

**Oracle® Communications
Platform**

PM&C Incremental Upgrade

Release 6.2

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CAUTION: Use only the Upgrade procedure included in the Upgrade Kit.

Before upgrading any system, please access My Oracle Support (MOS) (<https://support.oracle.com>) and review any MOS Notes that relate to this upgrade.

My Oracle Support (MOS) (<https://support.oracle.com>) is your initial point of contact for all product support and training needs. A representative at Customer Access Support (CAS) can assist you with MOS registration. Call the CAS 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>. See more information on MOS in the Appendix section.

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Upgrade Procedure

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Important Notices



CAUTION: Use only the procedure downloaded from the Oracle Help Center (OHC) site (See Appendix J).

Before beginning this procedure, contact [Oracle Support](#) to inform them of your upgrade plans.

1 Introduction

PM&C is an application that provides platform-level (as opposed to application-level) management functionality for various hardware platforms and virtual environments. PM&C provides the capability to manage and provision platform components to enable the system to host applications and appropriately provision platform components for specific solution configurations.

1.1 Purpose and Scope

This document describes methods utilized and procedures executed to perform a software upgrade on an in-service PM&C application to a 6.2 software release, from software releases identified in section 1.7.

1.2 My Oracle Support

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

Phone: +1.800.223.1711 (toll-free in the US),

Or retrieve your local hotline from Oracle Global Customer Support Center at <http://www.oracle.com/us/support/contact/index.html>

Make the following selections on the Support telephone menu:

Select **2** for **New Service Request**

Then select **3** for **Hardware, Networking, and Solaris Operating System Support**

Then either

- Select **1** for **Technical Issues**,
When talking to the agent, please indicate that you are an existing Tekelec customer.

Note: Oracle support personnel performing installations or upgrades on a customer site must obtain the customer Support Identification (SI) number prior to seeking assistance.

OR

- Select **2** for **Non-Technical Issues**, for example, for My Oracle Support (MOS) registration.
When talking to the agent, mention that you are a Tekelec customer new to MOS.

1.3 Software Release Numbering

Refer to the Product Release Notes or other appropriate document with the most recent build numbers.

1.4 Glossary

This section lists terms and acronyms specific to this document.

Table 1. Glossary

Acronym/Term	Definition
DHCP	Dynamic Host Configuration Protocol
OSDC	Oracle Software Delivery Cloud
External Media	USB containing a software image

Table 1. Glossary

Acronym/Term	Definition
HP c-Class	HP blade server offering
IPM	Initial Product Manufacturing
RMS	Rack Mount Server
Management Server	An HP RMS or Oracle RMS that has physical connectivity required to configure switches and may host the PM&C application or serve other configuration purposes.
NetBackup Feature	Feature that provides support of the Symantec NetBackup client utility on an application server.
Redundant Management Server	A Management Server but is not initialized. Ensures a decrease in outage for PM&C Disaster Recovery.
OS	Operating System (e.g. TPD or TVOE)
PM&C	Platform Management and Configuration application, resides on a guest
PM&C guest	The virtual machine hosting the PM&C application.
PM&C TVOE host	The TVOE host that contains the PM&C guest
Redundant PM&C	A secondary PM&C guest that is not initialized. Ensures a decreased outage for PM&C Disaster Recovery
TPD	Tekelec Platform Distribution
TVOE	Tekelec Virtual Operating Environment
TVOE Host	The host (physical machine) capable of hosting virtual machines (guests such as PM&C).
Accept	This process formally accepts the upgrade. This action removes the ability to backout to the previous release.
Reject (Backout)	The process to take a system back to a Source Release prior to completion of upgrade to Target release.
Incremental upgrade	An upgrade that takes a target system from any given release to another release but not necessarily from the shipping baseline to the target release.
Non-preserving upgrade	“Upgrade” that does not adhere to the standard goals of software upgrade methodology. The outcome of the execution is that the system is running on the Target Release; however the Source Release database is not preserved.
Downgrade	The process to take a system from a Target Release back to a Source Release including preservation of databases and system configuration.
Source release	Software release to upgrade from.
Target release	Software release to upgrade to.
Software Centric	A term used to differentiate between customers buying both hardware and software from Oracle, and customers buying only software.

Table 1. Glossary

Acronym/Term	Definition
NUMA	Non-Uniform Memory Access

1.5 Recommendations

Never attempt an upgrade of the PM&C application when the server on which it is running is unhealthy. Follow the pre-upgrade procedures for testing system health, and do not proceed with upgrade if any non-normal conditions are shown.

Upgrade of the PM&C application should be done prior to an upgrade of any other application, with the exception of the TVOE hosting the PM&C guest. The application release notes should indicate which release of PM&C (and TVOE) is required.

Prior to upgrading the PM&C TVOE host and PM&C guest, the Management Server should have its firmware upgraded using the HP Firmware Upgrade Pack (HP FUP) or Oracle Firmware Upgrade Pack (Oracle FUP) specified by the application being upgraded. Otherwise, if the PM&C is being upgraded by itself outside of a larger application upgrade, ensure that the Management Server has been upgraded to the minimum HP FUP or Oracle FUP or newer for the platform that the PM&C release is based on. For PM&C 6.2 (Platform 7.2.x), the minimums are HP FUP 2.2.9 and Oracle FUP 3.1.6. Use the Upgrade Procedures and Release Notes documents contained in the Firmware Upgrade Packs to assess whether a firmware upgrade is necessary.

1.6 Supported Browsers and Versions

Table 2. Supported Internet Browsers and Versions

Product Release	Supported Browsers	Versions
PM&C 5.7 release	Microsoft® Internet Explorer	7.0, 8.0, or 9.0
PM&C 6.0 release	Microsoft® Internet Explorer	8.0, 9.0, or 10.0
PM&C 6.2 release	Microsoft® Internet Explorer	9.0, 10.0, or 11.0

1.7 PM&C Release Upgrade Paths

The upgrade to PM&C release 6.2 is supported from the following releases:

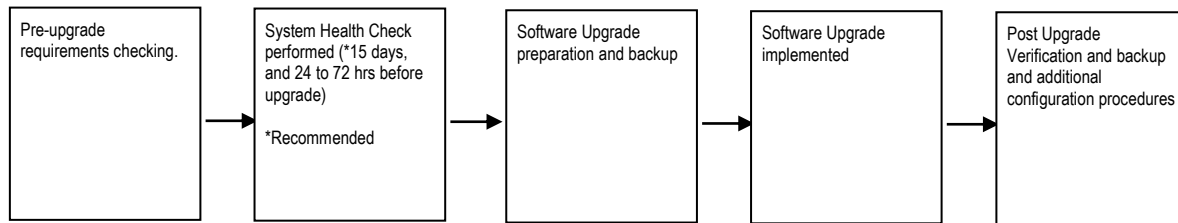
- PM&C 5.7
- PM&C 6.0
- PM&C 6.2

2 General Description

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

The figure below shows the general steps for all processes of performing a software upgrade, from hardware inventory to final upgrade health check of the primary PM&C application. If the system is configured with a Redundant Management Server, and Redundant PM&C guest, the process is modified to perform pre-upgrade steps to verify requirements. Additionally, the redundant PM&C guest is upgraded subsequent to the primary PM&C guest.

Figure 1. Upgrade Process



3 Upgrade Overview

This section provides a brief overview of the recommended method for upgrading the PM&C Source Release software that is installed and running on a server to the Target Release PM&C software. The basic upgrade process and approximate time required is outlined in Table 4, Table 5 and Table 6, with the Reject procedure shown in Table 7.

It is assumed that the upgrade is coordinated to ensure that all work is performed within the four-hour maintenance window. Note that several variables affect the upgrade times shown in the tables – the elapsed time values shown are lab environment estimates and will vary on live systems.

Please note, this document contains several references to a redundant Management Server and/or redundant PM&C. The procedures and steps associated with the redundant PM&C are only applicable if the site has a redundant PM&C deployed. These procedures and steps can be safely skipped if redundant PM&C is not deployed.

Also note that after the successful completion of the upgrade, all active GUI Session are automatically forced out if they remained active during the upgrade. Users will be required to log back in with proper credentials as necessary.

