

**Oracle® Communications  
EAGLE LSMS**

**System Health Check Guide**

Release 13.2 and later

**F42045-02**

October 2023

**ORACLE®**

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Refer to Appendix 4.3 for instructions on accessing My Oracle Support.

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## 1 Introduction

### 1.1 Purpose and Scope

This document describes the Oracle recommended methods and procedures to evaluate the health of the setup. This document is intended for use for systems running on LSMS release 13.2 or higher.

This document is intended for EAGLE engineering, integration, documentation, technical services, and any craft person who has completed LSMS training and is familiar with LSMS interface.

**The document is written to support all customer configurations. All of the commands specified in the procedures should be executed unless explicitly stated otherwise in the individual procedure. Not doing so may result in a delay in the analysis performed by Oracle support.**

### 1.2 Acronyms

This section lists terms and acronyms specific to this document.

**Table 1. Acronyms**

Acronym/Term	Definition
OC-LSMS	Oracle Communication Local Service Management System
MPS	Multi-Purpose Server
OC-ELAP	Oracle Communications EAGLE LNP Application Processor
TPD	Tekelec Platform Distribution

### 1.3 Terminology

Multiple servers may be involved with the procedures in this manual. Therefore, most steps in the written procedures begin with the name or type of server to which the step applies. For example:

*Each step has a checkbox 1A for every command within the step that the technician should check to keep track of the progress of the procedure*

*Each step has a checkbox 1B for every command within the step that the technician should check to keep track of the progress of the procedure*

*The title box describes the operations to be performed during that +step*

*Each command that the technician is to enter is in 9 point Lucida Consile font*

*Output displayed only for reference actual output may differ*

1A <input type="checkbox"/>	1B <input type="checkbox"/>	MPS 1A: verify date	\$ date Mon Jul 17 11:48:24 EDT 2017
--------------------------------	--------------------------------	------------------------	---

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

## 2 Health Check Overview

An LSMS system is a pair of MPS servers (an A and a B node). One MPS server running LSMS is referred to as `lsmspri`, while the mate MPS server running LSMS is referred to as `lsmsec`. The two MPS servers running LSMS have exactly the same software installed. The main functions of LSMS are:

- a. Receives LNP data from Number Portability Administration Center (NPAC).
- b. Enables customers to enter locally provisioned data such as Override Global Title Translation (OGTT) data.
- c. Forwards all NPAC and locally provisioned data to up to eight ELAP systems.

Therefore, a mated pair of LSMS systems consists of `lsmspri` and `lsmsec` node. This document describes how to conduct the health check of the LSMS software on one system, that system consisting of two MPS servers (A (`lsmspri`) and B (`lsmsec`)).

### 3 Pre-Health Check Requirements

- User shall have the access to the server on which health check is to be performed via Securelink, VPN and/or via Modem or a PC with null modem cable for connection to serial port.
- User shall be able to log into the web GUI, such as a PC with Chromium-based Microsoft Edge browser, or via lynx text GUI.
- User shall have the terminal capture enabled to allow review of the output.
- User shall have the passwords for the following users as mentioned in table below:

LSMS USERS		
login	MPS A password	MPS B password
lsmsmgr		
lsmsadm		
root		
mysql dbroot user		
admusr		

## 4 LSMS Health Check

### 4.1 System Status

These steps can be performed on any of the LSMS configurations as mentioned in section 2. For mated pairs, commands should be run on both of the servers.

Steps To Be Completed	Expected output/command to
	<pre>login: admusr password: &lt;admusr_password&gt;</pre>
	<pre>\$ getPlatRev 7.4.0.0.0_88.37.0</pre>
<p>ervers is 30 seconds or less.</p>	<pre>\$ sudo date ; sudo clock Tue Sep 12 18:49:26 EDT 2017 Tue 12 Sep 2017 06:49:55 PM EDT -0.234883 seconds</pre>
	<pre>\$ ntpq -p remote          refid          st t when poll reach delay offset ===== ntpserver1      .LCL.          1 u 423 1024 377 0.368 -39502 lsmssec-heartbeat-a 192.168.1.1 14 u 513 1024 0 50.483 -1608 lsmssec-heartbeat-b 192.168.1.1 14 u 54 1024 0 107.601 -161</pre>
	<pre>\$ uptime 18:56:18 up 5 days, 2:24, 1 user, load average: 1.11, 0.86, 0.70Note: days.</pre>
<p>m query.</p>	<pre>\$ rpm -qi TKLClsms Name       : TKLClsms           Relocations: (not relocatable) Version    : 13.43.0            Vendor: Tekelec Release    : 13.2.1.0.0_132.21.0 Build Date: Mon 28 Aug 2017 Install Date: Sat 02 Sep 2017 04:01:10 AM EDT Build Host: coac Group      : TKLC/Application Source RPM: TKLClsms-13 Size       : 215874493      License: TEKELEC 2004-20</pre>

Signature : (none)  
 Packager : <Open Systems>  
 URL : http://www.tekelec.com/  
 Summary : Oracle Communications LSMS Package  
 Description :  
 This is the Oracle Communications LSMS Package. The package installs the Local Service Management System (LSMS) is a secure and reliable Local Number Portability (LNP) system.

```
$ sudo syscheck
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
```

Note: In case one or more modules FAILED, rerun the command with the following options:

```
$ sudo syscheck -v
```

## 4.2 Record the output and contact Upgrade Media Center

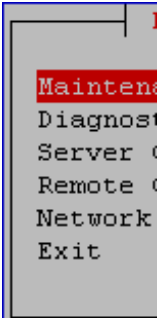
### 4.2.1 ISO Image copy from USB Media

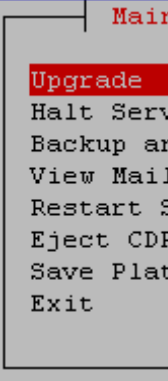
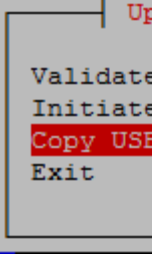
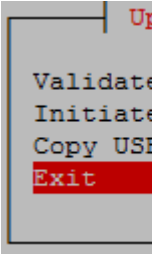
**S  
T  
E  
P  
#**

This procedure provides instructions to copy an ISO image to a USB drive.  
 Estimated time: 5 minutes



1.	<b>MPS X:</b> Insert USB.	Insert media in USB drive
2.	<b>MPS X:</b> Log in to the server as the “root” user.	<b>[hostname] console login: root</b> <b>password: password</b>
3.	<b>MPS X:</b> Run syscheck to make sure there is no error.	Execute the following command: <b># syscheck</b> The output should look like: [root@hostname ~]# syscheck Running modules in class p Running modules in class s Running modules in class sy Running modules in class d Running modules in class ha Running modules in class ne LOG LOCATION: /var/TKLC/log
4.	<b>MPS X:</b> Verify ISO image doesn't already exist.	Execute the following command to <b># ls -al /var/TKLC/upgrade</b> The output should look like: [root@hostname ~]# ls -al / total 16 dr-xr-xr-x 2 root root 40 dr-xr-xr-x 21 root root 40 If an ISO image exists, remove it by <b># rm -f /var/TKLC/upgrade/</b>
5.	<b>MPS X:</b> Delete unwanted ISOs from USB media.	Execute the following command to <b># mkdir -p /mnt/usb</b> Execute the following command to <b># fdisk -l  grep FAT</b> The output should look like: /dev/sdc1 * FAT16 Execute the following command to from the output above: <b># mount /dev/sdc1 /mnt/usb</b> Execute the following command to format is as expected: <b># ls -al /mnt/usb</b> The output should look like: [root@hostname ~]# # ls total 629400 dr-xr-xr-x 2 root root dr-xr-xr-x 22 root root

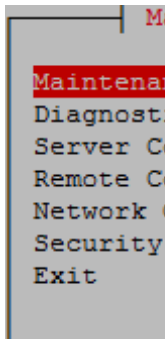
		<pre>-rw-r--r-- 1 root root 13.2.1.0.0_132.18.0-x86 Only one ISO file should be listed, command to remove unwanted ISO # rm -f /mnt/usb/&lt;ISO_NAME&gt;  For e.g., # rm -f /mnt/usb/LSMS-13.3</pre>
6.	<p><b>MPS X:</b> Verify space exists for ISO.</p>	<p>Execute the following command to</p> <pre># df -h /var/TKLC</pre> <p>The output should look like: [root@lsmspri log]# df Filesystem Size /dev/mapper/vgroot-plat 3</p> <p>Verify that there is at least 1G in the is space available.</p> <p><b>CAUTION: Make sure you know cleaning up. It is recommended /var/TKLC/upgrade directory a should only contain ISO images contain images for any length of Oracle Support beforehand if ren /var/TKLC/upgrade directory a</b></p>
7.	<p><b>MPS X:</b> Start platcfg utility.</p>	<p>Execute the following command to</p> <pre># su - platcfg</pre>
8.	<p><b>MPS X:</b> Select the Maintenance submenu.</p>	<p>On the Main Menu of the Platform press [ENTER].</p> 
9.	<p><b>MPS X:</b> Select the Upgrade submenu.</p>	<p>Select the <b>Upgrade</b> menu and press</p>

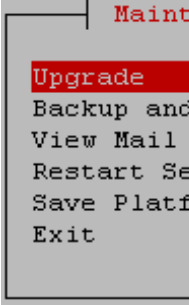
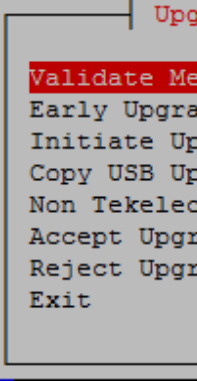
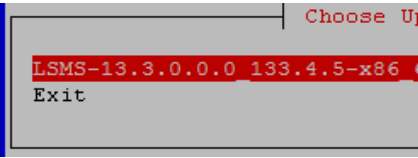
			
10.	<p><b>MPS X:</b> Select Copy USB Upgrade Image submenu.</p>	Select the Copy USB Upgrade Image submenu.	
11.	<p><b>MPS X:</b> The ISO will be copied from the USB media to /var/TKLC/upgrade.</p> <p>Press any key to return to Upgrade menu.</p>	<p>Copying /mnt/upgrade/ LSMS-13</p> <p>PRESS ANY KEY TO RETURN</p>	
12.	<p><b>MPS X:</b> Exit platcfg.</p>	Select Exit and press [ENTER] to return to the main menu.	
13.	<p><b>MPS X: Unmount USB media</b></p>	Execute the following command to unmount the USB media: # umount /mnt/usb	
14.	<p><b>MPS X:</b> Verify ISO image exists.</p>	<p>Execute the following command to verify the ISO image exists:</p> <p>The output should look like:</p> <pre>[root@lsmspri log]# ls -al /var/TKLC/upgrade total 895152 drwxrwxr-x. 2 root admgrp 4096 dr-xr-xr-x. 20 root root 4096 -r----- 1 admusr admgrp 916621 x86_64.iso</pre>	

		Repeat this procedure from step 5
15.	<b>MPS X:</b> Logout from server.	Logout from the server by executing <b># logout</b>
16.	<b>MPS X:</b> Remove USB media.	Remove media from USB drive.
17.	<b>Procedure Complete.</b>	This procedure is complete.

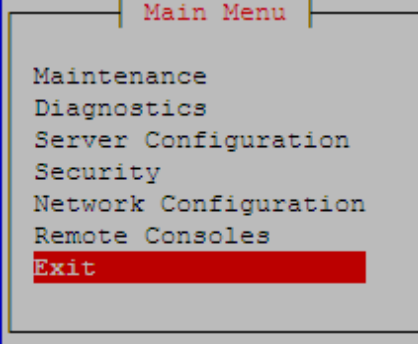
### 4.2.2 Validate Upgrade Media

This procedure is used to execute a validation of the Upgrade Media an upgrade. The upgrade process automatically validates the upgrade perform just a validation before proceeding with upgrade, thus the re

<b>S T E P #</b>	This procedure provides instructions to perform a validation procedure assumes that the E5-APP-B IPM procedure has b ISO image available.  Estimated time: 5 minutes	
1.	<b>MPS X:</b> Start platcfg utility by logging as platcfg user.	<b># su - platcfg</b>
2.	<b>MPS X:</b> Select the Maintenance submenu	On the <b>Main Menu</b> of the Platform C press <b>[ENTER]</b> .  
3.	<b>MPS X:</b> Navigate to the media validation function.	Select the <b>Upgrade</b> menu and press <b>[</b>

		 <p>Select the <b>Validate Media</b> menu and p</p> 
<p>4.</p>	<p><b>MPS X:</b> Output from the Validate Media selection.</p>	<p>The screen displays a message that it is media is found, an Upgrade Media selection. Select the desired upgrade media and p selection available, as in the example below.</p> 
<p>5.</p>	<p><b>MPS X:</b> View the Validation results</p>	<p>The results of the validation are displayed. Press <b>[ENTER]</b> to continue.</p>



		
7.	<b>Procedure Complete.</b>	This procedure is complete.

My Oracle Support.

