure 18	Minicom mate	Initial Configuration	10	155	5	Transfer EuiDB backup to Local 1A server	Direct SSH	Procedure 19
Procedure 20	Minicom mate	Restore EuiDB	5	165				
Procedure 22	Minicom mate	Additional Configuration	10	170				
Procedure 23	Minicom mate	NTP configuration	10	180				
Procedure 29	Minicom mate	Remote RTDB Reload from 1B	10	190				
Procedure 25	Minicom mate	Reboot MPS	10	200				
Procedure 28	GUI	Verify the PDB and RTDB are in sync	5	210				
Procedure 34	Direct SSH	Post configuration syscheck and Restore remote PDB connection and other configuration	10	255				
Procedure 40	Direct SSH	Verify the replication between PDBA(s) and Non-Prov nodes.	10	225				
Procedure 41		Boot 1 SM in the connected EAGLE	40	235				
		Upgrade Completed		275				

Note: After successful upgrade of NON-Prov server, autobackup shall be configured on its homed PDBA. If autobackup is configured in a PDBA where the Non-PROV is not homed, then a banner message will be raised saying "Unable to configure auto RTDB backup in Non-PROV servers".

3.2 Pre Full Upgrade Steps

Check off (√) each step as it is completed for MPS 1A/2A and MPS 1B/2B. Boxes have been provided for this purpose under each step number for both MPS.

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

Procedure 1 SETTING UP PRE-FULL UPGRADE ENVIRONMENT

S T E P #	1A	1B	This procedure sets up the full upgrade environment. Estimated time: 5 minutes	
1.	☐	☐	**Ensure MPS X:** All the console/PuTTY Sessions.	On all the console/PuTTY sessions, make sure that the logging in enabled and logs are written to a file. For example, on a PuTTY session, do the following. **1.** Right click on the top bar in the PuTTY and choose "change setting". **2.** Click on "Logging". **3.** Select "Printable output". **4.** Click on "Browse" and choose where you want the logs to be written so that you can collect those later, if needed. Put a name which will serve better on a later date to understand, for example, name of the log file can be `<server name>_active_pdba_A_server_puttylog_ddmmyyyy`. **5.** Click on "Save". **6.** Type a text "Putty Logging starts" in the PuTTY session and check that above text is logged in the PuTTY log file. Repeat the above six steps on every console/PuTTY session that will be used to enter commands or execute procedure of this document.
2.	☐	☐	**MPS X:** Login as root to MPS	**S**SH to MPS IP: `login: root` `password: <root_password>`
3.	☐	☐	**MPS X:** Start capture file.	Start a capture file using IsoConsole, or by starting a local screen session and capturing its output.
4.	☐	☐	**MPS X:** Access mate MPS via serial console	Note: Skip this step on Standalone PDB. `# minicom mate`
5.	☐	☐	**mate MPS:** Login as root.	Note: Skip this step on Standalone PDB. `console login: root` `password: <root_password>`
6.	☐	☐	Note down the timestamp in log.	Run the following command `$ date`

This procedure is complete!

Procedure 2 CAPTURING CURRENT CONFIGURATIONS

S T E P #	1A	This procedure captures the exsting configuration on the server that runs on the source release. Estimated time: 5 minutes	
1.	☐	**MPS 1A:** Log in as epapconfig.	`# su - epapconfig`

2.	☐	**MPS 1A:** A successful configuration file setup results in the display of the EPAP Configuration Menu. Select option 1 to display the EPAP configuration.	/-------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: 1
3.	☐	**MPS 1A:** Configuration information is displayed. <u>Capture and record all information displayed in this output</u>	**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 = 192.168.61.45 Remote PDBA B Address = 192.168.61.46 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>**

4.	☐	**MPS 1A:** Record the configuration data.	Record the configuration data paying particular attention to the highlighted items in the sample output above.
5.	☐	**MPS 1A:** Press Return to continue.	Press return to continue... **<return>**
6.	☐	**MPS 1A:** The EPAP Configuration Menu is displayed. Select option 7 to determine the NTP Server configuration.	/-----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: **7**
7.	☐	**MPS 1A:** The EPAP NTP Server Menu is displayed. Select option 1 to display the External NTP Server (if configured).	/-----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**
8.	☐	**MPS 1A:** Record the NTP server information (if configured).	There are no External NTP Servers. Press return to continue... **<return>**
9.	☐	**MPS 1A:** Select **e** to exit	/-----EPAP Configure NTP Server Menu-\ /----------\ | 1 | Display External NTP Server | |----|----------| | 2 | Add External NTP Server |

			<pre>|----|-----------------------------------| | 3 | Remove External NTP Server | |----|-----------------------------------| | e | Exit | \\---/ Enter Choice: **e**</pre>
10.	☐	**MPS 1A:** Select **e** to exit	<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: **e**</pre>
11.	☐	**MPS 1A:** Execute the following command to determine if the EPAP is Provisionable or non-provisionable. Write down this information.	**# uiEdit | grep PROVISIONABLE** "PROVISIONABLE_MPS" is set to "YES" *If the above output contains "YES", then the EPAP is Provisionable. Otherwise, the EPAP is non-provisionable.* For provisionable EPAP, continue with next step, otherwise skip to step 14.
12.	☐	**MPS 1A:** Capture the configured provisioning Database Size. Write down the Capacity of the PDB in "Information Required for the full upgrade".	**# uiEdit | grep PDB_SUB_CAPACITY** "PDB_SUB_CAPACITY" is set to "251000000"
13.	☐	**MPS 1A:** Determine which PDBA is active.	**# telnet localhost 5873** Trying 127.0.0.1... Connected to localhost. Escape character is '^]'. **connect(endchar newline)** rsp (rc 0, data (connectId 5, side active)) **disconnect()**

			If the output is "standby" then, the remote PDBA shall be the active PDBA. *Note – Standby PDBA shall be upgraded first. Hence all the subsequent procedures talk about the full upgrade of Standby PDBA.* The nomenclature followed is – 1A – Standby PDBA MPS A 1B – Standby PDBA MPS B 2A – Active PDBA MPS A 2B – Active PDBA MPS B
14.	☐	**MPS 1A:** Write down the current EPAP release (should be either EPAP 15.0 or 16.0)	Example output for EPAP 15.0 – **# rpm -qa | grep TKLCepap** TKLCepap-150.0.23-15.0.2_150.27.0.x86_64 **# uiEdit | grep EPAP_RELEASE** "EPAP_RELEASE" is set to "15.0." Example output for EPAP 16.0 – **# rpm -qa | grep TKLCepap** TKLCepap-HA-6.0.2-16.0.0_160.6.0.noarch TKLCepap-160.0.17-16.0.0_160.17.0.x86_64 **# uiEdit | grep EPAP_RELEASE** "EPAP_RELEASE" is set to "16.0." **Write down the current EPAP release**
15.	☐	**MPS 1A:** Capture the EPAP_PRETTY_ NAME if configured.	**# uiEdit | grep PRETTY_NAME** "EPAP_B_PRETTY_NAME" is set to "wolverine-b" "EPAP_A_PRETTY_NAME" is set to "wolverine-a"
16.	☐	**MPS 1A:** Capture the entire uiEdit output for reference if required later. *The example output to the right has been truncated to fit this page.*	**# uiEdit** "EPAP_B_INCR_DNLOAD_BACKUP_MCASTADDR" is set to "225.10.81.15" "LNP_ENABLED" is set to "FALSE" "EPAP_A_RTDB_DEBUG_LEVEL" is set to "50" "EPAP_B_GS_BANNER_PORT" is set to "8473" "EPAP_A_HSDOWNLOAD" is set to "OFF" "EPAP_A_GS_BANNER_PORT" is set to "8473" "PDBA_STATS_ENABLED" is set to "OFF" "max_passwd_age" is set to "0" "new_user_default_groups" is set to "readonly" "max_concurrent_user_logins" is set to "1" "EPAP_B_PRETTY_NAME" is set to "wolverine-b" "max_concurrent_logins" is set to "20" … … … "RTDB_HOMING_POLICY" is set to "STANDBY" "PDBA_MAX_COMMAND_DELAY" is set to "-1" "EPAP_B_RTDB_AUDIT" is set to "ON" "JRS_STATUS" is set to "ENABLED" "EPAP_A_JRS_DEBUG_LEVEL" is set to "0" "PDBA_LOCAL_NAME" is set to "10.253.103.18" "PDBA_COMMAND_LOG_DEBUG_LEVEL" is set to "20" "EPAP_B_DSM_MAIN_NETWORK_ADDRESS" is set to "192.168.120.200" "EPAP_B_HTTPS_PORT" is set to "443" "EPAP_B_DSM_BACKUP_NETWORK_ADDRESS" is set to "192.168.121.200" "EPAP_A_FULL_DNLOAD_MAIN_MCASTADDR" is set to "225.10.80.12"

			"max_failed_logins" is set to "3" "PDB_SUB_CAPACITY" is set to "251000000"
17.	☐	Note down the timestamp in log.	Run the following command **$ date**

This procedure is complete!

Procedure 3 CAPTURING CURRENT CONFIGURATIONS ON STANDALONE EPAP

STEP #	1A	This procedure captures the exsting configuration on the server that runs on the source release. Estimated time: 5 minutes	
1.	☐	**MPS 1A:** Log in as epapconfig.	**# su – epapconfig**
2.	☐	**MPS 1A:** A successful configuration file setup results in the display of the EPAP Configuration Menu. Select option 1 to display the EPAP configuration.	/-------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: 1
3.	☐	**MPS 1A:** Configuration information is displayed. <u>Capture and record all information displayed in this output</u>	Example output for **SINGLE Standalone PDB**: **EPAP A Provisioning Network IP Address = 10.248.10.79** **Provisioning Network Netmask = 255.255.255.0** **Provisioning Network Default Router = 10.248.10.1** **EPAP A Backup Prov Network IP Address = Not configured** **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 = 10.248.10.79 Remote PDBA Address = 10.248.10.78 Time Zone = America/New_York PDB Database = Exists Auto DB Recovery Enabled = No Press return to continue... **<return>** Example output for **SEGMENTED Standalone PDB**: **EPAP A Provisioning Network IP Address = 192.168.61.36** **Provisioning Network Netmask = 255.255.255.0** **Provisioning Network Default Router = 192.168.61.250** EPAP A Backup Prov Network IP Address = Not configured Backup Prov Network Netmask = Not configured Backup Prov Network Default Router = Not configured **Network Configuration Type = SEGMENTED** **EPAP A GUI Network IP Address = 192.168.59.28** **GUI Network Netmask = 255.255.255.0** **GUI Network Default Router = 192.168.59.250** **EPAP A O&M Network IP Address = 192.168.60.27** **O&M Network Netmask = 255.255.255.0** **O&M Network Default Router = 192.168.60.250** 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 = 192.168.61.36 Remote PDBA Address = 10.248.10.79 Time Zone = America/New_York PDB Database = Exists Auto DB Recovery Enabled = No Press return to continue... **<return>**
4.	☐	**MPS 1A:** Record the configuration data.	Record the configuration data paying particular attention to the highlighted items in the sample output above.
5.	☐	**MPS 1A:** Press Return to continue.	Press return to continue... **<return>**
6.	☐	**MPS 1A:** The EPAP Configuration Menu is displayed. Select option 7 to determine the NTP Server configuration.	/-----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: **7**
7.	☐	**MPS 1A:** The EPAP NTP Server Menu is displayed. Select option 1 to display the External NTP Server (if configured).	/-----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**
8.	☐	**MPS 1A:** Record the NTP server information (if configured).	There are no External NTP Servers. Press return to continue... **<return>**
9.	☐	**MPS 1A:** Select **e** to exit	/-----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**
10.	☐	**MPS 1A:** Select **e** to exit	/-----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: **e**
11.	☐	**MPS 1A:** Capture the configured provisioning Database Size. Write down the Capacity of the PDB in "Information Required for the full upgrade".	**# uiEdit | grep PDB_SUB_CAPACITY** "PDB_SUB_CAPACITY" is set to "251000000"
12.	☐	**MPS 1A:** Determine which PDBA is active.	**# telnet localhost 5873** Trying 127.0.0.1... Connected to localhost. Escape character is '^]'. **connect(endchar newline)** rsp (rc 0, data (connectId 5, side active)) **disconnect()** *If the output is "standby" then, the remote PDBA shall be the active PDBA.* *Note – Standby PDBA shall be upgraded first. Hence all the subsequent procedures talk about the full upgrade of Standby PDBA.* The nomenclature followed is – 1A – Standby PDBA MPS A 2A – Active PDBA MPS A
13.	☐	**MPS 1A:** Write down the current EPAP release.	**# rpm -qa | grep TKLCepap** TKLCepap-HA-6.0.2-16.0.0_160.6.0.noarch TKLCepap-160.0.17-16.0.0_160.17.0.x86_64 **# uiEdit | grep EPAP_RELEASE** "EPAP_RELEASE" is set to "16.0." **Write down the current EPAP release**
14.	☐	**MPS 1A:** Capture the EPAP_PRETTY_ NAME if configured.	**# uiEdit | grep PRETTY_NAME** "EPAP_A_PRETTY_NAME" is set to "wolverine-a"
15.	☐	**MPS 1A:** Capture the entire uiEdit output for reference if required later. *The example output to the right has been truncated to fit this page.*	**# uiEdit** "LNP_ENABLED" is set to "FALSE" "NETWORK_CONFIGURATION_TYPE" is set to "SINGLE" "EPAP_A_GS_BANNER_PORT" is set to "8473" "PDBA_STATS_ENABLED" is set to "OFF" "GUI_NETWORK_NETMASK" is set to "255.255.255.0" "EPAP_DATA_SPLIT" is set to "OFF" "max_passwd_age" is set to "180" … … "PDBA_COMMAND_LOG_DEBUG_LEVEL" is set to "20" "GUI_NETWORK_DEFAULT_ROUTER" is set to "10.248.11.1" "max_failed_logins" is set to "3" "DN_BLK_EXPANSION_200K" is set to "OFF" "PDB_SUB_CAPACITY" is set to "251000000"
16.	☐	Note down the timestamp	Run the following command

		in log.	`$ date`

Procedure 4 PRE-FULL UPGRADE CHECK

Note: This procedure may be executed outside of the maintenance window.

STEP #	1A	1B		
			This procedure determines the health of the MPS before beginning the full upgrade. This procedure should be done 1 week before scheduled full upgrade and repeated the day of the full upgrade. NOTE: Step 1 – 3 are syscheck, 4 is Database check, 6 is Eagle status check. NOTE: The step 4 should NOT executed on a Standalone PDB. If the to-be-upgrade system is a Standalone PDB, executed these steps on its connected non-provisioning EPAP. Estimated time: 10 minutes	
1.	☐	☐	**MPS 1A:** Validate date, time and time zone to ensure accuracy.	`# date` `Mon Mar 8 13:24:22 EST 2012`
2.	☐	☐	**MPS 1A:** Execute syscheck.	`# syscheck` `Running modules in class disk... OK` `Running modules in class net... OK` `Running modules in class proc... OK` `Running modules in class system... OK` `Running modules in class hardware... OK` `The log is available at: -->/opt/TKLCplat/log/syscheck/fail_log`
3.	☐	☐	**MPS 1A:** Execute syscheck on the mate server.	Note: Skip this step on Standalone PDB. `# ssh mate syscheck` `Running modules in class disk... OK` `Running modules in class net... OK` `Running modules in class proc... OK` `Running modules in class system... OK` `Running modules in class hardware... OK` `The log is available at: -->/opt/TKLCplat/log/syscheck/fail_log`
4.	☐	☐	**MPS 1A:** Login to the web GUI terminal	If "**RTDB 80% Full**" or "**RTDB 90% Full**" alarm shown on the banner, STOP the upgrade and contact Customer Support for assistance. If both "RTDB 80% Full" and "RTDB 90% Full" alarms do not display on the banner, continue on step 5.
5.	☐	☐	Repeat on the day of the scheduled full upgrade.	All Health Checks should be repeated the day of the full upgrade. If any problems are encountered, resolve before proceeding further.

6.	☐	☐	Note: Skip this step on Standalone EPAP. Login into the EAGLE associated with the Standby PDBA (1A) and verify the currect configuration. > **rept-stat-card:appl=vsccp** (correlate below output for all SM card IP LINK configuration) > **rtrv-ip-lnk** Record all SM port A and B link configuration. Pay special attention to DUPLEX and SPEED setting.	
7.	☐	☐	Note down the timestamp in log.	Run the following command **$ date**

This procedure is complete!

3.3 Data Backup before Full Upgrade

Note: Make sure provisioning is stopped at the Active PDBA site. This procedure must run on Prov or PDBonly setup.

Procedure 5 SHUTTING DOWN THE PDBA AND EPAP

STEP #	1A	1B	This procedure stops the software on the Standby PDBA MPS A and B. Estimated time: 5 minutes	
1.	☐		**MPS 1A:** Stop the Customer provisioning in to the active PDB	NOTE: Contact customer provisioning and verify provisioning has been deactivated.
2.	☐		**MPS 1A:** Login to EPAP CLI.	`login: root` `Password: <root_password>`
3.	☐		**MPS 1A and 2A:** Turn off the PDBA_REMOTE_PDBI_ALLOWED flag to stop provisioning during upgrade. **Note: PDBA software must be restarted, for this change to take effect.** **Note: Execute the procedure in both the active and the standby PDBA.**	Execute the below command to find the current status of PDBA_REMOTE_PDBI_ALLOWED flag. `# uiEdit | grep -i PDBA_REMOTE_PDBI_ALLOWED` Turn off the PDBA_REMOTE_PDBI_ALLOWED flag. Skip the next command if the output of the above command is "PDBA_REMOTE_PDBI_ALLOWED" is set to "OFF" `# uiEdit PDBA_REMOTE_PDBI_ALLOWED OFF` "PDBA_REMOTE_PDBI_ALLOWED" is set to "OFF" `#uiEdit PDBA_TEST_RTDB_LEVEL 0`
4.	☐		**MPS 1A and 2A:** Stop the PDBA process on both the Active and the Standby servers.	`# service Pdba stop` `~~ /etc/init.d/Pdba stop ~~` `PDBA application stopped.`
5.	☐	☐	Change the pdba process name so that Pdba does not start accidentally.	`# cd /etc/init.d/` `# ls Pdba*` `Pdba` `# mv Pdba Pdba_stopped`
6.	☐	☐	**MPS 1A:** Stop the EPAP process	`# service Epap stop` `~~ /etc/init.d/Epap stop ~~` `EPAP application stop Successful.` Note: Skip the following command on Standalone PDB. `# ssh mate "service Epap stop"` `~~ /etc/init.d/Epap stop ~~` `EPAP application stop Successful.`
7.	☐	☐	Note down the timestamp in log.	Run the following command `$ date`

This procedure is complete!

Procedure 6 DISABLE EPAP VIP AND DEACTIVATE PDBA PROXY FEATURE

If PDBA Proxy feature is NOT enabled and VIP is NOT configured, this procedure can be skipped. Refer to step 3 of Procedure 2.

Ensure the provisioning activity has been halted before proceeding!!!

STEP #	1A	2A	This procedure outlines the steps to disable the PDBA proxy feature. Estimated time: 5 minutes	
1.	☐	☐	**MPS 1A**: Login to the Standby PDBA EPAP A server.	`login: root` `Password: <root_password>`
2.	☐	☐	**MPS 1A**: Log into epapconfig	`# su - epapconfig`
3.	☐	☐	**MPS 1A**: Choose option "8" to display "PDB Configuration Menu.	MPS Side A: /-----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
4.	☐	☐	**MPS 1A**: Choose option "6" to "Change PDBA Proxy State".	MPS Side A: /-----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                           |` `\-------------------------------------/` `Enter Choice: 6`
5.	☐	☐	**MPS 1A**: Enter "Y" to stop PDBA / EPAP software and disable PDBA Proxy.	`PDBA PROXY is currently ENABLED.` `Do you want to DISABLE PDBA Proxy? [N]: **Y**`
6.	☐	☐	**MPS 1A**: Enter "1" to "Display Configuration"	`MPS Side A:` `/-----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: 1`
7.	☐	☐	**MPS 1A**: Verify that the state of PDBA Proxy Feature is No.	`MPS Side A:` `EPAP A Provisioning Network IP Address = 192.168.61.115` `EPAP B Provisioning Network IP Address = 192.168.61.116` `Provisioning Network Netmask = 255.255.255.0` `Provisioning Network Default Router = 192.168.61.1` `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 = 192.168.15.152 Remote Provisioning VIP = 192.168.15.172 Local PDBA Address = 192.168.15.115 Remote PDBA Address = 192.168.16.115 Remote PDBA B Address = 192.168.16.116 Time Zone = America/New_York PDB Database = Exists Preferred PDB = Standby Allow updates from alternate PDB = Yes Auto DB Recovery Enabled = Yes PDBA Proxy Enabled = **NO** Press return to continue...
8.	☐	☐	**MPS 1A**: Choose option "2" to enter the "Configure Network Interfaces Menu".	MPS Side A: /-----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
9.	☐	☐	**MPS 1A**: Choose option "7" to enter the "Configure Provisioning VIP Addresses Menu".	MPS Side A: /-----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: 7`
10.	☐	☐	**MPS 1A**: Remove the local provisioning VIP and remote provisioning VIP, by entering 0.0.0.0.	`Verifying root connectivity with mate...` `EPAP local provisioning Virtual IP Address [192.168.15.152]:` **`0.0.0.0`** `EPAP remote provisioning Virtual IP Address [192.168.15.172]:` **`0.0.0.0`**
11.	☐	☐	**MPS 1A**: Choose option "e" to exit.	`MPS Side A:` `/-----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`
12.	☐	☐	**MPS 1A**: Choose option "1" to "Display Configuration.	`MPS Side A:` `/-----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: 1`

13.	☐	☐	**MPS 1A**: Verify VIP addresses are set to **0.0.0.0.**	MPS Side A: EPAP A Provisioning Network IP Address = 192.168.61.115 EPAP B Provisioning Network IP Address = 192.168.61.116 Provisioning Network Netmask = 255.255.255.0 Provisioning Network Default Router = 192.168.61.1 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 = 192.168.15.115 Remote PDBA Address = 192.168.16.115 Remote PDBA B Address = 192.168.16.116 Time Zone = America/New_York PDB Database = Exists Preferred PDB = Standby Allow updates from alternate PDB = Yes Auto DB Recovery Enabled = Yes PDBA Proxy Enabled = No Press return to continue...
14.	☐	☐	**MPS 1A**: Choose “e” to exit.	MPS Side A: /-----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: e
15.	☐	☐	Note down the timestamp in log.	Run the following command **$ date**
16.	☐	☐	**Repeat steps 1 through 15 on the Active PDBA EPAP server (2A).** **This procedure needs to be run on both the ACTIVE and STANDBY PDBA sites for the feature to perform properly.**	

This procedure is complete!

Procedure 7 STOP ACTIVE /STANDBY PDBA AND TRUNCATE REPLLOG AND REQUESTS TABLE

This procedure shall be executed on Active PDBA (2A). If REPL log in not empty, part of the procedure will be executed in Standby PDBA (1A) as well.

Note: This Procedure is run on the Prov and PDBonly setup. It is not to be run on Non-Prov setup and needs to be run on both Active and Standby PDBA.

S T E P #	2A	This procedure stops the PDBA software. Estimated time: 5 minutes	
1.	☐	**MPS 2A:** Stop the Customer provisioning in to the active PDB.	NOTE: Contact customer provisioning and verify provisioning has been deactivated.
2.	☐	**MPS 2A:** Login to EPAP CLI.	login: **root** Password: **<root_password>**
3.	☐	**MPS 2A:** Stop the PDBA process.	**# service Pdba stop** ~~ /etc/init.d/Pdba stop ~~ PDBA application stopped.
4.	☐	**MPS 2A:** Stop the Epap software.	**# service Epap stop** ~~ /etc/init.d/Epap stop ~~ EPAP application stopped.
5.	☐	**MPS 2A:** Switch from root to the epapdev user	**# su - epapdev**
6.	☐	**MPS 2A:** Clear the REPL logs.	**$ mysql -u root -p -S/var/TKLC/epap/db/pdb/mysql.sock < /usr/TKLC/epap/config/pdb_repl.sql** Enter password: **<MySQL_root_password>**
7.	☐	**MPS 2A:** Login to the mysql database and verify that there are no updates to be	$ **mysql -u root -p -S/var/TKLC/epap/db/pdb/mysql.sock pdb** Enter password: **<MySQL_root_password>** On the MySQL prompt, execute the following commands: mysql> **select * from replLog;**

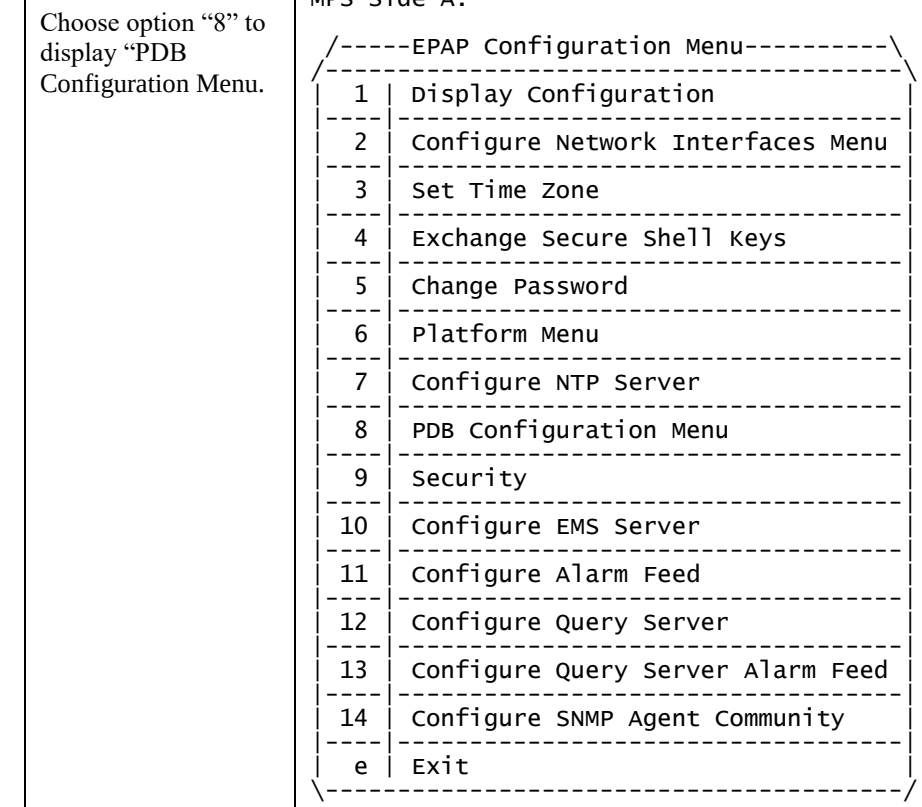
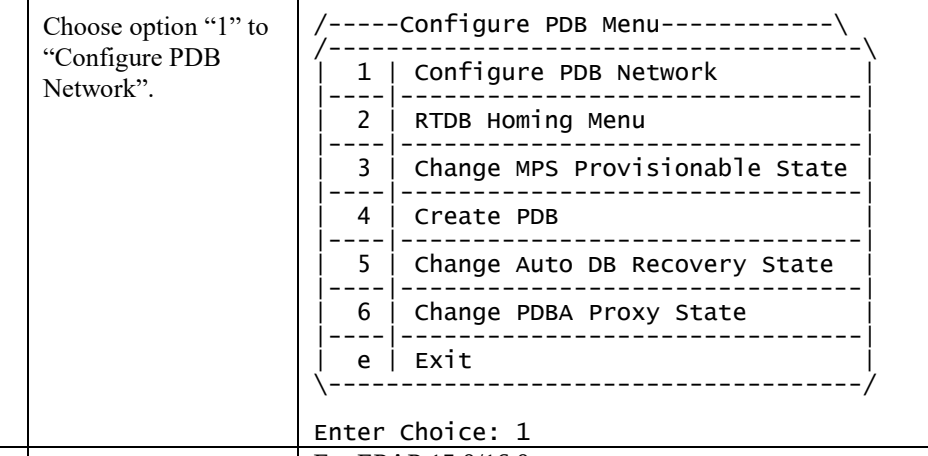
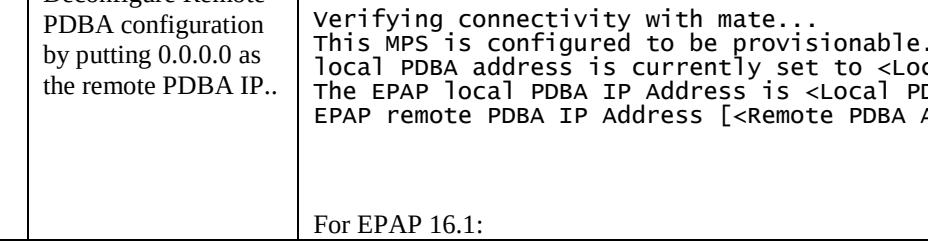
		sent to the standby PDB. If any REPL log exists, follow steps 8 to 12. Otherwise jump to step 11.	Empty set (0.00 sec) mysql> **select * from requests;** Empty set (0.00 sec) mysql> **quit** Bye
8.	☐	**MPS 1A:** Start the PDBA and EPAP at the Standby site (1A)	**# service Pdba start** ~~ /etc/init.d/Pdba stop ~~ PDBA application started. **# service Epap start** ~~ /etc/init.d/Epap start ~~ **EPAP application started.** Note : Skip the following step on Standalone PDB **# ssh mate "service Epap start"** ~~ /etc/init.d/Epap start ~~ EPAP application started.
9.	☐	**MPS 2A:** Start the PDBA at the Active site (2A)	**# service Pdba start** ~~ /etc/init.d/Pdba stop ~~ PDBA application started. **# service Epap start** ~~ /etc/init.d/Epap start ~~ **EPAP application started.** Note : Skip the following step on Standalone PDB **# ssh mate "service Epap start"** ~~ /etc/init.d/Epap start ~~ EPAP application started.
10.	☐	**MPS 2A:** Wait a minute for the updates to sync between Active and Standby PDBA. Check in intervals of 1 minute till all updates are sent from Active PDBA to Standby PDBA. Move to next step ONLY after checking that output of replLog and requests tables shows “Empty set”.	$ **mysql -u root -p -S/var/TKLC/epap/db/pdb/mysql.sock pdb** Enter password: **<MySQL_root_password>** On the MySQL prompt, execute the following commands: mysql> **select * from replLog;** Empty set (0.00 sec) mysql> **select * from requests;** Empty set (0.00 sec) mysql> **quit** Bye
11.	☐	Repeat step 1 – 7 on Standby PDBA side. Note: To make sure that repl log and request tables are empty on both the PDBAs. Note: Once replLog and requsts are empty in both Active and Standby sides execute the next step.	Repeat step 1 – 7 on Standby PDBA side.