**** WARNING ****

Call Oracle Customer Support prior to executing this upgrade to ensure that the proper media are available for use.

Before upgrade, users must complete section 4.2 Software Upgrade Preparations to ensure that the system to be upgraded is in an upgrade-ready state. Performing the system health check determines which alarms are present in the system and if upgrade can proceed with alarms.

Please read the following notes on upgrade procedures:

- Procedure completion times shown here are estimates. Times may vary due to differences in database size, user experience, and user preparation.
- Where possible, EXACT command response outputs are shown. EXCEPTIONS are as follows:
 - Banner information is displayed in a format form only.
 - System-specific configuration information such as *hostname*, *filenames*, and *IP addresses*.
 - ANY information marked with “XXXX” or “YYYY.” Where appropriate, instructions are provided to determine what output should be expected in place of “XXXX or YYYY”
- After completing each step and at each point where data is recorded from the screen, the technician performing the upgrade must initial each step. A check box should be provided.
- Captured data is required for future support reference if Oracle Technical Services is not present during the upgrade.

3.1 Required Materials

1. Information gathered and captured in Table 3. Software Upgrade Required Data
2. The media for the version of PM&C that you are upgrading from
3. The media for the version of PM&C that you are upgrading to
4. The media and documentation for the version of TVOE that you are upgrading from
5. The media and documentation for the version of TVOE that you are upgrading to
6. HP Solutions Firmware Upgrade Pack (HP FUP version specified by the application, otherwise HP FUP 2.2.9 is the minimum and the current version is recommended)

7. Platform 7.2 Configuration Guide, E64363, Current Version
8. Platform 7.0 Configuration Guide, E53486, Current Version
9. Platform 6.7 Configuration Guide, E54386, Current Version
10. Platform 6.0 Configuration Reference, 909-2209-001, Current Version
11. TVOE 3.0 Software Upgrade, E53018, Current Version
12. TVOE 2.7 Software Upgrade, E54523, Current Version
13. Oracle Firmware Upgrade Pack, Release Notes (Oracle FUP version specified by the application, otherwise Oracle FUP 3.1.5 is the minimum and the current version is recommended)
14. Oracle Firmware Upgrade Pack, Upgrade Guide (Oracle FUP version specified by the application, otherwise Oracle FUP 3.1.5 is the minimum and the current version is recommended)
15. HP Solutions Firmware Upgrade Pack, Software Centric Release Notes (HP FUP version specified by the application, otherwise HP FUP 2.2.9 is the minimum and the current version is recommended)
16. Application Release Notes
17. Network access to the PM&C TVOE host iLO/iLOM.
18. Capability to log into the PM&C guest via a network connection to allow remote access for Oracle Customer Service personnel.
19. Capability to log into the PM&C’s web UI via supported web browsers.
20. Terminal device or equivalent interface.

3.2 Logins, Passwords and Server IP Addresses

Obtain all the information in the following table. This ensures that the necessary administration information is available prior to an upgrade.

Consider the sensitivity of the information recorded in this table. While all of the information in the table may be required to complete the upgrade, there may be security policies in place that prevent the actual recording of this information in hard-copy form.

Table 3. Software Upgrade Required Data

Subject/Attribute	Value
PM&C TVOE host User IDs/password (root user)	
PM&C TVOE host Network addresses (TVOE IP address)	
PM&C Guest Name	
PM&C User IDs/password (root user)	
PM&C Network addresses (PM&C IP address)	
PM&C GUI administrator account login credentials	

Platform User IDs/password (admusr)	
OA administrator account login credentials	
iLO/ILOM login credentials	

NOTE: Upon completion of the upgrade to PM&C 6.2 or later, the GUI administrative user formerly known as "pmacadmin" will become "guiadmin". This is only a renaming of the standard administrative account, not a different account; the account access privileges will be retained from the "pmacadmin" account.

3.3 Application ISO Image File/Media

The Target Release ISO image file must already be at the customer site; either via OSDC or delivered on physical media.

This file is necessary to perform the upgrade.

- The PM&C application ISO image file for PM&C 6.2 will be in the following format:
PMAC-6.2..0.0.0.x_62.y.z-x86_64.iso

Note: Prior to the execution of this upgrade procedure it is assumed that the PM&C application ISO image file has already been delivered to the customer’s premises and any user performing the upgrade must have access to the ISO image file. Alternatively, if the user performing the upgrade is at a remote location, it is assumed the ISO file is already available to them before starting the upgrade procedure. The distribution of the PM&C application software load is outside the scope of this procedure.

3.4 Pre-Upgrade Overview

The pre-upgrade procedures shown in Table 4 may be executed outside of the maintenance window.

Pre-upgrade health check should be run 24 to 72 hours before the scheduled upgrade. If the system fails the health check, then the failure conditions must be corrected and upgrade rescheduled for a later date.

In addition to the running the system health check 24 to 72 hours before the scheduled upgrade, the system health check should also be executed immediately before the upgrade, to ensure that the system has no error or failure conditions that would interfere with a successful upgrade.

Note: If a Redundant Management server is configured in this system, the pre-upgrade health check should be run on the PM&C application running on the Redundant Management system. The PM&C application running on the Redundant Management server is not initialized and does not require database backups

Table 4. Pre-Upgrade Procedure

Elapsed Time (Hrs:Min)		Downtime (Hrs:Min)		Activity	Impact
This Step	Cum.	This Step	Cum.		
10	10	-	-	Perform System Health check (Refer to section 4)	Do not proceed with upgrade if system health check shows any problems with PM&C system.

Table 4. Pre-Upgrade Procedure

Elapsed Time (Hrs:Min)		Downtime (Hrs:Min)		Activity	Impact
This Step	Cum.	This Step	Cum.		
15	25			Backup PM&C provision and configuration databases.	PM&C provision and configuration databases are backed up.

3.5 Upgrade Execution Overview

The procedures shown in Table 5 are executed in the maintenance window.

Table 5. Upgrade Execution Overview

Elapsed Time (Hrs:Min)		Downtime (Hrs:Min)		Activity	Impact
This Step	Cum.	This Step	Cum.		
40	65	40	40	Execute the upgrade on PM&C	PM&C Software is upgraded

3.6 Post Upgrade Overview

The procedures shown in Table 6 are executed in the maintenance window.

Table 6. Post-Upgrade Overview

Elapsed Time (Hrs:Min)		Downtime (Hrs:Min)		Activity	Impact
This Step	Cum.	This Step	Cum.		
10	75	10	50	Perform System Health check	Notify Oracle Customer Support if system health check shows any problems with PM&C system. Backout may be necessary.
10	85			Configuration of netConfig Repository (execution is conditional)	The elapsed time assumes one switch pair. This step can take an additional 10 min per switch pair.
15	100	15	65	Configuration of larger PM&C ISO Image Repository area (optional).	Ensures the PM&C ISO Image Repository is the appropriate size.
15	115	15	80	Enlarging PM&C ISO temporary import area may be recommended by application (optional).	The PM&C ISO temporary import area supports large images.
15	130			Backup PM&C provision and configuration databases.	PM&C provision and configuration databases are backed up post-upgrade.
10	140			Accept the upgrade	Upgrade is accepted and backout is no longer available.

Note: Upgrading firmware is not included in the maintenance window.

3.7 Backout (reject) Procedure Overview

The procedures shown in Table 7 are executed in the maintenance window.

Table 7. Backout Procedure Overview

Elapsed Time (Hrs:Min)		Downtime (Hrs:Min)		Activity	Impact
This Step	Cum.	This Step	Cum.		
-	-	-	-	Contact Oracle Customer Support	Apprise Oracle of the situation and get guidance on proceeding.
30	170	30	110	If not triggered automatically, execute the backout(reject) of the target release	Upgrade is rejected and server is backed out to the prior installed release.

3.8 Log Files

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

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

4 Upgrade Preparation

This section provides detailed procedures to prepare a system for upgrade execution. These procedures may be executed outside a maintenance window.

Perform pre-upgrade system health checks to establish that the system is fit to upgrade.

Backup PM&C provision and configuration databases and transfer the backups to customer defined network storage.

4.1 Hardware Upgrade Preparation

Hardware upgrade is not in the scope of this document.

4.2 Software Upgrade Preparations

Note: The PM&C Healthcheck procedure below should be executed.