	<pre>\$ alarmMgr --alarmStatus</pre> <p>Note: No output will be displayed if there are no alarms on the system. Sample alarms are displayed below:</p> <pre>\$ alarmMgr --alarmStatus</pre> <pre>SEQ: 17272594 UPTIME: 14280330 BIRTH: 1356031430 TYPE: S</pre> <pre>TKSPLATMA1   tpdFanError   1.3.6.1.4.1.323.5.3.18.3.1.2.1</pre>
--	--

	<pre>\$ sudo tail -40 /var/TKLC/log/lsms/alarmls/LsmsAlarm.1</pre> <p>ALARM LOG &lt;&lt; 20170912185911 &gt;&gt;</p> <pre>[4100:LSMS] lsmsec: Minor Platform Alarm (50000004001C2000):</pre> <pre>Failure, NTP Offset Check Failure, NTP Stratum Check Failure, NTP</pre> <pre>Time</pre> <p>ALARM LOG &lt;&lt; 20170912185946 &gt;&gt;</p> <pre>[4100:LSMS] Minor Platform Alarm (5000000000002200): Server N</pre> <pre>Warning</pre> <p>ALARM LOG &lt;&lt; 20170912185946 &gt;&gt;</p> <pre>[4100:LSMS] lsmsec: Minor Platform Alarm (5000000400182000):</pre> <pre>Failure, NTP Stratum Check Failure, NTP Source Server Is Not Able</pre>
--	--

ALARM LOG << 20170912190016 >>  
 [4100:LSMS] Minor Platform Alarm (5000000000042200): Server N Warning, Platform Health Check Failure

**B Media**

...volume” sections, contact Upgrade Media Check

...ions to copy an ISO image from an USB media.

...media in USB drive

**name] consolelogin: root**

**ord: password**

...the following command:

**check**

...tput should look like:  
 hostname ~]# syscheck  
 g modules in class proc... OK  
 g modules in class services... OK  
 g modules in class system... OK  
 g modules in class disk... OK  
 g modules in class hardware... OK  
 g modules in class net... OK

...CAUTION: /var/TKLC/log/syscheck/fail\_log

...the following command to perform directory listing:  
**al /var/TKLC/upgrade**

...tput should look like:  
 hostname ~]# ls -al /var/TKLC/upgrade  
 16  
 xr-x 2 root root 4096 Oct 22 16:31 .  
 xr-x 21 root root 4096 Oct 18 13:40 ..

...O image exists, remove it by executing the following command:

```
$ sudo tail -40 /var/log/messages
Sep 12 19:00:16 lsmspri sudo: lsmsadm : TTY=unknown ; PWD=/u
COMMAND=/usr/TKLC/lsms/tools/pass_fetch pass1
Sep 12 19:00:40 lsmspri sudo: lsmsadm : TTY=unknown ; PWD=/u
COMMAND=/usr/TKLC/lsms/tools/pass_fetch pass1

$ sudo vgdisplay -v
    Using volume group(s) on command line.
--- Volume group ---
VG Name          vgroot
System ID
Format           lvm2
Metadata Areas   1
Metadata Sequence No 104
VG Access        read/write
VG Status        resizable
MAX LV           0
Cur LV          11
Open LV          11
Max PV           0
Cur PV          1
Act PV           1
VG Size          446.72 GiB
PE Size          32.00 MiB
Total PE         14295
Alloc PE / Size  13055 / 407.97 GiB
Free PE / Size   1240 / 38.75 GiB
VG UUID          AlsBKN-nqKn-kUZD-0K0X-Nz54-r293-eyb

--- Logical volume ---
LV Path          /dev/vgroot/plat_root
LV Name          plat_root
VG Name          vgroot
```



**df /var/TKLC/upgrade/<ISO image>**

Use the following command to create a directory to mount the USB media:  
**mkdir -p /mnt/usb**

Use the following command to get the USB drive name:  
**lsblk -l |grep FAT**

The output should look like:

```
sdcl * 1 812 831472 6
```

Use the following command to mount the USB media using the USB drive name from the output above:  
**mount /dev/sdc1 /mnt/usb**

Use the following command to perform directory listing and verify the file name is as expected:  
**ls -al /mnt/usb**

The output should look like:

```
@hostname ~]# # ls -al /mnt/usb
629400
-r-xr-x 2 root root 4096 Dec 5 13:33 .
-r-xr-x 22 root root 4096 Dec 5 13:55 ..
--r-- 1 root root 853002240 Dec 5 16:20 LSMS-
1.0.0_132.18.0-x86_64.iso
```

If the ISO file should be listed, if additional files are listed, execute the following command to remove unwanted ISOs:  
**rm /mnt/usb/<ISO\_NAME>.iso**

**rm /mnt/usb/LSMS-13.3.0.0.0\_133.4.0-x86\_64.iso**

Use the following command to verify the available disk space:

**df -h /var/TKLC**

The output should look like:

```
@lsmspri log]# df -h /var/TKLC
Filesystem Size Used Avail Use% Mounted on
mapper/vgroot-plat_var_tklc
3.9G 1.2G 2.5G 32% /var/TKLC
```

Make sure there is at least 1G in the Avail column. If not, clean up files until there is available.

**WARNING: 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 only contain ISO images. This directory should not be expected to contain images for any length of time as they can get purged. Contact My Support beforehand if removing files other than the files in the /var/TKLC/upgrade directory as removing files is dangerous.**

LV UUID CaxkPU-1vWU-JAFH-BF0r-u4at-xwXL-RjZ4

LV Write Access read/write

LV Creation host, time localhost.localdomain, 2017-09-02 02:47:32

LV Status available

# open 1

LV Size 1.00 GiB

Current LE 32

Segments 1

Allocation inherit

Read ahead sectors auto

- currently set to 256

Block device 253:0

--- Logical volume ---

LV Path /dev/vgroot/plat\_swap

LV Name plat\_swap

VG Name vgroot

LV UUID 6pB5XH-juQq-fMns-sL7k-b4eX-Dh21-xyUO

LV Write Access read/write

LV Creation host, time localhost.localdomain, 2017-09-02 02:47:33

LV Status available

# open 1

LV Size 1.97 GiB

Current LE 63

Segments 1

Allocation inherit

Read ahead sectors auto

- currently set to 256

Block device 253:1

--- Logical volume ---

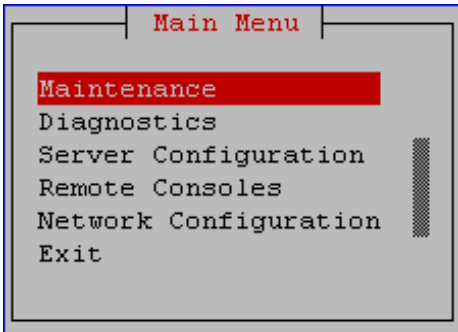
LV Path /dev/vgroot/plat\_var

LV Name plat\_var

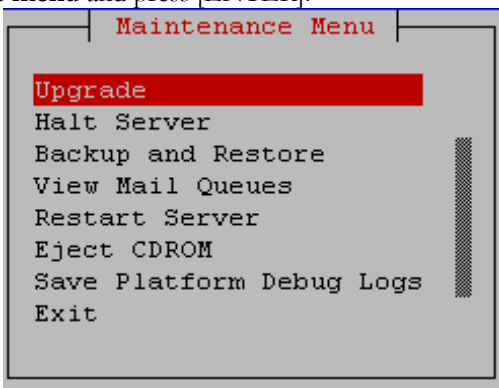
VG Name vgroot

the following command to change the user:  
`platcfg`

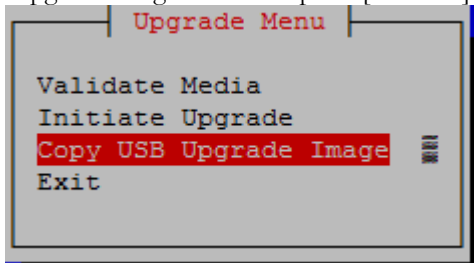
Main Menu of the Platform Configuration Utility, select **Maintenance** and [ENTER].



the **Upgrade** menu and press [ENTER].



the **Copy USB Upgrade Image** menu and press [ENTER].



`g /mnt/upgrade/ LSMS-13.3.0.0.0_133.4.0-x86_64.iso`

ANY KEY TO RETURN TO THE PLATCFG MENU.

Exit and press [ENTER] repeatedly until the “platcfg” utility terminates.

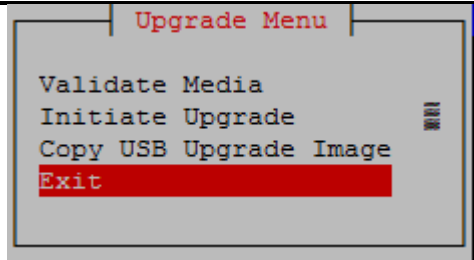
```
LV UUID          BLSR5N-NDAv-xW7n-S4nI-cPg6-PMLI-LPij
LV Write Access  read/write
LV Creation host, time localhost.localdomain, 2017-09-02 02:47:33
LV Status        available
# open           1
LV Size          1.00 GiB
Current LE       32
Segments         1
Allocation       inherit
Read ahead sectors  auto
- currently set to 256
Block device     253:2
```

--- Logical volume ---

```
LV Path          /dev/vgroot/plat_usr
LV Name          plat_usr
VG Name          vgroot
LV UUID          b39mVM-YaBW-e7Iy-zwxM-8UkZ-k45K-9RC
LV Write Access  read/write
LV Creation host, time localhost.localdomain, 2017-09-02 02:47:34
LV Status        available
# open           1
LV Size          4.00 GiB
Current LE       128
Segments         1
Allocation       inherit
Read ahead sectors  auto
- currently set to 256
Block device     253:3
```

--- Logical volume ---

```
LV Path          /dev/vgroot/plat_tmp
LV Name          plat_tmp
VG Name          vgroot
```



Execute the following command to unmount the USB media:  
**umount /mnt/usb**

Execute the following command to perform directory listing:  
**ls -al /var/TKLC/upgrade**

The output should look like:  

```
lsmspri log]# ls -al /var/TKLC/upgrade
5152
-r-x. 2 root admgrp 4096 Apr 20 17:16 .
-r-x. 20 root root 4096 Apr 20 18:01 ..
-rw-r--r-- 1 admusr admgrp 916621312 Apr 20 17:16 LSMS-13.3.0.0.0_133.4.0-
iso
```

Follow this procedure from step 5 if LSMS ISO file is not as expected.

Remove the media from the server by executing the following command:  
**umount /mnt/usb**

Remove the media from USB drive.

The procedure is complete.

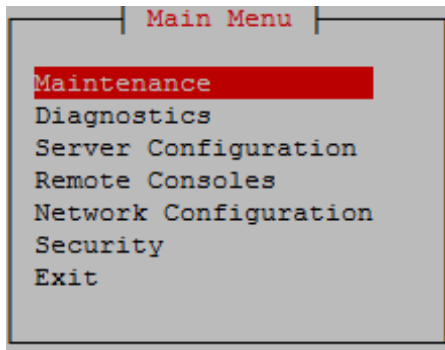
Validation of the Upgrade Media (typically an ISO image) separately from executing the upgrade process automatically validates the upgrade media. However, sometime the user may wish to validate the upgrade media with upgrade, thus the reason for this separate process.

Instructions to perform a validation of the upgrade media on the server. This procedure has been executed and the user has LSMS Upgrade Media on the server.

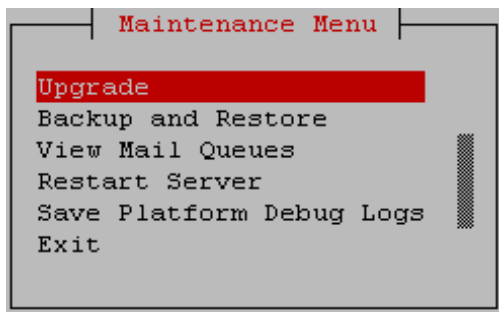
Execute the following command:  
**lsmspri log]# ls -al /var/TKLC/upgrade**

LV UUID	6TZ2wy-l0QR-HnTu-2bzC-ECta-S5a2-8xTM
LV Write Access	read/write
LV Creation host, time	localhost.localdomain, 2017-09-02 02:47:35
LV Status	available
# open	1
LV Size	1.00 GiB
Current LE	32
Segments	1
Allocation	inherit
Read ahead sectors	auto
- currently set to	256
Block device	253:4
--- Logical volume ---	
LV Path	/dev/vgroot/plat_var_tklc
LV Name	plat_var_tklc
VG Name	vgroot
LV UUID	YTz4gK-LstQ-RS7R-DPth-RoZF-fnRF-0vuq
LV Write Access	read/write
LV Creation host, time	localhost.localdomain, 2017-09-02 02:47:36
LV Status	available
# open	1
LV Size	4.00 GiB
Current LE	128
Segments	1
Allocation	inherit
Read ahead sectors	auto
- currently set to	256
Block device	253:5
--- Logical volume ---	
LV Path	/dev/vgroot/lsms_root
LV Name	lsms_root
VG Name	vgroot

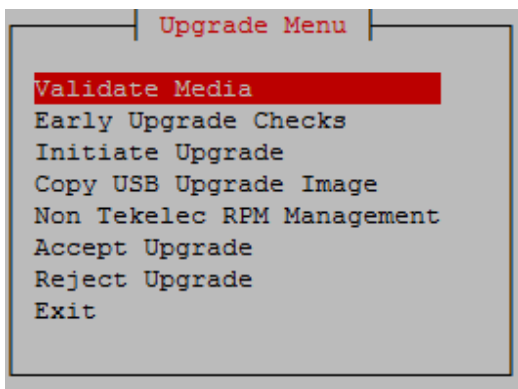
In Menu of the Platform Configuration Utility, select **Maintenance** and **[ENTER]**.