12.	☐	**MPS 2A:** Stop the active PDBA.	`# service Pdba stop` `~~ /etc/init.d/Pdba stop` `~~ PDBA application stopped`
13.	☐	**MPS 1A:** Stop the standby PDBA.	`# service Pdba stop` `~~ /etc/init.d/Pdba stop` `~~ PDBA application stopped`
14.	☐	**MPS 2A:** Exit the epapdev user	`$ exit`
15.	☐	Note down the timestamp in log.	Run the following command `$ date`

This procedure is complete!

Procedure 8 DISCONNECT REMOTE PDBA

STEP #	1A	2A		
			This procedure outlines the steps to disconnect remote PDBA. Estimated time: 5 minutes	
1.	☐	☐	**MPS 1A**: Login to the Standby PDBA EPAP A server.	`login: root` `Password: <root_password>`
2.	☐	☐	**MPS 1A**: Login to epapconfig	`# su - epapconfig`

3.	☐	☐	**MPS 1A**: Choose option "8" to display "PDB Configuration Menu.	MPS Side A: 
4.	☐	☐	**MPS 1A**: Choose option "1" to "Configure PDB Network".	MPS Side A: 
5.	☐	☐	**MPS 1A**: Deconfigure Remote PDBA configuration by putting 0.0.0.0 as the remote PDBA IP..	For EPAP 15.0/16.0:  For EPAP 16.1:

				/-----PDB Network Configuration Menu-\ /--------------------------------------\ | 1 | IPv4 Configuration | |----|--------------------------------| | 2 | IPv6 Configuration | |----|--------------------------------| | e | Exit | \--------------------------------------/ Enter Choice: 1 Verifying connectivity with mate... This MPS is configured to be provisionable. The EPAP local PDBA IPv4 address is currently set to < Local PDBA IP > The EPAP local PDBA IPv6 address is currently set to 0000:0000:0000:0000:0000:00 00:0000:0000 The EPAP local PDBA IPv4 Address is < Local PDBA IP >. EPAP remote PDBA IP Address [<Remote PDBA A IP>]: **0.0.0.0**
6.	☐	☐	**MPS 1A**: Exit from PDB menu	/-----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 | \--------------------------------------/ Enter Choice: e

7.	☐	☐	**MPS 1A**: Exit from epapconfig menu	/-----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: e
8.	☐	☐	Note down the timestamp in log.	Run the following command **$ date**
9.	**Repeat steps 1-8 for <u>ACTIVE PBDA</u> site, that is, 2A server. This procedure needs to be run on both the ACTIVE and STANDBY PDBA sites.**			

This procedure is complete!

Procedure 9 BACKUP EUIDB DATABASE

STEP #	1A	This procedure backs up the EuiDB. Estimated time: 5 minutes	
1.	☐	**MPS 1A:** Log in as epapconfig.	**# su - epapconfig**

2.	☐	**MPS 1A:** The EPAP Configuration Menu is displayed. Select option6, Platform Menu.	/-------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**
3.	☐	**MPS 1A:** The Platform Menu is displayed. Select option 3, MySQL Backup.	/-----EPAP Platform Menu-\ /--------------------------\ | 1 | Initiate Upgrade | |----|---------------------| | 2 | Reboot MPS | |----|---------------------| | 3 | MySQL Backup | |----|---------------------| | 4 | RTDB Backup | |----|---------------------| | 5 | PDB Backup | |----|---------------------| | e | Exit | \--------------------------/ Enter Choice: **3**
4.	☐	**MPS 1A:** Verify. Answer Y. Backup output is displayed.	Are you sure you want to backup the MySQL Database on MPS A [N]: **Y** Backing up the NPDB... NPDB Backed up Successfully to /var/TKLC/appl/free/npdbBackup_<hostname>_<timestamp>.sql.gz Write down the name of the backup file.

5.	☐	**MPS 1A:** Select e to exit.	/-----EPAP Platform Menu-\ /-------------------------\ | 1 | Initiate Upgrade | |---|---------------------| | 2 | Reboot MPS | |---|---------------------| | 3 | MySQL Backup | |---|---------------------| | 4 | RTDB Backup | |---|---------------------| | 5 | PDB Backup | |---|---------------------| | e | Exit | \-------------------------/ Enter Choice: **e**
6.	☐	**MPS 1A:** The EPAP Configuration Menu is displayed. Select option e, Exit.	/-------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: **e**
7.	☐	**MPS 1A:** Record the MD5 Checksum Value from the backup file.	**# md5sum** **/var/TKLC/appl/free/npdbBackup_<hostname>_<timestamp>.sql.gz** 7494d28c6f4633ade0bd3bda1ed525e4 /var/TKLC/appl/free/npdbBackup_*<hostname>_<timestamp>*.sql.gz
8.	☐	Note down the timestamp in log.	Run the following command **$ date**

This procedure is complete!

Procedure 10 BACKUP PDB

Note: This procedure shall be executed on Active PDBA (2A) and Standby PDBA (1A) site.

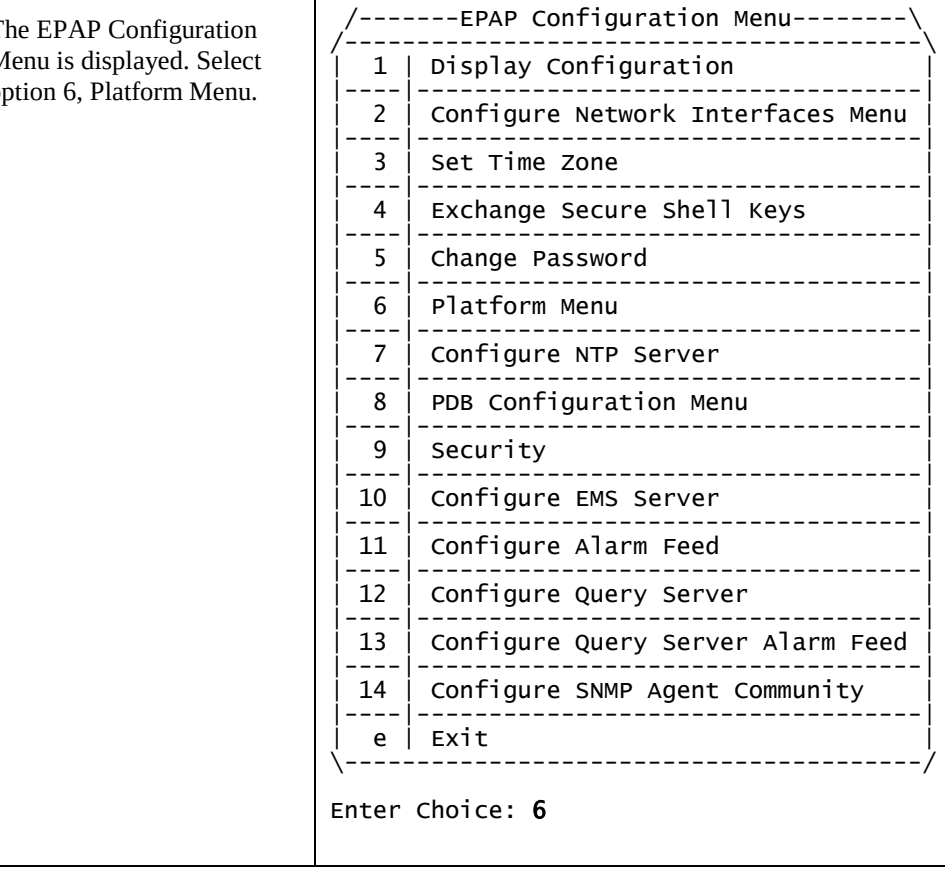
If there is only one PDB site, steps 1-3 below are executed at the pdb site. We want a pdb backup before the meb upgrade and one after the meb upgrade.

Step 1-3 below will be executed on the Standby site where the upgrade is being attempted. We want to store the original PDB before the upgrade so that in case the upgrade fails, we have the PDB backup handy to restore the server to it's original release by doing IPM of the server and restoring the original PDB.

Step 4 onwards are executed on the Active PDBA site.

STEP #	2A	Estimated time: 5 minutes	
1.	☐	**MPS 1A:** Login to EPAP CLI as root.	Login: **root** Password: **<root_password>.**
2.	☐	**MPS 1A:** Take a backup of the PDB before upgrading the MEB.	Complete Steps 6 through 17. Rename the backup file name in next step: **# mv /var/TKLC/appl/free/pdbBackup_mps-a_20110602052959_v5.6.bkp.tar.gz /var/TKLC/appl/free/pdbBackup_mps-a_20110602052959_v5.6_before_meb_backup.bkp.tar.gz** Complete Step 18.
3.	☐	**MPS 1A:** Store the PDB backup in a safe, remote location. Note: This backup will be used only if there is an upgrade failure and there is a need to roll back to an older release.	**Note: Transfer the backups taken to a remote server:** **$ cd /var/TKLC/epap/free** **$ ls -l pdbBackup*.tar.gz** **$ scp -p** *pdbBackup_xxxxx.bkp.tar.gz* **epapdev@<1B IP>:/var/TKLC/epap/free/** epapdev@<1B IP>'s password:<**epapdev@1B_password>** Or **$ scp -p** *pdbBackup_xxxxx.bkp.tar.gz* **epapdev@<** E5APPB/Remote IP>**:/var/TKLC/epap/free/** epapdev@< E5APPB IP >'s password: **<epapdev_password>** Or **$ sftp <username>@<IP address of E5APPB/remote computer>** <username>@<IP address of remote computer>'s password: **<sftp _password>** sftp> **cd <target directory>** sftp> **put *pdbBackup*xxxxx-xxxxxxxxx.tar.gz*** Uploading *pdbBackup*xxxxx-xxxxxxxxx.tar.gz* to *pdbBackup*xxxxx-xxxxxxxxx.tar.gz* **sftp**> bye
4.	☐	**MPS 2A:** Execute **Appendix A 3.7A.1** **Note: If it is a DUAL PDBA setup and the Active PDBA site is already**	Copy iso from usb to /var/TKLC/upgrade directory.

		upgraded in last MTC Window (Hence MEB and MySQL are already upgraded), skip steps 4 - 7	
5.	☐	**MPS 2A:** Mount the EPAP 16.1 ISO to /mnt/upgrade directory	**# loopMount /var/TKLC/upgrade/EPAP-16.1.0.0.0_161.23.5-x86_64.iso /mnt/upgrade/** WARNING: Could not give mount point your ownership! WARNING: UID: 0 WARNING: GID: 0 10 6 4 3 2 1 0
6.	☐	**MPS 2A:** Change directory to /mnt/upgrade/upgrade/ and run ./upgrade_backup.sh	**# cd /mnt/upgrade/upgrade/** **# ./upgrade_backup.sh** Preparing... ## [100%] Repackaging... 1:meb ## [100%] Upgrading... 1:meb ## [100%] Updating ibbackup symbolic link. Replacing backupPdb.pl file.
7.	☐	**MPS 2A:** If the current EPAP release is 15.0 (Step 14 of Procedure 2) then perform this step, otherwise continue with step 6.	Note: Perform this step if current EPAP release is 15.0 Upgrade MySQL to 5.6 (only for EPAP 15.0) **# ./upgrade_mysql** ~~ /etc/init.d/Epap stop ~~ EPAP processes are already stopped. ~~ /etc/init.d/Epap stop ~~ EPAP processes are already stopped. Stopping mysql on mate [snipped] mysql 5.6 is upgraded successfully After successful upgrade Start MySQL services. **# service mysqlapp start** **# service mysqlpdb start**
8.	☐	**MPS 2A:** List the pdb Backup files contained in the /var/TKLC/epap/free directory	**# cd /var/TKLC/epap/free** **# ls -l pdbBackup***
9.	☐	**MPS 2A:** Ensure that there are no backup files present in the /var/TKLC/epap/free directory. **If any backups are present,**	If the output is similar to the following (i.e. backup files exist), then move or delete them. -rw-rw-rw- 1 epapdev epap 4440758738 Oct 19 12:08 pdbBackup_mps-0787-a_20101019110758.bkp.tar.gz -rw-rw-rw- 1 epapdev epap 5546258738 Aug 1 08:35 pdbBackup_mps-0787-a_20100801110758.bkp.tar.gz

		move or delete them to ensure there is enough room for the current back to complete.	
10.	☐	**MPS 2A:** Verify the permission of /var/TKLC/epap/db/pdb/stats directory.	`$ ls -lrthd /var/TKLC/epap/db/pdb/stats` `drwxrwx--- 2 mysql mysql 4.0K May 14 18:57 stats` **NOTE:** If permission is different execute the following command. `$ chmod 770 /var/TKLC/epap/db/pdb/stats`
11.	☐	**MPS 2A:** Log in as epapconfig.	`#  su - epapconfig`
12.	☐	**MPS 2A:** The EPAP Configuration Menu is displayed. Select option 6, Platform Menu.	

13.	☐	**MPS 2A:** The Platform Menu is displayed. Select option 5 for PDB Backup on Mixed EPAP and option 4 on Standalone PDB.	**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** **Standalone PDB:** /-----EPAP Platform Menu-\ /--------------------------\ | 1 | Initiate Upgrade | |----|--------------------| | 2 | Reboot MPS | |----|--------------------| | 3 | MySQL Backup | |----|--------------------| | 4 | PDB Backup | |----|--------------------| | e | Exit | \--------------------------/ Enter Choice: 4
14.	☐	**MPS 2A:** You are prompted to confirm. Type **Y**. You are prompted to confirm PDB backup. Type **Y**.	The PDBA software is not running. The backup can still be performed butthe filename will not contain the PDB level and the birthdate. Continue? [N]:" Y Are you sure you want to backup the PDB to "*PDB Backup Filename"*? [N]: Y Write down the location and name of the backup file.
15.	☐	**MPS 2A:** PDB Backup Started, Press return to continue	Successfully started backup of PDB. Status will be displayed on the GUI banner. Press return to continue...

16.	☐	**MPS 2A:** Select e to exit.	/-----EPAP Platform Menu-\ /-------------------------\ | 1 | Initiate Upgrade | |----|---------------------| | 2 | Reboot MPS | |----|---------------------| | 3 | MySQL Backup | |----|---------------------| | 4 | RTDB Backup | |----|---------------------| | 5 | PDB Backup | |----|---------------------| | e | Exit | \-------------------------/ Enter Choice: **e**
17.	☐	**MPS 2A:** The EPAP Configuration Menu is displayed. Select option e, Exit.	/-------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: e
18.	☐	**MPS 2A:** Backup Process may also be monitored from the command line	# **manageBannerInfo -l** ID: BACKUP_PDB MSG: Backup PDB in progress ClearTime:

19.	☐	**MPS 2A:** You may also verify that the PDB Backup completes successfully from the command line.	**# manageBannerInfo -l** ID: BACKUP_PDB_CPLT MSG: Backup PDB completed successfully ClearTime: OR There are currently no BannerInfo messages for this side in the database. Check the /usr/TKLC/epap/logs/cgi.dbg file for the status of the PDB backup, since a lack of banner messages does not always indicate successful backup.
20.	☐	**MPS 2A:** Record the MD5 Checksum Value from the backup file.	**# md5sum /var/TKLC/appl/free/pdbBackup_mps-a_20110602052959_v5.6.bkp.tar.gz** 2355d5c1da2b1b4de165f95b2af95713 /var/TKLC/appl/free/pdbBackup_mps-a_20110602052959_v5.6.bkp.tar.gz
21.	☐	**MPS 2A:** Stop the Pdba service.	**#service Pdba stop** ~~ /etc/init.d/Pdba stop ~~ PDBA application stopped.
22.	☐	**MPS 2A:** Change the pdba process name so that Pdba does not start accidentally.	**# cd /etc/init.d/** **# ls Pdba*** Pdba **# mv Pdba Pdba_stopped**
23.	☐	Note down the timestamp in log.	Run the following command **$ date**

This procedure is complete!

Procedure 11 BACKUP RTDB DATABASE

Note: When backing up the RTDB, the RTDB process must be taken down before the backup is performed.

When running this procedure for NON-PROV upgrade (Table 12), take RTDB backup from B server of the Standby PROV server, which is already upgraded to EPAP 16.1 and transfer to the NON-PROV-A server where upgrade is being attempted.

STEP #	1A	This procedure backs up the RTDB. Estimated time: 30-60 minutes	
1.	☐	**MPS 1A:** List the rtdb Backup files contained in the /var/TKLC/epap/free directory	**# cd /var/TKLC/epap/free** **# ls -l rtdbBackup***

2.	☐	**MPS 1A:** Ensure that there are no backup files present in the /var/TKLC/epap/free directory. **If any backups are present, move or delete them to ensure there is enough room for the current back to complete.**	If the output is similar to the following (i.e. backup files exist), then move or delete them. -rw-rw-rw- 1 epapdev epap 4440758738 Oct 19 12:08 rtdbBackup_mps-A_20160428153905_v3.72.bkp.tar.gz -rw-rw-rw- 1 epapdev epap 5546258738 Aug 1 08:35 rtdbBackup_mps-A_20140630162457_v3.72.bkp.tar.gz
3.	☐	**MPS 1A:** Log in as epapconfig.	**# su - epapconfig**
4.	☐	**MPS 1A:** The EPAP Configuration Menu is displayed. Select option6, Platform Menu.	/-------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

5.	☐	**MPS 1A:** Select option 4 to backup the RTDB	/-----EPAP Platform Menu-\ /--------------------------\ | 1 | Initiate Upgrade | |----|--------------------| | 2 | Reboot MPS | |----|--------------------| | 3 | MySQL Backup | |----|--------------------| | 4 | RTDB Backup | |----|--------------------| | 5 | PDB Backup | |----|--------------------| | e | Exit | \--------------------------/ Enter Choice: 4
6.	☐	**MPS 1A:** Confirm RTDB backup.	Are you sure you want to back up the RTDB database on MPS B to " /var/TKLC/appl/free/rtdbBackup_<hostname>_<timestamp>.tar.gz "? [N]: Y Successfully started backup of RTDB. Status will be displayed on the GUI banner. Press return to continue... Write down the name of the backup file.
7.	☐	**MPS 1A:** The Platform Menu is displayed. Select option e, exit.	/-----EPAP Platform Menu-\ /--------------------------\ | 1 | Initiate Upgrade | |----|--------------------| | 2 | Reboot MPS | |----|--------------------| | 3 | MySQL Backup | |----|--------------------| | 4 | RTDB Backup | |----|--------------------| | 5 | PDB Backup | |----|--------------------| | e | Exit | \--------------------------/ Enter Choice: e

8.	☐	**MPS 1A:** The EPAP Configuration Menu is displayed. Select option e, Exit.	/-------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: e
9.	☐	**MPS 1A:** Backup Process may also be monitored from the command line	**# manageBannerInfo -l** ID: BACKUP_RTDB MSG: Backup RTDB in progress ClearTime:
10.	☐	**MPS 1A:** You may also verify that the RTDB Backup completes successfully from the command line.	# **manageBannerInfo -l** ID: BACKUP_RTDB_CPLT MSG: Backup RTDB completed successfully ClearTime: OR There are currently no BannerInfo messages for this side in the database. Check the /usr/TKLC/epap/logs/cgi.dbg file for the status of the RTDB backup, since a lack of banner messages does not always indicate successful backup.
11.	☐	**MPS 1A:** Record the MD5 Checksum Value from the backup file.	**# md5sum /var/TKLC/appl/free/rtdbBackup_xxxxx-b_xxxxxxxx.tar.gz** 2355d5c1da2b1b4de165f95b2af95713 /var/TKLC/appl/free/rtdbBackup_xxxxx-b_xxxxxxxx.tar.gz
12.	☐	Note down the timestamp in log.	Run the following command **$ date**

This procedure is complete!

Procedure 12 STOP MYSQL SERVICE

This procedure is used to stop the replication of EuiDB from EPAP 15.0/16.0 to EPAP 16.1

S T E P #	1A	This procedure stops mysqlapp service on Provisionable sites. Estimated time: 5 minutes.	
1.	☐	**MPS 1A:** Login to Epap CLI.	`login: root` `Password: <root_password>`
2.	☐	**MPS 1A:** Stop mysqlapp process.	`# service mysqlapp stop` Output might contain the following errors: ssh: connect to host mate port 22: No route to host Died at /opt/TKLCappl/bin/repltest_switch.pl line 59. Waiting for mysqlapp to stop done Note: Ignore the errors pegged in the output. These errors occur as EPAP B is IPM'ed.
3.	☐	Note down the timestamp in log.	Run the following command `$ date`

This procedure is complete!

Procedure 13 TRANSFER DATABASES TO MATE AND REMOTE

Note: If the backups are transferred to a remote server then it is recommended that the remote server has at least **100Mbps network bandwidth and 100G diskspace.**
PDB backup shall be transferred from Active PDBA (2A).