- 15 days prior to upgrade (optional),
- 72 to 24 hours before the scheduled upgrade, and
- Immediately before executing the upgrade

If any error or failure conditions are discovered then *do not proceed with the upgrade*. Contact Oracle Customer Support for assistance in resolving the failure conditions. Upgrade will have to be rescheduled to a later date.

Procedure 1. Verifying Pre-Upgrade Requirements and Capturing Upgrade Data

STEP #	Task	Description
1. <input type="checkbox"/>	Verify all materials required are present	Materials are listed in section 3.1 Required Materials
2. <input type="checkbox"/>	Verify passwords for PM&C systems are available	Refer to Table 3. Software Upgrade Required Data for a list of users. Fill in the username and password information in the table for later reference.
3. <input type="checkbox"/>	Determine the current PM&C version	Execute Appendix F: Determine The Current PM&C Version.
4. <input type="checkbox"/>	Contact Oracle Customer Support	Contact Oracle Customer Support and inform them of your plans to upgrade this system.

Procedure 1. Verifying Pre-Upgrade Requirements and Capturing Upgrade Data

5. <input type="checkbox"/>	Verify the PM&C guest TVOE host is at the appropriate release.	<p>Note: Upgrade of the TVOE host may require its own maintenance window.</p> <p>Execute Appendix G Determine If PM&C TVOE Host Requires Upgrade</p>
6. <input type="checkbox"/>	Verify the redundant PM&C guest TVOE host is at the appropriate release.	<p>Note: This step is optional and applies only if this system is configured with a redundant PM&C.</p> <p>Note: Upgrade of the TVOE host may require its own maintenance window.</p> <p>Execute Appendix G Determine If PM&C TVOE Host Requires Upgrade using the IP address of redundant PM&C TVOE host.</p>
---End of Procedure---		


Procedure 2. Execute the Health check Procedure on the primary PM&C

S T E P #	<p>This procedure executes a health check on the PM&C system.</p> <p>Note: The PM&C Health check procedure should be executed</p> <ul style="list-style-type: none"> • 72 to 24 hours before the scheduled upgrade, and • Immediately before executing the upgrade <p>If any error or failure conditions are discovered then do not proceed with upgrade. Contact Oracle Customer Support for assistance in resolving the failure conditions. Upgrade will have to be rescheduled to a later date.</p> <p><i>Check off (✓) each step as it is completed.</i> Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, see Section 1.2.</p>	
	Task	Description
1. <input type="checkbox"/>	Execute the system health check.	<p>Execute Appendix C PM&C System Health Check</p> <p>If any error or failure conditions are discovered then do not proceed with upgrade. Contact Oracle Customer Support to work to resolve the failure conditions. Upgrade will have to be rescheduled to a later date.</p>
---End of Procedure---		

Procedure 3. Prepare the primary PM&C for a remote upgrade (optional)

S T E P #	This procedure prepares the PM&C for a remote upgrade. <i>Check off (✓) each step as it is completed.</i> Boxes have been provided for this purpose under each step number. If this procedure fails, see Section 1.2.	
	Task	Description
1. <input type="checkbox"/>	If this upgrade is to be performed remotely, get the ISO image onto the system.	Obtain a copy of the Target-release PM&C ISO image file and place that copy using SCP into the /var/TKLC/upgrade directory of the PM&C guest: Use platform admusr credentials from Table 3. Software Upgrade Required Data
---End of Procedure---		





Procedure 4. Check/Modify OA Power Supply Redundancy

S T E P #	Use this procedure to configure enclosure power supply redundancy in the HP Onboard Administrator. <i>Check off (✓) each step as it is completed.</i> Boxes have been provided for this purpose under each step number. If this procedure fails, see Section 1.2.	
	Task	Description
1. <input type="checkbox"/>	Access the PM&C GUI	If necessary, open the IE web browser and enter: https://<PM&C Management Network IP > Login with administrator credentials from Table 3. Software Upgrade Required Data <div style="border: 1px solid black; padding: 10px; text-align: center;">  </div>

Procedure 4. Check/Modify OA Power Supply Redundancy

<p>2. <input type="checkbox"/></p>	<p>Obtain a list of the Enclosures managed by this PM&C.</p>	<p>The Main Menu > Hardware > System Configuration page of the PM&C GUI contains a "Provisioned Enclosures" table showing the Enclosures being managed by this PM&C. Starting at the top of this table, apply the remaining steps of this procedure successively to each Enclosure in the list.</p>
<p>3. <input type="checkbox"/></p>	<p>Access the GUI of the Active OA</p>	<p>Open your web browser and navigate to the login page of the first OA of the Enclosure by using the "Bay 1 OA IP" address from the "Provisioned Enclosures" table. http://< Bay 1 OA IP > If the login page contains the red warning message similar to "This Onboard Administrator is in Standby mode.", then repeat this step using the "Bay 2 OA IP".</p>
<p>4. <input type="checkbox"/></p>	<p>Log in to the Active OA</p>	<p>Log in to the GUI of the Active OA with credentials from Table 3. Software Upgrade Required Data</p>
<p>5. <input type="checkbox"/></p>	<p>View the configuration of power supply redundancy.</p>	<p>In the menu tree of the OA GUI, select Enclosure Information > Power and Thermal > Power Management.</p>

Procedure 4. Check/Modify OA Power Supply Redundancy

<p>6. <input type="checkbox"/></p>	<p>Configure power supply redundancy.</p>	<p>The first available setting will be either “AC Redundant” or “Redundant” depending on whether the Enclosure is powered by AC or DC. In either case, confirm the second radio button, “Power Supply Redundant””, is selected. If necessary, change the selection to “Power Supply Redundant”.</p> <p>AC-powered Enclosures:</p> <div style="border: 1px solid gray; padding: 5px;"> <p>Power Management</p> <p><i>Power Mode: Select the power subsystem's redundant operation mode.</i></p> <p><input type="radio"/> AC Redundant: In this configuration N power supplies are used to provide power and N are used to provide redundancy, where N can equal 1, 2 or 3. When correctly wired with redundant AC line feeds this will ensure that an AC line feed failure will not cause the enclosure to power off.</p> <div style="display: flex; align-items: center;">  (2 plus 2 configuration shown) </div> <p><input checked="" type="radio"/> Power Supply Redundant: Up to 6 power supplies can be installed with one power supply always reserved to provide redundancy. In the event of a single power supply failure the redundant power supply will take over the load. A power line feed failure or failure of more than one power supply will cause the system to power off.</p> <div style="display: flex; align-items: center;">  (3 plus 1 configuration shown) </div> <p><input type="radio"/> Not Redundant: No power redundancy rules are enforced and power redundancy warnings will not be given. If all of the power supplies are needed to supply Present Power, the failure of a power supply or power feed to the enclosure may cause the enclosure to brown-out.</p> </div> <p>DC-powered Enclosures:</p> <div style="border: 1px solid gray; padding: 5px;"> <p>Power Management</p> <p><i>Power Mode: Select the power subsystem's redundant operation mode.</i></p> <p><input type="radio"/> Redundant: In this configuration N power supplies are used to provide power and N are used to provide redundancy, where N can equal 1, 2 or 3. When correctly wired with redundant AC line feeds this will ensure that an AC line feed failure will not cause the enclosure to power off.</p> <div style="display: flex; align-items: center;">  (2 plus 2 configuration shown) </div> <p><input checked="" type="radio"/> Power Supply Redundant: Up to 6 power supplies can be installed with one power supply always reserved to provide redundancy. In the event of a single power supply failure the redundant power supply will take over the load. A power line feed failure or failure of more than one power supply will cause the system to power off.</p> <div style="display: flex; align-items: center;">  (3 plus 1 configuration shown) </div> <p><input type="radio"/> Not Redundant: No power redundancy rules are enforced and power redundancy warnings will not be given. If all of the power supplies are needed to supply Present Power, the failure of a power supply or power feed to the enclosure may cause the enclosure to brown-out.</p> </div> <p>Click the Apply button at the bottom of the page to save the change.</p>
<p>7. <input type="checkbox"/></p>	<p>Continue with the next Enclosure.</p>	<p>Continue with Step 2, using the IP addresses of the next Enclosure in the “Provisioned Enclosures” table.</p>
<p>---End of Procedure---</p>		