**Upgrade** menu and press **[ENTER]**.

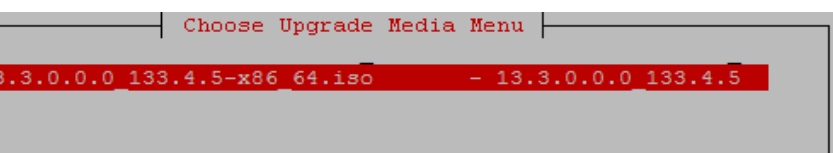


**Validate Media** menu and press **[ENTER]**.



displays a message that it is searching for upgrade media. Once the upgrade found, an Upgrade Media selection menu appears similar to the example below.

desired upgrade media and press **[ENTER]**. There should only be one available, as in the example below.



```

LV UUID          aXq7eJ-OV53-OMP0-Cxss-oSCi-kImQ-fS3H
LV Write Access  read/write
LV Creation host, time lmspri, 2017-09-02 03:59:01 -0400
LV Status        available
# open          1
LV Size          4.00 GiB
Current LE       128
Segments        1
Allocation       inherit
Read ahead sectors auto
- currently set to 256
Block device     253:6
    
```

--- Logical volume ---

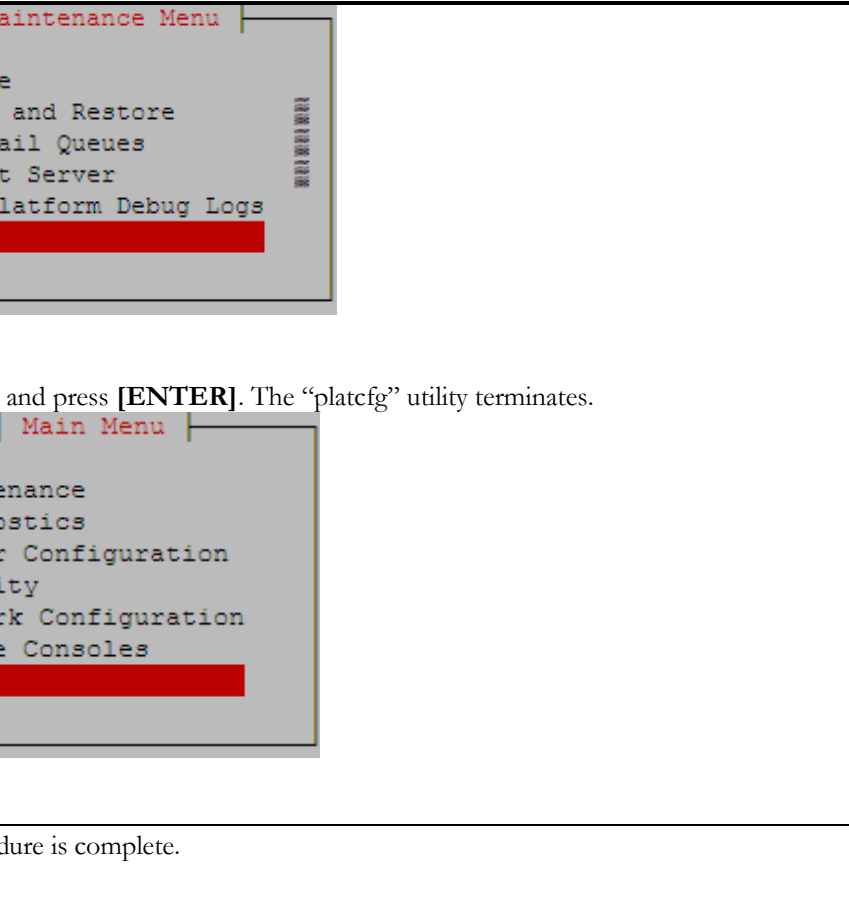
```

LV Path          /dev/vgroot/lsms_external
LV Name          lsms_external
VG Name          vgroot
LV UUID          REF15A-ShrB-0GJW-MRRf-ZNJ8-pnsq-POS
LV Write Access  read/write
LV Creation host, time lmspri, 2017-09-02 03:59:02 -0400
LV Status        available
# open          1
LV Size          2.00 GiB
Current LE       64
Segments        1
Allocation       inherit
Read ahead sectors auto
- currently set to 256
Block device     253:7
    
```

```

--- Logical volume ---
LV Path          /dev/vgroot/lsms_logs
LV Name          lsms_logs
VG Name          vgroot
    
```





and press **[ENTER]**. The “platcfg” utility terminates.

procedure is complete.

procedures can be scheduled to be performed.

physical and swap memory in the system.

use.

```

LV UUID          aZgNdR-31YF-jTwe-pBFW-3Ma0-zjAz-RT3Z
LV Write Access  read/write
LV Creation host, time lmspri, 2017-09-02 03:59:32 -0400
LV Status        available
# open          1
LV Size         140.00 GiB
Current LE      4480
Segments        1
Allocation       inherit
Read ahead sectors auto
- currently set to 256
Block device    253:10

--- Physical volumes ---
PV Name          /dev/md2
PV UUID          3RMk1T-fj6y-nETi-T7jU-HdTc-tXnX-Pd26dn
PV Status        allocatable
Total PE / Free PE 14295 / 1240
    
```

```

$ free
      total    used    free   shared  buffers   cached
Mem:   8059380  7423640  635740    32356   470128   45748
-/+ buffers/cache: 2378648  5680732
Swap:  2064380    26764   2037616
    
```

```

$ df -h
Filesystem      Size  Used Avail Use% Mounted on
/dev/mapper/vgroot-plat_root
                976M 286M 640M 31% /
tmpfs            3.9G   0 3.9G  0% /dev/shm
/dev/md1         244M  40M 192M 17% /boot
/dev/mapper/vgroot-plat_tmp
                976M 1.3M 924M  1% /tmp
/dev/mapper/vgroot-plat_usr
    
```

	<pre> 3.9G 2.2G 1.5G 60% /usr /dev/mapper/vgroot-plat_var 976M 330M 596M 36% /var /dev/mapper/vgroot-plat_var_tklc 3.9G 2.5G 1.3G 67% /var/TKLC /dev/mapper/vgroot-lsmsg_root 3.9G 8.2M 3.7G 1% /var/TKLC/lsmg /dev/mapper/vgroot-lsmsg_db 210G 8.5G 191G 5% /var/TKLC/lsmg/db /dev/mapper/vgroot-lsmsg_external 2.0G 3.0M 1.9G 1% /var/TKLC/lsmg/external /dev/mapper/vgroot-lsmsg_free 138G 3.2G 128G 3% /var/TKLC/lsmg/free /dev/mapper/vgroot-lsmsg_logs 36G 634M 33G 2% /var/TKLC/lsmg/logs                 </pre>
--	---

<p>AID status</p>	<pre> \$ 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]       bitmap: 3/4 pages [12KB], 65536KB chunk  unused devices: &lt;none&gt;                 </pre>
-------------------	--

	<pre> \$ sudo fdisk -l /dev/sd[a-z]  Disk /dev/sda: 480.1 GB, 480103981056 bytes 255 heads, 63 sectors/track, 58369 cylinders Units = cylinders of 16065 * 512 = 8225280 bytes Sector size (logical/physical): 512 bytes / 512 bytes I/O size (minimum/optimal): 512 bytes / 512 bytes Disk identifier: 0x000c8e91                 </pre>
--	---

```

Device Boot      Start    End  Blocks  Id System
/dev/sda1        1      58336 468578304 fd Linux raid autodet
/dev/sda2 *      58336    58369   262144 fd Linux raid autodet

Disk /dev/sdb: 480.1 GB, 480103981056 bytes
255 heads, 63 sectors/track, 58369 cylinders
Units = cylinders of 16065 * 512 = 8225280 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disk identifier: 0x000e5bf1

Device Boot      Start    End  Blocks  Id System
/dev/sdb1        1      58336 468578304 fd Linux raid autodet
/dev/sdb2 *      58336    58369   262144 fd Linux raid autodet
    
```

```

$ sudo smartctl -A -l error /dev/sda
smartctl 5.43 2012-06-30 r3573 [x86_64-linux-2.6.32-642.15.1.el6pre
Copyright (C) 2002-12 by Bruce Allen, http://smartmontools.sourceforge

=== START OF READ SMART DATA SECTION ===
SMART Attributes Data Structure revision number: 1
Vendor Specific SMART Attributes with Thresholds:
ID# ATTRIBUTE_NAME          FLAG     VALUE WORST THRU
RAW_VALUE

   5 Reallocated_Sector_Ct   0x0032   098   098   000   Old_age   Alw
   9 Power_On_Hours          0x0032   100   100   000   Old_age   Alw
  12 Power_Cycle_Count       0x0032   100   100   000   Old_age   Alw
 170 Unknown_Attribute      0x0033   099   099   010   Pre-fail  Alw
 171 Unknown_Attribute      0x0032   100   100   000   Old_age   Al
 172 Unknown_Attribute      0x0032   100   100   000   Old_age   Al
 174 Unknown_Attribute      0x0032   100   100   000   Old_age   Al
 175 Program_Fail_Count_Chip 0x0033   100   100   010   Pre-fail  A
 183 Runtime_Bad_Block       0x0032   100   100   000   Old_age   Al
 184 End-to-End_Error        0x0033   100   100   090   Pre-fail  Alwa
 187 Reported_Uncorrect      0x0032   100   100   000   Old_age   Alw
    
```



190 Airflow\_Temperature\_Cel 0x0022 086 083 000 Old\_age A  
 192 Power-Off\_Retract\_Count 0x0032 100 100 000 Old\_age A  
 194 Temperature\_Celsius 0x0022 100 100 000 Old\_age Al  
 197 Current\_Pending\_Sector 0x0032 100 100 000 Old\_age A  
 199 UDMA\_CRC\_Error\_Count 0x003e 100 100 000 Old\_ag  
 225 Load\_Cycle\_Count 0x0032 100 100 000 Old\_age Al  
 226 Load-in\_Time 0x0032 100 100 000 Old\_age Alway  
 227 Torq-amp\_Count 0x0032 100 100 000 Old\_age Al  
 228 Power-off\_Retract\_Count 0x0032 100 100 000 Old\_age A  
 232 Available\_Reservd\_Space 0x0033 099 099 010 Pre-fail Al  
 233 Media\_Wearout\_Indicator 0x0032 088 088 000 Old\_age A  
 234 Unknown\_Attribute 0x0032 100 100 000 Old\_age Al  
 241 Total\_LBAs\_Written 0x0032 100 100 000 Old\_age Al  
 242 Total\_LBAs\_Read 0x0032 100 100 000 Old\_age Al

SMART Error Log Version: 1

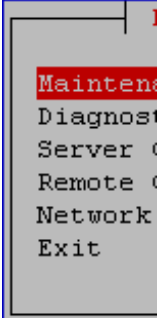
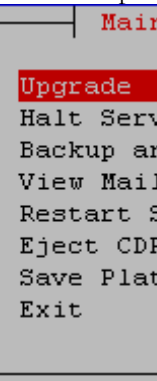
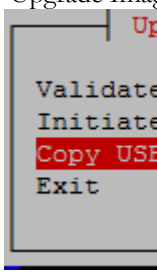
No Errors Logged

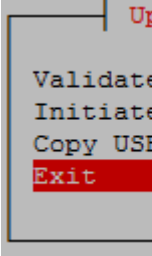
**4.3 Note: If any error is observed record the error a**

**4.3.1 ISO Image copy from USB Media**

<b>S T E P #</b>	This procedure provides instructions to copy an ISO image  Estimated time: 5 minutes	
35.	<b>MPS X:</b> Insert USB.	Insert media in USB drive
36.	<b>MPS X:</b> Log in to the server as the “root” user.	<b>[hostname] console login: root</b> <b>password: password</b>
37.	<b>MPS X:</b> Run syscheck to make sure there is no error.	Execute the following command: <b># syscheck</b>  The output should look like [root@hostname ~]# syscheck Running modules in class p  Running modules in class s  Running modules in class sy  Running modules in class d

		<p>Running modules in class ha</p> <p>Running modules in class ne</p> <p>LOG LOCATION: /var/TKLC/log</p>
38.	<p><b>MPS X:</b> Verify ISO image doesn't already exist.</p>	<p>Execute the following command to</p> <pre># ls -al /var/TKLC/upgrade</pre> <p>The output should look like:</p> <pre>[root@hostname ~]# ls -al / total 16 dr-xr-xr-x  2 root root 40 dr-xr-xr-x 21 root root 40</pre> <p>If an ISO image exists, remove it by</p> <pre># rm -f /var/TKLC/upgrade/</pre>
39.	<p><b>MPS X:</b> Delete unwanted ISOs from USB media.</p>	<p>Execute the following command to</p> <pre># mkdir -p /mnt/usb</pre> <p>Execute the following command to</p> <pre># fdisk -l  grep FAT</pre> <p>The output should look like:</p> <pre>/dev/sdc1      * FAT16</pre> <p>Execute the following command to from the output above:</p> <pre># mount /dev/sdc1 /mnt/usb</pre> <p>Execute the following command to format is as expected:</p> <pre># ls -al /mnt/usb</pre> <p>The output should look like:</p> <pre>[root@hostname ~]# # ls total 629400 dr-xr-xr-x  2 root root dr-xr-xr-x 22 root root -rw-r--r--  1 root root 13.2.1.0.0_132.18.0-x86</pre> <p>Only one ISO file should be listed, command to remove unwanted ISO</p> <pre># rm -f /mnt/usb/&lt;ISO_NAME&gt;</pre> <p>For e.g.,</p> <pre># rm -f /mnt/usb/LSMS-13.3</pre>
40.	<p><b>MPS X:</b> Verify space exists for ISO.</p>	<p>Execute the following command to</p> <pre># df -h /var/TKLC</pre> <p>The output should look like:</p> <pre>[root@lsmspri log]# df Filesystem</pre>