S T E P #	1A	2A	This procedure transfers the database backup from the 1A server to the upgraded 1B server and remote server. Estimated time: 30-60 minutes	
1.	☐	☐	**MPS 1A:** Login as epapdev.	`login: epapdev` `Password: <epapdev_password>`
2.	☐	☐	**MPS 1A:** Verify Connectivity between the E5APPB and the remote server. If the E5APPB/remote server cannot be pinged, verify the network connectivity.	`$ ping <E5APPB/remote IP> -c 3` `PING 192.168.3.2 (192.168.3.2) 56(84) bytes of data.` `64 bytes from mate (192.168.3.2): icmp_seq=0 ttl=64 time=0.118 ms` `64 bytes from mate (192.168.3.2): icmp_seq=1 ttl=64 time=0.102 ms` `64 bytes from mate (192.168.3.2): icmp_seq=2 ttl=64 time=0.120 ms` `--- mate ping statistics ---` `3 packets transmitted, 3 received, 0% packet loss, time 2001ms` `rtt min/avg/max/mdev = 0.102/0.113/0.120/0.011 ms, pipe 2`

3.	☐	☐	**MPS 1A:** Change directory to the /var/TKLC/epap/free directory	**$ cd /var/TKLC/epap/free**
4.	☐		**MPS 1A:** List the files in this directory. There should be 2 backup files for EuiDB and RTDB on Mixed EPAP where as only 1 backup file for EuiDB on Standalone PDB.	Note: Standalone PDB donot have rtdbBackups. **$ ls -l** **npdbBackup_xxxxx-a_xxxxxxxx.sql.gz** **rtdbBackup_xxxxx-b_xxxxxxxx.tar.gz**
5.	☐		**MPS 1A:** Copy MySQL Database Backup File to E5APPB B and a Remote Server.	Note: Transfer the backups taken on Standalone PDB, on the remote server only. **$ scp -p** *npdbBackup_xxxxx-a_xxxxxxxx.sql.gz* **epapdev@mate:/var/TKLC/epap/free/** epapdev@mate's password: **<epapdev@mate_password>** NOTE: You may have to delete the known_host file entry corresponding to mate server. **Or** **$ scp -p** *npdbBackup_xxxxx-a_xxxxxxxx.sql.gz* **epapdev@**< E5APPB /Remote IP>**:/var/TKLC/epap/free/** epapdev@< E5APPB IP >'s password: **<epapdev _password>** **Or** **$ sftp <username>@<IP address of E5APPB /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. <username>@<IP address of remote computer>'s password: **<sftp _password>** sftp> cd <target directory> sftp> put ***npdbBackup_xxxxx-a_xxxxxxxx.sql.gz*** Uploading *npdbBackup_xxxxx-a_xxxxxxxx.sql.gz* to *npdbBackup_xxxxx-a_xxxxxxxx.sql.gz* sftp> bye
6.	☐		**MPS 1A:** Copy RTDB Database Backup File to 1B and to a remote server	Note: Skip this step on Standalone PDB. **$ scp -p** *rtdbBackup_xxxxxxxx.tar.gz* **epapdev@**mate**:/var/TKLC/epap/free/** epapdev@mate's password: **<epapdev@mate_password>** Or **$ scp -p** *rtdbBackup_xxxxxxxx.tar.gz* **epapdev@**< E5APPB/Remote IP>**:/var/TKLC/epap/free/** epapdev@< E5APPB IP >'s password: **<epapdev_password>** Or

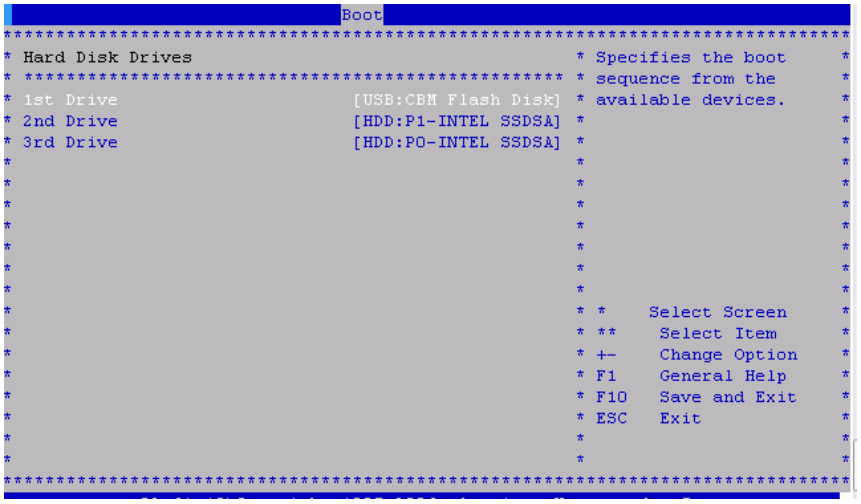
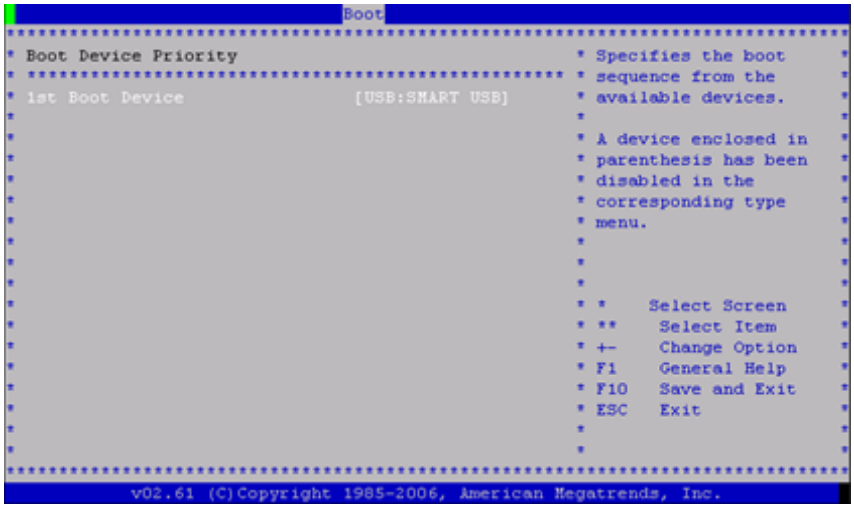
				$ sftp <username>@<IP address of E5APPB/remote computer> <username>@<IP address of remote computer>'s password: **<sftp_password>** sftp> **cd <target directory>** sftp> **put rtdbBackup_xxxxx-b_xxxxxxxx.tar.gz** Uploading rtdbBackup_xxxxx-b_xxxxxxxx.tar.gz to rtdbBackup_xxxxx-b_xxxxxxxx.tar.gz sftp> **bye**
7.		☐	**MPS 2A:** Execute step 1 to 3 on MPS 2A.	Login to 2A server.
8.		☐	**MPS 2A:** List the files in this directory. You should see the 1 backup files for PDB.	**$ ls -l pdbBackup*.tar.gz**
9.		☐	**MPS 2A:** Copy PDB Database Backup File to 1B and to a remote server Note: Ignore if a Non-Prov site upgrade.	Note: Transfer the backups taken on Standalone PDB, on the remote server only. **$ scp -p** *pdbBackup_xxxxx.bkp.tar.gz* **epapdev@<1B IP>:/var/TKLC/epap/free/** epapdev@<1B IP>'s password:<**epapdev@1B_password>** Or **$ scp -p** *pdbBackup_xxxxx.bkp.tar.gz* **epapdev@<** E5APPB/Remote IP>**:/var/TKLC/epap/free/** epapdev@< E5APPB IP >'s password: **<epapdev_password>** Or **$ sftp <username>@<IP address of E5APPB/remote computer>** <username>@<IP address of remote computer>'s password: **<sftp _password>** sftp> **cd <target directory>** sftp> **put *pdbBackup*xxxxx-xxxxxxxxx.tar.gz*** Uploading *pdbBackup*xxxxx-xxxxxxxxx.tar.gz* to *pdbBackup*xxxxx-xxxxxxxxx.tar.gz* sftp> **bye**
10.	☐	☐	**E5APPB/Remote Server:** Compare the MD5 Checksum Value to the value captured in Procedure 9, Procedure 10 andProcedure 11. If the values are not the same, transfer the file again.	**$ md5sum pdbBackup*.tar.gz** 2355d5c1da2b1b4de165f95b2af95713 pdbBackup*.tar.gz **$ md5sum rtdbBackup_xxxxx-b_xxxxxxxx.tar.gz** 2355d5c1da2b1b4de165f95b2af95713 rtdbBackup_xxxxx-b_xxxxxxxx.tar.gz **$ md5sum npdbBackup_<hostname>_<timestamp>.sql.gz** 7494d28c6f4633ade0bd3bda1ed525e4 npdbBackup_<hostname>_<timestamp>.sql.gz
11.	☐	☐	Note down the timestamp in log.	Run the following command **$ date**

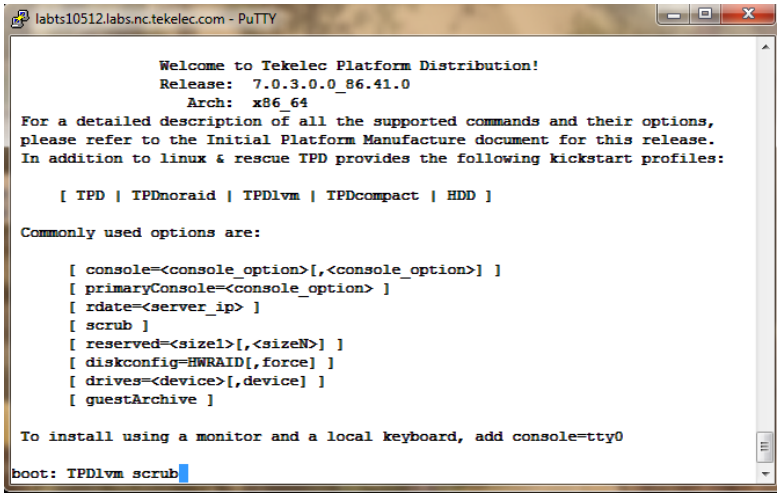
This procedure is complete!

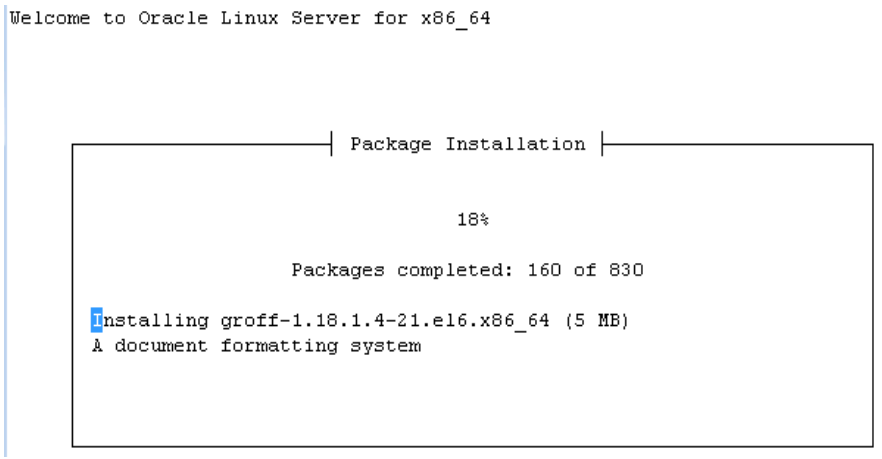
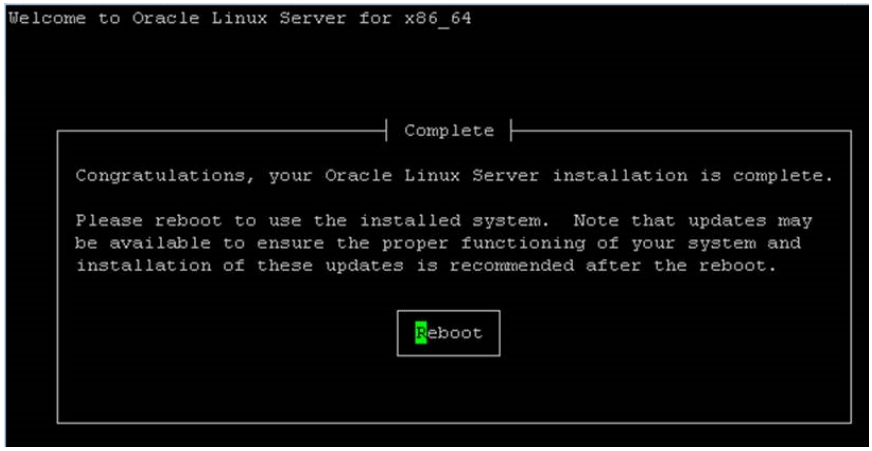
3.4 IPM and EPAP 16.1 Installation

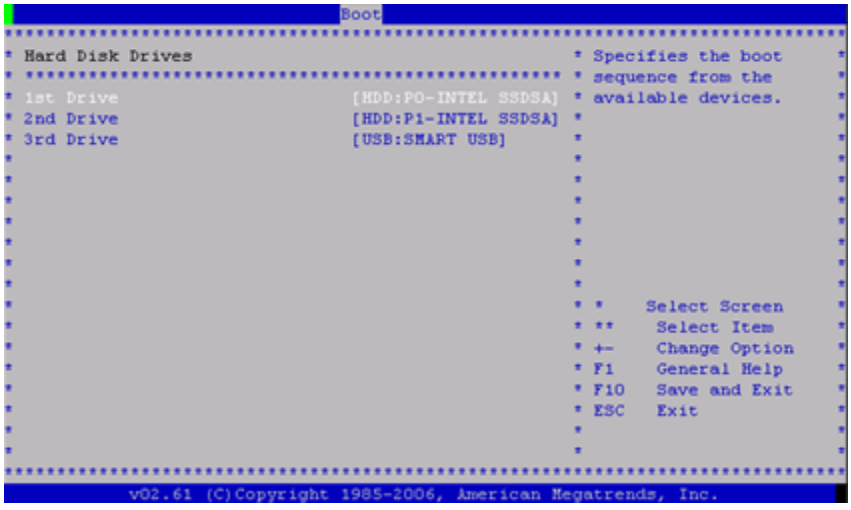
Procedure 14 IPM MPS SERVER WITH TPD 7.0.X

STEP #	1A	1B	This procedure will remove the EPAP application and all the data from the server. Estimated time: 45 minutes	
1.	☐	☐	**MPS X:** Insert TPD 7.0.x USB media into the USB port (E5-APP-B)	Reboot server `# reboot`
2.	☐	☐	**MPS X:** Press 'del' key to enter the BIOS. Enter current **UTC** Time and Date.	 **NOTE:** Make sure to input **UTC** time (same as GMT time) in this step. Never ever input local time of the EPAP server. **If you input local time at this step, application installation will fail later with no recovery path**, ruining your entire Maintenance window.
3.	☐	☐	**MPS X:** Select Boot → Hard Disk Drives option using arrow key.	

4.	☐	☐	**MPS X:** Press '+' key to select USB drive as 1st Drive.	
5.	☐	☐	**MPS X:** Press 'Esc' key and select Boot Device Priority	
6.	☐	☐	**MPS X:** Verify that the 1st Boot Device is set to USB.	

7.	☐	☐	**MPS X:** Press 'Esc' key and select *Exit → Save Changes and Exit* option	
8.	☐	☐	**MPS X:** Select [OK] to save the configuration changes. The server will reboot and TPD boot prompt will appear.	
9.	☐	☐	**MPS X:** Start the IPM process by entering the TPDlvm command at the boot prompt.	

10.	☐	☐	**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.	mounting /dev/pts (unix98 pty) filesystem... done mounting /sys filesystem... done anaconda installer init version 13.21.239 using a serial console trying to remount root filesystem read write... done mounting /tmp as tmpfs... done running install... running /sbin/loader detecting hardware... waiting for hardware to initialize...
11.	☐	☐	**MPS X:** Once the drive formatting and file system creation steps are complete, the screen at right will appear indicating that the package installation has begin.	
12.	☐	☐	**MPS X:** Once all the packages have been successfully installed, the screen at right will appear letting you know the installation process is complete. **Remove USB media before Reboot.** **On E5-APP-B server press <ENTER> to reboot the system and continue with the next step.**	
13.	☐	☐	**MPS X:** Press ‘del’ key to enter the BIOS	

				
14.	☐	☐	**MPS X:** Select *Boot* → *Hard Disk Drives* option	
15.	☐	☐	**MPS X:** Press 'Enter' key and select HDD:P0 as the 1st Drive	
16.	☐	☐	**MPS X:** Press 'Esc' key and select	

			Boot Device Priority	
17.	☐	☐	**MPS X:** Verify that the 1st Boot Device is set to HDD:P0.	
18.	☐	☐	**MPS X:** Press 'Esc' key and select *Exit → Save Changes and Exit* option	

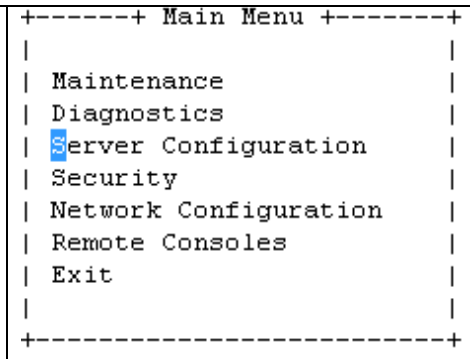
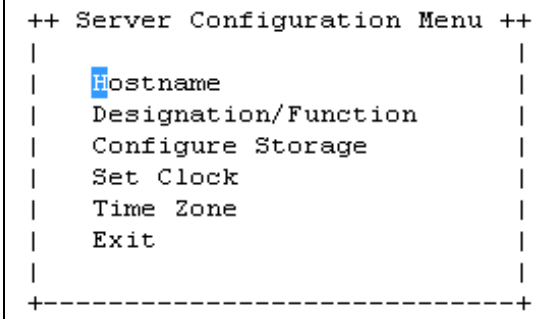
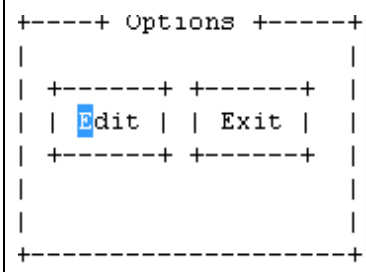
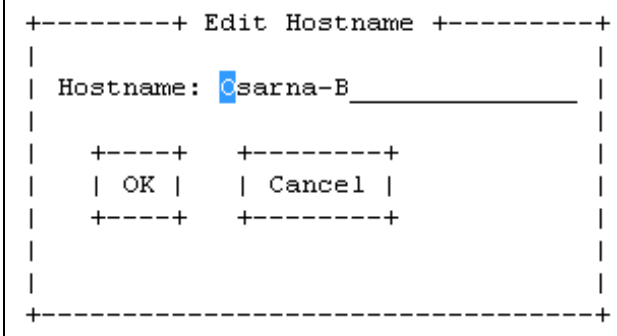
19.	☐	☐	**MPS X:** Select [OK] to save the configuration changes. The server will reboot.	 **When the message "Upstart Job ntdMgr: started", is displayed, press the Enter Key to get the Login prompt.**
20.	☐	☐	**MPS X:** Log in to the server as the user "admusr"	`console login: admusr` `password: <admusr_password>`
21.	☐	☐	**MPS X:** Check the UTC time by running the "date –u" command.	`$ date -u` If the output does not match the time set in step 14, contact **My Oracle Support**.
22.	☐	☐	**MPS X:** Verify that the platform revision is same as the ISO used.	`$ getPlatRev` `7.0.x.0.0-y.z.0`
23.	☐	☐	Note down the timestamp in log.	Run the following command `$ date`

This procedure is complete!

Procedure 15 PRE INSTALL CONFIGURATION

Note: These steps can be performed together on the MPS-A and MPS-B servers.

STEP #	1A	1B	This procedure will perform the initial configuration required for EPAP installation. Estimated time: 5 minutes	
1.	☐	☐	**MPS X:** log in to the server as the user "admusr"	`console login: admusr` `password: <admusr_password>`
2.	☐	☐	**MPS X:** Switch user to platcfg. Select "Server Configuration" Menu	`$ sudo su - platcfg`

				
3.	☐	☐	**MPS X:** Select “Hostname” Menu	
4.	☐	☐	**MPS X:** 1) Select “Edit” from the options dialogue box. 2) Set the hostname	  While connected to the serial console, some console output might come when the user is using the serial console to configure the EPAP. Those serial output are harmless and can be ignored.

5.	☐	☐	**MPS X:** Verify that the Hostname is correct then select and press "Exit". Otherwise repeat the step above.	Hostname: Osarna-B Hostname Configuration Current Hostname: Osarna-B +----+ Options +-----+ | | | +------+ +------+ | | | Edit | | Exit | | | +------+ +------+ | | | | | +--------------------+
6.	☐	☐	**MPS X:** Select "Designation/ Function" Menu	++ Server Configuration Menu ++ | | | Hostname | | Designation/Function | | Configure Storage | | Set Clock | | Time Zone | | Exit | | | +----------------------------+
7.	☐	☐	**MPS X:** 1) Select "Edit" from the options dialogue box. 2) Set the Designation as "1A" on Server A and as "1B" on Server B, Function as "**EPAP**" for PROV/Non-PROV or "**PDBonly**" for Standalone PDB and press "OK".	+----+ Options +-----+ | | | +------+ +------+ | | | Edit | | Exit | | | +------+ +------+ | | | | | +--------------------+ Mixed EPAP: +-------+ Edit Designation +--------+ | | | Designation: 1A_____ | | Function: EPAP_____ | | | | +----+ +--------+ | | | OK | | Cancel | | | +----+ +--------+ | | | | | +-----------------------------------+ Standalone PDB:

				+-------+ Edit Designation +--------+ | | | Designation: 1A_____ | | Function: PDBonly_____ | | | | +----+ +--------+ | | | OK | | Cancel | | | +----+ +--------+ | | | | | +-----------------------------------+
8.	☐	☐	**MPS X:** Verify that the Designation and Hostname information is correct then select and press “Exit”. Otherwise repeat the step above.	Mixed EPAP: Designation Information Designation: 1A Function: EPAP Standalone PDB: Designation Information Designation: 1A Function: PDBonly +----+ Options +-----+ | | | +------+ +------+ | | | Edit | | Exit | | | +------+ +------+ | | | | | +--------------------+
9.	☐	☐	**MPS X:** Exit the platcfg menu **NOTE:** **DO NOT** set the time zone in platcfg. The time zone will be set later in epapconfig.	++ Server Configuration Menu ++ | | | Hostname | | Designation/Function | | Configure Storage | | Set Clock | | Time Zone | | Exit | | | +-----------------------------+

				+------+ Main Menu +-------+ | | | Maintenance | | Diagnostics | | Server Configuration | | Security | | Network Configuration | | Remote Consoles | | Exit | | | +-------------------------+
10.	☐	☐	Note down the timestamp in log.	Run the following command **$ date**

This procedure is complete!

Procedure 16 EPAP INSTALLATION

STEP #	1A	1B	This procedure will install the EPAP application on the server Estimated time: 20 minutes	
1.	☐	☐	**MPS X:** log in to the server as the user "admusr"	console login: **admusr** password: **<admusr_password>**
2.	☐	☐	**MPS X:** Perform A.1 Or copy an EPAP 16.1 ISO image to /var/TKLC/upgrade directory.	
3.	☐	☐	**MPS X:** Start platcfg utility	**$ sudo su - platcfg**
4.	☐	☐	**MPS X:** Early upgrade checks	+------+ Main Menu +-------+ | | | Maintenance | | Diagnostics | | Server Configuration | | Security | | Network Configuration | | Remote Consoles | | Exit | | | +-------------------------+

```
+----+ Maintenance Menu +-----+
|                              |
| Upgrade                      |
| Backup and Restore           |
| Halt Server                  |
| View Mail Queues             |
| Restart Server               |
| Eject CDROM                  |
| Save Platform Debug Logs     |
| Exit                         |
|                              |
+------------------------------+
```

Select the "Early Upgrade Checks" menu to verify that the system is ready for upgrade.

```
+-------+ Upgrade Menu +--------+
|                               |
| Validate Media                |
| Early Upgrade Checks          |
| Initiate Upgrade              |
| Copy USB Upgrade Image        |
| Non Tekelec RPM Management    |
| Exit                          |
|                               |
+-------------------------------+
```

```
----------------------+ Choose Upgrade Media Menu +----------------------------

/sdc1/TPD.install-7.0.3.0.0_86.45.0-OracleLinux6.7-x86_64.iso - 7.0.3.0.0_86.45.
6.1.0.0.0_161.26.0-x86_64.iso      - 16.1.0.0.0_161.26.0


-------------------------------------------------------------------------------
```

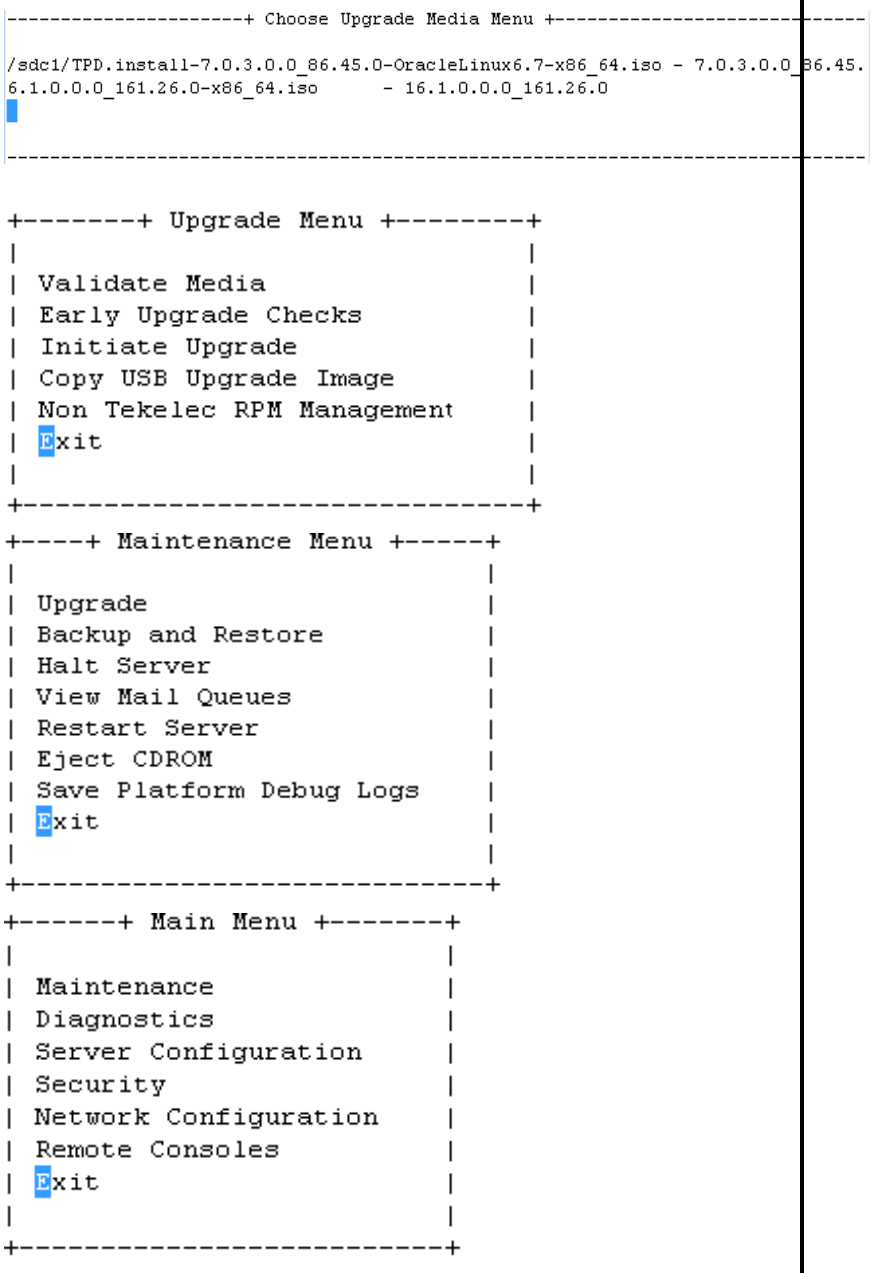
If the Early Upgrade Checks fail due to the ongoing syncing of raid mirrors, then proceed to the next step to ignore the disk mirroring before the EPAP installation.

```
Early Checks failed for the next upgrade
Look at earlyChecks.log for more info
tarting Early Upgrade Checks at 1011413059
Running earlyUpgradeChecks() for Upgrade::EarlyPolicy::TPDEarlyChecks upgrade policy...
Verified server is not pending accept of previous upgrade
ERROR: Raid mirrors are syncing!
ERROR: md2 is syncing!
ERROR: earlyUpgradeChecks() code failed for Upgrade::EarlyPolicy::TPDEarlyChecks
ERROR: Failed running earlyUpgradeChecks() code
Hardware architectures match
Install products match.
No Application installed yet.. Skip alarm check!
ERROR: Early Upgrade Checks Failed!
User has requested just to run early checks.
No upgrade will be performed...
Early Upgrade Checks finished at 1011413059


[admusr@epappri ~]$ cat /proc/mdstat
Personalities : [raid1]
md1 : active raid1 sdb2[1] sda2[0]
      262080 blocks super 1.0 [2/2] [UU]

md2 : active raid1 sda1[0] sdb1[1]
      468447232 blocks super 1.1 [2/2] [UU]
      [=====>.............]  resync = 29.7% (139377920/468447232) finish=73.0min speed=75060K/sec
      bitmap: 4/4 pages [16KB], 65536KB chunk

unused devices: <none>
```

				Contact My Oracle Support following the instructions on or the instructions on the Appendix B, if the early upgrade checks fail due to any other reason.
5.	☐	☐	**MPS X:** Exit the platcfg menu	
6.	☐	☐	**MPS X:** Change to root user	`$ su - root` `Password: <root_password>`
7.	☐	☐	**MPS X:** Ignore disk mirroring before EPAP installation	`# echo "IGNORE_EARLY_CHECKS=1" > /var/TKLC/log/upgrade/tmp_upgrade.conf`

				Verify: `# cat /var/TKLC/log/upgrade/tmp_upgrade.conf` `IGNORE_EARLY_CHECKS=1`
8.	☐	☐	**MPS X:** Validate the upgrade media Use the "Arrow" and the [**ENTER**] keys to navigate the Menu options as shown to choose the upgrade media.	Start platcfg utility. `# su - platcfg` `+------+ Main Menu +-------+` `| |` `| Maintenance |` `| Diagnostics |` `| Server Configuration |` `| Security |` `| Network Configuration |` `| Remote Consoles |` `| Exit |` `| |` `+--------------------------+` `+----+ Maintenance Menu +-----+` `| |` `| Upgrade |` `| Backup and Restore |` `| Halt Server |` `| View Mail Queues |` `| Restart Server |` `| Eject CDROM |` `| Save Platform Debug Logs |` `| Exit |` `| |` `+-----------------------------+` `+-------+ Upgrade Menu +--------+` `| |` `| Validate Media |` `| Early Upgrade Checks |` `| Initiate Upgrade |` `| Copy USB Upgrade Image |` `| Non Tekelec RPM Management |` `| Exit |` `| |` `+---------------------------------+` `----------------------+ Choose Upgrade Media Menu +----------------------------` `/sdc1/TPD.install-7.0.3.0.0_86.45.0-OracleLinux6.7-x86_64.iso - 7.0.3.0.0_86.45.6.1.0.0.0_161.26.0-x86_64.iso - 16.1.0.0.0_161.26.0` `--------------------------------------------------------------------------------` The results of the validation will be displayed, similar to the example below. Press the "enter" key to continue.