Procedure 5. Backup OA configuration to PM&C

S T E P #	This procedure backs up the OA configuration to the PM&C for inclusion in a backup of PM&C, then performs the actual PM&C data backup. <i>Check off (✓) each step as it is completed.</i> Boxes have been provided for this purpose under each step number. If this procedure fails, see Section 1.2.	
	Task	Description
1. <input type="checkbox"/>	Backup the OA configuration to the PM&C.	Execute Procedure “Store OA Configuration on Management Server” in the appropriate Platform Configuration Guide for the release being upgrade to 6.2.
---End of Procedure---		

Procedure 6. Execute the Health check Procedure for the redundant PM&C

S T E P #	This procedure executes a health check on the redundant PM&C (if present). Note: This procedure is only executed if the site contains a redundant PM&C Note: The PM&C Health check procedure should be executed. <ul style="list-style-type: none"> • 72 to 24 hours before the scheduled upgrade, and • Immediately before executing the upgrades If any error or failure conditions are discovered then <i>do not proceed with upgrade</i> . Contact Oracle Customer Support for assistance in resolving the failure conditions. Upgrade will have to be rescheduled to a later date. <i>Check off (✓) each step as it is completed.</i> Boxes have been provided for this purpose under each step number. If this procedure fails, see Section 1.2.	
	Task	Description
1. <input type="checkbox"/>	Execute the redundant PM&C system health check	Execute Appendix C PM&C System Health Check on redundant PM&C. If any error or failure conditions are discovered then do not proceed with upgrade. Contact Oracle Customer Support to work to resolve the failure conditions. Upgrade will have to be rescheduled to a later date.
---End of Procedure---		

Procedure 7. Prepare the redundant PM&C for a remote upgrade (optional)

S T E P #	This procedure prepares the redundant PM&C (if present) for a remote upgrade. Note: This procedure is only executed if the site contains a redundant PM&C. <i>Check off (✓) each step as it is completed.</i> Boxes have been provided for this purpose under each step number. If this procedure fails, see Section 1.2.	
	Task	Description
1. <input type="checkbox"/>	If this upgrade is to be performed remotely, get the ISO image onto the redundant PM&C.	NOTE: This procedure is only executed if the site contains a redundant PM&C. Obtain a copy of the Target-release PM&C ISO image file and place that copy using SCP into the /var/TKLC/upgrade directory of the redundant PM&C guest: Use platform admusr credentials from Table 3. Software Upgrade Required Data
---End of Procedure---		

Procedure 8. Backup PM&C database data to redundant PM&C (optional)

S T E P #	This procedure backs up all necessary PM&C database data to redundant PM&C. Note: This procedure is only executed if the site contains a redundant PM&C. <i>Check off (✓) each step as it is completed.</i> Boxes have been provided for this purpose under each step number. If this procedure fails, see Section 1.2.	
	Task	Description
1. <input type="checkbox"/>	Backup the PM&C database to redundant PM&C.	Note: This procedure is only executed if the site contains a redundant PM&C Execute Appendix D, PM&C System Backup
Section 4.2 has been completed.		

5 Software Upgrade Procedures

See the warning block in Section 3, Upgrade Overview, before proceeding with procedures in this section

5.1 Software Upgrade Execution on the Primary PM&C

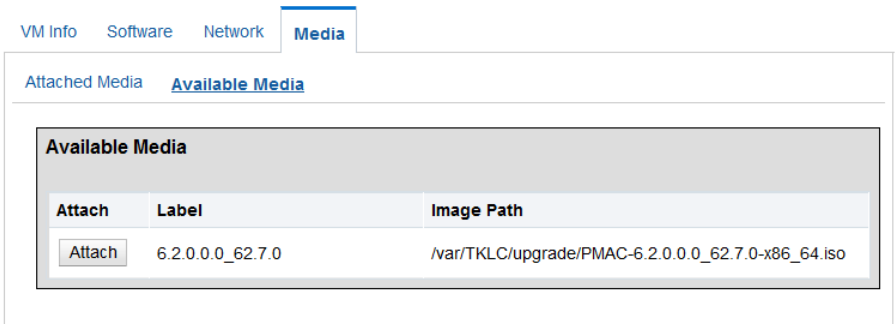
If the PM&C application ISO was delivered to the system remotely (via SCP or SFTP) then make sure the image is located in the /var/TKLC/upgrade directory prior to executing this procedure. This should have been done as part of the Software Upgrade Preparation in section 4.2.

The upgrade of the PM&C Guest TVOE host may be executed in the same maintenance window as the PM&C. It is expected that the TVOE host upgrade is completed prior to the start of the PM&C upgrade. This procedure does not cover the procedural steps required for the upgrade of the TVOE host. Please see the appropriate references noted in the procedures of section 4.2.

Procedure 9.PM&C Upgrade Procedure on the primary PM&C

STEP #	Task	Description
S T E P #	This procedure provides instructions to perform a software upgrade of the PM&C. <i>Check off (✓) each step as it is completed.</i> Boxes have been provided for this purpose under each step number. If this procedure fails, see Section 1.2.	
1. <input type="checkbox"/>	Execute the system health check	Re-execute <i>Procedure 2: Execute the Health check Procedure on the primary PM&C.</i>
2. <input type="checkbox"/>	For Remote Upgrade, verify correct ISO file is present, and then skip to Step 6	If you executed <i>Procedure 3: Prepare the primary PM&C for a remote upgrade</i> , then verify the correct ISO has been delivered to the PM&C. <ul style="list-style-type: none"> • Access the PM&C Guest console using Appendix B • Verify the correct ISO file is located in the /var/TKLC/upgrade directory. • If the correct ISO is present, proceed to step 6. • If the correct ISO is NOT present, then redo <i>Procedure 3</i> before proceeding.
3. <input type="checkbox"/>	Insert the media containing PM&C image into the Management Server	Insert the media containing PM&C image (item Error! Reference source not found. in section 3.1 Required Materials) into the Management Server.

Procedure 9. PM&C Upgrade Procedure on the primary PM&C

<p>4. <input type="checkbox"/></p>	<p>Log in to the PM&C GUI.</p>	<p>Open IE web browser and enter: https://<PM&C Management Network IP > Login with administrator credentials from Table 3. Software Upgrade Required Data</p>						
<p>5. <input type="checkbox"/></p>	<p>Attach the PM&C ISO media to the PM&C guest.</p>	<p>Using the PM&C GUI, navigate to the VM Management page. Select the PM&C Guest to get to the “View guest” page. Select the “Media” tab on the “View guest” page. Click the “Available Media” link. Click the “Attach” button for the image just inserted.</p> <p>Note: The “Label” field can help identify the PM&C upgrade media by part number and release level (see Section 3.1).</p> <p>View guest pmac91216u15</p>  <p>VM Info Software Network Media</p> <p>Attached Media Available Media</p> <table border="1"> <thead> <tr> <th>Attach</th> <th>Label</th> <th>Image Path</th> </tr> </thead> <tbody> <tr> <td><input type="button" value="Attach"/></td> <td>6.2.0.0.0_62.7.0</td> <td>/var/TKLC/upgrade/PMAC-6.2.0.0.0_62.7.0-x86_64.iso</td> </tr> </tbody> </table>	Attach	Label	Image Path	<input type="button" value="Attach"/>	6.2.0.0.0_62.7.0	/var/TKLC/upgrade/PMAC-6.2.0.0.0_62.7.0-x86_64.iso
Attach	Label	Image Path						
<input type="button" value="Attach"/>	6.2.0.0.0_62.7.0	/var/TKLC/upgrade/PMAC-6.2.0.0.0_62.7.0-x86_64.iso						
<p>6. <input type="checkbox"/></p>	<p>Close any active browser sessions to the PM&C.</p>	<p>If you have any open browsers connected to the PM&C, close them before proceeding.</p>						
<p>7. <input type="checkbox"/></p>	<p>Access the PM&C guest console</p>	<p>Execute Appendix B Accessing The PM&C Guest Console</p>						
<p>8. <input type="checkbox"/></p>	<p>Run the “platcfg” utility.</p>	<p>Note: If you deviated from the previous step, please ensure that you are in admusr’s home directory before executing the following command.</p> <p>Execute (from PM&C guest console): [admusr@pmac ~]\$ sudo su - platcfg</p>						