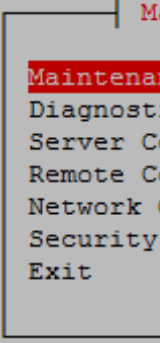
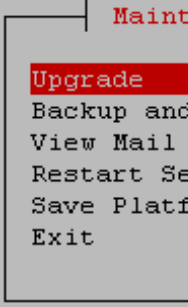
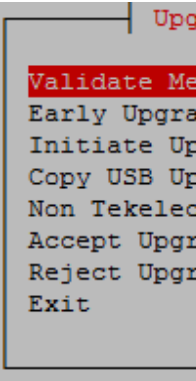
		<p>/dev/mapper/vgroot-plat</p> <p>3</p> <p>Verify that there is at least 1G in the is space available.</p> <p><b>CAUTION: Make sure you know cleaning up. It is recommended /var/TKLC/upgrade directory a should only contain ISO images contain images for any length of Oracle Support beforehand if re /var/TKLC/upgrade directory a</b></p>
41.	<b>MPS X:</b> Start platcfg utility.	Execute the following command to <b># su - platcfg</b>
42.	<b>MPS X:</b> Select the Maintenance submenu.	On the Main Menu of the Platform press <b>[ENTER]</b> . 
43.	<b>MPS X:</b> Select the Upgrade submenu.	Select the <b>Upgrade menu</b> and press 
44.	<b>MPS X:</b> Select Copy USB Upgrade Image submenu.	Select the Copy USB Upgrade Image submenu. 
45.	<b>MPS X:</b> The ISO will be copied from the	Copying /mnt/upgrade/ LSMS-13

	USB media to /var/TKLC/upgrade.  Press any key to return to Upgrade menu.	PRESS ANY KEY TO RETURN
46.	<b>MPS X:</b> Exit platcfg.	Select Exit and press [ENTER] rep  
47.	<b>MPS X: Unmount USB media</b>	Execute the following command to <b># umount /mnt/usb</b>
48.	<b>MPS X:</b> Verify ISO image exists.	Execute the following command to <b># ls -al /var/TKLC/upgrade</b>  The output should look like: [root@lsmspri log]# ls -al /var/TKLC/upgrade total 895152 drwxrwxr-x. 2 root admgrp 4096 dr-xr-xr-x. 20 root root 4096 -r----- 1 admusr admgrp 916621 x86_64.iso  Repeat this procedure from step 5
49.	<b>MPS X:</b> Logout from server.	Logout from the server by executing <b># logout</b>
50.	<b>MPS X:</b> Remove USB media.	Remove media fromUSB drive.
51.	<b>Procedure Complete.</b>	This procedure is complete.

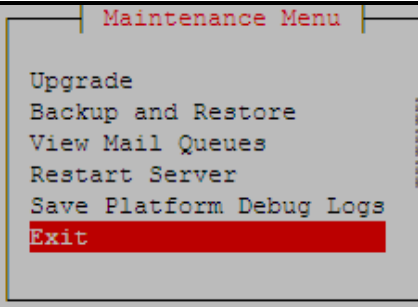
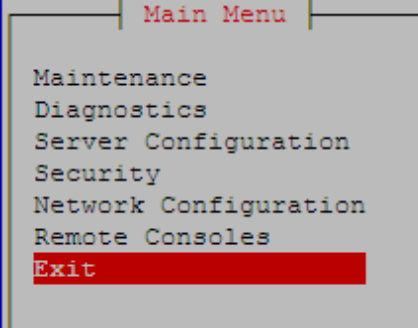
### 4.3.2 Validate Upgrade Media

This procedure is used to execute a validation of the Upgrade Media before performing an upgrade. The upgrade process automatically validates the upgrade media. To perform just a validation before proceeding with upgrade, thus the re

<b>S</b>	This procedure provides instructions to perform a validation of the upgrade media. This procedure assumes that the E5-APP-B IPM procedure has been completed and an ISO image available.
<b>T</b>	
<b>E</b>	
<b>P</b>	
<b>#</b>	

15.	<p><b>MPS X:</b> Start platcfg utility by logging in as platcfg user.</p>	<p># su - platcfg</p>
16.	<p><b>MPS X:</b> Select the Maintenance submenu</p>	<p>On the <b>Main Menu</b> of the Platform C press [ENTER].</p> 
17.	<p><b>MPS X:</b> Navigate to the media validation function.</p>	<p>Select the <b>Upgrade</b> menu and press [ENTER].</p>  <p>Select the <b>Validate Media</b> menu and press [ENTER].</p> 
18.	<p><b>MPS X:</b> Output from the Validate Media selection.</p>	<p>The screen displays a message that it is no upgrade media is found, an Upgrade Media selection is available.</p> <p>Select the desired upgrade media and press [ENTER]. The screen displays the selection available, as in the example below.</p>



		 <p>Upgrade Backup and Restore View Mail Queues Restart Server Save Platform Debug Logs <b>Exit</b></p> <p>Select <b>Exit</b> and press <b>[ENTER]</b>. The</p>  <p>Maintenance Diagnostics Server Configuration Security Network Configuration Remote Consoles <b>Exit</b></p>
21.	<b>Procedure Complete.</b>	This procedure is complete.

My Oracle Support.

	<pre>\$ sudo smartctl -t short /dev/sda smartctl 5.43 2012-06-30 r3573 [x86_64-linux-2.6.32-642.15.1.el6pre Copyright (C) 2002-12 by Bruce Allen, http://smartmontools.sourceforge  === START OF OFFLINE IMMEDIATE AND SELF-TEST SE Sending command: "Execute SMART Short self-test routine immedi Drive command "Execute SMART Short self-test routine immediat Testing has begun. Please wait 1 minutes for test to complete. Test will complete after Tue Sep 12 19:09:27 2017  Use smartctl -X to abort test.</pre>
--	---

sults

```
$ sleep 60; sudo smartctl -l selftest /dev/sda
smartctl 5.43 2012-06-30 r3573 [x86_64-linux-2.6.32-642.15.1.el6pre
Copyright (C) 2002-12 by Bruce Allen, http://smartmontools.sourceforge

=== START OF READ SMART DATA SECTION ===
SMART Self-test log structure revision number 1
Num Test_Description Status Remaining LifeTime(hours)
# 1 Short offline Completed without error 00% 28524
```

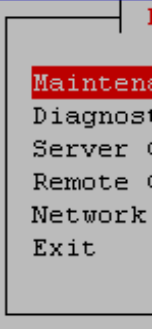
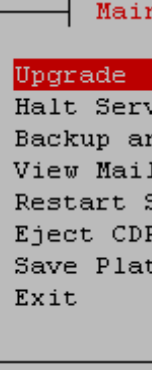
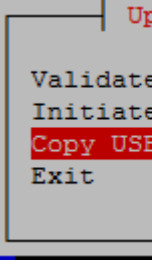
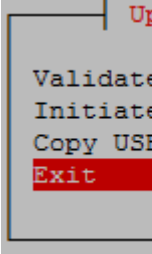
**4.4 Note: Record if any error is reported and contact your system administrator.**

**4.4.1 ISO Image copy from USB Media**

<b>S T E P #</b>	This procedure provides instructions to copy an ISO image  Estimated time: 5 minutes	
52.	<b>MPS X:</b> Insert USB.	Insert media in USB drive
53.	<b>MPS X:</b> Log in to the server as the “root” user.	<b>[hostname] console login: root</b> <b>password: password</b>
54.	<b>MPS X:</b> Run syscheck to make sure there is no error.	Execute the following command: <b># syscheck</b>  The output should look like: [root@hostname ~]# syscheck Running modules in class p  Running modules in class s  Running modules in class sy  Running modules in class d  Running modules in class ha  Running modules in class ne  LOG LOCATION: /var/TKLC/log
55.	<b>MPS X:</b> Verify ISO image doesn't already exist.	Execute the following command to <b># ls -al /var/TKLC/upgrade</b>  The output should look like: [root@hostname ~]# ls -al / total 16 dr-xr-xr-x 2 root root 40 dr-xr-xr-x 21 root root 40  If an ISO image exists, remove it by  <b># rm -f /var/TKLC/upgrade/</b>



<p>56.</p>	<p><b>MPS X:</b> Delete unwanted ISOs from USB media.</p>	<p>Execute the following command to</p> <pre># mkdir -p /mnt/usb</pre> <p>Execute the following command to</p> <pre># fdisk -l  grep FAT</pre> <p>The output should look like:</p> <pre>/dev/sdc1 * FAT16</pre> <p>Execute the following command to from the output above:</p> <pre># mount /dev/sdc1 /mnt/usb</pre> <p>Execute the following command to format is as expected:</p> <pre># ls -al /mnt/usb</pre> <p>The output should look like:</p> <pre>[root@hostname ~]# # ls total 629400 dr-xr-xr-x 2 root root dr-xr-xr-x 22 root root -rw-r--r-- 1 root root 13.2.1.0.0_132.18.0-x86 Only one ISO file should be listed, command to remove unwanted ISO</pre> <pre># rm -f /mnt/usb/&lt;ISO_NAME&gt;</pre> <p>For e.g.,</p> <pre># rm -f /mnt/usb/LSMS-13.3</pre>
<p>57.</p>	<p><b>MPS X:</b> Verify space exists for ISO.</p>	<p>Execute the following command to</p> <pre># df -h /var/TKLC</pre> <p>The output should look like:</p> <pre>[root@lsmspri log]# df Filesystem                               Size      Used      Avail /dev/mapper/vgroot-plat                   3 Verify that there is at least 1G in th is space available. <p><b>CAUTION: Make sure you know cleaning up. It is recommended /var/TKLC/upgrade directory a should only contain ISO images contain images for any length of Oracle Support beforehand if ren /var/TKLC/upgrade directory a</b></p> </pre>
<p>58.</p>	<p><b>MPS X:</b> Start platcfg utility.</p>	<p>Execute the following command to</p> <pre># su - platcfg</pre>

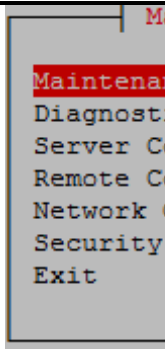
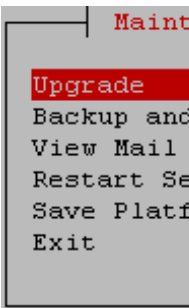
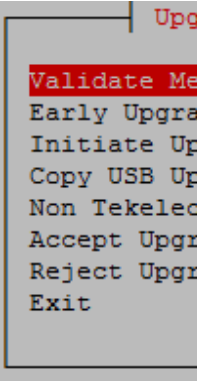
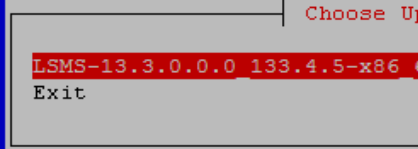
59.	<p><b>MPS X:</b> Select the Maintenance submenu.</p>	<p>On the Main Menu of the Platform press [ENTER].</p> 
60.	<p><b>MPS X:</b> Select the Upgrade submenu.</p>	<p>Select the <b>Upgrade</b> menu and press [ENTER].</p> 
61.	<p><b>MPS X:</b> Select Copy USB Upgrade Image submenu.</p>	<p>Select the Copy USB Upgrade Image submenu.</p> 
62.	<p><b>MPS X:</b> The ISO will be copied from the USB media to /var/TKLC/upgrade.  Press any key to return to Upgrade menu.</p>	<p>Copying /mnt/upgrade/ LSMS-13  PRESS ANY KEY TO RETURN</p>
63.	<p><b>MPS X:</b> Exit platcfg.</p>	<p>Select Exit and press [ENTER] to return to the Main Menu.</p> 

64.	<b>MPS X: Unmount USB media</b>	Execute the following command to <b># umount /mnt/usb</b>
65.	<b>MPS X: Verify ISO image exists.</b>	Execute the following command to <b># ls -al /var/TKLC/upgrade</b>  The output should look like: [root@lsmspri log]# ls -al /var/TKLC/upgrade total 895152 drwxrwxr-x. 2 root admgrp 4096 dr-xr-xr-x. 20 root root 4096 -r----- 1 admusr admgrp 916621 x86_64.iso  Repeat this procedure from step 5
66.	<b>MPS X: Logout from server.</b>	Logout from the server by executing <b># logout</b>
67.	<b>MPS X: Remove USB media.</b>	Remove media from USB drive.
68.	<b>Procedure Complete.</b>	This procedure is complete.