| | | | **Press any key to return to the menu and then press Exit all way back to the Maintenance Menu** | ```
############################################################
############################################################
############################################################
############################################################
############################################################
############################################################
######################
UMVT Validate Utility v2.3.4, (c)Tekelec, May 2014
Validating /var/TKLC/upgrade/EPAP-16.1.0.0.0_161.26.0-x86_64.iso
Date&Time: 2016-06-01 03:51:53
Volume ID: 16.1.0.0.0_161.26.0
Part Number: N/A
Version: 16.1.0.0.0_161.26.0
Disc Label: EPAP
Disc description: EPAP
The media validation is complete, the result is: PASS

CDROM is Valid


PRESS ANY KEY TO RETURN TO THE PLATCFG MENU.
``` |
| 9. | ☐ | ☐ | **MPS X:** Initiate Upgrade<br>Use the "Arrow" and the [**ENTER**] keys to navigate the Menu options as shown to choose the upgrade media. | ```
+--------+ Upgrade Menu +---------+
|                                  |
| Validate Media                   |
| Early Upgrade Checks             |
| Initiate Upgrade                 |
| Copy USB Upgrade Image           |
| Non Tekelec RPM Management       |
| Accept Upgrade                   |
| Reject Upgrade                   |
| Exit                             |
|                                  |
+----------------------------------+
```<br>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.<br>Select the desired upgrade media and press [ENTER].<br>```
----------------------+ Choose Upgrade Media Menu +----------------------------

/sdc1/TPD.install-7.0.3.0.0_86.45.0-OracleLinux6.7-x86_64.iso - 7.0.3.0.0_86.45.
6.1.0.0.0_161.26.0-x86_64.iso      - 16.1.0.0.0_161.26.0


-------------------------------------------------------------------------------
``` |
| 10. | ☐ | ☐ | **MPS X:**<br>Upgrade proceeds | The screen displays the output like following, indicating that the upgrade software is first running the upgrade checks, and then proceeding with the upgrade.<br>```
No Application installed yet.. Skip alarm check!
Verified all raid mirrors are synced.
Early Upgrade Checks Have Passed!
Early Upgrade Checks finished at 1447429031
Initializing upgrade information...
```<br>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.
11.	☐	☐	**MPS X:** Upgrade completed.	After the final reboot, the screen displays the login prompt as in the example below. `Starting TKLCe5appb: [ OK ]` `Checking network config files: [ OK ]` `~~ /etc/rc4.d/S99Epap start ~~` `EPAP configuration data not found. Exiting...` `~~ /etc/rc4.d/S99Pdba start ~~` `EPAP configuration data not found. Exiting...` `Starting smartd: [ OK ]` `Daemon is not running...` `AlarmMgr daemon is not running, delaying by 1 minute` `TKLChwmgmtcli stop/pre-start, process 5208` `TPDhpDiskStatus stop/pre-start, process 5228` `Oracle Linux Server release 6.7` `Kernel 2.6.32-573.3.1.el6prerel7.0.3.0.0_86.37.0.x86_64 on an x86_64` `devloan03-A login:`
12.	☐	☐	**MPS X:** Login as epapdev user.	`login: epapdev` `Password : <epapdev_password>`
13.	☐	☐	**MPS X:** Verify that installation is complete and no error occurred during installation.	`$ grep "Upgrade returned success" /var/TKLC/log/upgrade/upgrade.log` `1248284646:: Upgrade returned success!` `$ grep -i error /var/TKLC/log/upgrade/upgrade.log` Check the output of the upgrade log, Contact the Technical Assistance Center if the output contains any errors beside the following: `1462192490::ERROR: Raid mirrors are syncing!` `1462192490::ERROR: md2 is syncing!` `1462192490::ERROR: earlyUpgradeChecks() code failed for Upgrade::EarlyPolicy::TPDEarlyChecks` `1462192490::ERROR: Failed running earlyUpgradeChecks() code` `1462192490::Ignoring errors as requested by IGNORE_EARLY_CHECKS...` `1416257705::perl-Class-ErrorHandler ##################################################` `1416259622::Checking perl-Class-ErrorHandler-0.01-15.0.0_150.3.0.noarch.rpm: PASSED` 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, for example in "1252687151::myisamchk: error: File '" case, "1252687169::myisa" might show up on one line while the rest "mchk: error: File '/" might show up on the next line. This is acceptable and should be ignored. `$ sudo grep -i error /var/TKLC/log/upgrade/ugwrap.log` There should be no error output.

$ **sudo grep -i warning /var/TKLC/log/upgrade/upgrade.log**

```
1491977598::WARNING: Source file does not exist!
Assume deleted.

1491977601::WARNING: SOURCE: /etc/sysconfig/network-
scripts/ifcfg-eth0

1491977742::WARNING: Will start the interface down
since the base interface has ONBOOT = NO

1491977742::WARNING: Will start the interface down
since the base interface has ONBOOT = NO

1491977758::*       write: WARNING:: Could not find
configured path "/var/TKLC/epap/rt".

1491977758::*       write: WARNING:: Could not find
configured path "/var/TKLC/epap/db".

1491977758::*       write: WARNING:: Could not find
configured path "/var/TKLC/epap/logs".

1491977758::*       write: WARNING:: Could not find
configured path "/var/TKLC/epap/free".

1491977758::*       write: WARNING:: Could not find
configured path "/var/TKLC/epap/rt".

1491977758::*       write: WARNING:: Could not find
configured path "/var/TKLC/epap/db".

1491977758::*       write: WARNING:: Could not find
configured path "/var/TKLC/epap/logs".

1491977758::*       write: WARNING:: Could not find
configured path "/var/TKLC/epap/free".

1491977770::warning: user mysql does not exist - using
root

1491977770::warning: group mysql does not exist -
using root

1491977770::2017-04-12 02:16:09 0 [Warning] TIMESTAMP
with implicit DEFAULT value is deprecated. Please use
--explicit_defaults_for_timestamp server option (see
documentation for more details).

1491977771::2017-04-12 02:16:10 27323 [Warning]
InnoDB: New log files created, LSN=45781

1491977771::2017-04-12 02:16:10 27323 [Warning]
InnoDB: Creating foreign key constraint system tables.

1491977772::2017-04-12 02:16:11 0 [Warning] TIMESTAMP
with implicit DEFAULT value is deprecated. Please use
--explicit_defaults_for_timestamp server option (see
documentation for more details).

1491977774::WARNING: Default config file /etc/my.cnf
exists on the system

1491977778::useradd: warning: the home directory
already exists.

1491977787::WARNING: Could not write to config file
/usr/my-new.cnf: Permission denied

1491977790::WARNING: The host 'EPAP-18' could not be
looked up with /usr/bin/resolveip.

1491977790::2017-04-12 02:16:29 28066 [Warning]
Buffered warning: Changed limits: max_open_files: 1024
(requested 5310)

1491977790::2017-04-12 02:16:29 28066 [Warning]
Buffered warning: Changed limits: max_connections: 214
```

				(requested 300) 1491977790::2017-04-12 02:16:29 28066 [Warning] Buffered warning: Changed limits: table_open_cache: 400 (requested 2500) 1491977808::2017-04-12 02:16:47 28066 [Warning] InnoDB: New log files created, LSN=45782 1491977809::2017-04-12 02:16:48 28066 [Warning] InnoDB: Creating foreign key constraint system tables. 1491977811::2017-04-12 02:16:50 28190 [Warning] Buffered warning: Changed limits: max_open_files: 1024 (requested 5310) 1491977811::2017-04-12 02:16:50 28190 [Warning] Buffered warning: Changed limits: max_connections: 214 (requested 300) 1491977811::2017-04-12 02:16:50 28190 [Warning] Buffered warning: Changed limits: table_open_cache: 400 (requested 2500) 1491977812::WARNING: Could not copy config file template /usr/share/mysql/my-default.cnf to 1491977812::WARNING: Default config file /etc/my.cnf exists on the system 1491977814::WARNING: Could not write to config file /usr/my-new.cnf: Permission denied 1491977817::WARNING: The host 'EPAP-18' could not be looked up with /usr/bin/resolveip. 1491977817::Installing MySQL system tables...2017-04-12 02:16:56 0 [Warning] TIMESTAMP with implicit DEFAULT value is deprecated. Please use --explicit_defaults_for_timestamp server option (see documentation for more details). 1491977817::2017-04-12 02:16:56 29021 [Warning] Buffered warning: Changed limits: max_open_files: 1024 (requested 5000) 1491977817::2017-04-12 02:16:56 29021 [Warning] Buffered warning: Changed limits: table_open_cache: 431 (requested 2000) 1491977818::2017-04-12 02:16:57 29021 [Warning] InnoDB: New log files created, LSN=45781 1491977818::2017-04-12 02:16:57 29021 [Warning] InnoDB: Creating foreign key constraint system tables. 1491977820::Filling help tables...2017-04-12 02:16:59 0 [Warning] TIMESTAMP with implicit DEFAULT value is deprecated. Please use --explicit_defaults_for_timestamp server option (see documentation for more details). 1491977820::2017-04-12 02:16:59 29055 [Warning] Buffered warning: Changed limits: max_open_files: 1024 (requested 5000) 1491977820::2017-04-12 02:16:59 29055 [Warning] Buffered warning: Changed limits: table_open_cache: 431 (requested 2000) 1491977822::WARNING: Could not copy config file template /usr/share/mysql/my-default.cnf to 1491977822::WARNING: Default config file /etc/my.cnf exists on the system 1491977847::WARNING: A new file was added to xml alarm files...reparsing xml... 1491977848::WARNING: FILE:

				/usr/TKLC/plat/etc/alarms/alarms_mps.xml 1491977855::TKLCepap-HA **$ sudo grep -i warning /var/TKLC/log/upgrade/ugwrap.log** There should be no warning output.
14.	☐	☐	**MPS X:** Verify EPAP release.	$ **rpm -qi TKLCepap** Name : TKLCepap Relocations: (not relocatable) Version : 161.0.26 Vendor: Tekelec Release : 16.1.0.0.0_161.26.0 Build Date: Fri 20 May 2016 09:44:19 AM EDT Install Date: Wed 01 Jun 2016 03:55:57 AM EDT Build Host: diablo-8.tekelec.com Group : Development/Build Source RPM: TKLCepap-161.0.26-16.1.0.0.0_161.26.0.src.rpm Size : 149986414 License: © TEKELEC 2005-2016 Signature : (none) Packager : <@tekelec.com> URL : http://www.tekelec.com/ Summary : Oracle Communications EPAP Package Description : This is the Oracle Communications EAGLE Application Processor(EPAP) Package. The Package installs EPAP software. EPAP provides Provisioning Database Applicat ion (PDBA on A side) and Real Time Database (RTDB).
15.	☐	☐	Note down the timestamp in log.	Run the following command **$ date**

This procedure is complete!

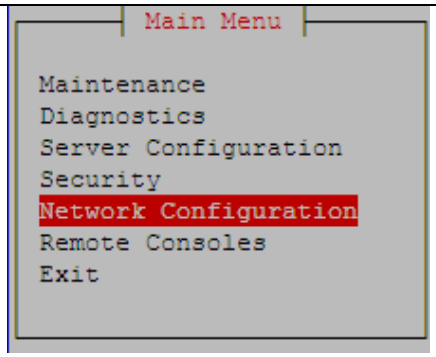
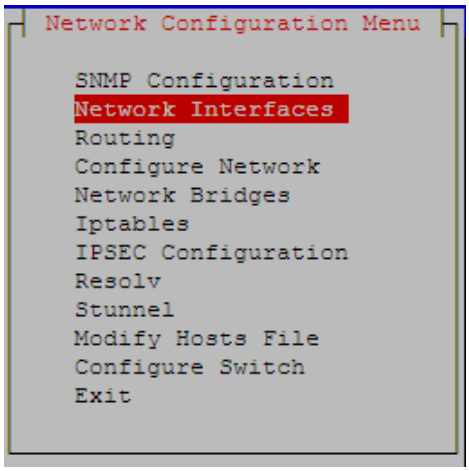
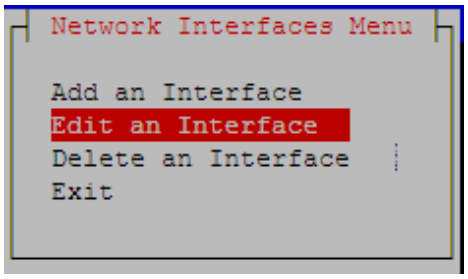
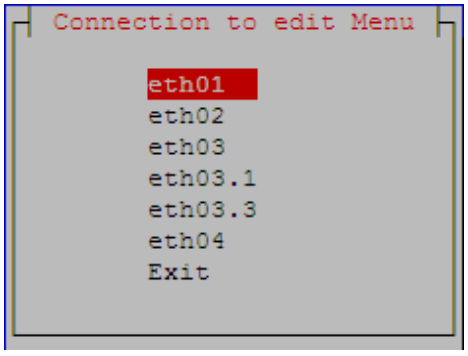
3.5 Initial Configuration on EPAP

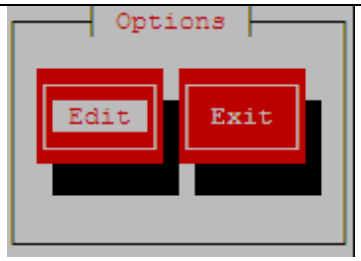
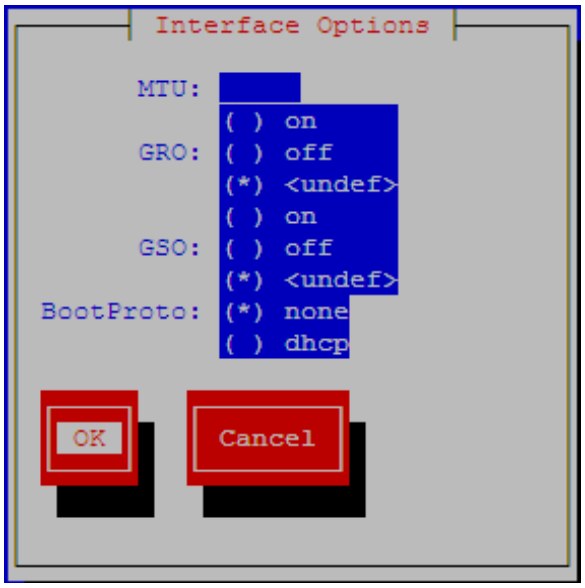
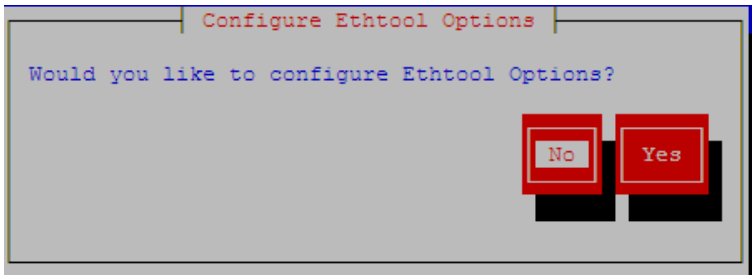
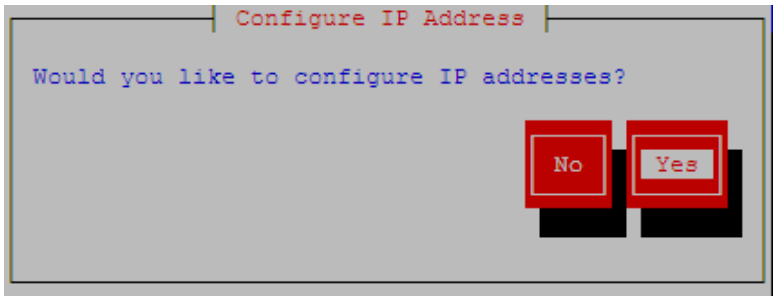
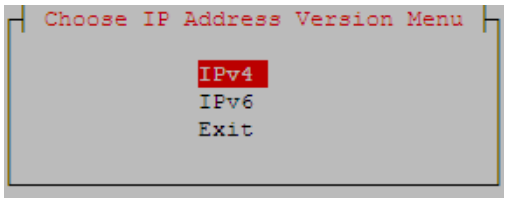
This procedure sets the EPAP initial configuration parameters and prepares the upgraded MPS-A and MPS-B servers for network access.

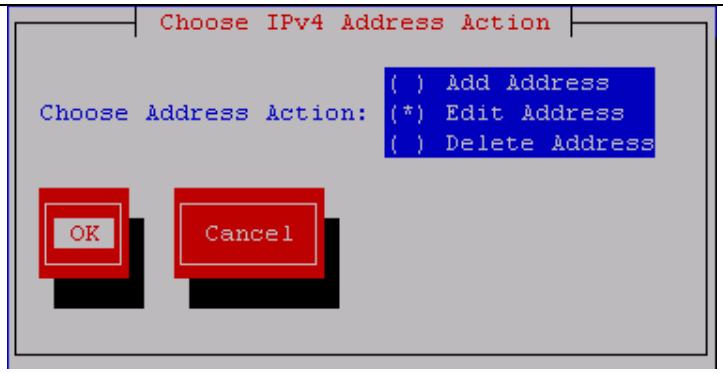
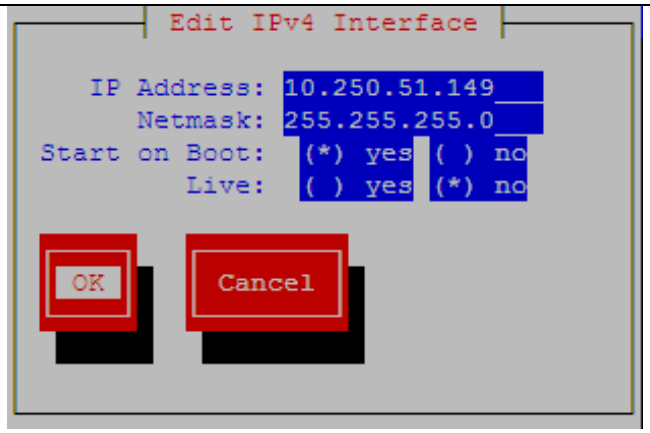
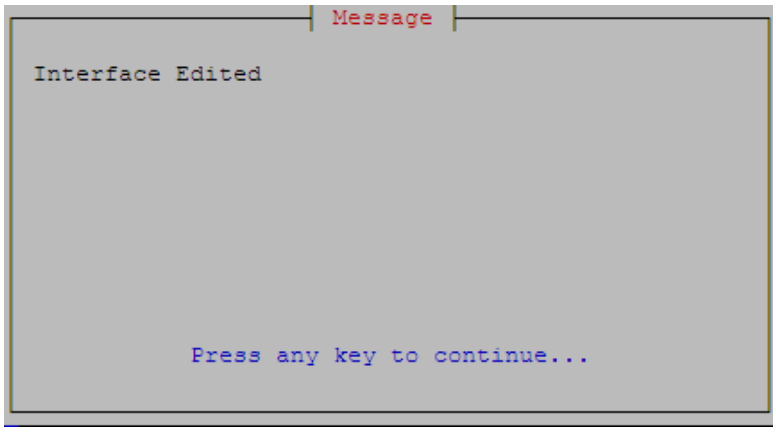
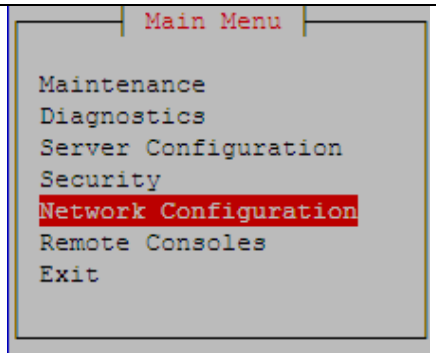
Procedure 17 CONFIGURE NETWORK INTERFACE USING PLATCFG UTILITY

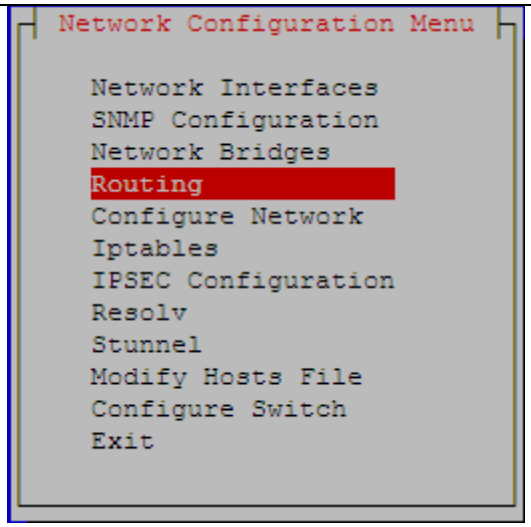
Procedure 17 needs to be executed to configure network interfaces to do "minicom mate".

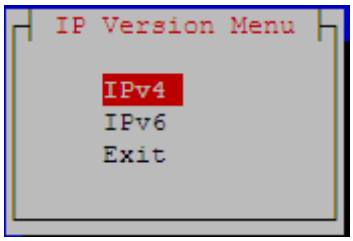
S T E P #	1B	This procedure configures the network interfaces and makes the E5APPB servers accessible to the network. Estimated time: 5 minutes	
1.	☐	**MPS 1B:** Login as admusr.	login: **admusr** Password: **<admusr_password>**
2.	☐	**MPS 1B:** Login to platcfg utility	**$ sudo su - platcfg**

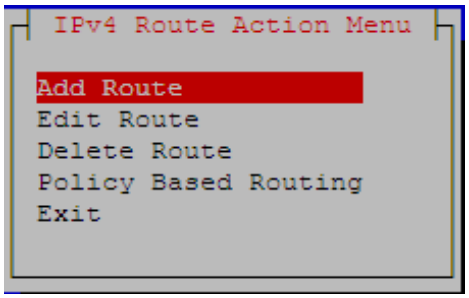
3.	☐	**MPS 1B:** Configure Network Interface	   

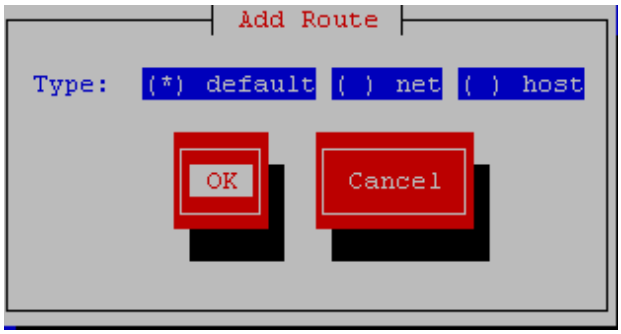
			
4.	☐	**MPS 1B:** Select Interface Options	    Select Edit interface below. HARSH

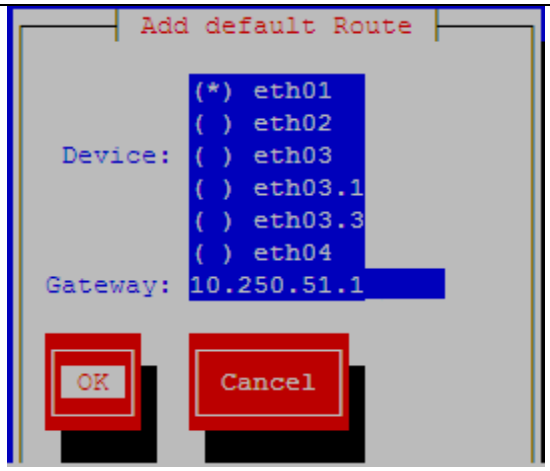
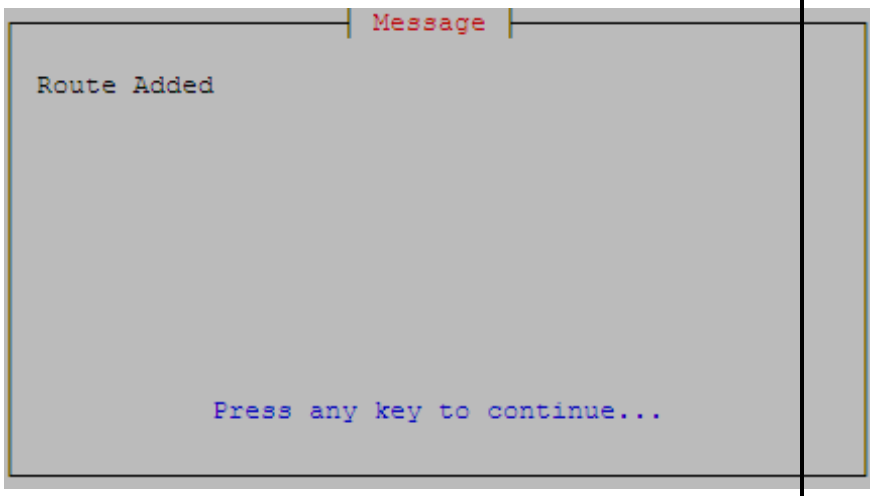
			
5.	☐	**MPS 1B:** Input the Interface Address	 
6.	☐	**MPS 1B:** Select Routing Option.	


Network Configuration Menu
Network Interfaces
SNMP Configuration
Network Bridges
Routing
Configure Network
Iptables
IPSEC Configuration
Resolv
Stunnel
Modify Hosts File
Configure Switch
Exit


IP Version Menu
IPv4
IPv6
Exit


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


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

7.	☐	**MPS 1B:** Input the Routing IP Address for Ethernet port eth01.	  Select “Exit” until Network Configration Menu display.
8.	☐	Note down the timestamp in log.	Run the following command **$ date**

This procedure is complete!

Procedure 18 CONFIGURE NETWORK INTERFACES

NOTE: This procedure configures the application in the IPv4 configuration. The initial configuration of the application in IPv6 should not be done to configure Active/Standby PDBA. To configure the application in the dual stack configuration, refer to [6].