Procedure 9.PM&C Upgrade Procedure on the primary PM&C

<p>9. <input type="checkbox"/></p>	<p>In “platcfg” utility Access the Maintenance menu</p>	<p>Note: Use the “Arrow” and the [ENTER] keys to navigate through the menu options.</p> <p>Note: The following images are for illustrative purposes only. The actual menu content will differ based on the current PM&C release.</p> <div data-bbox="574 520 1008 821" style="border: 1px solid black; padding: 10px; margin: 10px auto; width: fit-content;"> <p style="text-align: center;"> Main Menu </p> <p>Maintenance Diagnostics Server Configuration Remote Consoles Network Configuration Exit</p> </div> <p>Select “Maintenance” to navigate to the Maintenance Menu.</p>
<p>10. <input type="checkbox"/></p>	<p>In “platcfg” utility Access the Upgrade menu</p>	<p>Note: Use the “Arrow” and the [ENTER] keys to navigate through the menu options.</p> <p>Note: The following images are for illustrative purposes only. The actual menu content will differ based on the current PM&C release.</p> <div data-bbox="574 1108 1062 1476" style="border: 1px solid black; padding: 10px; margin: 10px auto; width: fit-content;"> <p style="text-align: center;"> Maintenance Menu </p> <p>Upgrade Backup and Restore Halt Server View Mail Queues Restart Server Eject CDROM Save Platform Debug Logs Exit</p> </div> <p>Select “Upgrade” to navigate to the Upgrade Menu.</p>

Procedure 9.PM&C Upgrade Procedure on the primary PM&C

<p>11. <input type="checkbox"/></p>	<p>In “platcfg” utility select “Initiate Upgrade” to start the upgrade process.</p>	<p>Note: Use the “Arrow” and the [ENTER] keys to navigate through the menu options.</p> <p>Note: The following images are for illustrative purposes only. The actual menu content will differ based on the current PM&C release.</p> <div data-bbox="586 527 1101 800" style="border: 1px solid black; padding: 10px; margin: 10px auto; width: fit-content;"> <pre> Upgrade Menu Validate Media Early Upgrade Checks Initiate Upgrade Non Tekelec RPM Management Exit </pre> </div> <p>Select “Initiate Upgrade” to start the upgrade process</p>
<p>12. <input type="checkbox"/></p>	<p>Wait for the “Choose Upgrade Media Menu” screen</p>	<p>Note: The following images are for illustrative purposes only.</p> <p>Note: The screen shown below be displayed several times as the “platcfg” utility searches for available upgrade media.</p> <div data-bbox="578 1020 1430 1486" style="border: 1px solid black; padding: 10px; margin: 10px auto; width: fit-content;"> <pre> System Busy Searching for upgrade media... Please wait..._ </pre> </div> <p>Wait for the “Choose Upgrade Media Menu” screen to display before proceeding to the next step.</p>

Procedure 9.PM&C Upgrade Procedure on the primary PM&C

<p>13. <input type="checkbox"/></p>	<p>Start the upgrade to the target release</p>	<p>Note: Use the “Arrow” and the [ENTER] keys to navigate through the menu options.</p> <p>Note: The following images are for illustrative purposes only.</p> <p>If the image is located on virtual CD, then the menu would look similar to this:</p> <pre> Choose Upgrade Media Menu ----- /dev/sr0 - CDROM /dev/sr1 - 6.0.0.0.0_60.8.1 Exit </pre> <p>If the image was copied to the /var/TKLC/upgrade directory of the redundant PM&C guest, then the menu would look similar to this:</p> <pre> Choose Upgrade Media Menu ----- /dev/sr0 - CDROM PMAC-6.0.0.0.0_60.8.1-x86_64.iso - 6.0.0.0.0_60.8.1 Exit </pre> <p>Select the PM&C 6.2 target release and press the [ENTER] key.</p>
<p>14. <input type="checkbox"/></p>	<p>The upgrade begins. Ensure that Early Upgrade Checks pass and the upgrade is started.</p> <p>Note: Upgrade takes about 20 minutes and includes a boot of the PM&C guest.</p>	<p>Note: The following images are for illustrative purposes only.</p> <p>Screen similar to the one shown below will be displayed as the upgrade progresses.</p> <pre> Starting Early Upgrade Checks at 1429637774 Running earlyUpgradeChecks() for Upgrade::EarlyPolicy::PMAC upgrade policy... This is an upgrade of PMAC. Check for IN-PROGRESS BG Tasks. No IN-PROGRESS BG Tasks found, we can upgrade. Running earlyUpgradeChecks() for Upgrade::EarlyPolicy::TPDEarlyChecks upgrade policy... Verified server is not pending accept of previous upgrade Hardware architectures match Install products match. Verified server is alarm free! Early Upgrade Checks Have Passed! Early Upgrade Checks finished at 1429637777 Initializing upgrade information... The runlevel transition complete RC file was created as /etc/rc3.d/S99local_runlevel_tra Changing to run-level 3... ***** * Waiting for run level 3 transistion to finish * ***** waiting for /etc/rc3.d/S99local_runlevel_transition_complete to disappear. waiting for /etc/rc3.d/S99local_runlevel_transition_complete to disappear. waiting for /etc/rc3.d/S99local_runlevel_transition_complete to disappear. </pre>

Procedure 9.PM&C Upgrade Procedure on the primary PM&C

<p>15.</p> <p><input type="checkbox"/></p>	<p>Verify upgrade is progressing</p>	<p>Note: The following images are for illustrative purposes only.</p> <p>Screen similar to the one shown below will be displayed as the upgrade progresses.</p> <pre> Upgrade from current release 7.0.0.0-86.14.0 supported Changing platform revision so must upgrade Determining the appropriate upgrade command... Using /mnt/upgrade/upgrade/upgrade_server as the upgrade command Current platform version: 7.0.0.0-86.14.0 No backout release boundary: 6.7.0-0.0.0 Backout will be supported... Running prepareUpgrade() for Upgrade::Policy::Platform upgrade policy... Preserving files so verifyUpgrade can run. preserveVerifyUpgradeFiles(): File does not exist! FILE: /mnt/upgrade/upgrade/etc/multiRpmsAllowed.sed Skipping... Adding /usr/TKLC/plat/etc/alarms/alarms.xml to RCS... Adding /usr/TKLC/plat/etc/alarms/alarms.dtd to RCS... Adding /usr/TKLC/plat/lib/Syscheck/modules/proc/ntp/config to RCS... Disabling HIDS monitoring... Running prepareUpgrade() for Upgrade::Policy::HP upgrade policy... Running prepareUpgrade() for Upgrade::Policy::LSI upgrade policy... Found MegaCli-8.02.21-1.noarch installed on the system. Running prepareUpgrade() for Upgrade::Policy::MBL upgrade policy... Running prepareUpgrade() for Upgrade::Policy::PMAC upgrade policy... Running prepareUpgrade() for Upgrade::Policy::PlatformLast upgrade policy... Initializing upgrade... Verify RCS repository and checkin files... RCSCHECK REPORT: /var/TKLC/log/upgrade/rcscheck.before.upgrade INFO: Checking rcs elements for unchecked in changes... </pre>
<p>16.</p> <p><input type="checkbox"/></p>	<p>Upgrade completes successfully.</p> <p>Note: If the PM&C upgrade fails to complete, contact Oracle Customer Support</p>	<p>Note: The following images are for illustrative purposes only.</p> <p>If the upgrade completes successfully, the screen shown below will be displayed as the upgrade progresses.</p> <pre> rsshRebuild: Rebuilding /var/TKLC/sm/c/image/isoimages chroot... Applications Enabled. Running /usr/TKLC/plat/bin/service_conf reconfig UPGRADE IS COMPLETE /mnt/upgrade/upgrade/upgrade_server returned success! Running postUpgrade() for Upgrade::Policy::Platform upgrade policy... /var/log/sun-ssm exists. No need to restore. Running postUpgrade() for Upgrade::Policy::HP upgrade policy... Running postUpgrade() for Upgrade::Policy::LSI upgrade policy... Running postUpgrade() for Upgrade::Policy::MBL upgrade policy... Running postUpgrade() for Upgrade::Policy::PMAC upgrade policy... Running postUpgrade() for Upgrade::Policy::PlatformLast upgrade policy... Creating boot script: /etc/rc4.d/S89upgrade Creating RC script to set alarm on next boot `/mnt/upgrade/upgrade/upgradeStatus' -> `/sysimage/etc/rc.d/rc4.d/S99TKLCupgradestatus' Cleaning up chroot environment... A reboot of the server is required. The server will be rebooted in 10 seconds </pre> <p>Note: If the PM&C upgrade fails to complete, contact Oracle Customer Support for assistance.</p>

Procedure 9.PM&C Upgrade Procedure on the primary PM&C

Section 5.1 has been completed.