#### 4.4.2 Validate Upgrade Media

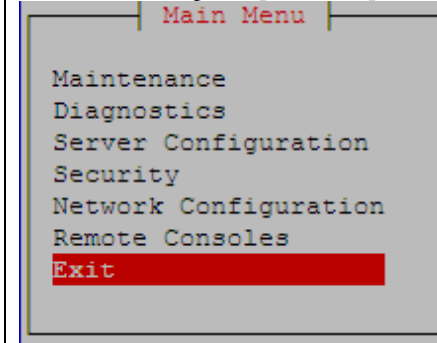
This procedure is used to execute a validation of the Upgrade Media before performing an upgrade. The upgrade process automatically validates the upgrade media. To perform just a validation before proceeding with upgrade, thus the re

<b>S T E P #</b>	This procedure provides instructions to perform a validation of the upgrade media. This procedure assumes that the E5-APP-B IPM procedure has been completed and an ISO image available.  Estimated time: 5 minutes	
22.	<b>MPS X: Start platcfg utility by logging as platcfg user.</b>	<b># su - platcfg</b>
23.	<b>MPS X: Select the Maintenance submenu</b>	On the <b>Main Menu</b> of the Platform Configuration Utility, press <b>[ENTER]</b> .

		
	<p>24. <b>MPS X:</b> Navigate to the media validation function.</p>	<p>Select the <b>Upgrade</b> menu and press [U].</p>  <p>Select the <b>Validate Media</b> menu and press [V].</p> 
	<p>25. <b>MPS X:</b> Output from the Validate Media selection.</p>	<p>The screen displays a message that it is no upgrade media is found, an Upgrade Media selection screen is displayed. Select the desired upgrade media and press [Enter]. The selection available, as in the example below.</p> 



Select **Exit** and press **[ENTER]**. The



28.	<b>Procedure Complete.</b>	This procedure is complete.
-----	----------------------------	-----------------------------

My Oracle Support.

```
$ sudo smartctl -a /dev/sda | grep -i LBA
241 Total_LBAs_Written 0x0032 100 100 000 Old_age AL
242 Total_LBAs_Read 0x0032 100 100 000 Old_age AL
Num Test_Description Status Remaining LifeTime(hours)
SPAN MIN_LBA MAX_LBA CURRENT_TEST_STATUS
```

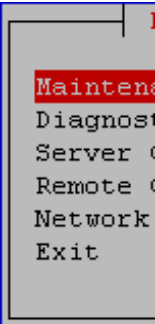
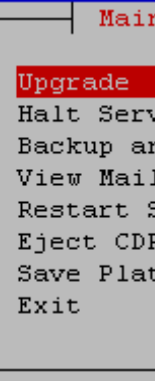
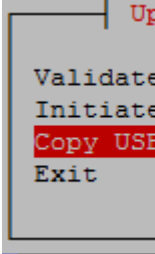
**4.5 Note: No error should be observed in case any mentioned below, record the output and contact Upgrade**

**4.5.1 ISO Image copy from USB Media**

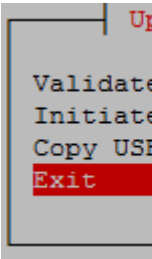
<b>S T E P #</b>	This procedure provides instructions to copy an ISO image  Estimated time: 5 minutes	
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69.	<b>MPS X:</b> Insert USB.	Insert media in USB drive
70.	<b>MPS X:</b> Log in to the server as the “root” user.	<b>[hostname] consolelogin: root</b> <b>password: password</b>
71.	<b>MPS X:</b> Run syscheck to make sure there is no error.	Execute the following command: <b># syscheck</b>  The output should look like: [root@hostname ~]# syscheck Running modules in class p  Running modules in class s  Running modules in class sy

		<p>Running modules in class d-</p> <p>Running modules in class ha</p> <p>Running modules in class ne</p> <p>LOG LOCATION: /var/TKLC/log</p>
72.	<p><b>MPS X:</b> Verify ISO image doesn't already exist.</p>	<p>Execute the following command to</p> <pre># ls -al /var/TKLC/upgrade</pre> <p>The output should look like:</p> <pre>[root@hostname ~]# ls -al / total 16 dr-xr-xr-x  2 root root 40 dr-xr-xr-x 21 root root 40</pre> <p>If an ISO image exists, remove it by</p> <pre># rm -f /var/TKLC/upgrade/</pre>
73.	<p><b>MPS X:</b> Delete unwanted ISOs from USB media.</p>	<p>Execute the following command to</p> <pre># mkdir -p /mnt/usb</pre> <p>Execute the following command to</p> <pre># fdisk -l  grep FAT</pre> <p>The output should look like:</p> <pre>/dev/sdc1      * FAT16</pre> <p>Execute the following command to</p> <p>from the output above:</p> <pre># mount /dev/sdc1 /mnt/usb</pre> <p>Execute the following command to</p> <p>format is as expected:</p> <pre># ls -al /mnt/usb</pre> <p>The output should look like:</p> <pre>[root@hostname ~]# # ls total 629400 dr-xr-xr-x  2 root root dr-xr-xr-x 22 root root -rw-r--r--  1 root root 13.2.1.0.0_132.18.0-x86 Only one ISO file should be listed, command to remove unwanted ISO <pre># rm -f /mnt/usb/&lt;ISO_NAME&gt;</pre> <p>For e.g.,</p> <pre># rm -f /mnt/usb/LSMS-13.3</pre> </pre>
74.	<p><b>MPS X:</b> Verify space exists for ISO.</p>	<p>Execute the following command to</p> <pre># df -h /var/TKLC</pre> <p>The output should look like:</p> <pre>[root@lsmspri log]# df</pre>

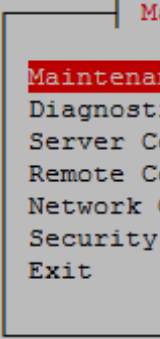
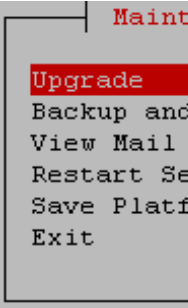
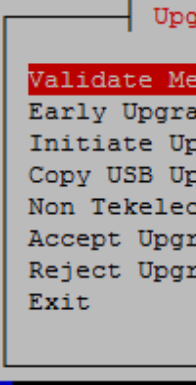
		<p>Filesystem /dev/mapper/vgroot-plat</p> <p>Verify that there is at least 1G in the is space available.</p> <p><b>CAUTION: Make sure you know cleaning up. It is recommended /var/TKLC/upgrade directory a should only contain ISO images contain images for any length of Oracle Support beforehand if re /var/TKLC/upgrade directory a</b></p>
75.	<p><b>MPS X:</b> Start platcfg utility.</p>	<p>Execute the following command to <b># su - platcfg</b></p>
76.	<p><b>MPS X:</b> Select the Maintenance submenu.</p>	<p>On the Main Menu of the Platform press <b>[ENTER]</b>.</p> 
77.	<p><b>MPS X:</b> Select the Upgrade submenu.</p>	<p>Select the <b>Upgrade menu</b> and press</p> 
78.	<p><b>MPS X:</b> Select Copy USB Upgrade Image submenu.</p>	<p>Select the Copy USB Upgrade Image</p> 



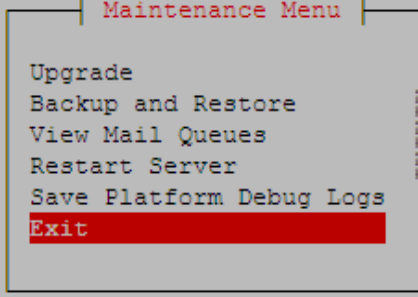
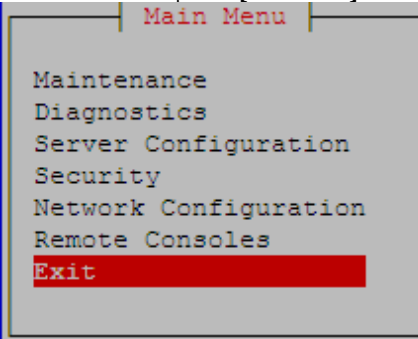
79.	<p><b>MPS X:</b> The ISO will be copied from the USB media to /var/TKLC/upgrade.</p> <p>Press any key to return to Upgrade menu.</p>	<p>Copying /mnt/upgrade/ LSMS-13</p> <p>PRESS ANY KEY TO RETURN</p>
80.	<p><b>MPS X:</b> Exit platcfg.</p>	<p>Select Exit and press [ENTER] rep</p> 
81.	<p><b>MPS X: Unmount USB media</b></p>	<p>Execute the following command to</p> <p><b># umount /mnt/usb</b></p>
82.	<p><b>MPS X:</b> Verify ISO image exists.</p>	<p>Execute the following command to</p> <p><b># ls -al /var/TKLC/upgrade</b></p> <p>The output should look like:</p> <pre>[root@lsmspri log]# ls -al /var/TKLC/upgrade total 895152 drwxrwxr-x. 2 root admgrp 4096 dr-xr-xr-x. 20 root root 4096 -r----- 1 admusr admgrp 916621 x86_64.iso</pre> <p>Repeat this procedure from step 5</p>
83.	<p><b>MPS X:</b> Logout from server.</p>	<p>Logout from the server by executin</p> <p><b># logout</b></p>
84.	<p><b>MPS X:</b> Remove USB media.</p>	<p>Remove media fromUSB drive.</p>
85.	<p><b>Procedure Complete.</b></p>	<p>This procedure is complete.</p>

**4.5.2 Validate Upgrade Media**

This procedure is used to execute a validation of the Upgrade Media before performing an upgrade. The upgrade process automatically validates the upgrade media. To perform just a validation before proceeding with upgrade, thus the re

<p><b>S T E P #</b></p>	<p>This procedure provides instructions to perform a validation procedure that assumes that the E5-APP-B IPM procedure has been completed and the ISO image available.</p>	<p>Estimated time: 5 minutes</p>	
	<p>29.</p>	<p><b>MPS X:</b> Start platcfg utility by logging in as platcfg user.</p>	<p><b># su - platcfg</b></p>
	<p>30.</p>	<p><b>MPS X:</b> Select the Maintenance submenu</p>	<p>On the <b>Main Menu</b> of the Platform Configuration Utility, press <b>[ENTER]</b>.</p> 
<p>31.</p>	<p><b>MPS X:</b> Navigate to the media validation function.</p>	<p>Select the <b>Upgrade</b> menu and press <b>[ENTER]</b>.</p>  <p>Select the <b>Validate Media</b> menu and press <b>[ENTER]</b>.</p> 	



		<p>Select <b>Exit</b> and press [ENTER] to return to the Main Menu.</p>  <p>Select <b>Exit</b> and press [ENTER]. The system returns to the Main Menu.</p> 
	<p>35. <b>Procedure Complete.</b></p>	<p>This procedure is complete.</p>
		<p>My Oracle Support</p> <p>40 51 a0 11 8e 57 e0 Error: UNC 160 sectors at LBA = 0x00578e11</p> <p>40 51 a8 11 8e 57 e0 Error: UNC 168 sectors at LBA = 0x00578e11</p> <p>Num Test_Description Status Remaining LifeTime(hours) LBA_of_</p> <p>If UNC errors are found, execute following command:</p> <pre>\$ sudo smartctl -a /dev/sda</pre>
		<p>Repeat steps from <b>Error! Reference source not found.</b></p>
		<p>Repeat steps from 1 to 20 on mate LSMS server.</p>

### 4.6 System Configuration

These steps can be performed on LSMS system. For mated pairs, commands should be run on both of the servers. Assuming that MPS A is ACTIVE server.

S T E P #	Steps To Be Completed	Expected output/command to be executed
1. <input type="checkbox"/>	<b>MPS X:</b> Login as admusr	<b>login: admusr</b> <b>password: &lt;admusr_password&gt;</b>
2. <input type="checkbox"/>	<b>MPS X:</b> Record /etc/hosts configuration	<pre>\$ cat /etc/hosts 127.0.0.1 localhost localhost4 localhost4.localdomain4 ::1 localhost localhost6 localhost6.localdomain6 192.168.1.1 lsmspri-heartbeat-a heartbeat-a 192.168.1.2 lsmsec-heartbeat-a mate-heartbeat-a ntppeerA mate 192.168.2.1 lsmspri-heartbeat-b heartbeat-b hasync-1a 192.168.2.2 lsmsec-heartbeat-b mate-heartbeat-b ntppeerB hasync-1b mate-ha 192.168.3.1 lsmspri-backup backup 192.168.4.1 lsmsec-backup mate-backup 192.168.3.2 backupserver-lsmspri backupserver 192.168.4.2 backupserver-lsmsec mate-backupserver 10.248.11.122 lsmspri lsmspri-ems ems lsmspri-app app lsmspri-npac npac 10.248.11.123 lsmsec lsmsec-ems mate-ems lsmsec-app mate-app lsmsec- npac mate-npac 10.248.11.124 lsmactive-app lsmactive 10.248.13.17 ntpserver1</pre>
3. <input type="checkbox"/>	<b>MPS X:</b> Verify and Record IPs configured on each interface	<pre>\$ ifconfig -a  bond0  Link encap:Ethernet HWaddr 00:00:17:0F:2D:36         inet addr:192.168.1.1 Bcast:192.168.1.255 Mask:255.255.255.0         inet6 addr: fe80::200:17ff:fe0f:2d36/64 Scope:Link         UP BROADCAST RUNNING MASTER MULTICAST MTU:1500         Metric:1         RX packets:40906546 errors:0 dropped:0 overruns:0 frame:0         TX packets:45125575 errors:0 dropped:0 overruns:0 carrier:0         collisions:0 txqueuelen:0         RX bytes:6104529725 (5.6 GiB) TX bytes:15266072489 (14.2 GiB)  bond0.2  Link encap:Ethernet HWaddr 00:00:17:0F:2D:36         inet addr:192.168.2.1 Bcast:192.168.2.255 Mask:255.255.255.0         inet6 addr: fe80::200:17ff:fe0f:2d36/64 Scope:Link         UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1         RX packets:30552973 errors:0 dropped:0 overruns:0 frame:0         TX packets:30178620 errors:0 dropped:0 overruns:0 carrier:0         collisions:0 txqueuelen:0         RX bytes:4477305241 (4.1 GiB) TX bytes:2765906476 (2.5 GiB)  bond1  Link encap:Ethernet HWaddr 42:E1:3E:F8:6C:A6         BROADCAST MASTER MULTICAST MTU:1500 Metric:1         RX packets:0 errors:0 dropped:0 overruns:0 frame:0         TX packets:0 errors:0 dropped:0 overruns:0 carrier:0         collisions:0 txqueuelen:0</pre>