S T E P #			
	1A	This procedure configures the network interfaces and makes the E5APPB servers accessible to the network. Estimated time: 5 minutes	
1.	☐	**MPS 1**A: Login as admusr.	login: **admusr** Password: **<admusr_password>**

2.	☐	**MPS 1A:** Login to epapconfig.	`$ sudo su - epapconfig`
3.	☐	**MPS 1A:** Press Return to continue.	For Mixed EPAP: Caution: This is the first login of the text user interface. **Review the following checklist before continuing.** Failure to enter complete and accurate information at this time will have unpredictable results. 1. The mate MPS servers (MPS A and MPS B) must be powered on. 2. "Initial Platform Manufacture" for the mate MPS servers must be complete. 3. The sync network between the mate MPS servers must be operational. 4. You must have the correct password for the epapdev user on the mate MPS server. 5. You must be prepared to designate this MPS as provisionable or non-provisionable. **Press return to continue…<return>** For Standalone PDB: Caution: This is the first login of the text user interface. **Press return to continue... <return>**
4.	☐	**MPS 1A:** Enter Y to continue	`Are you sure you wish to continue? [N]: Y`

5.	☐	**MPS 1A:** If the current site is provisionable, enter 'Y' when prompted. Otherwise, enter 'N'.	Note: Skip this step on Standalone PDB. For Prov EPAP: `Password of epapdev:` `ssh is working correctly.` `Password of root:` `ssh is working correctly.` `Password of admusr:` `ssh is working correctly.` `Password of root:` `ssh is working correctly.` `Building the initial database on side A.` `  Stopping local slave` `  Stopping remote slave` `EuiDB already exists.` `FIPS integrity verification test failed.` `  Starting local slave` `  Starting remote slave` `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.` `If there are only 2 mated sites, it is safe to answer `Y' here.`  `Is this site provisionable? [Y]: Y`  For Non-Prov EPAP  `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.`  `If there are only 2 mated sites, it is safe to answer `Y' here.` `Is this site provisionable? [Y]: N`
6.	☐	**MPS 1A:** Enter the System Number for Standalone PDB.	Note: Skip this step on Mixed EPAP. `Are you sure you wish to continue? [N]: Y` `Building the initial database on side A.` `  Stopping local slave` `No preexisting EuiDB database was detected.` `Set EPAP System Number: ES01062016`
7.	☐	**MPS 1A:** Enter the Network Configration Type for Standalone PDB. Enter 1 for Single and 2 for Segmented.	Note: Skip this step on Mixed EPAP. Enter the Network Configuration Type (1 for Single, 2 for Segmented):

8.	☐	**MPS 1A:** The EPAP Configuration Menu is displayed. Select option 2 to enter the Network Interfaces Menu.	/-------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**
9.	☐	**MPS 1A:** The Configure Network Interfaces Menu is displayed. Select option 1 to configure the provisioning network. Select option 1 to	For Mixed 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** For Standalone SEGMENTED PDB: /-----Configure Network Interfaces Menu----------\ /--\ | 1 | Configure Provisioning Network | |---|---| | 2 | Configure GUI Network | |---|---| | 3 | Configure Operations and Maintenance Network | |---|---| | 4 | Configure Backup Provisioning Network | |---|---| | 5 | Configure Static NAT Addresses | |---|---|

		configure Provisioning Network in IPv4 configuration.	| e | Exit | \----------/ Enter Choice: 1 For Standalone SINGLE PDB: /-----Configure Network Interfaces Menu----\ /----------\ | 1 | Configure Provisioning Network | |----|----------| | 2 | Configure Backup Provisioning Network | |----|----------| | 3 | Configure Static NAT Addresses | |----|----------| | e | Exit | \----------/ Enter Choice: 1 /-----Configure Provisiong Network Menu-\ /----------\ | 1 | IPv4 Configuration | |----|----------| | 2 | IPv6 Configuration | |----|----------| | e | Exit | \----------/ Enter Choice: 1
10.	☐	**MPS 1A:** Enter the IP addresses, subnet mask and default gateway when prompted	For Mixed EPAP: Verifying connectivity with mate... EPAP A provisioning network IP Address [192.168.61.155]: 192.168.61.80 EPAP B provisioning network IP Address [192.168.61.156]: 192.168.61.81 EPAP provisioning network netmask [255.255.255.0]: EPAP provisioning network default router [192.168.61.250]: 192.168.61.250 For StandalonePDB: EPAP A provisioning network IP Address [192.168.61.36]: 192.168.61.36 EPAP provisioning network netmask [255.255.255.0]: 255.255.255.0 EPAP provisioning network default router [192.168.61.250]: 192.168.61.250

11.	☐	**MPS 1A:** Select option e to exit.	/-----Configure Network Interfaces Menu----\ /---\ | 1 | Configure Provisioning Network | |----|-------------------------------------| | 2 | Configure Sync Network | |----|-------------------------------------| | 3 | Configure DSM Network | |----|-------------------------------------| | 4 | Configure Backup Provisioning Network | |----|-------------------------------------| | 5 | Configure Forwarded Ports | |----|-------------------------------------| | 6 | Configure Static NAT Addresses | |----|-------------------------------------| | 7 | Configure Provisioning VIP Addresses | |----|-------------------------------------| | e | Exit | \---/ Enter Choice: **e** The message shall be displayed to the user that the MPS is not completely configured. Enter "Y" and exit the menu. No value specified for Remote PDBA B Address Caution: This MPS has not been completely configured. Applications may not run until all required parameters are entered through the text user interface. Choose "Display Configuration" for a list of configurable parameters and their settings. Press return to continue... Are you sure you wish to exit the text UI? [N]: Y Note: If this menu is not exited properly, then the root access shall remain enabled.
12.	☐	Note down the timestamp in log.	Run the following command **$ date**

This procedure is complete!

Procedure 19 TRANSFER DATABASES

NOTE: If the backups were copied to a remote server then the directory might be different then /var/TKLC/epap/free.

STEP #	1A	1B		
			This procedure transfers the database backup from the Remote Server to the upgraded EPAP. Estimated time: 10 minutes	
1.	☐	☐	**MPS 1B:** Login to 1B server or remote Server.	Note: In Standalone PDB Upgrade, Login to remote server where backups were transfered. login: **epapdev** Password: **<epapdev_password>**
2.	☐	☐	**MPS 1B:** Change directory to the directory where backups were FTPed.	**$ cd /var/TKLC/epap/free**

3.	☐	☐	**MPS 1B:** List the files in this directory. You should see the 3 backup files. Note: There will be 2 backup files in case of Non-Prov server, that is, EuiDB and RTDB backup. Note: There should be 2 backup files for EuiDB and PDBA, if standalone PDB is upgraded.	For Mixed EPAP: **$ ls -l** npdbBackup_xxxxx-a_xxxxxxxx.sql.gz pdbBackup*.tar.gz rtdbBackup_xxxxx-b_xxxxxxxx.tar.gz For Non-Prov EPAP: **$ls -l** npdbBackup_xxxxx - a_xxxxxxxx . sq l .gz r tdbBackup_xxxxx - b_xxxxxxxx . ta r .gz For Standalone PDB: **$ ls -l** npdbBackup_xxxxx-a_xxxxxxxx.sql.gz pdbBackup*.tar.gz
4.	☐	☐	**MPS 1B:** Copy MySQL Database Backup File to E5APPB A Server.	**$ scp -p** *npdbBackup_xxxxx-a_xxxxxxxx.sql.gz* **epapdev@mate:/var/TKLC/epap/free/** **Or** **$ scp -p** *npdbBackup_xxxxx-a_xxxxxxxx.sql.gz* **epapdev@**<E5APPB A IP>**:/var/TKLC/epap/free** epapdev@< E5APPB A IP >'s password:**<epapdev_password>** **Or** **$ sftp epapdev@<E5APPB A IP>** Connecting to <E5APPB A IP>... The authenticity of host '<E5APPB A IP>' can't be established. DSA key fingerprint is 58:a5:7e:1b:ca:fd:1d:fa:99:f2:01:16:79:d8:b4:24. Are you sure you want to continue connecting (yes/no)? **yes** Warning: Permanently added '<E5APPB A IP>' (DSA) to the list of known hosts. epapdev<E5APPB A IP>'s password: **<epapdev_password>** sftp> **cd /var/TKLC/epap/free** sftp> **put *npdbBackup_xxxxx-a_xxxxxxxx.sql.gz*** Uploading *npdbBackup_xxxxx-a_xxxxxxxx.sql.gz* to *npdbBackup_xxxxx-a_xxxxxxxx.sql.gz* sftp> **bye**
5.	☐	☐	**MPS 1B:** Copy PDB Database Backup File to E5APPB A Server.	**$ scp -p** *pdbBackup*xxxxx-xxxxxxxxx.tar.gz* **epapdev@**mate**:/var/TKLC/epap/free** Or **$ scp -p** *pdbBackup*xxxxx-xxxxxxxxx.tar.gz* **epapdev@**<E5APPB A IP>**:/var/TKLC/epap/free** epapdev@< E5APPB IP >'s password: **<epapdev_password>** Or **$ sftp epapdev@<E5APPB A IP>** epapdev<E5APPB A IP>'s password: **<epapdev_password>** sftp> **cd /var/TKLC/epap/free**

				sftp> **put *pdbBackup*xxxxx-xxxxxxxxx.tar.gz*** Uploading *pdbBackup*xxxxx-xxxxxxxxx.tar.gz* to *pdbBackup*xxxxx-xxxxxxxxx.tar.gz* sftp> **bye**
6.	☐	☐	**Remote Server:** Copy RTDB Database Backup File to E5APPB B Server. NOTE: RTDB backup needs to be copied if the backups were transferred to a remote server.	NOTE: Skip this step in following cases: ➢ If upgrading the Standalone PDB ➢ If the backups were copied to mate. **$ scp -p *rtdbBackup_xxxxx-a_xxxxxxxx.tar.gz*** **epapdev@@**<E5APPB B IP>**:/var/TKLC/epap/free** epapdev@< E5APPB IP >'s password: **<epapdev_password>** Or **$ sftp epapdev@<E5APPB B IP>** epapdev<E5APPB B IP>'s password: **<epapdev_password>** sftp> cd /var/TKLC/epap/free sftp> put ***rtdbBackup_xxxxx-a_xxxxxxxx.tar.gz*** Uploading *rtdbBackup_xxxxx-a_xxxxxxxx.tar.gz* to *rtdbBackup_xxxxx-a_xxxxxxxx.tar.gz* sftp> bye
7.	☐	☐	**MPS 1A :** Compare the MD5 Checksum value to the value captured in Procedure 9, Procedure 10. If the values are not the same, transfer the file again if time permits. If there is not sufficient time remaining in the maintenance window to perform a second transfer attempt, it may be necessary to fall back to the original system.	**$ md5sum pdbBackup*.tar.gz** 2355d5c1da2b1b4de165f95b2af95713 pdbBackup*.tar.gz **$ md5sum** **npdbBackup_<hostname>_<timestamp>.sql.gz** 7494d28c6f4633ade0bd3bda1ed525e4 npdbBackup_<hostname>_<timestamp>.sql.gz

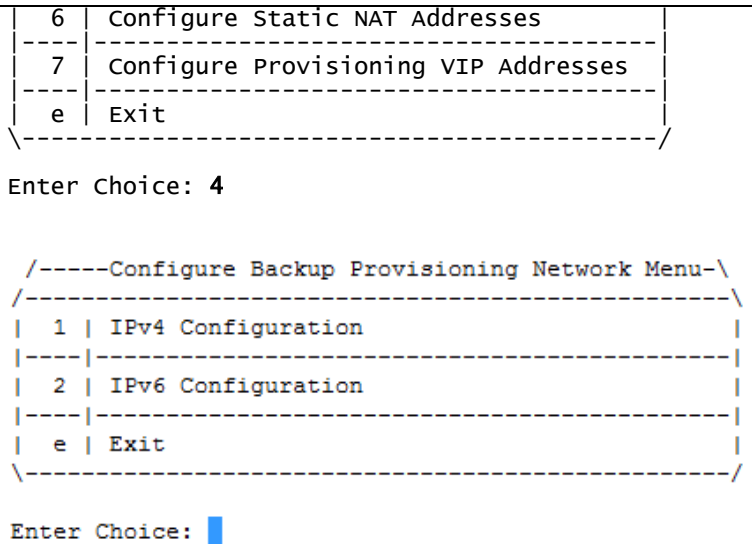
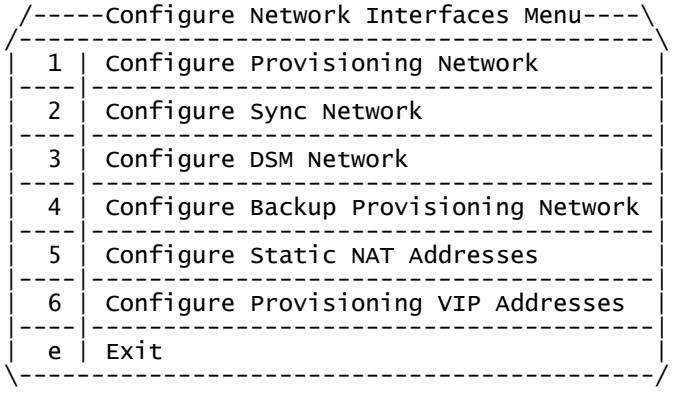
8.	☐	☐	**MPS 1B :** Compare the MD5 Checksum Value to the value captured in Procedure 11. If the values are not the same, transfer the file again.	Note: Skip this step on Standalone PDB. **$ md5sum rtdbBackup_mps-a_20110602052959_v5.6.bkp.tar.gz** 2355d5c1da2b1b4de165f95b2af95713 rtdbBackup_mps-b- \ a_20110602052959_v5.6.bkp.tar.gz
9.	☐	☐	Note down the timestamp in log.	Run the following command **$ date**

This procedure is complete!

Procedure 20 RESTORE EUIDB DATABASE

STEP #	1A	This procedure restores the EuiDB database. Estimated time: 5 minutes	
1.	☐	**MPS 1A:** Login as epapdev.	login: **epapdev** Password: **<epapdev_password>**
2.	☐	**MPS 1A:** Verify that the DB Backup Files have been transferred over.	**$ cd /var/TKLC/epap/free** **$ ls -l** **npdbBackup_xxxxx-a_xxxxxxxx.sql.gz** **pdbBackupxxx_xxxxx-a_xxxxxxxxx.tar.gz**
3.	☐	**MPS 1A:** MySQL Restore Execute the following command to restore the MySQL Database Restore Output is displayed	**$ /usr/TKLC/epap/bin/restore_npdb.pl** *npdbBackup_xxxxx-a_xxxxxxxx.sql.gz* Restoring up the NPDB... NPDB Restored up Successfully.
4.	☐	**MPS 1A:** Execute DB Migration utility to update the EuiDB with newly introduced configuration parameters.	**$ /usr/TKLC/epap/bin/dbMigration15_16** Warning: Using a password on the command line interface can be insecure. INFO: Provisionable EPAP found. ********** ********** Caution!!! Please enter correct details below, otherwise DB might get corrupt ********** **********

		Note: For Standalone PDB source release is 16.0	Enter the EPAP source release for migration (15/16.0): <Enter the source EPAP release here – Enter "15" if the source release is EPAP 15, otherwise enter "16.0" if the source release is EPAP 16.0.> …. …. INFO: EuiDB changes from EPAP <Source Release> to EPAP 16.1 done successfully.
5.	☐	**MPS 1A:** Change user to admusr	**$ su - admusr** Password: <admusr_password>
6.	☐	**MPS 1A:** Reconfigure IP Addresses.	Execute step 2, 8, 9, 10, 11 of Procedure 18 to reconfigure the IP addresses using the epapconfig menu. **$ sudo su - epapconfig**
7.	☐	**MPS 1A:** The EPAP Configuration Menu is displayed. Select choice 2, Configure Network Interfaces Menu.	/-------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**
8.	☐	**MPS 1A:** If the Backup Provisioning Network is being used, Select choice 4, to reconfigure the backup provisioning interface. If not used, skip steps 7 and 8.	/-----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 | |----|----------|

		Configure the Backup Provisioning Network in either IPv4 or/and IPv6 format(s), irrespective of the IP format of provisioning network.	
9.	☐	**MPS 1A:** Enter the Backup Provisioning configuration.	Following is the example output of backup provisioning configuration in IPv4 format. EPAP A backup provisioning network IP Address : 192.168.210.51 EPAP B backup provisioning network IP Address : 192.168.210.52 EPAP backup provisioning network netmask : 255.255.255.0 EPAP backup provisioning network default router: 192.168.210.1
10	☐	**MPS 1A:** If the Provisioning VIP Address is being used, Select choice 6, to reconfigure the VIP Address. If not used, skip to step 11below. Select option 1 to configure the VIP in IPv4 format.	

			/-----Configure Provisioning VIP address Menu-\ /---\ | 1 | IPv4 Configuration | |----|---| | 2 | IPv6 Configuration | |----|---| | e | Exit | \---/ Enter Choice:
11	☐	**MPS 1A:** Enter the Local and Remote VIP addresses.	Verifying root connectivity with mate... EPAP local provisioning Virtual IP Address [0.0.0.0]: EPAP remote provisioning Virtual IP Address [0.0.0.0]:
12	☐	**MPS 1A:** The Configure Network Interfaces menu is displayed. Select choice e, Exit.	/-----Configure Network Interfaces Menu----\ /---\ | 1 | Configure Provisioning Network | |----|-----------------------------------| | 2 | Configure Sync Network | |----|-----------------------------------| | 3 | Configure DSM Network | |----|-----------------------------------| | 4 | Configure Backup Provisioning Network | |----|-----------------------------------| | 5 | Configure Forwarded Ports | |----|-----------------------------------| | 6 | Configure Static NAT Addresses | |----|-----------------------------------| | 7 | Configure Provisioning VIP Addresses | |----|-----------------------------------| | e | Exit | \---/ Enter Choice: **e**
13	☐	**MPS 1A:** Select option 3 to set the time zone.	/-------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`
14	☐	**MPS 1A:** Type **Y** to set the time zone.	`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`
15	☐	**MPS 1A:** The following prompt is displayed. If the time zone is known, it can be entered or, press Return, and a list of the valid names is displayed.	`Enter a time zone:`
16	☐	**MPS 1A:** A list of all available time zone values is displayed.	`Valid time zone files are:` `Australia/Broken_Hill Australia/LHI Australia/NSW` `Australia/North Australia/Queensland Australia/South` `Australia/Tasmania Australia/Victoria Australia/West` `Australia/Yancowinna Australia/ACT Brazil/Acre` `Brazil/DeNoronha Brazil/East Brazil/West` `Canada/Atlantic Canada/Central Canada/East-Saskatchewan` `Canada/Eastern Canada/Mountain Canada/Newfoundland` `Canada/Pacific Canada/Yukon Chile/Continental` `Chile/EasterIsland Etc/GMT Etc/GMT+1` `--------Sample Output continues---------` `---------------End of output below----------------` `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 UCT` `UTC Universal Zulu` `Enter a time zone file (relative to /usr/share/lib/zoneinfo): US/Eastern` `Note - After the time zone is configured, the epapconfig main menu is displayed.`

17	☐	**MPS 1A:** The EPAP configuration menu is displayed. Select e to exit.	/-------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: **e** Note: If this menu is not exited properly, then the root access shall remain enabled.
18	☐	Check PDBA status and replLog entry. Note: replLog and requests tables should be empty and PDBA(s) should be stopped at both Active/Standby sides. Check the status of Active and Standby PDBA and verify that the status is Down.	**# service Pdba status** ~~ /etc/init.d/Pdba status ~~ PDBA process is stopped. If not stopped, stop PDBA at both Active/Stby site **# service Pdba stop** ~~ /etc/init.d/Pdba stop ~~ PDBA application stopped. Execute Procedure 7, step 1 – 7 and make sure that the replLog and requests are empty.
19	☐	**MPS 1A and 1B:** Restart the GUI Server process.	$ sudo **pkill gs**
20	☐	Note down the timestamp in log.	Run the following command **$ date**

This procedure is complete!

Procedure 21 CONFIGURE PROVISIONING NETWORK

Execute this procedure only for provisionable sites. Otherwise skip this procedure.

STEP #	1A	This procedure configures the provisioning network for the E5APPB. Intially, it is set as a stand-alone provisionable site. Estimated time: 5 minutes	
1.	☐	**MPS 1A:** Select option 8 to enter the PDB Configuration Menu.	/-------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**
2.	☐	**MPS 1A:** The Configure PDB Menu is displayed. Select option 1 to configure the provisioning network. Note: Configure the PDB network in the same format as that of	/-----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 | \-----------------------------------/ Enter Choice: **1**

		the provisioning network format.	/-----PDB Network Configuration Menu-\ /--------------------------------------\ | 1 | IPv4 Configuration | |----|--------------------------------| | 2 | IPv6 Configuration | |----|--------------------------------| | e | Exit | \--------------------------------------/ Enter Choice:
3.	☐	**MPS 1A:** Make this site a stand-alone EPAP by entering 0.0.0.0 for the Remote PDBA IP address Ensure the secure shell keys are successfully exchanged.	Verifying connectivity with mate... This MPS is configured to be provisionable. The EPAP local PDBA address is currently set to 192.168.61.45. EPAP software and PDBA are running. Stop them? [N]: **Y** The EPAP local PDBA IP Address is 192.168.61.45. EPAP remote PDBA IP Address [0.0.0.0]: 0.0.0.0
4.	☐	**MPS 1A:** Select option 2 to enter the RTDB Homing Menu.	Note : Skip this step on Standalone PDB /-----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 | \-----------------------------------/ Enter Choice: **2**
5.	☐	**MPS 1A:** Select an option to configure the desired RTDB homing. The example here shows the preferred Standby Homing.	Note : Skip this step on Standalone PDB /-------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>**

6.	☐	**MPS 1A:** Enter **e** to exit.	Note : Skip this step on Standalone PDB /-------RTDB Homing Menu-----------\ /-----------------------------------\ | 1 | Configure Specific RTDB Homing | |---|-------------------------------| | 2 | Configure Active RTDB Homing | |---|-------------------------------| | 3 | Configure Standby RTDB Homing | |---|-------------------------------| | e | Exit | \-----------------------------------/ Enter Choice: **e**
7.	☐	**MPS 1A:** Enter **4** to create PDB on Mixed EPAP and 2 to create on Standalone PDB.	For Mixed EPAP: /-----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 | \-----------------------------------/ **Enter Choice: 4** For Standalone PDB: /-----Configure PDB Menu----------\ /----------------------------------\ | 1 | Configure PDB Network | |---|------------------------------| | 2 | Create PDB | |---|------------------------------| | 3 | Change Auto DB Recovery State | |---|------------------------------| | e | Exit | \----------------------------------/ **Enter Choice: 2**
8.	☐	**MPS 1A:** The PDB configuration data is displayed.	localIP = 192.168.61.80 localName=wolverine-a remoteIP = 0.0.0.0 There is no remote PDB remoteBIP = 0.0.0.0 There is no remote B PDB mysqld is alive There is no local PDB
9.	☐	**MPS 1A:** Select option e to Exit.	For Mixed EPAP: /-----Configure PDB Menu-----------\ /-----------------------------------\ | 1 | Configure PDB Network | |---|-------------------------------| | 2 | RTDB Homing Menu |

			<pre>|----|--------------------------------| | 3 | Change MPS Provisionable State | |----|--------------------------------| | 4 | Create PDB | |----|--------------------------------| | 5 | Change Auto DB Recovery State | |----|--------------------------------| | 6 | Change PDBA Proxy State | |----|--------------------------------| | e | Exit | \----------------------------------/</pre> **Enter Choice:** e For Standalone PDB: <pre>/-----Configure PDB Menu-----------\ /----------------------------------\ | 1 | Configure PDB Network | |----|--------------------------------| | 2 | Create PDB | |----|--------------------------------| | 3 | Change Auto DB Recovery State | |----|--------------------------------| | e | Exit | \----------------------------------/</pre> **Enter Choice:** e
10.	☐	Note down the timestamp in log.	Run the following command **$ date**

This procedure is complete!

Procedure 22 VERIFY CONFIGURATIONS

STEP #	1A	1B		
			This procedure verifies the E5APPB configurations. Estimated time: 5 minutes	
1.	☐	☐	**MPS 1A:** Enter option 1 to display the current configuration.	<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 | |----|--------------------------------|</pre>

					13	Configure Query Server Alarm Feed
----	-----------------------------------
14	Configure SNMP Agent Community
----	-----------------------------------
e	Exit	 \-----------------------------------/ Enter Choice: **1**
2.	☐	☐	**MPS 1A:** Verify the configuration data with the data recorded earlier in Procedure 2 step 3 for Mixed EPAP and Procedure 3 step 3 for Standalone PDB. Be sure to verify all relevant data configurations.	For Mixed EPAP configured in IPv4 configuration, the configuration data shall look like: EPAP A Provisioning Network IP Address = 192.168.61.48 EPAP A Provisioning Network IP Address v6 = Not configured EPAP B Provisioning Network IP Address = 192.168.61.49 EPAP B Provisioning Network IP Address v6 = Not configured Provisioning Network Netmask = 255.255.255.0 Provisioning Network Prefix = Not configured Provisioning Network Default Router = 192.168.61.250 Provisioning Network Default Router v6 = Not configured EPAP A Backup Prov Network IP Address = Not configured EPAP A Backup Prov Network IP Address v6 = Not configured EPAP B Backup Prov Network IP Address = Not configured EPAP B Backup Prov Network IP Address v6 = Not configured Backup Prov Network Netmask = Not configured Backup Prov Network Prefix v6 = Not configured Backup Prov Network Default Router = Not configured Backup Prov Network Default Router v6 = 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 IP Version = IPv4 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 Local PDBA Address v6 = Not configured Remote PDBA Address = 0.0.0.0 Remote PDBA B Address = 0.0.0.0 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>** For Non-Provisionable EPAP configured in IPv4 configuration, the configuration data shall look like: EPAP A Provisioning Network IP Address = 10.250.51.149 EPAP A Provisioning Network IP Address v6 = Not configured EPAP B Provisioning Network IP Address = 10.250.51.150 EPAP B Provisioning Network IP Address v6 = Not configured Provisioning Network Netmask = 255.255.255.0 Provisioning Network Prefix = Not configured Provisioning Network Default Router = 10.250.51.1 Provisioning Network Default Router v6 = Not configured EPAP A Backup Prov Network IP Address = Not configured EPAP A Backup Prov Network IP Address v6 = Not configured EPAP B Backup Prov Network IP Address = Not configured EPAP B Backup Prov Network IP Address v6 = Not configured Backup Prov Network Netmask = Not configured Backup Prov Network Prefix v6 = Not configured Backup Prov Network Default Router = Not configured

```
Backup Prov Network Default Router v6     = 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 IP Version                           = IPv4
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 PDBA Address                        = 10.248.10.79
Local PDBA Address v6                     =
0000:0000:0000:0000:0000:0000:0000:0000
Remote PDBA Address                      = 0.0.0.0
Time Zone                                 = America/New_York
PDB Database                              = None - Non-
provisionable Site
Preferred PDB                             = 10.248.10.79
Allow updates from alternate PDB          = Yes

Press return to continue...
```

FOR SINGLE Standalone PDB, the configuration data shall look like:

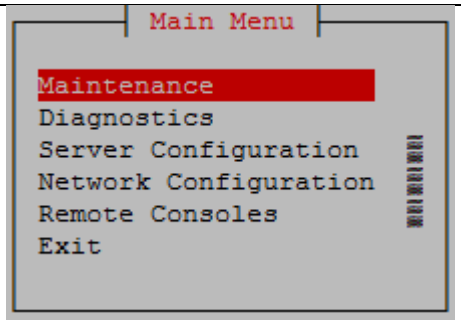
```
EPAP A Provisioning Network IP Address    = 10.250.51.130
EPAP B Provisioning Network IP Address    = Not configured
Provisioning Network Netmask              = 255.255.255.0
Provisioning Network Prefix               = Not configured
Provisioning Network Default Router       = 10.250.51.1
Provisioning Network Default Router v6    = Not configured
EPAP A Backup Prov Network IP Address     = Not configured
EPAP A Backup Prov Network IP Address v6  = Not configured
Backup Prov Network Netmask               = Not configured
Backup Prov Network Prefix v6             = Not configured
Backup Prov Network Default Router        = Not configured
Backup Prov Network Default Router v6     = Not configured
Network Configuration Type                = SINGLE
EPAP IP Version                           = IPv4
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
Local PDBA Address v6                    = Not configured
Remote PDBA Address                      = 0.0.0.0
Time Zone                                = US/Eastern
PDB Database                             = Exists
Auto DB Recovery Enabled                 = No

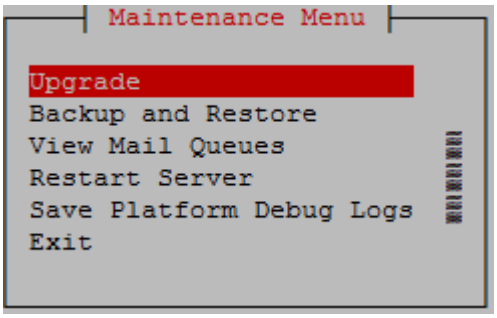
Press return to continue... <return>
```

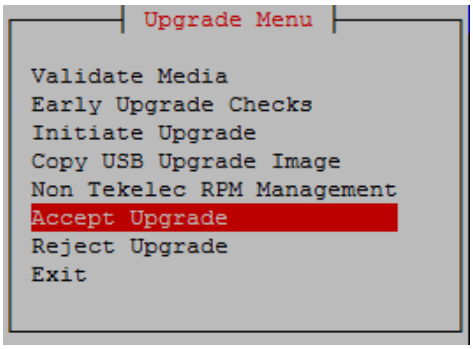
FOR SEGMENTED Standalone PDB, the configuration data shall look like:

```
EPAP A Provisioning Network IP Address    = 192.168.61.36
EPAP A Provisioning Network IP Address v6 = Not configured
Provisioning Network Netmask              = 255.255.255.0
Provisioning Network Prefix               = Not configured
Provisioning Network Default Router       = 192.168.61.250
Provisioning Network Default Router v6    = Not configured
EPAP A Backup Prov Network IP Address     = Not configured
EPAP A Backup Prov Network IP Address v6  = Not configured
Backup Prov Network Netmask               = Not configured
Backup Prov Network Prefix v6             = Not configured
Backup Prov Network Default Router        = Not configured
Backup Prov Network Default Router v6     = Not configured
Network Configuration Type                = SEGMENTED
EPAP A GUI Network IP Address             = 192.168.59.28
EPAP A GUI Network IP Address v6          = Not configured
```

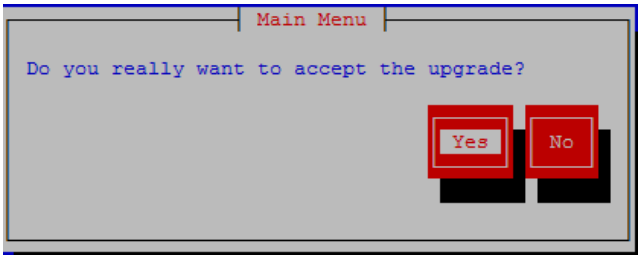
				GUI Network Netmask = 255.255.255.0 GUI Network Prefix v6 = Not configured GUI Network Default Router = 192.168.59.250 GUI Network Default Router v6 = Not configured EPAP A O&M Network IP Address = 192.168.60.27 EPAP A O&M Network IP Address v6 = Not configured O&M Network Netmask = 255.255.255.0 O&M Network Prefix v6 = Not configured O&M Network Default Router = 192.168.60.250 O&M Network Default Router v6 = Not configured GUI IP Version = Not configured EPAP IP Version = IPv4 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 = 192.168.61.36 Local PDBA Address v6 = 0000:0000:0000:0000:0000:0000:0000:0000 Remote PDBA Address = 0.0.0.0 Time Zone = US/Eastern PDB Database = Exists Auto DB Recovery Enabled = No
3.	☐	☐	**MPS 1A:** Exit from epapconfig menu	/-------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: **e** Note: If this menu is not exited properly, then the root access shall remain enabled.
4.	☐	☐	**MPS 1A**: Change user to admusr if not already logged in as admusr	**$ su - admusr** **Password: <admusr_password>**
5.	☐	☐	**MPS 1A**: Accept Upgrade	**$ sudo su - platcfg**







Note: The “Reject Upgrade” menu is also available after the EPAP installation. However, this option should not be used after the first installation of application. It should be used in subsequent upgrades to return to a previous application release.