5.2 Software Upgrade Completion on the Primary PM&C


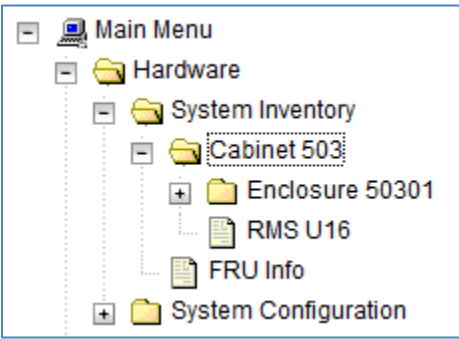
Procedure 10. Post Upgrade Verification on the primary PM&C

STEP #	Task	Description
	Use this procedure to provide instructions to verify the success to the PM&C upgrade and perform other required post upgrade steps. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. If this procedure fails, see Section 1.2.	
1. <input type="checkbox"/>	If necessary, access the PM&C guest console	If necessary, access the PM&C guest console as detailed in Appendix B Accessing The PM&C Guest Console
2. <input type="checkbox"/>	After logging in, a notice similar to the one shown to the right will be displayed.	<pre>Last login: Wed Jun 6 08:39:14 on ttyS0 ===== This system has been upgraded but the upgrade has not yet been accepted or rejected. Please accept or reject the upgrade soon. ===== [admusr@pmac ~]\$</pre>
3. <input type="checkbox"/>	Verify that the date/time stamp of the upgrade log aligns with the time of the upgrade.	Execute the following command: <pre>[admusr@pmac ~]\$ sudo /bin/ls -l /var/TKLC/log/upgrade/upgrade.log 1. -rw-rw-r-- 1 platcfg root 113112 Apr 21 14:09 /var/TKLC/log/upgrade/upgrade.log [admusr@pmac ~]\$</pre>
4. <input type="checkbox"/>	Verify that the release has been updated.	Execute the following command: <pre>[admusr@pmac ~]\$ sudo /usr/TKLC/plat/bin/appRev Install Time: Tue Apr 21 09:28:31 2015 Product Name: PMAC Product Release: 6.2.0.0.0_62.4.5 Base Distro Product: TPD Base Distro Release: 7.2.0.0.0_88.2.0 Base Distro ISO: TPD.install-7.2.0.0.0_88.2.0-OracleLinux6.6-x86_64.iso 2. ISO name: PMAC-6.2.0.0.0_62.4.5-x86_64.iso OS: OracleLinux 6.6 [admusr@pmac ~]\$</pre> <p>If the Product Release does not match the new target release number, then upgrade was not successful. Contact Oracle Customer Support and do not proceed until instructed by a Oracle Customer representative.</p>

Procedure 10. Post Upgrade Verification on the primary PM&C

<p>5. <input type="checkbox"/></p>	<p>Verify upgrade completion through the upgrade log.</p>	<p>Execute the following command on the PM&C: <pre>[admusr@pmac ~]\$ grep COMPLETE /var/TKLC/log/upgrade/upgrade.log</pre> <pre>1371492983:: UPGRADE IS COMPLETE</pre> <p>Note: Output like above is expected (the timestamp will be different). Now execute the following command: <pre>[admusr@pmac ~]\$ sudo /usr/TKLC/plat/bin/verifyUpgrade</pre> <p>Note: This command can take over a minute to complete. No output is expected, only the prompt should return Note: If 'UPGRADE IS COMPLETE' is not in the output from the first command, or if any output showing errors result from the verifyUpgrade command, contact Oracle Customer Support and do not proceed until instructed by an Oracle representative.</p> </p></p>
<p>6. <input type="checkbox"/></p>	<p>Execute the system health check.</p>	<p>Execute Appendix C PM&C System Health Check Note: Alarm about pending accept/reject such similar to the one below can be safely ignored in this step. <pre>SEQ: 1 UPTIME: 185 BIRTH: 1372167411 TYPE: SET ALARM: TKSPLATMI33 tpdServerUpgradePendingAccept 1.3.6.1.4.1.323.5.3.18.3.1.3.33</pre> <p>If any other error or failure conditions are discovered on the PM&C system then do not proceed. Contact Oracle Customer Support to work to resolve the failure conditions.</p> </p>
<p>7. <input type="checkbox"/></p>	<p>Clear browser cache.</p>	<p>Clear your browser's cache to ensure that your browser has the latest client-side code loaded. Refer to your browser's documentation if necessary.</p>

Procedure 10. Post Upgrade Verification on the primary PM&C

<p>8.</p> <p><input type="checkbox"/></p>	<p>Log in to the PM&C GUI.</p>	<p>Open IE web browser and enter: https://<PM&C Management Network IP > Login with administrator credentials from Table 3. Software Upgrade Required Data</p> 
<p>9.</p> <p><input type="checkbox"/></p>	<p>Verify the Hardware->System Inventory looks correct in the PM&C GUI.</p>	<p>Select the System Inventory node and verify the previously provisioned enclosures are present.</p> <p>Note: The hardware discovery may take some time to complete. The screen capture assumes discovery is complete for all enclosures.</p> 


Procedure 10. Post Upgrade Verification on the primary PM&C

10.	<input type="checkbox"/> Verify the Software->Software Inventory looks correct through the PM&C GUI.	<p>Note: The software discovery may take some time to complete. The screen capture assumes discovery is complete.</p> <p>Using the main menu, navigate to Software → Software Inventory page. Verify that all the servers are listed and have the details filled in (assuming TPD or TVOE is installed on the server)</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="text-align: left;">Identity</th> <th style="text-align: left;">IP Address</th> <th style="text-align: left;">Hostname</th> <th style="text-align: left;">Platform Name</th> <th style="text-align: left;">Platform Vers</th> </tr> </thead> <tbody> <tr> <td>Enc:50301 Bay:4E</td> <td>169.254.131.2</td> <td>hostnameee6495a2d0d73</td> <td>TPD (x86_64)</td> <td>7.2.0.0.0-88.1.1</td> </tr> </tbody> </table>	Identity	IP Address	Hostname	Platform Name	Platform Vers	Enc: 50301 Bay: 4E	169.254.131.2	hostnameee6495a2d0d73	TPD (x86_64)	7.2.0.0.0-88.1.1
Identity	IP Address	Hostname	Platform Name	Platform Vers								
Enc: 50301 Bay: 4E	169.254.131.2	hostnameee6495a2d0d73	TPD (x86_64)	7.2.0.0.0-88.1.1								
---End of Procedure---												