		<pre> RX bytes:0 (0.0 b) TX bytes:0 (0.0 b)  bond2  Link encap:Ethernet HWaddr A6:57:A4:45:D8:C6         BROADCAST MASTER MULTICAST MTU:1500 Metric:1         RX packets:0 errors:0 dropped:0 overruns:0 frame:0         TX packets:0 errors:0 dropped:0 overruns:0 carrier:0         collisions:0 txqueuelen:0         RX bytes:0 (0.0 b) TX bytes:0 (0.0 b)  bond3  Link encap:Ethernet HWaddr CE:1E:89:16:5D:02         BROADCAST MASTER MULTICAST MTU:1500 Metric:1         RX packets:0 errors:0 dropped:0 overruns:0 frame:0         TX packets:0 errors:0 dropped:0 overruns:0 carrier:0         collisions:0 txqueuelen:0         RX bytes:0 (0.0 b) TX bytes:0 (0.0 b)  eth0   Link encap:Ethernet HWaddr 00:00:17:0F:2D:34         inet addr:10.248.11.122 Bcast:192.168.61.255 Mask:255.255.255.0         inet6 addr: fd66:f550:5939:b:200:17ff:fe0f:2d34/64 Scope:Global         inet6 addr: fe80::200:17ff:fe0f:2d34/64 Scope:Link         UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1         RX packets:4803345 errors:0 dropped:0 overruns:0 frame:0         TX packets:4822838 errors:2377 dropped:0 overruns:0 carrier:2377         collisions:53965 txqueuelen:1000         RX bytes:3614293501 (3.3 GiB) TX bytes:1682375735 (1.5 GiB)         Memory:fdee0000-fdeffff  eth1   Link encap:Ethernet HWaddr 00:00:17:0F:2D:35         inet addr:192.168.3.1 Bcast:192.168.3.255 Mask:255.255.255.0         inet6 addr: fe80::200:17ff:fe0f:2d35/64 Scope:Link         UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1         RX packets:8780 errors:0 dropped:0 overruns:0 frame:0         TX packets:8815 errors:0 dropped:0 overruns:0 carrier:0         collisions:0 txqueuelen:1000         RX bytes:980056 (957.0 KiB) TX bytes:987006 (963.8 KiB)         Memory:fde60000-fde7ffff  eth2   Link encap:Ethernet HWaddr 00:00:17:0F:2D:36         UP BROADCAST SLAVE MULTICAST MTU:1500 Metric:1         RX packets:0 errors:0 dropped:0 overruns:0 frame:0         TX packets:0 errors:0 dropped:0 overruns:0 carrier:0         collisions:0 txqueuelen:1000         RX bytes:0 (0.0 b) TX bytes:0 (0.0 b)         Memory:fdfe0000-fdffffff  eth3   Link encap:Ethernet HWaddr 00:00:17:0F:2D:36         UP BROADCAST RUNNING SLAVE MULTICAST MTU:1500 Metric:1         RX packets:40906546 errors:0 dropped:0 overruns:0 frame:0         TX packets:45125575 errors:0 dropped:0 overruns:0 carrier:0         collisions:0 txqueuelen:1000         RX bytes:6104529725 (5.6 GiB) TX bytes:15266072489 (14.2 GiB)         Memory:fdf60000-fdf7ffff  lo     Link encap:Local Loopback         inet addr:127.0.0.1 Mask:255.0.0.0 </pre>
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		<pre>inet6 addr: ::1/128 Scope:Host UP LOOPBACK RUNNING MTU:65536 Metric:1 RX packets:8557266 errors:0 dropped:0 overruns:0 frame:0 TX packets:8557266 errors:0 dropped:0 overruns:0 carrier:0 collisions:0 txqueuelen:0 RX bytes:690513650 (658.5 MiB) TX bytes:690513650 (658.5 MiB)</pre>
<p>4. <input type="checkbox"/></p>	<p><b>MPS X:</b> Record features settings Note: This command will be run only on ACTIVE server</p>	<pre>\$ lsmsdb -c features N AFT N ALARM_FILTERING N ALT_SPID 98 BINLOGS_THRESHOLD N CANADA_SPID_RECOVERY N COMMAND_CLASS 0 DEFAULT_PASSWORD_TIMEOUT N EDR Y ENHANCED_FILTERS N ERROR_CODES_FOR_ACTIONS N ERROR_CODES_FOR_NON_ACTIONS Y HSOP_BUNDLING Y HTTP Y HTTPS N INACTIVITY_TIMEOUT N LOGIN_MSG N LOG_EAGLE_SUCCESS_RESP 16 MAX_EAGLES 32 MAX_SPIDS 8 MAX_USERS N MYSQL_PORT N NANC_3_2_ENHANCEMENTS N NANC_3_3_FEATURE_SET 900 NPAC_HEARTBEAT_QUIET_PERIOD_TIMEOUT 100000 NPAC_HEARTBEAT_QUIET_PERIOD_TIMEOUT_CANADA 3 NPAC_HEARTBEAT_RETRY_NUMBER 60 NPAC_HEARTBEAT_TIMEOUT 60 NPAC_RECOVERY_PERIOD Y QUERY_SERVER N REPORT_GEN 0 REPORT_GEN_QUERY_ACTIVE Y RESYNCDDB_QUERY_SERVER Y SERVDI_ENABLED N SERVICE_PROV_TYPE N SNMP Y SNMP_ALARM_FEED N SPID_SECURITY N SURV_OK_TRAP N SV_TYPE N SWIM_RECOVERY 15 SYSTEM_INACTIVITY_TIMEOUT N WSMSC N WSMSC_TO_EAGLE</pre>
<p>5. <input type="checkbox"/></p>	<p><b>MPS X:</b> Record the DB Counts</p>	<pre>\$ lsmsdb -c counts 0 ..... CanadaDB.NumberPoolBlock 2 ..... CanadaDB.ServiceProvLRN</pre>

	<p>Note: This command will be run only on ACTIVE server</p>	<pre> 0 ..... CanadaDB.ServiceProvNPA_NXX 0 ..... CanadaDB.ServiceProvNPA_NXX_X 406 ..... CanadaDB.ServiceProvNetwork 48,915,526 .... CanadaDB.SubscriptionVersion  0 ..... MidAtlanticDB.NumberPoolBlock 0 ..... MidAtlanticDB.ServiceProvLRN 0 ..... MidAtlanticDB.ServiceProvNPA_NXX 0 ..... MidAtlanticDB.ServiceProvNPA_NXX_X 1 ..... MidAtlanticDB.ServiceProvNetwork 11,100 ..... MidAtlanticDB.SubscriptionVersion  0 ..... NortheastDB.NumberPoolBlock 0 ..... NortheastDB.ServiceProvLRN 0 ..... NortheastDB.ServiceProvNPA_NXX 0 ..... NortheastDB.ServiceProvNPA_NXX_X 0 ..... NortheastDB.ServiceProvNetwork 0 ..... NortheastDB.SubscriptionVersion  1 ..... ReplTestDB.ReplTestTbl  1 ..... ResyncDB.LastTimestamp 2,043,494 ..... ResyncDB.ResyncRecord 0 ..... ResyncDB.ResyncRecordModel 1,168,305 ..... ResyncDB.resync1 875,189 ..... ResyncDB.resync2  0 ..... SoutheastDB.NumberPoolBlock 0 ..... SoutheastDB.ServiceProvLRN 0 ..... SoutheastDB.ServiceProvNPA_NXX 0 ..... SoutheastDB.ServiceProvNPA_NXX_X 0 ..... SoutheastDB.ServiceProvNetwork 11 ..... SoutheastDB.SubscriptionVersion  0 ..... SouthwestDB.NumberPoolBlock 0 ..... SouthwestDB.ServiceProvLRN 0 ..... SouthwestDB.ServiceProvNPA_NXX 0 ..... SouthwestDB.ServiceProvNPA_NXX_X 0 ..... SouthwestDB.ServiceProvNetwork 0 ..... SouthwestDB.SubscriptionVersion  0 ..... WestCoastDB.NumberPoolBlock 0 ..... WestCoastDB.ServiceProvLRN 0 ..... WestCoastDB.ServiceProvNPA_NXX 0 ..... WestCoastDB.ServiceProvNPA_NXX_X 0 ..... WestCoastDB.ServiceProvNetwork 0 ..... WestCoastDB.SubscriptionVersion                 </pre>
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	<p>0 ..... WesternDB.NumberPoolBlock  0 ..... WesternDB.ServiceProvLRN  0 ..... WesternDB.ServiceProvNPA_NXX  0 ..... WesternDB.ServiceProvNPA_NXX_X  0 ..... WesternDB.ServiceProvNetwork  0 ..... WesternDB.SubscriptionVersion</p> <p>2,043,342 ..... logDB.TransactionLog</p> <p>0 ..... noreplDB.EbdaProcessList  0 ..... noreplDB.ServdiProcessList</p> <p>4 ..... performance_schema.accounts  0 ..... performance_schema.cond_instances  0 ..... performance_schema.events_stages_current  0 ..... performance_schema.events_stages_history  0 ..... performance_schema.events_stages_history_long  432 .....  performance_schema.events_stages_summary_by_account_by_event_name  324 ..... performance_schema.events_stages_summary_by_host_by_event_name  2,160 .....  performance_schema.events_stages_summary_by_thread_by_event_name  324 ..... performance_schema.events_stages_summary_by_user_by_event_name  108 ..... performance_schema.events_stages_summary_global_by_event_name  18 ..... performance_schema.events_statements_current  0 ..... performance_schema.events_statements_history  0 ..... performance_schema.events_statements_history_long  660 .....  performance_schema.events_statements_summary_by_account_by_event_name  440 ..... performance_schema.events_statements_summary_by_digest  495 .....  performance_schema.events_statements_summary_by_host_by_event_name  3,300 .....  performance_schema.events_statements_summary_by_thread_by_event_name  495 .....  performance_schema.events_statements_summary_by_user_by_event_name  165 .....  performance_schema.events_statements_summary_global_by_event_name  0 ..... performance_schema.events_waits_current  0 ..... performance_schema.events_waits_history  0 ..... performance_schema.events_waits_history_long  876 .....  performance_schema.events_waits_summary_by_account_by_event_name  657 ..... performance_schema.events_waits_summary_by_host_by_event_name  460 ..... performance_schema.events_waits_summary_by_instance  4,380 .....  performance_schema.events_waits_summary_by_thread_by_event_name  657 ..... performance_schema.events_waits_summary_by_user_by_event_name  219 ..... performance_schema.events_waits_summary_global_by_event_name  460 ..... performance_schema.file_instances  43 ..... performance_schema.file_summary_by_event_name</p>
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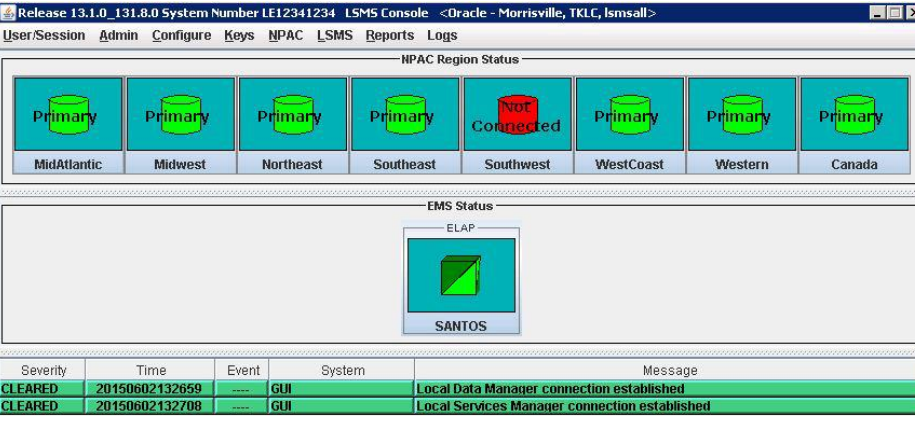
	<p>460 ..... performance_schema.file_summary_by_instance  1 ..... performance_schema.host_cache  3 ..... performance_schema.hosts  0 ..... performance_schema.mutex_instances  178 ..... performance_schema.objects_summary_global_by_type  5 ..... performance_schema.performance_timers  0 ..... performance_schema.rwlock_instances  82 ..... performance_schema.session_account_connect_attrs  93 ..... performance_schema.session_connect_attrs  1 ..... performance_schema.setup_actors  12 ..... performance_schema.setup_consumers  495 ..... performance_schema.setup_instruments  4 ..... performance_schema.setup_objects  4 ..... performance_schema.setup_timers  0 ..... performance_schema.socket_instances  3 ..... performance_schema.socket_summary_by_event_name  0 ..... performance_schema.socket_summary_by_instance  391 ..... performance_schema.table_io_waits_summary_by_index_usage  178 ..... performance_schema.table_io_waits_summary_by_table  178 ..... performance_schema.table_lock_waits_summary_by_table  20 ..... performance_schema.threads  3 ..... performance_schema.users</p> <p>0 ..... supDB.AlarmFilter  55 ..... supDB.AlarmInfo  745 ..... supDB.Authorization  10 ..... supDB.CanadaNpacMeasurements  1,000 ..... supDB.CanadaPrivateKey  1,000 ..... supDB.CanadaPublicKey  97 ..... supDB.DbConfig  0 ..... supDB.DefaultGtt  12 ..... supDB.ELAP21EagleMeasurements  1 ..... supDB.EmsInterface  1 ..... supDB.GttGroup  1 ..... supDB.GttGroupSpid  2 ..... supDB.LsmsServiceProvider  6 ..... supDB.LsmsUser  0 ..... supDB.LsmsUserSpid  1 ..... supDB.MidAtlanticNpacMeasurements  1,000 ..... supDB.MidAtlanticPrivateKey  1,000 ..... supDB.MidAtlanticPublicKey  0 ..... supDB.MidwestNpacMeasurements  0 ..... supDB.MidwestPrivateKey  0 ..... supDB.MidwestPublicKey  0 ..... supDB.NortheastNpacMeasurements  0 ..... supDB.NortheastPrivateKey  0 ..... supDB.NortheastPublicKey  0 ..... supDB.NpaSplit  0 ..... supDB.NpacMeasurementsModel  8 ..... supDB.NpacRegion  0 ..... supDB.OverrideGtt  0 ..... supDB.PrivateKeyModel  0 ..... supDB.PublicKeyModel  0 ..... supDB.STPAEagleMeasurements</p>
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		<pre> 20 ..... supDB.SoutheastNpacMeasurements 1,000 ..... supDB.SoutheastPrivateKey 1,000 ..... supDB.SoutheastPublicKey 0 ..... supDB.SouthwestNpacMeasurements 0 ..... supDB.SouthwestPrivateKey 0 ..... supDB.SouthwestPublicKey 1 ..... supDB.TnFilter 0 ..... supDB.WestCoastNpacMeasurements 0 ..... supDB.WestCoastPrivateKey 0 ..... supDB.WestCoastPublicKey 0 ..... supDB.WesternNpacMeasurements 0 ..... supDB.WesternPrivateKey 0 ..... supDB.WesternPublicKey 0 ..... supDB.snmpGrpCfg 0 ..... supDB.snmpNmsCfg 0 ..... supDB.snmpUserCfg 1 ..... supDB.snmpVerMode 1 ..... supDB.snmpViewCfg                 </pre>
<p>6. <input type="checkbox"/></p>	<p><b>MPS X:</b>  Verify operational status of LSMS software  Note: This command will be run only on ACTIVE server</p>	<pre> \$ sudo sentry status sending status command..  LSMS Sentry Status -----  sentryd started: Thu Sep 7 05:35:07 2017 Current activity mode: ACTIVE Debug is not enabled  Process      PID    Status   StartTS      LastPingTS  NumR Comment ----- osisk6      7820   running  20170907053523  ---        1  No Comment Specified lsmsgd      7826   running  20170907053512  ---        1  No Comment Specified rmtpmgr     7837   running  20170907053514  20170913153214 1  No Comment Specified rmtpagent   8177   running  20170907053514  ---        1  No Comment Specified lsman       25914  running  20170907083254  20170913153210 3  /usr/TKLC/lsms/bin/lsman supman      8181   running  20170907053517  20170913153212 1  /usr/TKLC/lsms/bin/supman reportman   7885   running  20170907053512  20170913153213 1  /usr/TKLC/lsms/bin/reportman apache      5576   running  20170907053508  ---        0  No Comment Specified N MidAtlantic 16092  running  20170907053810  20170913153206 2  PRIMARY NPAC: Not Associated RMTP failure times:0 0 0 N Northeast 9101   running  20170907053529  20170913153206 1  PRIMARY NPAC: Not Associated RMTP failure times:0 0 0                 </pre>