				Called with options: --accept Loading Backout::BackoutType::RPM Accepting Upgrade Executing common accept tasks Setting POST_UPGRADE_ACTION to ACCEPT in upgrade info. Cleaning backout directory. Clearing Upgrade Accept/Reject alarm. Cleaning message from MOTD. Removing SWAP /dev/mapper/vgroot-plat_swap from fstab. Removed 1 swap entries from fstab Note: Press "q" here to go to below screen. +--------------------+ Message +--------------------+ | The accept has completed. | | Press any key to continue... |
6.	☐	☐	**MPS 1B:** Accept Upgrade	Note: Skip this step on Standalone PDB. Repeat the above step on MPS B to accept upgrade.
7.	☐	☐	Note down the timestamp in log.	Run the following command **$ date**

This procedure is complete!

Procedure 23 CONFIGURE NTP SERVERS

S T E P #	1A	This procedure configures the NTP server setting for both servers. Estimated time: 5 minutes	
1.	☐	**MPS 1A:** Login to CLI as epapdev.	login: **admusr** Password: **<admusr_password>**
2.	☐	**MPS 1A:** Login as epapconfig.	**$ sudo su - epapconfig**
3.	☐	**MPS 1A:** Enter option 7 to configure the NTP Server Menu.	/-------EPAP Configuration Menu--------\ /----------\ | 1 | Display Configuration | |----|----------| | 2 | Configure Network Interfaces Menu | |----|----------| | 3 | Set Time Zone | |----|----------| | 4 | Exchange Secure Shell Keys |

			<pre>|----|-----------------------------------| | 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: 7</pre>
4.	☐	**MPS 1A:** The EPAP Configure NTP Server Menu is displayed. Configure NTP server(s) in either IPv4 or/and IPv6 format(s).	<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 /-----Add External NTP Server Menu-\\ /--------------------------------------\\ | 1 | IPv4 Configuration | |----|---------------------------------| | 2 | IPv6 Configuration | |----|---------------------------------| | e | Exit | \\--------------------------------------/ Enter Choice:</pre>
5.	☐	**MPS 1A:** Confirm the action of adding a new NTP Server. Press Return to exit the NTP menu	Are you sure you wish to add new NTP Server? [N]: **Y** Enter the EPAP NTP Server IP Address: **<NTP_server_IP_Addr>** Verifying NTP Server. It might take up to 1 minute. External NTP Server [server <NTP_server_IP_Addr> has been added. Press return to continue...**<return>**
6.	☐	**MPS 1A:** Enter option 1 to display the external NTP server.	<pre> /-----EPAP Configure NTP Server Menu-\\ /--------------------------------------\\ | 1 | Display External NTP Server | |----|---------------------------------| | 2 | Add External NTP Server | |----|---------------------------------| | 3 | Remove External NTP Server | |----|---------------------------------|</pre>

			| e | Exit | \----------/ Enter Choice: **1**
7.	☐	**MPS 1A:** Verify the External NTP Server IP address is correct and press Return.	ntpserver1 <Ipaddress> Press return to continue...**<return>**
8.	☐	**MPS 1A:** Select option e, Exit.	/-----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
9.	☐	Note down the timestamp in log.	Run the following command **$ date**

This procedure is complete!

Procedure 24 POST CONFIGURATION SYSCHECK

S T E P #	1A	1B	This procedure runs an initial system check to validate the software install and system readiness. Estimated time: 5 minutes	
1.	☐	☐	**MPS 1A**: Login as epapdev.	login: **epapdev** Password: **<epapdev_password>**
2.	☐	☐	**MPS 1A:** Issue the command to retrieve the system status	$ **syscheck**
3.	☐	☐	**MPS 1A:** The syscheck response is displayed. Verify all components are "OK" on the mate EPAP **NOTE:** Investigate the cause of any failure in the syscheck response. Correct the issue or contact Support	Running modules in class disk... OK Running modules in class hardware... OK Running modules in class net... OK Running modules in class proc... OK Running modules in class services... OK Running modules in class system...

			(Appendix B) for resolution before proceeding.	OK Running modules in class upgrade... OK LOG LOCATION: /var/TKLC/log/syscheck/fail_log
4.	☐	☐	**MPS 1A:** Issue the command to retrieve the system status on the mate EPAP	Note: Skip this step on Standalone PDB. `$ ssh mate syscheck`
5.	☐	☐	**MPS 1A:** The syscheck response is displayed. Verify all components are "OK" on the mate EPAP	Running modules in class disk... OK Running modules in class hardware... OK Running modules in class net... OK Running modules in class proc... OK Running modules in class services... OK Running modules in class system... OK Running modules in class upgrade... OK LOG LOCATION: /var/TKLC/log/syscheck/fail_log
6.	☐	☐	Note down the timestamp in log.	Run the following command `$ date`

This procedure is complete!

Procedure 25 REBOOT THE MPS

STEP #	1A	1B	This procedure reboots the MPS and applies the time zone setting. Estimated time: 5 minutes	
1.	☐	☐	**MPS 1A:** Select option 6 to enter the platform menu.	/-------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**
2.	☐	☐	**MPS 1A:** Select option 2 to reboot the MPS.	/-----EPAP Platform Menu-\ /-------------------------\ | 1 | Initiate Upgrade | |----|--------------------| | 2 | Reboot MPS | |----|--------------------| | 3 | MySQL Backup | |----|--------------------| | 4 | RTDB Backup | |----|--------------------| | 5 | PDB Backup | |----|--------------------| | e | Exit | \-------------------------/ Enter Choice: **2**
3.	☐	☐	**MPS 1A:** Select the default value of **BOTH** by pressing Return.	Note: Skip this step on Standalone PDB Reboot MPS A, MPS B or [BOTH]: **<return>**
4.	☐	☐	**MPS 1A:** Perform a ping test to confirm network	Note: Skip this step on Standalone PDB <hostname> login:

			connectivity. **MPS 1B:** Perform a ping test to confirm network connectivity.	From this E5APPB EPAP A server: $ ping < 2A server IP address> $ ping < 2B server IP address> From this E5APPB EPAP B server: $ ping < 2A server IP address> $ ping < 2B server IP address>
5.	☐	☐	Note down the timestamp in log.	Run the following command $ date

This procedure is complete!

3.6 Data Migration

Procedure 26 RESTORE PDB

Now that the Databases have been copied over, it's time to restore the PDB Databases (On provisionable site).

Note: The remote PDBA IP address MUST be set to 0.0.0.0.

Execute this procedure only for provisionable sites. Otherwise skip this procedure.

S T E P #	1A	This procedure restores the previous database backup to the upgraded 1A server. Estimated time: 15-30 minutes (Provisioning Site)	
1.	☐	**MPS 2A**: Login to the Standby PDBA EPAP A server.	login: root Password: <root_password>
2.	☐	**MPS 2A**: Login to epapconfig	# su - epapconfig
3.	☐	**MPS 2A**: Choose option "1" to display "PDB Configuration Menu.	MPS Side A: /-----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: 1
```

4. ☐ **MPS 2A:**

Configuration information is displayed.

Verify that the Remote PDBA Address and Remote PDBA B Address are set to 0.0.0.0.

```
MPS Side A:  hostname: inde5epap1d1  hostid: b20a5858
             Platform Version: 4.0.10-5.5.1_75.20.0
             Software Version: EPAP 160.0.17-16.0.0_160.17.0
             Mon Jul 30 10:46:10 EDT 2018

EPAP A Provisioning Network IP Address = 10.178.88.88
EPAP B Provisioning Network IP Address = 10.178.88.89
Provisioning Network Netmask           = 255.255.255.0
Provisioning Network Default Router    = 10.178.88.1
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                 = Not configured
Remote Provisioning VIP                = Not configured
Local PDBA Address                     = 10.178.88.88
Remote PDBA Address                    = 0.0.0.0
Remote PDBA B Address                  = 0.0.0.0
Time Zone                              = America/New_York
PDB Database                           = Exists
Preferred PDB                          = Standby
Allow updates from alternate PDB       = Yes
Auto DB Recovery Enabled               = No
PDBA Proxy Enabled                     = No

Press return to continue...
```

5. ☐ **MPS 2A:**

Select option e, Exit.

```
/-------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:` **`e`** Note: If this menu is not exited properly, then the root access will remain enabled.
6.	☐	Set the remote PDB IP to 0.0.0.0, if not already set.	If the remote PDBA is not set to 0.0.0.0, execute Procedure 8, and crosscheck that the remote PDBA has been set to 0.0.0.0. Skip this step if the remote PDBA is already set to 0.0.0.0.
7.	☐	**MPS 1A:** Login as epapdev.	`login:` **`epapdev`** `Password:` **`<epapdev_password>`**
8.	☐	**MPS 1A:** Change directory to /var/TKLC/epap/free.	**`$ cd /var/TKLC/epap/free`**
9.	☐	**MPS 1A:** List and verify the permission of pdb backups store in the /var/TKLC/epap/free directory.	**`$ ls -l pdbB*`** `-rw-rw-rw-  1 epapdev epap 4440758738 Oct 19 12:08 pdbBackupxxx_xxxxxxxx_xxx.xxx.tar.gz` **`NOTE:`** `If permission is different execute the following command.` **`$ chmod 666 pdbBackupxxx_xxxxxxxx_xxx.xxx.tar.gz`** `Copy the backup file to the clipboard for use as the source file for the restore command in next step.`
10.	☐	**MPS 1A:** Execute the comamnd /usr/TKLC/epap/config/restore_pdb --force to restore the PDB database. Using **--force7** option will skip the # of ibd files check due to the	**`$  /usr/TKLC/epap/config/restore_pdb --force7`** `Mon Dec 15 15:50:22 EST 2015` `This script will replace the existing PDB with one provided from a backup and copy the restored backup to the remote.` `Are you sure you want to do continue? (y/n) y` `Enter the name of the backup tar.gz file. <`**`pdbBackup_Paxi-A_20141212123002_DBBirthdate_20090612160947GMT_DBLevel_63974111_v7.50.bkp.tar.gz>`** `Mon Dec 15 15:50:31 EST 2015` `localIp = 192.168.61.116` `localName=Paxi-A` `remoteIp = 0.0.0.0` `No remote site`

		source PDB only has 25 ibd files and the target PDB has 50 ibd files. NOTE: Even though the backup is taken prior to EPAP 16.1 release we are using force7 option as the old backup is now compatible with EPAP 16.1 so please ignore the warning message "WARNING : If this backup is from EPAP 16.0 or earlier release please use option –force" Also specify "y" when asked that the backup is from EPAP 16.1. Are you sure this backup is from EPAP 16.1 or later release? (y/n)y	WARNING : If this backup is from EPAP 16.0 or earlier release please use option –force Are you sure this backup is from EPAP 16.1 or later release? (y/n) **y** Do you want to restore Stats database? (y/n) **y** Running with force option! Skip disk space check.. remoteBIp = 0.0.0.0 There is no remote B PDB Unzipping backup file. This may take a while.. … … ./pdb/dn.frm ./pdb/provBL.frm ./pdb/imsi_ne.frm ./pdb/imei.frm ./pdb/transLog.frm ./pdb/pdbaInfo.frm ./pdb/replLog.frm ./ibdata15 ./ibdata8 ./ibdata23 ./ibdata11 ./ibdata6 ./ibdata13 ./ibdata10 ./ibdata25 ./ibdata2 ./ibdata20 ./ibdata1 ./ibdata22 ./ibdata19 ./ibdata14 ./ibbackup_logfile ./stats/ ./stats/pdbaStats.frm ./stats/pdbaStats.MYD ./stats/pdbaStats.MYI ./ibdata18 ./ibdata9 ./ibbackup_export_variables.txt Running ibbackup.. ibbackup version 3.5.2 MySQL Enterprise Backup 3.5.2 Copyright (c) 2002, 2010, Oracle and/or its affiliates. Run 'ibbackup --help' for help and 'ibbackup --version' for version info. Note: Uses posix_fadvise() for performance optimization. Contents of /tmp/ibbackup.restore.14703: innodb_data_home_dir got value /var/TKLC/epap/db/pdb innodb_data_file_path got value ibdata1:2G;ibdata2:2G;ibdata3:2G;ibdata4:2G;ibdata5:2G;ibdata6:2G;ibdata7:2G;ibdata8:2G;ibdata9:2G;ibdata10:2G;ibdata11:2G;ibdata12:2G;ibdata13:2G;ibdata14:2G;ibdata15:2G;ibdata16:2G;ibdata17:2G;ibdata18:2G;ibdata19:2G;ibdata20:2G;ibdata21:2G;ibdata22:2G;ibdata23:2G;ibdata24:2G;ibdata25 datadir got value /var/TKLC/epap/db/pdb innodb_log_group_home_dir got value /var/TKLC/epap/db/pdb innodb_log_files_in_group got value 2 innodb_log_file_size got value 67108864 141215 16:26:05 ibbackup: ibbackup_logfile's creation parameters: ibbackup: start lsn 233107345920, end lsn 233107346264, ibbackup: start checkpoint 233107346224. InnoDB: Doing recovery: scanned up to log sequence number 233107346264 InnoDB: Starting an apply batch of log records to the database... InnoDB: Progress in percents: 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 Setting log file size to 0 67108864 Setting log file size to 0 67108864 ibbackup: We were able to parse ibbackup_logfile up to ibbackup: lsn 233107346264. ibbackup: Last MySQL binlog file position 0 522793311, file name pdb-repl.000036 ibbackup: The first data file is '/var/TKLC/epap/db/pdb/ibdata1' ibbackup: and the new created log files are at '/var/TKLC/epap/db/pdb/'

			ibbackup: System tablespace file format is Antelope. 141215 16:26:07 ibbackup: Full backup prepared for recovery successfully! ibbackup was successful in restoring DB. MyISAM file: /var/TKLC/epap/db/pdb/mysql/columns_priv.MYI is already checked --------- MyISAM file: /var/TKLC/epap/db/pdb/stats/pdbaStats.MYI is already checked Waiting for mysqlpdb to start done dbLevel is 63974111 maxReplLogLvl = 63173081 Successfully restored stats database as well Waiting for mysqlpdb to stop.... done gzip'ing bkupfile again nohup: appending output to `nohup.out' Zip successful. 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/stats/pdbaStats.MYI is already checked Waiting for mysqlpdb to start done Removing local pdba status file. Restore completed successfully. Mon Dec 15 16:26:24 EST 2014 Note: The PDB backup taken from pre-EPAP 16.1 on E5-APP-B-01 has 25 ibdata files. After the PDB force restore completes, the rest of the 25 ibdata files (26 to 50) are created in the background. It is recommended to wait for 10 minutes before proceeding to the next step.
11.	☐	**MPS 1A:** Issue the command to start Pdba	**$ service Pdba start** ~~ /etc/init.d/Pdba start ~~ Starting PDBA in 528M configuration. "PDB_SUB_CAPACITY" is set to "528000000" PDBA application started.
12.	☐	**MPS 1A:** Verify the permission of /var/TKLC/epap/db/pdb directory.	$ **ls -lrthd /var/TKLC/epap/db/pdb** **Output for Mixed EPAP:** Drwxrwxr-x 7 mysql mysql 4.0K May 19 01:50 /var/TKLC/epap/db/pdb **Output for Standalone PDB:** drwxrwxr-x 6 mysql mysql 4.0K Jun 1 05:35 /var/TKLC/epap/db/pdb **NOTE:** If permission is different execute the following command. Login as root to change the permision. For Mixed EPAP: **$ chmod 775 /var/TKLC/epap/db/pdb** For Standalone PDB **$ chmod 775 /var/TKLC/epap/db/pdb**
13.	☐	**MPS 1A:** Issue the command to start EPAP software on 1A.	Note: Skip this step on Mixed EPAP **$ service Epap start** ~~ /etc/init.d/Epap start ~~ "EPAP_RELEASE" is set to "16.1" EPAP application start Successful.

14.	☐	Note down the timestamp in log.	Run the following command `$ date`

This procedure is complete!

Procedure 27 RESTORE AND CONVERT RTDB

Now that the RTDB backup has been copied over, it's time to restore and convert RTDB (On Mixed EPAP and Non-provisionable site). Time taken by RTDB conversion is dependent on databases size.

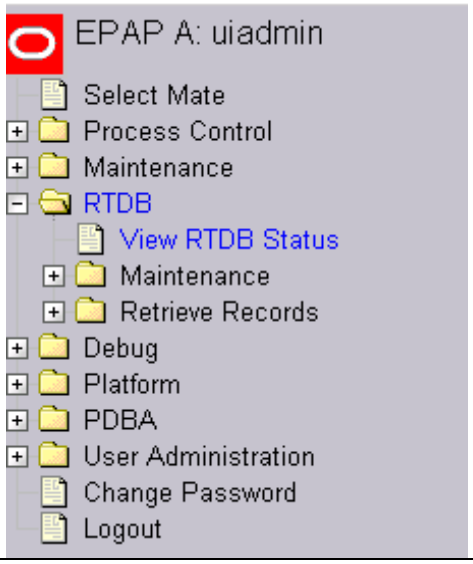
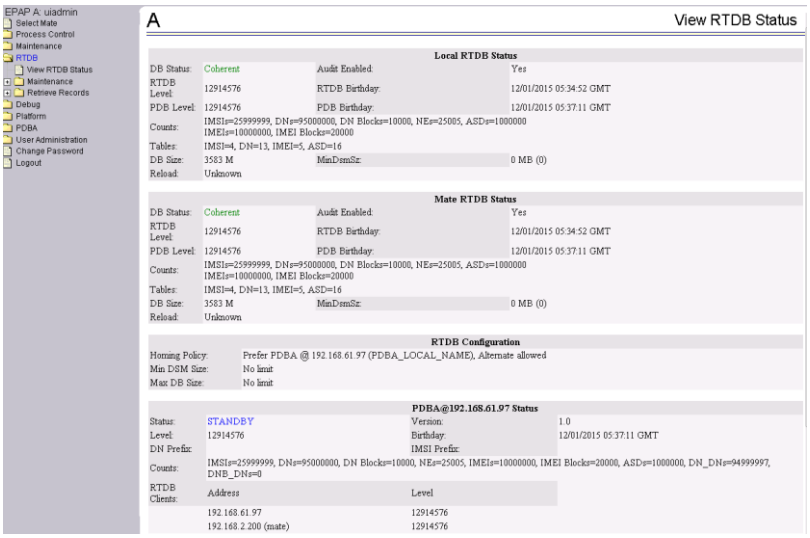
NOTE: This procedure should be skipped if the site is a Standalone PDB.

S T E P #	1B	This procedure restores the previous RTDB database backup to the upgrade 1B server. Estimated time: 90-120 minutes.	
1.	☐	**MPS 1B:** Login as epapdev.	`login: epapdev` `Password: <epapdev_password>`
2.	☐	**MPS 1B:** Change directory to /var/TKLC/epap/free .	`$ cd /var/TKLC/epap/free`
3.	☐	**MPS 1B:** Verify the permission rtdb backups store in the /var/TKLC/epap/free directory.	`$ ls -l rtdbB*` `-rw-rw-rw-  1 epapdev epap 4440758738 Oct 19 12:08 rtdbBackupxxx_xxxxxxxx_xxx.xxx.tar.gz` **NOTE:** If permission is different, execute the following command. `$ chmod 666 rtdbBackupxxx_xxxxxxxx_xxx.xxx.tar.gz`

4.	☐	**MPS 1B:** Execute the command "/usr/TKLC/epap/bin/restoreRtdb.pl file <RTDB backup file name>" to restore and convert RTDB. Note: While running the first command (Without --force option), Please mention backup file name only. Do not mention the full path of file. While running the second command (with --force option), mention the filename without directory path as 2nd argument and the diretory path as the 3rd argument to the command).	Execute the following command when RTDB backup is taken from EPAP 15.0 and 16.0 release. **$ /usr/TKLC/epap/bin/restoreRtdb.pl file rtdbBackup_EPAP111_20160615173313.tar.gz** Otherwise, execute the following command when RTDB backup is taken from EPAP 16.1 release. **$ /usr/TKLC/epap/bin/restoreRtdb.pl file rtdbBackup_EPAP111_20160615173313.tar.gz /var/TKLC/epap/free --force** Note: This script will exit immediately after the execution and run in backupground. Status of restore and convert RTDB shall be verify in step 5 and 6 after successful execution of Procedure 17 on 1A server.
5.	☐	**MPS 1B:** Verify that RTDB Restore is completed successfully.	**$ grep -a "Restore of RTDB from" /usr/TKLC/epap/logs/cgi.dbg | grep -a "finished successfully."** 06/20/16-02:27:37:<epapdev>:<epap1b>:<>::14735: Restore of RTDB from /var/TKLC/appl/free/rtdbBackup_epap1a_20160617131937.tar finished successfully.
6.	☐	**MPS 1B:** Verify that RTDB Conversion is completed successfully.	Note: Skip this step if RTDB backup is taken on upgraded EPAP 16.1 side B of Standby Prov server (Running this procedure for NON-PROV upgrade (Table 12)). **$ grep -a "RTDB conversion completed successfully" /usr/TKLC/epap/logs/cgi.dbg** 12/31/01-21:03:59:<epapdev>:<EPAP84B79A>:<>::24904: RTDB conversion completed successfully. 01/02/02-16:12:43:<epapdev>:<EPAP84B79A>:<>::8463: Banner Info msg added CONVERT_RTDB_CPLT=RTDB conversion completed successfully, exp=20020102161343 01/02/02-16:12:43:<epapdev>:<EPAP84B79A>:<>::8463: RTDB conversion completed successfully.
7.	☐	Note down the timestamp in log.	Run the following command **$ date**

This procedure is complete!

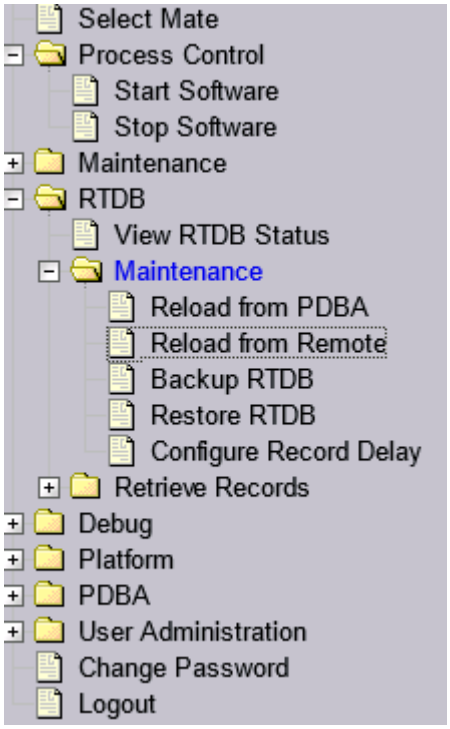
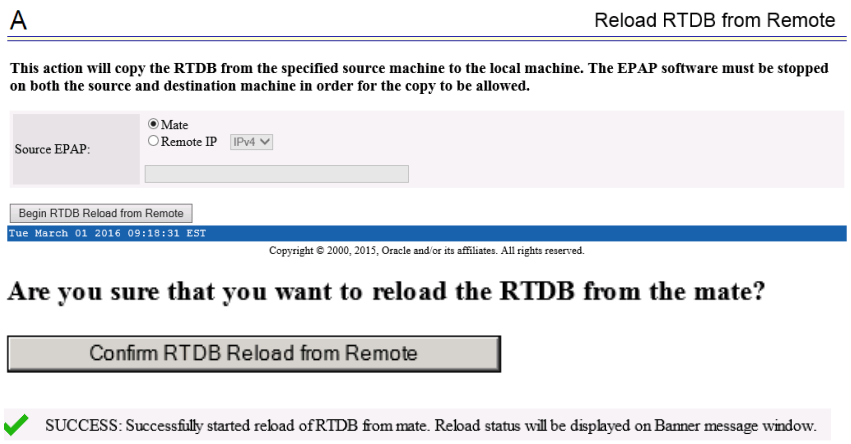
Procedure 28 VERIFY PDBA AND RTDB ARE IN SYNC

STEP #			
	1A	This procedure stops both mysqlapp and mysqlpdb services on Provisionable sites. Estimated time: 5 minutes.	
4.	☐	**MPS 1A:** Login to the GUI terminal and Navigate to the RTDB menu and select "View RTDB Status".	
5.	☐	**MPS 1A:** Verify that PDBA and RTDB are in sync.	
6.	☐	Note down the timestamp in log.	Run the following command `$ date`

This procedure is complete!