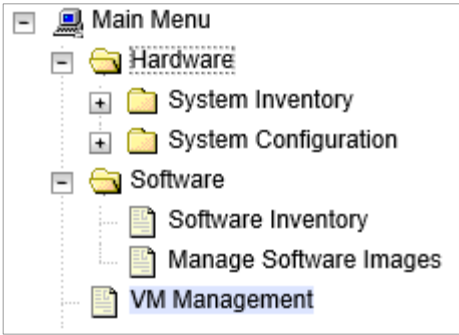
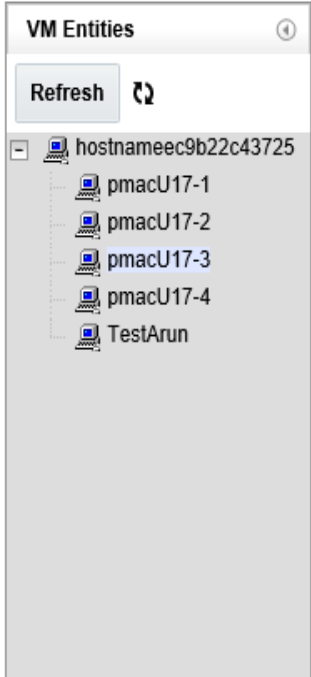
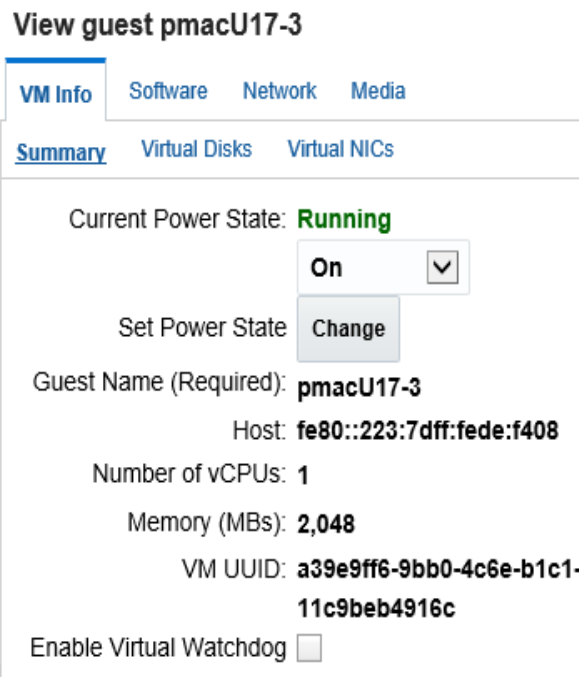
Procedure 11. Post Upgrade Procedure to Enable PM&C Virtual Watchdog

S T E P #	<p>This procedure provides instructions to enable Virtual Watchdog of the PM&C and should be executed after upgrade to PM&C 6.2 release.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, see Section 1.2.</p>
Task	Description

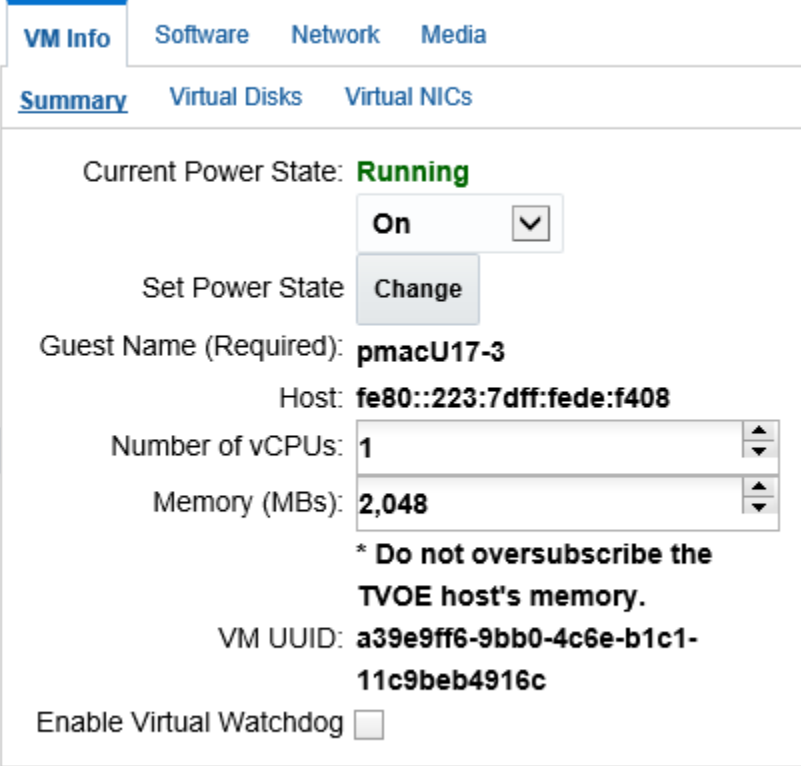
Procedure 11. Post Upgrade Procedure to Enable PM&C Virtual Watchdog

<p>1. <input type="checkbox"/></p>	<p>Access the PM&C GUI</p>	<p>Open the IE web browser and enter: https://<PM&C Management Network IP > Login with administrator credentials from Table 3. Software Upgrade Required Data</p> <p>Note:The following images are for illustrative purposes only.</p> <div data-bbox="513 506 1406 1182" style="border: 1px solid black; padding: 10px;"></div> <p>Welcome message is displayed after the successful login.</p> <div data-bbox="529 1272 1406 1432" style="border: 1px solid black; padding: 5px;"><p style="text-align: center;">This is the user-defined welcome message. It can be modified using the 'General Options' page, reached via the Main Menu's 'Administration' submenu.</p><p style="text-align: center;">Login Name: guidadmin Last Login Time: 2016-08-17 11:16:54 Last Login IP Address: 10.178.62.230 Recent Failed Login Attempts: 0</p></div>
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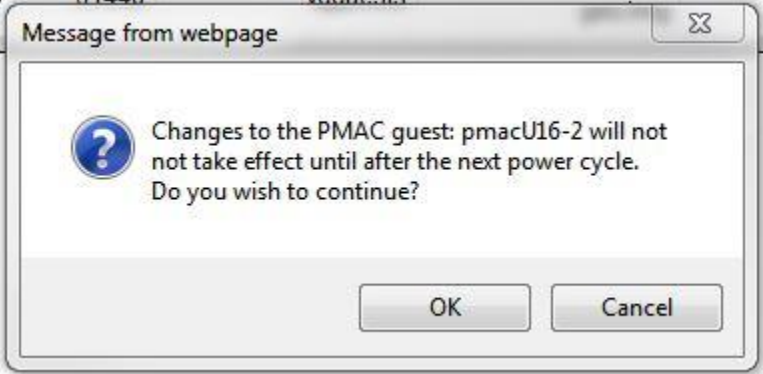
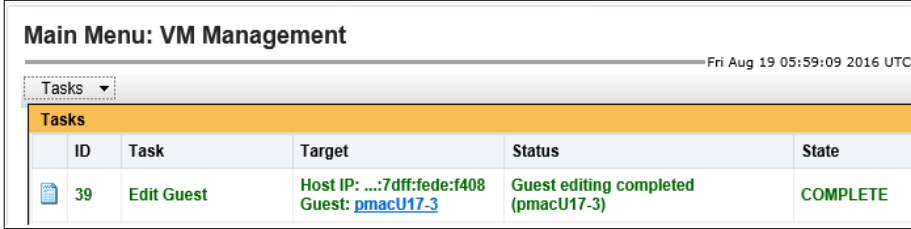
Procedure 11. Post Upgrade Procedure to Enable PM&C Virtual Watchdog

<p>2. <input type="checkbox"/></p>	<p>Navigate to VM Management page</p>	<p>Using Main Menu > VM Management navigate to VM Management page.</p> <p>Note:The following images are for illustrative purposes only.</p>  <p>The pane called 'Main Menu: VM Management' should load.</p>
<p>3. <input type="checkbox"/></p>	<p>Select the PM&C guest</p>	<p>Click on VM Host under 'VM Entities' Expand the VM Host if needed and select the PM&C guest</p> <p>Note:The following images are for illustrative purposes only.</p>   <p>A pane called 'View guest <PM&C guest name>' should load. If the 'Enable Virtual Watchdog' checkbox is not checked, proceed to the next step, otherwise exit the procedure.</p>