		<pre>N Southeast 13487 running 20170911055923 20170913153206 4 PRIMARY NPAC: Not Associated RMTP failure times:0 0 0 N Southwest 9252 running 20170907053530 20170913153206 1 PRIMARY NPAC: Not Associated RMTP failure times:0 0 0 N Western 9281 running 20170907053530 20170913153206 1 PRIMARY NPAC: Not Associated RMTP failure times:0 0 0 N WestCoast 9285 running 20170907053530 20170913153206 1 PRIMARY NPAC: Not Associated RMTP failure times:0 0 0 N Canada --- stopped --- --- 1 PRIMARY NPAC: Not Associated RMTP failure times:0 0 0 E ELAP21 8475 running 20170907053520 20170913153213 1 VIP=DOWN Pending=0% lmgrd 8004 running 20170907053512 --- 1 No Comment Specified  Wed Sep 13 15:32:14 2017 Command Complete.</pre>
7. <input type="checkbox"/>	<p><b>MPS X:</b> Verify sup status of LSMS software Note: This command will be run only on ACTIVE server</p>	<pre>\$ cd /usr/TKLC/lms/bin \$ sudo sup status  supman      :    MEM : 522748 kbytes    PCPU : 0.0 % lsman       :    MEM : 670004 kbytes   PCPU : 0.0 % reportman   :    MEM : 967300 kbytes   PCPU : 0.0 %</pre>
8. <input type="checkbox"/>	<p><b>MPS X:</b> Verify HA status</p>	<pre>\$ hastatus; ssh mate hastatus  ACTIVE STANDBY</pre>
9. <input type="checkbox"/>	<p><b>MPS X:</b> Verify that MySQL replication is working</p>	<pre># tail /var/TKLC/lms/logs/dbreplmon.log  If MySQL replication is functioning correctly then the following output will be observed, make sure that at least the last line of your output matches the lines below.  Wed Sep 13 15:52:27 2017 All tests passed on ACTIVE Wed Sep 13 15:53:30 2017 All tests passed on ACTIVE Wed Sep 13 15:54:32 2017 All tests passed on ACTIVE Wed Sep 13 15:55:34 2017 All tests passed on ACTIVE Wed Sep 13 15:56:35 2017 All tests passed on ACTIVE Wed Sep 13 15:57:37 2017 All tests passed on ACTIVE Wed Sep 13 15:58:39 2017 All tests passed on ACTIVE Wed Sep 13 15:59:40 2017 All tests passed on ACTIVE Wed Sep 13 16:00:42 2017 All tests passed on ACTIVE Wed Sep 13 16:01:44 2017 All tests passed on ACTIVE</pre>
10. <input type="checkbox"/>	<p><b>MPS X:</b> Record /etc/passwd file</p>	<pre>\$ cat /etc/passwd  root:x:0:0:root:/root:/bin/bash bin:x:1:1:bin:/bin:/sbin/nologin daemon:x:2:2:daemon:/sbin:/sbin/nologin adm:x:3:4:adm:/var/adm:/sbin/nologin</pre>

		<pre>lp:x:4:7:lp:/var/spool/lpd:/sbin/nologin sync:x:5:0:sync:/sbin:/bin/sync shutdown:x:6:0:shutdown:/sbin:/sbin/shutdown halt:x:7:0:halt:/sbin:/sbin/halt mail:x:8:12:mail:/var/spool/mail:/sbin/nologin uucp:x:10:14:uucp:/var/spool/uucp:/sbin/nologin operator:x:11:0:operator:/root:/sbin/nologin games:x:12:100:games:/usr/games:/sbin/nologin gopher:x:13:30:gopher:/var/gopher:/sbin/nologin ftp:x:14:50:FTP User:/var/ftp:/sbin/nologin nobody:x:99:99:Nobody:./:/sbin/nologin dbus:x:81:81:System message bus:./:/sbin/nologin rpc:x:32:32:Rpcbind Daemon:/var/cache/rpcbind:/sbin/nologin admusr:x:4996:4996:Platform remote admin user:/home/admusr:/bin/bash nscd:x:28:28:NSCD Daemon:./:/sbin/nologin vesa:x:69:69:virtual console memory owner:/dev:/sbin/nologin apache:x:48:48:Apache:/var/www:/sbin/nologin sshd:x:74:74:Privilege-separated SSH:/var/empty/sshd:/sbin/nologin ntp:x:38:38:./etc/ntp:/sbin/nologin saslauth:x:499:76:Saslauthd user:/var/empty/saslauth:/sbin/nologin postfix:x:89:89:./var/spool/postfix:/sbin/nologin platcfg:x:5000:5000:Platform Configuration User:/home/platcfg:/usr/TKLC/plat/bin/platcfg tpdProvd:x:5010:5010:TPD Provisioning Daemon:/home/tpdProvd:/usr/bin/false syscheck:x:71:71:System Health Check User:/home/syscheck:/bin/false hids:x:4995:4995:HIDS admin user:/home/hids:/sbin/nologin dhcpd:x:177:177:DHCP server:./:/sbin/nologin nslcd:x:65:55:LDAP Client User:./:/sbin/nologin rtkit:x:498:450:RealtimeKit:/proc:/sbin/nologin rpcuser:x:29:29:RPC Service User:/var/lib/nfs:/sbin/nologin nfsnobody:x:65534:65534:Anonymous NFS User:/var/lib/nfs:/sbin/nologin named:x:25:25:Named:/var/named:/sbin/nologin tcpdump:x:72:72:./:/sbin/nologin dbadm:x:1001:1007:./var/TKLC/lms/dbadm:/bin/bash lmsadm:x:1002:1001:./var/TKLC/lms/lmsadm:/bin/bash lmsall:x:1005:1001:./var/TKLC/lms/lmsall:/bin/bash lmsuext:x:1007:1001:./var/TKLC/lms/lmsuext:/bin/bash lmsuser:x:1003:1001:./var/TKLC/lms/lmsuser:/bin/bash lmsview:x:1004:1001:./var/TKLC/lms/lmsview:/bin/bash lmsmgr:x:5011:5011:./usr/TKLC/plat/etc/home.platcfg/lmsmgr:/usr/TKLC/plat/bin/platcfg mysql:x:497:449:MySQL server:/var/lib/mysql:/bin/bash</pre>
<p>11. <input type="checkbox"/></p>	<p><b>MPS X:</b> Verify backups are being taken properly on NAS</p>	<pre>\$ ssh root@backupserver # ls /volumes/LVstorage/logs_lmspri/ 00-Aug29_23:55 current # ls /volumes/LVstorage/db/ 00-Aug29_23:55 current # ls /volumes/LVstorage/logs_lmssec/ 00-Aug29_23:55 current # ls /volumes/LVstorage/lmspri 00-Aug29_23:55 current</pre>

		<pre># ls /Volumes/LVstorage/lsmsec 00-Aug29_23:55 current  # exit</pre>
12. <input type="checkbox"/>	<p><b>MPS X:</b> LSMS backups are scheduled for 23:55 everyday ( default, customer may have changed it). If the maintenance window time collides with backup time then please disable the backup prior to upgrade.</p> <p>Please also remember to enable the backup after the upgrade is done.</p> <p>NOTE: Same steps are mentioned in the Install/Upgrade doc.</p>	<p>Command to disable the backup:</p> <pre>\$ sed -i '/^#!/ {/lsmsec_wrapper/ s/^#!/}' /etc/cron.d/lsmsec.cron</pre> <p>Command to enable the backup:</p> <pre>\$ sed -i '/^#/ {/lsmsec_wrapper/ s/^#//}' /etc/cron.d/lsmsec.cron</pre>
13. <input type="checkbox"/>	<p><b>MPS X:</b> Gather application log files</p>	<pre>\$ sudo saveLogs -n &lt;numberof days&gt; \$ sudo saveLogs -n 7</pre> <p>Size of final tar file will be 9.7602 MB.</p> <p>Do you want to continue with this logs size ?[Y N] Y</p> <p>Logs Captured Successfully. Tar of logs placed at : /var/TKLC/lsmsec/free/saveLogs/logsCapture_lsmsecpri_20170913154421.tar.bz2 GUI Notification sent.</p>
14. <input type="checkbox"/>	<p><b>MPS X:</b> Gather system log files</p>	<pre>\$ sudo /usr/TKLC/plat/sbin/saveLogs_plat</pre> <p>Logs will be save in /tmp directory /tmp/saveLogs_plat.lsmsecpri.13563.tar.bz2</p>
15. <input type="checkbox"/>	<p><b>MPS X:</b> <b>Login to lsmsec GUI and verify NPAC and ELAP are connected.</b></p>	<p>Note: Connected NPAC regions and ELAP will be displayed in <b>Green</b> while not connected will be displayed in <b>Red</b> with status.</p>