Procedure 29 RELOAD RTDB FROM MATE

NOTE: This procedure should be skipped if the site is a Standalone PDB.
NOTE: Stop EPAP software at both the servers i.e. from where RTDB is reloaded and To where the RTDB is reloaded.

S T E P #			
	1A	This procedure restores the previous RTDB database backup to the upgraded 1A server. Estimated time: 15-30 minutes	
1.	☐	**MPS 1A:** Login to the GUI terminal and Navigate to the RTDB menu and select "Reload RTDB from Remote.	 
2.	☐	Check PDBA status and replLog entry. Note: replLog and requests tables should be empty and PDBA(s) should be stopped at both Active/Standby	**# service Pdba status** ~~ /etc/init.d/Pdba status ~~ PDBA process is stopped. If not stopped, stop PDBA at both Active/Stby site **# service Pdba stop** ~~ /etc/init.d/Pdba stop ~~ PDBA application stopped. Execute Procedure 7, step 1 – 7 and make sure that the

		sides. Check the status of Active and Standby PDBA and verify that the status is Down.	replLog and requests are empty.
3.	☐	**MPS 1A:** Issue the command to start EPAP software on 1A after successful completion of reload.	**$ service Epap start** ~~ /etc/init.d/Epap start ~~ "EPAP_RELEASE" is set to "16.1" EPAP application start Successful.
4.	☐	**MPS 1B:** Issue the command to start EPAP software on B.	**$ service Epap start** ~~ /etc/init.d/Epap start ~~ "EPAP_RELEASE" is set to "16.1" EPAP application start Successful.
5.	☐	Note down the timestamp in log.	Run the following command: **$ date**

This procedure is complete!

Procedure 30 POINT ACTIVE PDB (2A) TO UPGRADED STANDBY PDB (1A)

Note: In this procedure, we shall be configuring the Active/Standby PDBA as –
The EPAP 15.0/16.0 shall be the active PDBA if it is not yet upgraded to EPAP 16.1. The EPAP 16.1 shall be the standby PDBA.
This procedure shall be executed on the EPAP 15.0/16.0(upgraded EPAP 16.1) Active PDBA to configure EPAP 16.1 as its remote PDBA.

STEP #	2A	This procedure sets the remote PDB address to the upgraded Standby PDB. Estimated time: 10 minutes	
1.	☐	**MPS 2A:** Login as root to the Active PDBA (2A)	Determine the Active PDBA from step 13 of Procedure 2. Login: **root** Password: **<root_password>**
2.	☐	**MPS 2A:** Stop the Epap software on the Active PDB EPAP B.	**# ssh mate "service Epap stop"** **# service Epap stop** ~~ /etc/init.d/Epap stop ~~ EPAP application stopped.
3.	☐	**MPS 2A:** Switch user to epapconfig.	**# su - epapconfig**

4.	☐	**MPS 2A:** Configure PDB IP addresses. Select option 8, PDB Configuration Menu.	/-------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**
5.	☐	**MPS 2A:** The Configure PDB Menu is displayed. Select option 1.	/-----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 | \-----------------------------------/ Enter Choice: **1**
6.	☐	**MPS 2A:** Configure the Remote PDBA IP Address to match the Standby PDBA EPAP A and B servers. Enter the password for epapdev of remote PDBA EPAP A.	Verifying connectivity with mate... This MPS is configured to be provisionable. The EPAP local PDBA IPv4 address is currently set to <IP> The EPAP local PDBA IPv6 address is currently set to 0000:0000:0000:0000:0000:0000:0000:0000 The EPAP local PDBA IPv4 Address is <IP>. EPAP remote PDBA IP Address [0.0.0.0]: **<1A IP address>** EPAP remote PDBA B machine IP Address [0.0.0.0]: **<1B IP address>** The server does not know of <1A IP address>. Will just exchange host keys for the name given! Password of epapdev: **<epapdev_password>**

7.	☐	**MPS 2A:** Select option e to Exit.	/-----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 | \-----------------------------------/ Enter Choice: **e**
8.	☐	**MPS 2A:** The EPAP Configuration Menu is displayed. Select option1, Display Configuration	/-------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: **1**

9.	☐	**MPS 2A:** Configuration information is displayed. Verify that the Remote PDBA Address and Remote PDBA B Address match the Standby PDBA EPAP A and B servers.	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 = 192.168.50.150** **Remote PDBA B Address = 192.168.50.151** 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>**

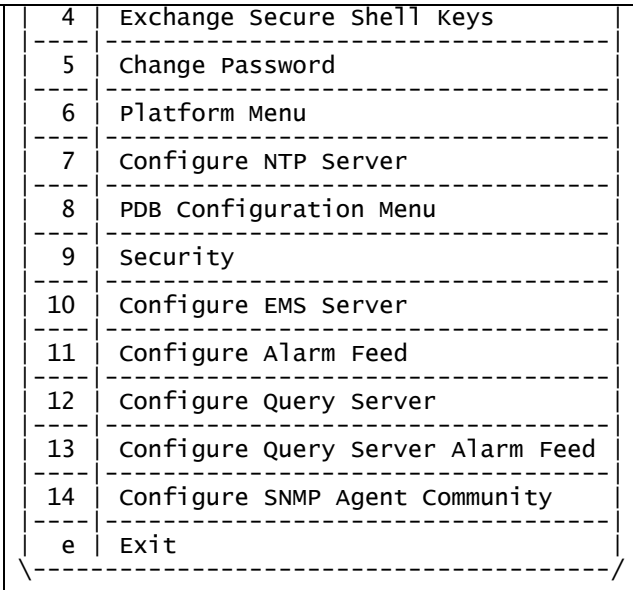
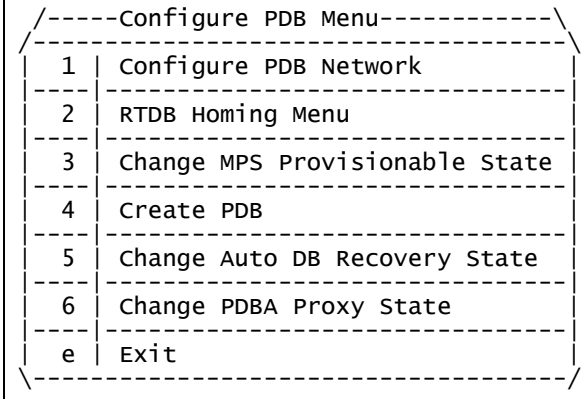
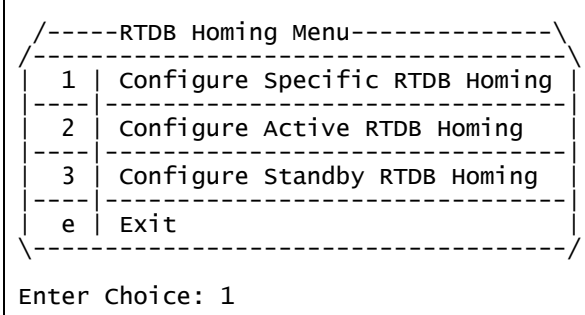
10.	☐	**MPS 2A:** Select option e, Exit.	/-------EPAP Configuration Menu--------\ /--\ | 1 | Display Configuration | |----|----------------------------------| | 2 | Configure Network Interfaces Menu | |----|----------------------------------| | 3 | Set Time Zone | |----|----------------------------------| | 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: **e** Note: If this menu is not exited properly, then the root access shall remain enabled.
11.	☐	Note down the timestamp in log.	Run the following command: **$ date**

This procedure is complete!

Procedure 31 SET SPECIFIC RTDB HOMING

Set the RTDB homing on the Active PDBA 2A server to Specific Homing.

STEP #	2A	This procedure sets specific RTDB homing. Estimated time: 5 minutes	
1.	☐	**MPS 2A:** Enter the epapconfig menu	$ **su - epapconfig**
2.	☐	**MPS 2A:** Select option 8 to enter the PDB Configuration menu.	/-------EPAP Configuration Menu--------\ /--\ | 1 | Display Configuration | |----|----------------------------------| | 2 | Configure Network Interfaces Menu | |----|----------------------------------| | 3 | Set Time Zone | |----|----------------------------------|

			
3.	☐	**MPS 2A:** Select option 2 to enter the RTDB Homing menu.	
4.	☐	**MPS 2A:** Select option 1 to select Specific RTDB Homing.	
5.	☐	**MPS 2A:** Set the RTDB Homing to receive updates from the local (Active) PDB.	EPAP software and PDBA are running. Stop them? [N]: Y EPAP software is running on mate MPS. Stop it? [N]: Y There are two configured PDBs for this MPS: 1. 10.23.2.23 (local) 2. 10.2.2.250 Select the preferred PDB from which to receive updates [1]: **1**

			The RTDB Homing policy is set to 'specific' and will prefer updates from 10.23.2.23 Press return to continue...
6.	☐	**MPS 2A:** Select option ‘e’ to exit the RTDB Homing menu.	/-----RTDB Homing Menu----------\ /-----------------------------------\ | 1 | Configure Specific RTDB Homing | |---|-----------------------------| | 2 | Configure Active RTDB Homing | |---|-----------------------------| | 3 | Configure Standby RTDB Homing | |---|-----------------------------| | e | Exit | \-----------------------------------/ Enter Choice: e
7.	☐	**MPS 2A:** Select option ‘e’ to exit the PDB Configuration menu.	/-----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 | \-----------------------------------/ Enter Choice: e
8.	☐	**MPS 2A:** Select option ‘e’ to exit the epapconfig menu.	/-------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: e
9.	☐	Note down the timestamp in log.	Run the following command: **$ date**

This procedure is complete!

Procedure 32 POINT STANDBY PDB (1A) TO ACTIVE PDB (2A)

Note: This procedure is the continuation of Procedure 30. The EPAP 15.0/16.0 shall be the active PDBA if it is not yet upgraded to EPAP 16.1. The EPAP 16.1 shall be the standby PDBA.
This procedure shall be executed on the EPAP 16.1 to configure the EPAP 15.0/16.0(upgraded EPAP 16.1) as its remote PDBA.

STEP #	1A	This procedure points the Standby PDBA (1A) to the Active PDBA (2A). Estimated time: 10 minutes	
1.	☐	**MPS 1**A: Login as epapdev to the 1A server	login: **epapdev** Password: **<epapdev_password>**
2.	☐	**MPS 1A:** Stop the Pdba software.	**$ service Pdba stop** ~~ /etc/init.d/Pdba stop ~~ PDBA application stopped.
3.	☐	**MPS 1A:** Stop the Epap software.	**$ service Epap stop** ~~ /etc/init.d/Epap stop ~~ EPAP application stopped.
4.	☐	**MPS 1A:** Stop the Epap software on MPS 1B.	**$ ssh mate** **$ service Epap stop** ~~ /etc/init.d/Epap stop ~~ EPAP application stopped. **$ exit**
5.	☐	**MPS 1A:** Change User to admusr	**$ su – admusr** **Password: <admusr_password>**
6.	☐	**MPS 1A:** Enter the epapconfig menu.	$ sudo **su - epapconfig**

7.	☐	**MPS 1A:** Configure PDB IP addresses. Select option 8, PDB Configuration Menu.	/-------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**
8.	☐	**MPS 1A:** The Configure PDB Menu is displayed. Select option1. Select option 1 to configure the 1A as the remote PDBA**.**	/-----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 | \--------------------------------------/ Enter Choice: **1** /-----PDB Network Configuration Menu-\ /-------------------------------------\ | 1 | IPv4 Configuration | |----|----------------------------------| | 2 | IPv6 Configuration | |----|----------------------------------| | e | Exit | \-------------------------------------/ Enter Choice:

9.	☐	**MPS 1A:** Configure the Remote PDBA IP Address to match the 2A and 2B servers. Enter the password for MPS 2A on MPS 2B. 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 If the default values shown are correct press return to accept them. Otherwise, enter the values and press Return.	Verifying connectivity with mate... This MPS is configured to be provisionable. The EPAP local PDBA IPv4 address is currently set to <IP> The EPAP local PDBA IPv6 address is currently set to 0000:0000:0000:0000:0000:00 00:0000:0000 The EPAP local PDBA IPv4 Address is <IP>. EPAP remote PDBA IP Address [0.0.0.0]: **<2A IP address>** EPAP remote PDBA B machine IP Address [0.0.0.0]: **<2B IP address>** The server does not know of <2A IP address>. Will just exchange host keys for the name given! Password of epapdev: **<epapdev_password>**
10.	☐	**MPS 1A:** Select option e, Exit.	/-----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 | \-----------------------------------/ Enter Choice: **e**

11.	☐	**MPS 1A:** The EPAP Configuration Menu is displayed. Select option1, Display Configuration	/-------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: **1**

12.	☐	**MPS 1A:** Configuration information is displayed. Verify that the Remote PDBA Address and Remote PDBA B Address match the 1A and 1B servers.	EPAP A Provisioning Network IP Address = 192.168.61.48 EPAP A Provisioning Network IP Address v6 = Not configured EPAP B Provisioning Network IP Address = 192.168.61.49 EPAP B Provisioning Network IP Address v6 = Not configured Provisioning Network Netmask = 255.255.255.0 Provisioning Network Prefix = Not configured Provisioning Network Default Router = 192.168.61.250 Provisioning Network Default Router v6 = Not configured EPAP A Backup Prov Network IP Address = Not configured EPAP A Backup Prov Network IP Address v6 = Not configured EPAP B Backup Prov Network IP Address = Not configured EPAP B Backup Prov Network IP Address v6 = Not configured Backup Prov Network Netmask = Not configured Backup Prov Network Prefix v6 = Not configured Backup Prov Network Default Router = Not configured Backup Prov Network Default Router v6 = 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 IP Version = IPv4 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 Local PDBA Address v6 = Not configured 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>

13.	☐	**MPS 1A:** Select option e, Exit.	/-------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: **e**
14.	☐	Note down the timestamp in log.	Run the following command: **$ date**

This procedure is complete!

Procedure 33 RESTART THE PDBA AND EPAP

STEP #	1A	2A		
			This procedure restarts the PDBA software and verifies that replication is working correctly. Estimated time: 5 minutes	
1.	☐	☐	**MPS 2**A: Login as epapdev to MPS 2A.	login: **epapdev** Password: **<epapdev_password>** Note: Skip the step 2 if MPS 2A is already migrated to EPAP 16.1
2.	☐	☐	**MPS 2A:** Switch super user to root.	**$ su -** **Password: <root_password>**
3.	☐	☐	**MPS 2A:** Start the Epap software	**# service Epap start** ~~ /etc/init.d/Epap start ~~ EPAP application started.
4.	☐	☐	**MPS 2A:** Start the Epap software on mate.	Note : Skip this step on Standalone PDB **# ssh mate "service Epap start"** ~~ /etc/init.d/Epap start ~~ EPAP application started.
5.	☐	☐	**MPS 2A**: Turn on the **PDBA_REMOTE_PDBI_ALLOWED**	Execute the command below to find the current status of PDBA_REMOTE_PDBI_ALLOWED flag.

			flag to enable PDB to accept updates from remote PDBI. **Note: PDBA software must be restarted, for this change to take effect.**	**# uiEdit | grep -i PDBA_REMOTE_PDBI_ALLOWED** Turn on the PDBA_REMOTE_PDBI_ALLOWED flag. Skip the next command if output of the above command is "PDBA_REMOTE_PDBI_ALLOWED" is set to "ON" **# uiEdit PDBA_REMOTE_PDBI_ALLOWED ON** "PDBA_REMOTE_PDBI_ALLOWED" is set to "ON"
6.	☐	☐	**MPS 2A:** Change the pdba process name back to its original state.	**# cd /etc/init.d/** **# ls Pdba*** Pdba_stopped **# mv Pdba_stopped Pdba**
7.	☐	☐	**MPS 2A:** Start the Pdba software.	**# service Pdba start** ~~ /etc/init.d/Pdba start ~~ Starting PDBA in 255M configuration. "PDB_SUB_CAPACITY" is set to "255000000" PDBA application started.
6.	☐	☐	**MPS 1A:** Login as epapdev to MPS 1A.	login: **epapdev** Password: **<epapdev_password>**
7.	☐	☐	**MPS 1A:** Start the Epap software.	**# service Epap start** ~~ /etc/init.d/Epap start ~~ EPAP application started.
8.	☐	☐	**MPS 1A**: SSH to MPS 1B.	Note : Skip this step on Standalone PDB **# ssh mate**
9.	☐	☐	**MPS 1B:** Start the Epap software on mate.	Note : Skip this step on Standalone PDB **# service Epap start** ~~ /etc/init.d/Epap start ~~ EPAP application started.
10	☐	☐	**MPS 1A:** Start the Pdba software.	**# service Pdba start** ~~ /etc/init.d/Pdba start ~~ Starting PDBA in 528M configuration. "PDB_SUB_CAPACITY" is set to "528000000" **PDBA application started.**
11	☐	☐	Note down the timestamp in log.	Run the following command: **$ date**

This procedure is complete!

Procedure 34 UPDATE PDB CONFIGURATION

Perform this procedure on ALL NON-PROV EPAP's in Network!!!

Note: This procedure also exchange keys with PROV site.

S T E P #	1A	1B	This procedure updates the RTDB Homing. Estimated time: 5 minutes	
1.	☐	☐	**MPS 1**A:	login: **epapdev**

			Login as epapdev.	Password: **<epapdev_password>**
2.	☐	☐	**MPS 1A:** Issue the command to retrieve the system status	**$ syscheck**
3.	☐	☐	**MPS 1A:** The syscheck response is displayed. Verify all components are "OK" on the mate EPAP **NOTE:** Investigate the cause of any failure in the syscheck response. Correct the issue or contact TAC for resolution before proceeding.	Running modules in class hardware... OK Running modules in class proc... OK Running modules in class net... OK Running modules in class disk... OK Running modules in class services... OK Running modules in class system... OK LOG LOCATION: /var/TKLC/log/syscheck/fail_log #
4.	☐	☐	**MPS 1A:** Issue the command to retrieve the system status on the mate EPAP	Note : Skip this step on Standalone PDB $ **ssh mate syscheck**
5.	☐	☐	**MPS 1A:** The syscheck response is displayed. Verify all components are "OK" on the mate EPAP	Note : Skip this step on Standalone PDB syscheck@mate's password: **<syscheck@mate_password>** Running modules in class disk... OK Running modules in class hardware... OK Running modules in class net... OK Running modules in class proc... OK Running modules in class system... OK Running modules in class services... OK LOG LOCATION: /var/TKLC/log/syscheck/fail_log Connection to mate closed.
6.	☐	☐	**MPS 1A:** Stop the EPAP software on the mate EPAP.	Note : Skip this step on Standalone PDB $ **ssh mate "service Epap stop"** ~~ /etc/init.d/Epap stop ~~ EPAP application stopped.
7.	☐	☐	**MPS 1A:** Stop the EPAP software on the local EPAP.	$ service Epap stop ~~ /etc/init.d/Epap stop ~~ EPAP application stopped.
8.	☐	☐	**MPS 1A:** Change user to admusr	**$ su – admusr** **Password: <admusr_password>**
9.	☐	☐	**MPS 1A:**	**$ sudo su - epapconfig**

			Enter the epapconfig menu	
10.	☐	☐	**MPS 1A:** Select option 8 to enter the PDB Configuration menu.	/-------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
11.	☐	☐	**MPS 1A:** Select option 1 to Configure PDB Network	/-----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 | \-----------------------------------/ Enter Choice: 1
12.	☐	☐	**MPS 1A:** Enter the IPs of both Remote PDBA.	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 [10.248.10.79]: Key Exchange shall be done on both Local and Mate epapdev@10.248.10.79's Password: <**epapdev_password**> epapdev@10.248.10.79's Password: <**epapdev_password**>
13.	☐	☐	**MPS 1A:** Select option ‘e’ to exit the PDB Configuration	/-----Configure PDB Menu------------\ /-----------------------------------\ | 1 | Configure PDB Network | |----|----------------------------|

			menu.	/-------EPAP Configuration Menu--------\ /--\ | 1 | Display Configuration | |----|----------------------------------| | 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 | \----------------------------------/ Enter Choice: e
14.	☐	☐	**MPS 1A:** Select option 'e' to exit the epapconfig menu.	/-------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: e
15.	☐	☐	**MPS 1A:** Change user back to epapdev	**$ su – epapdev** **Password:<epapdev_password>**
16.	☐	☐	**MPS 1A:** Start the Epap software. **Note: This is run on the side, which is** being upgraded.	**$ service Epap start** ~~ /etc/init.d/Epap start ~~ EPAP application started.
17.	☐	☐	**MPS 1A:** Start the Epap software on mate. Note: This is run on the side, which is being upgraded.	**$ ssh mate "service Epap start"** ~~ /etc/init.d/Epap start ~~ EPAP application started.

18.	☐	☐	**MPS 1A:** Enter the command to kill the gui screen process on EPAP-A	`$ pkill gs`
19.	☐	☐	**MPS 1A:** Enter the command to kill the gui screen process of EPAP-B	`$ ssh mate "pkill gs"`
20.	☐	☐	**MPS 1A:** Issue the command to retrieve the system status	`$ syscheck`
21.	☐	☐	**MPS 1A:** The syscheck response is displayed. Verify all components are "OK" on the mate EPAP **NOTE:** Investigate the cause of any failure in the syscheck response. Correct the issue or contact TAC for resolution before proceeding.	`Running modules in class hardware...` `OK` `Running modules in class proc...` `OK` `Running modules in class net...` `OK` `Running modules in class disk...` `OK` `Running modules in class services...` `OK` `Running modules in class system...` `OK` `LOG LOCATION: /var/TKLC/log/syscheck/fail_log` `#`
22.	☐	☐	**MPS 1A:** Issue the command to retrieve the system status on the mate EPAP	`$ ssh mate syscheck`
23.	☐	☐	**MPS 1A:** The syscheck response is displayed. Verify all components are "OK" on the mate EPAP	`syscheck@mate's password: <syscheck@mate_password>` `Running modules in class disk...` `OK` `Running modules in class hardware...` `OK` `Running modules in class net...` `OK` `Running modules in class proc...` `OK` `Running modules in class system...` `OK` `Running modules in class services...` `OK` `LOG LOCATION: /var/TKLC/log/syscheck/fail_log` `Connection to mate closed.`
24.	☐	☐	Note down the timestamp in log.	Run the following command: `$ date`

This procedure is complete!

Procedure 35 EXCHANGE KEYS BETWEEN PROVISIONABLE AND NON-PROVISIONABLE SERVERS USING SCRIPT

STEP #	1A	This procedure exchange keys between provisional and non-provisionable sites. Estimated time: 10 minutes for 14 Non-prov IPs.	
1.	☐	**MPS 1A:** Login as epapdev.	`login: epapdev` `Password: <epapdev_password>`
2.	☐	**MPS 1A:** Change director to /usr/TKLC/epap/bin.	`$ cd /usr/TKLC/epap/bin`
3.	☐	**MPS 1A:** Create a new file having Non-Provs IP addresses and epapdev password.	`$ touch input.txt` `$ chmod 777 input.txt` Note: Enter the Non-Prov IP and Password in input.txt, in the following format: `<NonProv1-A IP> <epapdev password>` `<NonProv1-B IP> <epapdev password>` e.g. `11.178.88.85 passwd1` `11.178.88.86 passwd1`
4.	☐	**MPS 1A:** Execute exchangeKeyProvNonProv.pl script to exchange keys between Prov servers and Non-Prov servers. Enter the file name created in previous step.	`$ /usr/TKLC/epap/bin/exchangeKeyProvNonProv.pl` `This script will exchange keys with A and B server of non-provs attached with Prov server` `Enter the full path of file containing the Non-Provisionable servers' credentials.` `Example: /var/TKLC/epap/free/input.txt` `/usr/TKLC/epap/bin/input.txt`
5.	☐	**MPS 1A:** Execute Procedure 36 for Non-Provs IPs with which key exchange is failed in previous step.	Exchange Keys between provisionable and non-provisionable server.
6.	☐	Note down the timestamp in log.	Run the following command: `$ date`

Procedure 36 EXCHANGE KEYS BETWEEN PROVISIONABLE AND NON-PROVISIONABLE

Execute this procedure only on non-provisionable sites. Otherwise skip this procedure.

STEP #	1A	1B	This procedure exchange keys between provisional and non-provisionable sites. Estimated time: 5 minutes for each non-prov	
1.	☐	☐	**MPS 1A:** Execute step 1 to 3 and 9 of Procedure 21.	Configure Provisioning Network on Non-Provisionable sites.
2.	☐	☐	**MPS 1B:** Select option 4 to enter the Exchange Secure Shell Keys Menu.	/-------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: **4**
3.	☐	☐	**MPS 1B:** The Exchange Secure Shell Keys is displayed. Select option 1 to exchange keys between provisionale and non-provisional sites. Enter the IP Provisionable site.	/-----Exchange Secure Shell Keys Menu-----\ /--\ | 1 | Exchange Keys with Mate | |----|----------| | 2 | Exchange Keys with Remote | |----|----------| | 3 | Exchange Keys with Mate as Root User | |----|----------| | e | Exit | \--/ Enter Choice: 2 Are you sure you wish to exchange keys with remote? [N]: **Y** Remote IP Address:**10.248.10.84** epapdev@10.248.10.84:
4.	☐	☐	Note down the timestamp in log.	Run the following command: **$ date**

This procedure is complete!

Procedure 37 ENABLE EPAP PDBA PROXY AND EPAP VIP OPTIONAL FEATURES

Ensure the provisioning activity has been halted before proceeding!!!

STEP #	1A	2A	This procedure outlines the steps for provisioning the PDBA proxy VIP. Estimated time: 10 minutes	
1.	☐	☐	**MPS 1A**: Login as epapdev to 1A server.	Login: **epapdev** Password: **<epapdev_password>**
2.	☐	☐	**MPS 1A**: Perform "syscheck" on the 1A server.	**$ syscheck** Running modules in class hardware... OK Running modules in class proc... OK Running modules in class net... OK Running modules in class disk... OK Running modules in class services... OK Running modules in class system... OK LOG LOCATION: /var/TKLC/log/syscheck/fail_log #
3.	☐	☐	**MPS 1A**: SSH to EPAP 1B.	**$ssh mate**
4.	☐	☐	**MPS 1B**: Perform "syscheck" on the 1B.	**$ syscheck** Running modules in class hardware... OK Running modules in class proc... OK Running modules in class net... OK Running modules in class disk... OK Running modules in class services... OK Running modules in class system... OK LOG LOCATION: /var/TKLC/log/syscheck/fail_log #
5.	☐	☐	**MPS 1B**: Exit back to the 1A server	**$ exit**
6.	☐	☐	**MPS 1A**: Log into epapconfig	$ **su – epapconfig**
7.	☐	☐	**MPS 1A**: Choose option "1" to display Configuration.	MPS Side A: /-------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 |

8.	☐	☐	**MPS 1A**: Verify that the VIP is not configured.	MPS Side A: EPAP A Provisioning Network IP Address = 192.168.61.115 EPAP B Provisioning Network IP Address = 192.168.61.116 Provisioning Network Netmask = 255.255.255.0 Provisioning Network Default Router = 192.168.61.1 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 = Not configured** **Remote Provisioning VIP = Not configured** Local PDBA Address = 192.168.61.115 Remote PDBA Address = 192.168.61.181 Remote PDBA B Address = 192.168.61.182 Time Zone = America/New_York PDB Database = Exists Preferred PDB = Standby Allow updates from alternate PDB = Yes Auto DB Recovery Enabled = Yes PDBA Proxy Enabled = No Press return to continue...
9.	☐	☐	**MPS 1A**: Choose option "2" to enter the "Configure Network Interfaces Menu".	MPS Side A: /-------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
10.	☐	☐	**MPS 1A**: Choose option "6" to enter the "Configure Provisioning VIP Addresses Menu".	MPS Side A: /-----Configure Network Interfaces Menu----\ /---\ | 1 | Configure Provisioning Network | |---|---| | 2 | Configure Sync Network | |---|---| | 3 | Configure DSM Network | |---|---| | 4 | Configure Backup Provisioning Network | |---|---| | 5 | Configure Static NAT Addresses | |---|---| | 6 | Configure Provisioning VIP Addresses | |---|---| | e | Exit | \\---/ Enter Choice: 6
11.	☐	☐	**MPS 1A**: Enter "Y" to stop PDBA / EPAP software then enter VIP address for the local and remote PDBA sites.	Verifying root connectivity with mate... EPAP software and PDBA are running. Stop them? [N]: **Y** EPAP software is running on mate MPS. Stop it? [N]: **Y** EPAP local provisioning Virtual IP Address [0.0.0.0]: **192.168.15.152** EPAP remote provisioning Virtual IP Address [0.0.0.0]: **192.168.15.172**
12.	☐	☐	**MPS 1A**: Choose option "e" to exit.	MPS Side A: /-----Configure Network Interfaces Menu----\ /---\ | 1 | Configure Provisioning Network | |---|---| | 2 | Configure Sync Network | |---|---| | 3 | Configure DSM Network | |---|---| | 4 | Configure Backup Provisioning Network | |---|---| | 5 | Configure Static NAT Addresses | |---|---| | 6 | Configure Provisioning VIP Addresses | |---|---| | e | Exit | \\---/ Enter Choice: e

13.	☐	☐	**MPS 1A**: Choose option "1" to "Display Configuration.	MPS Side A: /-------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: 1
14.	☐	☐	**MPS 1A**: Verify VIP addresses	MPS Side A: EPAP A Provisioning Network IP Address = 192.168.61.115 EPAP B Provisioning Network IP Address = 192.168.61.116 Provisioning Network Netmask = 255.255.255.0 Provisioning Network Default Router = 192.168.61.1 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 = 192.168.15.152** **Remote Provisioning VIP = 192.168.15.172** Local PDBA Address = 192.168.15.115 Remote PDBA Address = 192.168.16.115 Remote PDBA B Address = 192.168.16.116 Time Zone = America/New_York PDB Database = Exists Preferred PDB = Standby Allow updates from alternate PDB = Yes Auto DB Recovery Enabled = Yes

				PDBA Proxy Enabled = No Press return to continue...
15.	☐	☐	**MPS 1A**: Choose "e" to exit	/-------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: e
16.	☐	☐	**MPS 1A**: Verify that you can ping both VIP addresses.	$ **ping <local VIP>** **$ ping <remote VIP>**
17.	☐	☐	**MPS 1A**: Log into epapconfig	$ **su - epapconfig**
18.	☐	☐	**MPS 1A**: Enter "1" to "Display Configuration"	/-------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 |

11.	☐	☐	**MPS 1A**: Verify that the state of PDBA Proxy Feature is No.	MPS Side A: EPAP A Provisioning Network IP Address = 192.168.61.115 EPAP B Provisioning Network IP Address = 192.168.61.116 Provisioning Network Netmask = 255.255.255.0 Provisioning Network Default Router = 192.168.61.1 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 = Not configured Remote Provisioning VIP = Not configured Local PDBA Address = 192.168.61.115 Remote PDBA Address = 192.168.61.181 Remote PDBA B Address = 192.168.61.182 Time Zone = America/New_York PDB Database = Exists Preferred PDB = Standby Allow updates from alternate PDB = Yes Auto DB Recovery Enabled = Yes PDBA Proxy Enabled = **No** Press return to continue...
12.	☐	☐	**MPS 1A**: Choose option “8” to display “PDB Configuration Menu	MPS Side A: /-------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
13.	☐	☐	**MPS 1A**: Choose option "6" to "Change PDBA Proxy State".	MPS Side A: /-----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 \----\----------/ Enter Choice: 6
14.	☐	☐	**MPS 1A**: Enter **"Y"** to stop PDBA / EPAP software and enable PDBA Proxy.	EPAP software and PDBA are running. Stop them? [N]: **Y** EPAP software is running on mate MPS. Stop it? [N]: **Y** PDBA PROXY is currently DISABLED. Do you want to ENABLE PDBA Proxy? [N]: **Y**
15.	☐	☐	**MPS 1A**: Enter "e" to exit	MPS Side A: /-----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 \----\----------/ Enter Choice: e
16.	☐	☐	**MPS 1A**: Enter "1" to "Display Configuration"	/-------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: 1 ```
17.	☐	☐	**MPS 1A**: Verify that the state of PDBA Proxy Feature is Yes.	``` MPS Side A EPAP A Provisioning Network IP Address = 192.168.61.115 EPAP B Provisioning Network IP Address = 192.168.61.116 Provisioning Network Netmask = 255.255.255.0 Provisioning Network Default Router = 192.168.61.1 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 = 192.168.15.152 Remote Provisioning VIP = 192.168.15.172 Local PDBA Address = 192.168.15.115 Remote PDBA Address = 192.168.16.115 Remote PDBA B Address = 192.168.16.116 Time Zone = America/New_York PDB Database = Exists Preferred PDB = Standby Allow updates from alternate PDB = Yes Auto DB Recovery Enabled = Yes PDBA Proxy Enabled = Yes ```
18.	☐	☐	**MPS 1A**: Enter "e" to exit	``` MPS Side A: /-------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: e
```

19.	☐	☐	**MPS 1A**: Start Epap software	`$ service Epap start`
20.	☐	☐	**MPS 1A**: Start PDBA software	`$ service Pdba start`
21.	☐	☐	**MPS 1A**: Perform "syscheck" on MPS-A.	`$ syscheck` `Running modules in class hardware...` `OK` `Running modules in class proc...` `OK` `Running modules in class net...` `OK` `Running modules in class disk...` `OK` `Running modules in class services...` `OK` `Running modules in class system...` `OK` `LOG LOCATION: /var/TKLC/log/syscheck/fail_log`
22.	☐	☐	**MPS 1A**: SSH to MPS 1B.	`$ ssh mate`
23.	☐	☐	**MPS 1B**: Start Epap software on MPS 1B.	`$  service Epap start`
24.	☐	☐	**MPS 1B**: Perform "syscheck" on MPS 1B.	`$ syscheck` `Running modules in class hardware...` `OK` `Running modules in class proc...` `OK` `Running modules in class net...` `OK` `Running modules in class disk...` `OK` `Running modules in class services...` `OK` `Running modules in class system...` `OK` `LOG LOCATION: /var/TKLC/log/syscheck/fail_log`
25.	☐	☐	Note down the timestamp in log.	Run the following command: `$ date`

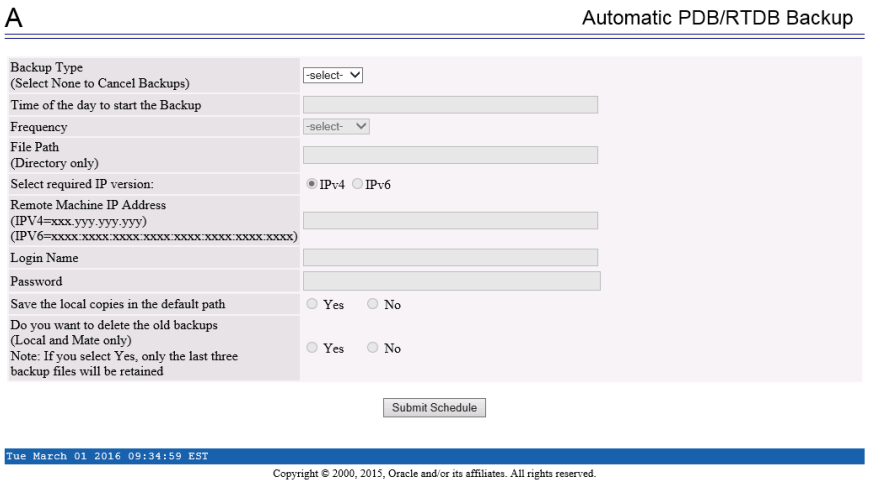
26.	☐	☐	**Repeat steps 1-25 for <u>ACTIVE PBDA</u> site, that is, 2A server. This procedure needs to be run on both the ACTIVE and STANDBY PDBA sites for the feature to perform properly**

This procedure is complete!

Procedure 38 CONFIGURE THE AUTO BACKUP

This procedure also configures auto backup for RTDB on all the Non-PROVs that are homed to the PDBA on which auto backup is being configured.

EPAP software on all Non-PROVs homed to the PDBA should be running for successful auto RTDB backup on the Non-PROVs.

STEP #			
	1A	This procedure enables the auto backup feature for the Provisioning Database. Estimated time: 5 minutes	
1.	☐	**MPS 1A:** Navigate to the main Maintenance menu selection and select "Automatic PDB/RTDB Backup". Specify the required fields and press the Submit Schedule button.	
2.	☐	Note down the timestamp in log.	Run the following command: `$ date`

This procedure is complete!

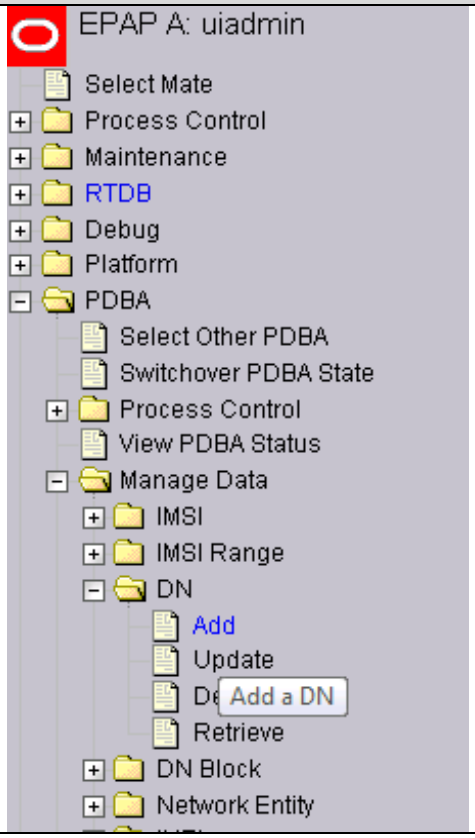
Procedure 39 SWITCHOVER PDBA

STEP #		
	1A	This procedure switchovers PDBA. Estimated time: 5 minutes

1.	☐	**MPS 1A :** Switchover PDBA to make it Active	`[epapdev@Natal-A ~]$ telnet localhost 5873` `Trying 127.0.0.1...` `Connected to localhost.` `Escape character is '^]'.` `connect()` `rsp (rc 0, data (connectId 1, side standby))` `switchover(side active, timeout 10)` `rsp (rc 0)` `disconnect()` `rsp (rc 0)Connection closed by foreign host.`
2.	☐	Note down new PDBA configuration	**Now the upgraded servers are Active PDBA. Mark them as 2A and 2B now.** **The EPAP 15.0/16.0 servers are now 1A and 1B (Standby PDBA A and B).**
3.	☐	Note down the timestamp in log.	Run the following command: `$ date`

This procedure is complete!

Procedure 40 CHECK REPLICATION BETWEEN ACTIVE AND STANDBY PDBA

STEP #	2A	This procedure checks the replication between Active EPAP 16.1 and Standby EPAP 15.0/16.0. Estimated time: 5 minutes	
1.	☐	**MPS 2A:** Login to the GUI terminal and Navigate to the "ADD" menu under PDBA->Manage Data->DN.	

2.	☐	**MPS 2A:** Enter a DN entery.	A Add a DN DN to add: 12345 Enter a maximum of 2 Network Entities (optional): RN SP VMS GRN Clear / RN SP VMS GRN Clear Additional Subscriber Data (optional): Portability Type: No portability type (PT=none) Subscriber Type (optional): Enter Number Substitution DN (optional): Calling Party Blacklist: No Called Party Blacklist: No Enter up to 7 additional DN's to add (optional): Force: No Add DN
3.	☐	**MPS 2A:** Navigate to the "View PDAB Status" menu under PDBA to verify the Data replication between Active and Standby PDBA as well as on all RTDBs.	A View PDBA Status **PDBA@192.168.61.45 Status** Status: ACTIVE Version: 1.0 Level: 121822 Birthday: 06/14/2016 13:23:16 GMT DN Prefix: IMSI Prefix: Counts: IMSIs=200001, DNs=298292, DN Blocks=0, NEs=2, IMEIs=0, IMEI Blocks=0, ASDs=0, DN_DNs=0, DNB_DNs=0 RTDB Clients: Address Level 192.168.61.45 121822 192.168.2.200 (mate) 121822 **PDB@192.168.61.45 Status** Status: Database daemon is running Counts: IMSIs=200001, DNs=298292, DNBlocks=0, NEs=2, IMEIs=0, IMEIBlocks=0, ASDs=0, DN_DNs=0, DNB_DNs=0 Resync Objects=92674 **PDBA@192.168.61.97 Status** Status: STANDBY Version: 1.0 Level: 121822 Birthday: 06/14/2016 13:23:16 GMT DN Prefix: IMSI Prefix: Counts: IMSIs=200001, DNs=298292, DN Blocks=0, NEs=2, IMEIs=0, IMEI Blocks=0, ASDs=0, DN_DNs=0, DNB_DNs=0 RTDB Clients: Address Level 192.168.61.97 121822 192.168.2.200 (mate) 121822 **PDB@192.168.61.97 Status** Status: Database daemon is running Counts: IMSIs=200001, DNs=298292, DNBlocks=0, NEs=2, IMEIs=0, IMEIBlocks=0, ASDs=0, DN_DNs=0, DNB_DNs=0 Resync Objects=90426 **Refresh Options** View Pdba Status refresh time (seconds): 0 Change refresh time Stop refresh
4.	☐	Note down the timestamp in log.	Run the following command: `$ date`

This procedure is complete!

3.7 SM UPGRADE

Procedure 41 REBOOT EAGLE CARDS

S T E P #	This procedure reboots all SM cards on an Eagle. Estimated time: 40 minutes

1. ☐	**EAGLE**: reboot all SM cards to reload new RTDB.	Login onto the connected Eagle. 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 2 batches (booting 1/2 of the cards at a single time). If this is a Provisionable EPAP, reboot the rest of the cards on both local and remote sides over 2 batches (booting 1/2 of the cards at a single time).
2. ☐	Note down the timestamp in log.	Run the following command: `$ date`

This procedure is complete!

APPENDIX A. GENERIC UPGRADE PROCEDURES

A.1 ISO Image copy from USB Media

Assumption: The USB media contains the desired EPAP ISO.

STEP #	1A	1B	This procedure provides instructions to copy an ISO image from an USB media.	
1.	☐	☐	**MPS X:** Insert USB.	Insert media in USB drive
2.	☐	☐	**MPS X:** Log in to the server as the "admusr" user.	`[hostname] consolelogin: admusr` `password: <admusr_password>`
3.	☐	☐	**MPS X:** Run syscheck to make sure there is no error.	Execute the following command: `$ sudo syscheck` The output should look like: `Running modules in class disk...` `OK` `Running modules in class hardware...` `OK` `Running modules in class net...` `OK` `Running modules in class proc...` `OK` `Running modules in class system...` `OK` `Running modules in class upgrade...` `OK`

				LOG LOCATION: /var/TKLC/log/syscheck/fail_log
4.	☐	☐	**MPS X:** Verify ISO image doesn't already exist.	Execute the following command to perform directory listing: **$ ls -al /var/TKLC/upgrade** The output should look like: total 16 dr-xr-xr-x 2 root root 4096 Oct 22 16:31 . dr-xr-xr-x 21 root root 4096 Oct 18 13:40 .. If an ISO image exists, remove it by executing the following command: **$ rm -f /var/TKLC/upgrade/<ISO image>**
5.	☐	☐	**MPS X:** Delete unwanted ISOs from USB media.	Execute the following command to create a directory to mount the USB media: **$ sudo mkdir -p /mnt/usb** Execute the following command to get the USB drive name: **$ sudo fdisk -l |grep FAT** The output should look like: /dev/sdc1 * 1 812 831472 6 FAT16 Execute the following command to mount the USB media using the USB drive name from the output above: **$ sudo mount /dev/sdc1 /mnt/usb** Sometimes the mount needs to be done on /dev/sdc. If you don't see the epap iso after mounting /dev/sdc1, try mounting /dev/sdc, that is, **sudo mount /dev/sdc /mnt/usb** Execute the following command to perform directory listing and verify the file name format is as expected: **$ sudo ls -al /mnt/usb** The output should look like: 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 04:53 872-1234-101-16.1.0_161.1.0-EPAP-x86_64.iso Only one ISO file should be listed, if additional files are listed, execute the following command to remove unwanted EPAP ISOs: **$ sudo rm -f /mnt/usb/<ISO_NAME>.iso**
6.	☐	☐	**MPS X:** Verify space exists for ISO.	Execute the following command to verify the available disk space: **$ df -h /var/TKLC** The output should look like: Filesystem Size Used Avail Use% Mounted on /dev/md7 3.9G 902M 2.8G 24% /var/TKLC Verify that there is at least 620M in the Avail column. If not, clean up files until there is space available. **CAUTION: Make sure you know what files you can remove safely before cleaning up. It is recommended that you only clean up files in the**

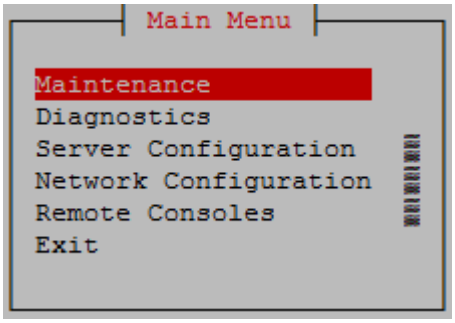
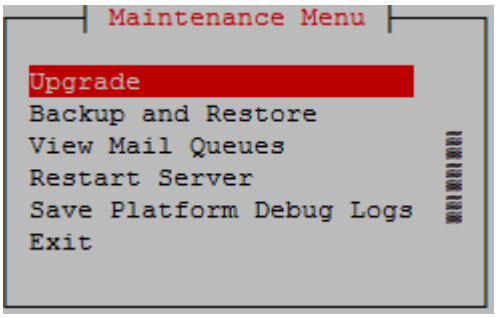
				/var/TKLC/upgrade directory as this is a platform owned directory that should only contain ISO images. This directory should not be expected to contain images for any length of time as they can get purged. Contact Technical Services beforehand if removing files other than the /var/TKLC/upgrade directory as removing files is dangerous.
7.	☐	☐	Copy iso from mounted path to the destination path	Execute the following command to copy ISO: `$ cp /mnt/usb/<xyz.iso> /var/TKLC/upgrade/` Execute the following command to unmount the USB media: `$ sudo umount /mnt/usb`
8.	☐	☐	**MPS X:** Verify ISO image exists.	Execute the following command to perform directory listing: `$ ls -al /var/TKLC/upgrade` The output should look like: `[admusr@hostname ~]4 ls -al /var/TKLC/upgrade` `total 814372` `dr-xr-xr-x 2 root root 4096 Dec 29 09:14 .` `dr-xr-xr-x 22 root root 4096 Dec 19 14:31 ..` `-rw-r--r-- 1 root root 833081344 Dec 29 09:13 872-1234-101-16.1.0_161.1.0-EPAP-x86_64.iso` Repeat this procedure from step 5 if EPAP ISO file is not as expected.
9.	☐	☐	**MPS X:** Logout from server.	Logout from the server by executing the following command: `$ logout`
10.	☐	☐	**MPS X:** Remove USB media.	Remove media from USB drive.
11.	☐	☐	**MPS X:** Validate ISO file.	Validate ISO file using step 8 of Procedure 16.
12.	☐	☐	Note down the timestamp in log.	Run the following command: `$ date`

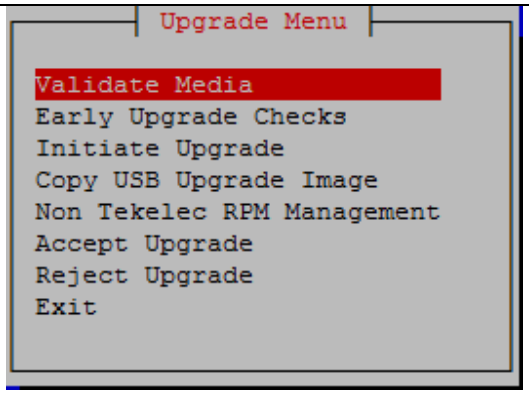
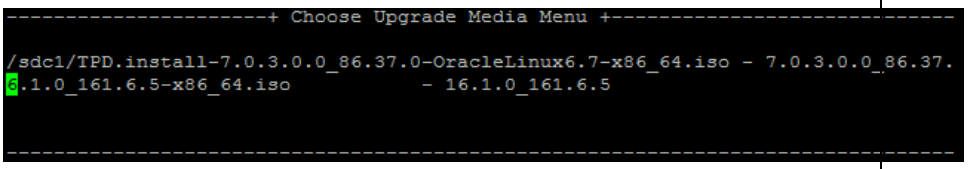
This procedure is complete!

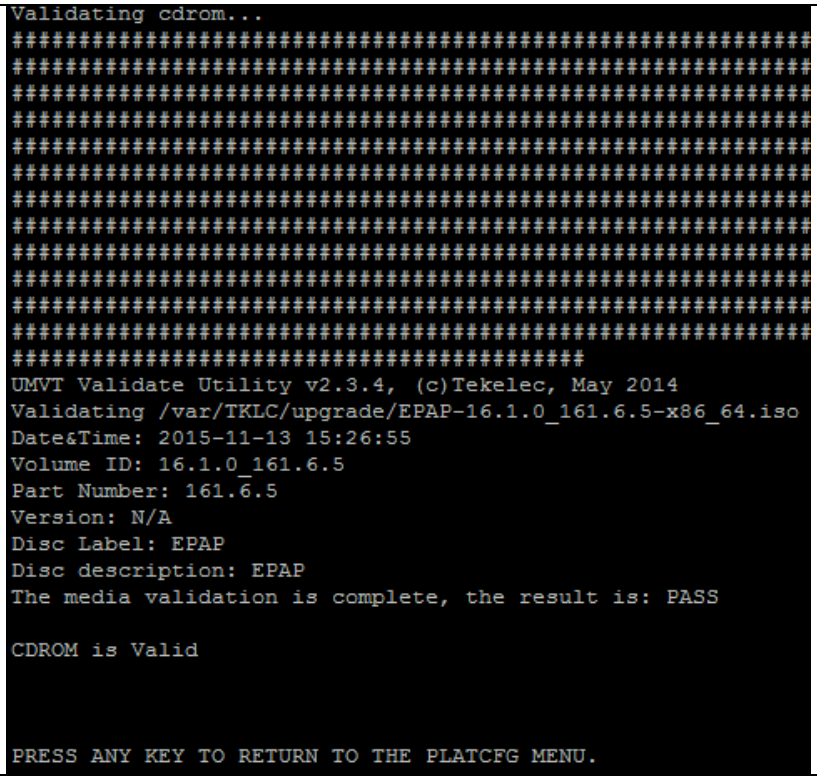
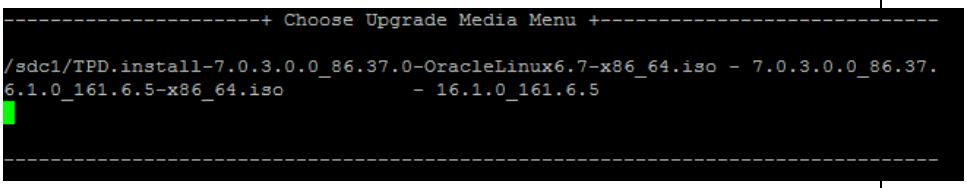
A.2 Validate Upgrade Media

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.

STEP #	1A	1B	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.	
1.	☐	☐	**MPS X:** If necessary, log in to the server as the user "admusr".	If not already logged in to the MPS server, then login as user "admusr".
2.	☐	☐	**MPS X:** Execute the platcfg menu.	`$ sudo su - platcfg`
3.	☐	☐	**MPS X:** Select the Maintenance submenu.	The platcfg Main Menu appears. On the Main Menu, select Maintenance and press [ENTER]. 
4.	☐	☐	**MPS X:** Select the Upgrade submenu.	Select the Upgrade menu and press [ENTER]. 
5.	☐	☐	**MPS X:** Select the Validate Media selection	Select the Validate Media menu and press [ENTER].

				
6.	☐	☐	**MPS X:** Output from the Validate Media selection.	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. If the upgrade media is not found, follow A.1 to copy the upgrade ISO. 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 B. 
7.	☐	☐	**MPS X:** View the Validation results.	The results of the validation will be displayed, similar to the example below. press [ENTER] to continue.

				
8.	☐	☐	**MPS X:** Select the Exit option.	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. 
9.	☐	☐	**MPS X:** Procedure complete.	Media Validation is complete. Return to the procedure that you came here from.
10.	☐	☐	Note down the timestamp in log.	Run the following command: `$ date`

This procedure is complete!

APPENDIX B. REMOVING OFFENDING KEY FROM KNOWN_HOSTS FILE

STEP #	1A	This procedure is used to remove the offending keys from the known_hosts file after upgrade previous keys become the offending keys.	
1.	☐	**MPS X:** Determine if it is required to remove the offending keys.	If following error occur during transfer of any file: @@@ @ WARNING: REMOTE HOST IDENTIFICATION HAS CHANGED! @ @@@ IT IS POSSIBLE THAT SOMEONE IS DOING SOMETHING NASTY! Someone could be eavesdropping on you right now (man-in-the-middle attack)! It is also possible that the RSA host key has just been changed. The fingerprint for the RSA key sent by the remote host is b8:a7:2d:bb:a9:72:a5:03:49:ae:86:b0:c0:9d:52:87. Please contact your system administrator. Add correct host key in /home/epapall/.ssh/known_hosts to get rid of this message. Offending key in /home/epapall/.ssh/known_hosts:5 RSA host key for mate has changed and you have requested strict checking. Host key verification failed. lost connection [epapdev@epap1a free]$
2.	☐	**MPS X:** Delete the offending key from the specific line no of known_host file (high lighted in the last step).	`$ vim /home/epapall/.ssh/known_hosts +5` `Remove this line using “dd” command`
3.	☐	Note down the timestamp in log.	Run the following command: `$ date`

APPENDIX C. 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).

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

Call the Customer Access Support main number at 1-800-223-1711 (toll-free in the US), or call the Oracle Support hotline for your local country from the list at http://www.oracle.com/us/support/contact/index.html. When calling, make the selections in the sequence shown below on the Support telephone menu:

- For Technical issues such as creating a new Service Request (SR), select **1**.
- For Non-technical issues such as registration or assistance with My Oracle Support, select **2**.
- For Hardware, Networking and Solaris Operating System Support, select **3**.

You are connected to a live agent who can assist you with My Oracle Support registration and opening a support ticket.

My Oracle Support is available 24 hours a day, 7 days a week, 365 days a year.