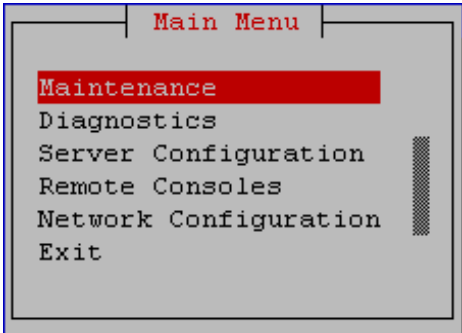
		 
<p>16. <input type="checkbox"/></p>	<p><b>MPS X:</b> Verify LSMS Query server connectivity NOTE: This should be run only from Active server</p>	<pre>\$ /usr/TKLC/lsmstools/lmsmdb -c queryservers</pre> <p>/usr/TKLC/lsmstools/lmsmdb: Query Server Feature is not enabled. ---OR--- cs2-bss2 (&lt;LSMS Query Server IP&gt;) Connected ---OR--- cs2-bss2 (&lt;LSMS Query Server IP&gt;) Disconnected</p> <p>Verify replication is working on Query server. Login into Query Servers's as root user and run following command.</p> <pre># cd /opt/mysql/mysql/bin # mysql -u root -p Enter password:&lt;password&gt; mysql&gt; SHOW SLAVE STATUS \G;       Relay_Master_Log_File: mysql-bin.000056       Slave_IO_Running: Yes       Slave_SQL_Running: Yes</pre> <p>Note: Verify Slave IO Running and Slave SQL running status. If this is not Yes contact My Oracle Support.</p> <pre>mysql&gt; exit;</pre>
<p>17. <input type="checkbox"/></p>	<p><b>MPS X:</b> Repeat the procedure for mate LSMS</p>	<p>Run steps 1 to 16 on mate server unless stated that step can be run only on active server.</p>

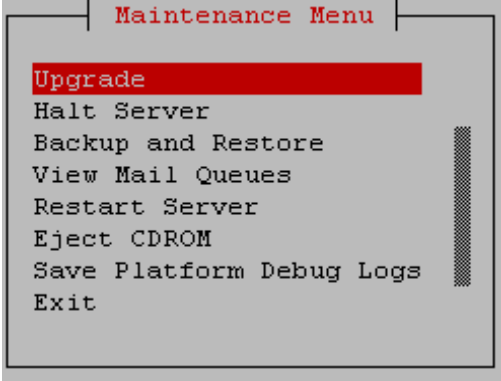
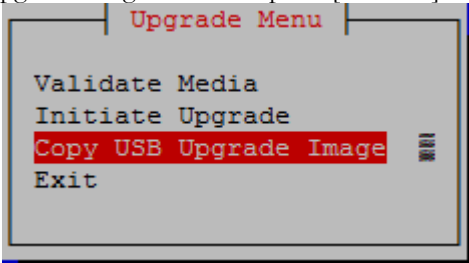
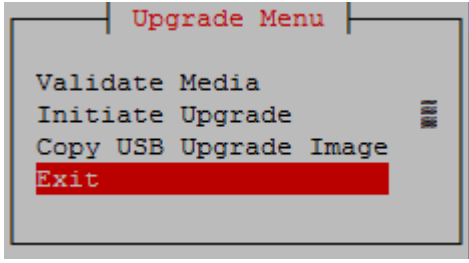
## 4.7 Upgrade Media Check

### 4.7.1 ISO Image copy from USB Media

<p><b>S T E P #</b></p>	<p>This procedure provides instructions to copy an ISO image from an USB media.</p> <p>Estimated time: 5 minutes</p>	
<p>86. <input type="checkbox"/></p>	<p><b>MPS X:</b> Insert USB.</p>	<p>Insert media in USB drive</p>
<p>87. <input type="checkbox"/></p>	<p><b>MPS X:</b> Log in to the server as the “root” user.</p>	<p><b>[hostname] consolelogin: root</b></p> <p><b>password: password</b></p>
<p>88. <input type="checkbox"/></p>	<p><b>MPS X:</b> Run syscheck to make sure there is no error.</p>	<p>Execute the following command:</p> <p><b># syscheck</b></p> <p>The output should look like:</p> <pre>[root@hostname ~]# syscheck Running modules in class proc...      OK Running modules in class services...  OK Running modules in class system...    OK Running modules in class disk...      OK Running modules in class hardware...  OK Running modules in class net...       OK LOG LOCATION: /var/TKLC/log/syscheck/fail_log</pre>
<p>89. <input type="checkbox"/></p>	<p><b>MPS X:</b> Verify ISO image doesn't already exist.</p>	<p>Execute the following command to perform directory listing:</p> <p><b># ls -al /var/TKLC/upgrade</b></p> <p>The output should look like:</p> <pre>[root@hostname ~]# ls -al /var/TKLC/upgrade total 16 dr-xr-xr-x  2 root root 4096 Oct 22 16:31 . dr-xr-xr-x 21 root root 4096 Oct 18 13:40 ..</pre> <p>If an ISO image exists, remove it by executing the following command:</p> <p><b># rm -f /var/TKLC/upgrade/&lt;ISO image&gt;</b></p>
<p>90. <input type="checkbox"/></p>	<p><b>MPS X:</b> Delete unwanted ISOs from USB media.</p>	<p>Execute the following command to create a directory to mount the USB media:</p> <p><b># mkdir -p /mnt/usb</b></p> <p>Execute the following command to get the USB drive name:</p> <p><b># fdisk -l  grep FAT</b></p> <p>The output should look like:</p> <pre>/dev/sdc1 *                1                812                831472                6 FAT16</pre> <p>Execute the following command to mount the USB media using the USB drive name from the output above:</p> <p><b># mount /dev/sdc1 /mnt/usb</b></p>



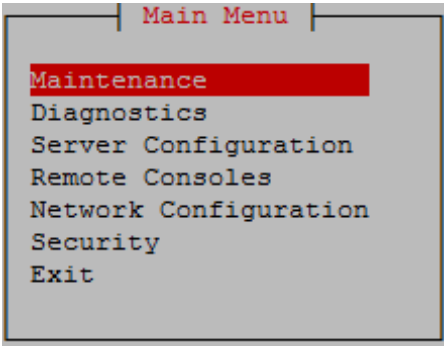
		<p>Execute the following command to perform directory listing and verify the file name format is as expected:  <b># ls -al /mnt/usb</b></p> <p>The output should look like:  <pre>[root@hostname ~]# # ls -al /mnt/usb total 629400 dr-xr-xr-x  2 root root      4096 Dec  5 13:33 . dr-xr-xr-x 22 root root      4096 Dec  5 13:55 .. -rw-r--r--  1 root root 853002240 Dec  5 16:20 LSMS-13.2.1.0.0_132.18.0-x86_64.iso</pre> <p>Only one ISO file should be listed, if additional files are listed, execute the following command to remove unwanted ISOs:  <b># rm -f /mnt/usb/&lt;ISO_NAME&gt;.iso</b></p> <p>For e.g.,  <b># rm -f /mnt/usb/LSMS-13.3.0.0.0_133.4.0-x86_64.iso</b></p> </p>
<p>91. <input type="checkbox"/></p>	<p><b>MPS X:</b> Verify space exists for ISO.</p>	<p>Execute the following command to verify the available disk space:  <b># df -h /var/TKLC</b></p> <p>The output should look like:  <pre>[root@lsmspri log]# df -h /var/TKLC Filesystem              Size  Used Avail Use% Mounted on /dev/mapper/vgroot-plat_var_tklc                         3.9G  1.2G  2.5G  32% /var/TKLC</pre> <p>Verify that there is at least 1G in the Avail column. If not, clean up files until there is space available.</p> <p><b>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 My Oracle Support beforehand if removing files other than the /var/TKLC/upgrade directory as removing files is dangerous.</b></p> </p>
<p>92. <input type="checkbox"/></p>	<p><b>MPS X:</b> Start platcfg utility.</p>	<p>Execute the following command to change the user:  <b># su - platcfg</b></p>
<p>93. <input type="checkbox"/></p>	<p><b>MPS X:</b> Select the Maintenance submenu.</p>	<p>On the Main Menu of the Platform Configuration Utility, select <b>Maintenance</b> and press <b>[ENTER]</b>.</p>  <p>The screenshot shows a terminal window titled "Main Menu" with a list of options: Maintenance (highlighted in red), Diagnostics, Server Configuration, Remote Consoles, Network Configuration, and Exit. A vertical cursor is positioned to the right of the list.</p>
<p>94.</p>	<p><b>MPS X:</b> Select the Upgrade submenu.</p>	<p>Select the <b>Upgrade menu</b> and press <b>[ENTER]</b>.</p>

<input type="checkbox"/>		
<p>95.</p> <input type="checkbox"/>	<p><b>MPS X:</b> Select Copy USB Upgrade Image submenu.</p>	<p>Select the Copy USB Upgrade Image menu and press [ENTER].</p> 
<p>96.</p> <input type="checkbox"/>	<p><b>MPS X:</b> The ISO will be copied from the USB media to /var/TKLC/upgrade.</p> <p>Press any key to return to Upgrade menu.</p>	<p>Copying /mnt/upgrade/ LSMS-13.3.0.0.0_133.4.0-x86_64.iso</p> <p>PRESS ANY KEY TO RETURN TO THE PLATCFG MENU.</p>
<p>97.</p> <input type="checkbox"/>	<p><b>MPS X:</b> Exit platcfg.</p>	<p>Select Exit and press [ENTER] repeatedly until the “platcfg” utility terminates.</p> 
<p>98.</p> <input type="checkbox"/>	<p><b>MPS X: Unmount USB media</b></p>	<p>Execute the following command to unmount the USB media:  <b># umount /mnt/usb</b></p>
<p>99.</p> <input type="checkbox"/>	<p><b>MPS X:</b> Verify ISO image exists.</p>	<p>Execute the following command to perform directory listing:  <b># ls -al /var/TKLC/upgrade</b></p> <p>The output should look like:  <pre>[root@lsmspri log]# ls -al /var/TKLC/upgrade total 895152 drwxrwxr-x. 2 root  admgrp  4096 Apr 20 17:16 . dr-xr-xr-x. 20 root  root   4096 Apr 20 18:01 .. -r-----  1 admusr admgrp 916621312 Apr 20 17:16 LSMS-13.3.0.0.0_133.4.0-x86_64.iso</pre></p>

		Repeat this procedure from step 5 if LSMS ISO file is not as expected.
100. <input type="checkbox"/>	<b>MPS X:</b> Logout from server.	Logout from the server by executing the following command:  <b># logout</b>
101. <input type="checkbox"/>	<b>MPS X:</b> Remove USB media.	Remove media from USB drive.
102. <input type="checkbox"/>	<b>Procedure Complete.</b>	This procedure is complete.

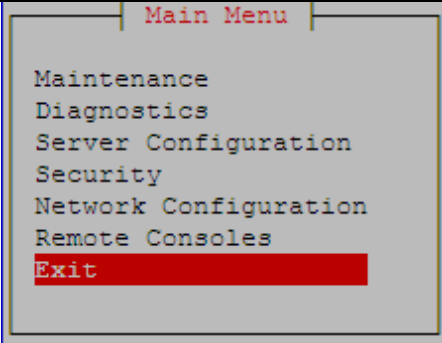
### 4.7.2 Validate Upgrade Media

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.

<b>S T E P #</b>	This procedure provides instructions to perform a validation of the upgrade media on the server. This procedure assumes that the E5-APP-B IPM procedure has been executed and the user has LSMS Upgrade ISO image available.  Estimated time: 5 minutes	
36. <input type="checkbox"/>	<b>MPS X:</b> Start platcfg utility by logging as platcfg user.	<b># su - platcfg</b>
37. <input type="checkbox"/>	<b>MPS X:</b> Select the Maintenance submenu	On the <b>Main Menu</b> of the Platform Configuration Utility, select <b>Maintenance</b> and press <b>[ENTER]</b> .  
38. <input type="checkbox"/>	<b>MPS X:</b> Navigate to the media validation function.	Select the <b>Upgrade</b> menu and press <b>[ENTER]</b> .

		<div data-bbox="699 199 1195 506" style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p style="text-align: center; color: red;">Maintenance Menu</p> <pre style="font-family: monospace;"> Upgrade Backup and Restore View Mail Queues Restart Server Save Platform Debug Logs Exit                     </pre> </div> <p>Select the <b>Validate Media</b> menu and press <b>[ENTER]</b>.</p> <div data-bbox="688 573 1203 955" style="border: 1px solid black; padding: 5px;"> <p style="text-align: center; color: red;">Upgrade Menu</p> <pre style="font-family: monospace;"> Validate Media Early Upgrade Checks Initiate Upgrade Copy USB Upgrade Image Non Tekelec RPM Management Accept Upgrade Reject Upgrade Exit                     </pre> </div>
<p>39. <input type="checkbox"/></p>	<p><b>MPS X:</b> Output from the Validate Media selection.</p>	<p>The screen displays a message that it is searching for upgrade media. Once the upgrade media is found, an Upgrade Media selection menu appears similar to the example below.</p> <p>Select the desired upgrade media and press <b>[ENTER]</b>. There should only be one selection available, as in the example below.</p> <div data-bbox="472 1226 1427 1377" style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p style="text-align: center; color: red;">Choose Upgrade Media Menu</p> <pre style="font-family: monospace;"> LSMS-13.3.0.0.0_133.4.5-x86_64.iso - 13.3.0.0.0_133.4.5 Exit                     </pre> </div>
<p>40. <input type="checkbox"/></p>	<p><b>MPS X:</b> View the Validation results</p>	<p>The results of the validation are displayed, similar to the example below.</p> <p>Press <b>[ENTER]</b> to continue.</p>



		
<p>42. <input type="checkbox"/></p>	<p><b>Procedure Complete.</b></p>	<p>This procedure is complete.</p>

## 5 My Oracle Support

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.