Procedure 11. Post Upgrade Procedure to Enable PM&C Virtual Watchdog

<p>4. <input type="checkbox"/></p>	<p>Edit PM&C Virtual Watchdog</p>	<p>Click on Edit button, check the 'Enable Virtual Watchdog' checkbox and click on the Save button.</p> <p>Note:The following images are for illustrative purposes only.</p> <p>Edit guest pmacU17-3</p> 
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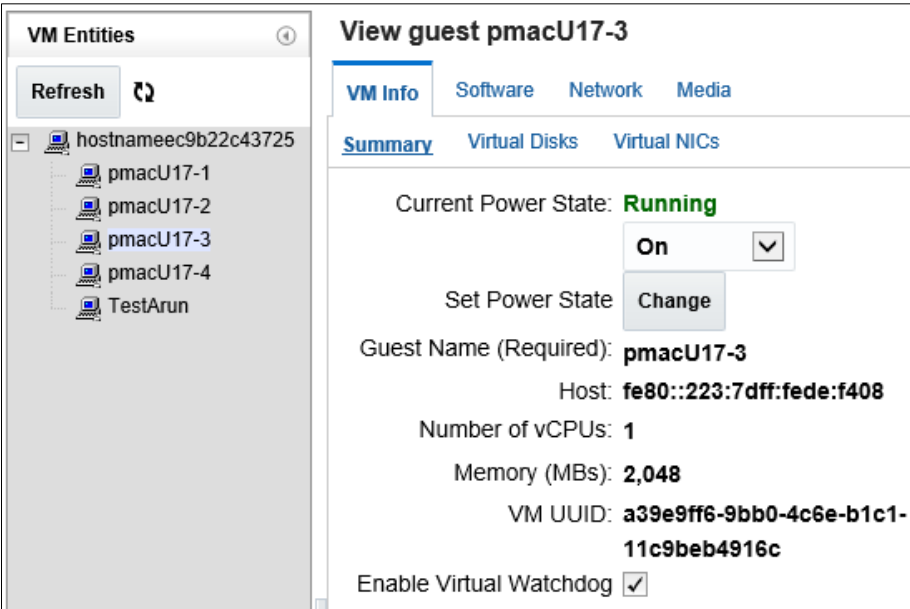
Procedure 11. Post Upgrade Procedure to Enable PM&C Virtual Watchdog

<p>5.</p> <p><input type="checkbox"/></p>	<p>Confirm the change to the PM&C guest</p>	<p>A confirmation dialog will be presented with the message, "Changes to the PM&C guest will not take effect until after the next power cycle. Do you wish to continue?".</p>  <p>Click "OK" to continue.</p>
<p>6.</p> <p><input type="checkbox"/></p>	<p>Wait for the Edit Guest background task to complete</p>	<p>Click on the dropdown menu, 'Tasks', on the 'View guest <PM&C guest name>' pane. Verify that the 'Edit Guest' Task has completed successfully.</p> <p>Note:The following images are for illustrative purposes only.</p> 
<p>7.</p> <p><input type="checkbox"/></p>	<p>Shut down the PM&C guest</p>	<p>Shutdown the PM&C guest as detailed in Appendix H Shutdown PM&C Guest</p>

Procedure 11. Post Upgrade Procedure to Enable PM&C Virtual Watchdog

<p>8. <input type="checkbox"/></p>	<p>Start the PM&C guest</p>	<p>Using the virsh utility on the PM&C TVOE Host, start the PM&C guest. Query the list of guests until the PM&C guest is "running".</p> <pre>[admusr@tvoeU17~]\$ sudo /usr/bin/virsh list --all Id Name State ----- 20 <PM&C guest name> shut off [admusr@tvoeU17~]\$ sudo /usr/bin/virsh start <PM&C guest name> Domain <PM&C guest name> started [admusr@tvoeU17 ~]\$ sudo /usr/bin/virsh list --all Id Name State ----- 20 <PM&C guest name> running</pre>
<p>9. <input type="checkbox"/></p>	<p>Monitor the PM&C guest until it comes up</p>	<p>In a Putty session to PM&C TVOE Host, execute the following command:</p> <pre>[admusr@tvoeU17 ~]\$ sudo /usr/bin/virsh console <PM&C guest name></pre> <p>Wait for the PM&C guest login prompt to appear.</p>


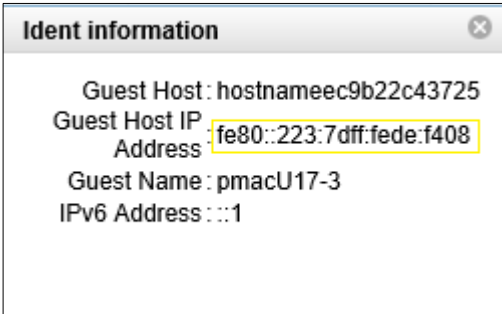
Procedure 11. Post Upgrade Procedure to Enable PM&C Virtual Watchdog

<p>10.</p>	<p>Verify if the Virtual Watchdog is enabled</p>	<p>In the GUI session of the PM&C guest, navigate to VM Management page using Main Menu > VM Management Click on VM Host under 'VM Entities' Expand the VM Host if needed and select the PM&C guest</p> <p>Note: The following images are for illustrative purposes only.</p>  <p>Verify in the pane 'View guest < PM&C guest name>' that the 'Enable Virtual Watchdog' checkbox is checked.</p> <p style="text-align: center;">---End of Procedure---</p>
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Procedure 12. Post Upgrade Procedure to Edit PM&C NUMA Tuning

<p>S T E P #</p>	<p>This procedure provides instructions to edit the NUMA tuning of the PM&C and should be executed after upgrade to PM&C 6.2 release. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. If this procedure fails, see Section 1.2.</p>	
	<p>Task</p>	<p>Description</p>

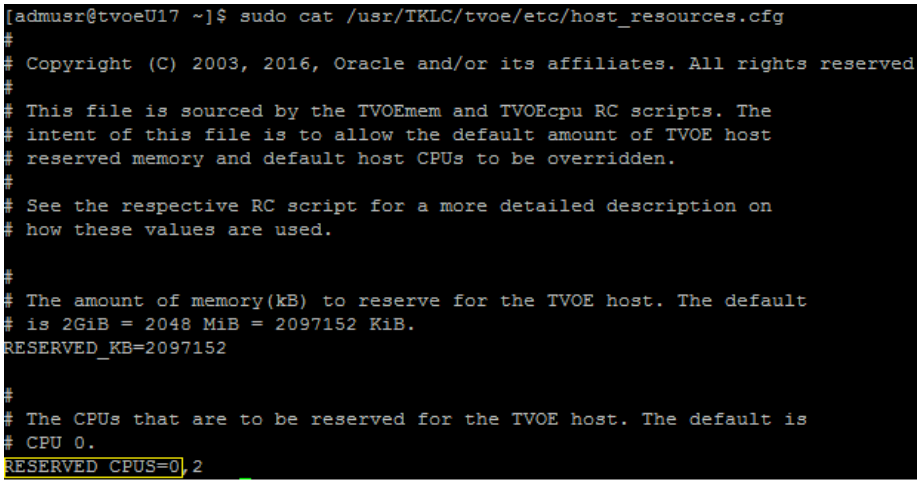
Procedure 12. Post Upgrade Procedure to Edit PM&C NUMA Tuning

<p>1. <input type="checkbox"/></p>	<p>Locate the Ipv6 address of the PM&C TVOE Host</p>	<p>Open the IE web browser and enter: https://<PM&C Management Network IP > Login with administrator credentials from Table 3. Software Upgrade Required Data</p> <p>Note:The following images are for illustrative purposes only.</p> <div data-bbox="516 499 1409 1178" style="border: 1px solid black; padding: 10px; text-align: center;">  </div> <p>Using the Main Menu, navigate to Software -> Software Inventory page. Locate the entry belonging to the PM&C guest.</p> <table border="1" data-bbox="505 1289 1432 1360"> <tr> <td>Host:</td> <td>hostnameec9b22c43725</td> <td>169.254.129.1</td> <td>pmacU17-3</td> <td>TPD (x86_64)</td> <td>7.2.0.0.0-88.25.0</td> </tr> <tr> <td>Guest:</td> <td colspan="5">pmacU17-3</td> </tr> </table> <p>Now, click on the IP Address field of the PM&C guest entry, this will bring up “Ident Information” window:</p> <div data-bbox="716 1486 1214 1797" style="border: 1px solid black; padding: 5px; text-align: center;">  </div> <p>Note down the value next to GuestHost IP:</p> <table border="1" data-bbox="516 1864 987 1913"> <tr> <td>Guest Host Ip:</td> <td style="width: 200px;"></td> </tr> </table>	Host:	hostnameec9b22c43725	169.254.129.1	pmacU17-3	TPD (x86_64)	7.2.0.0.0-88.25.0	Guest:	pmacU17-3					Guest Host Ip:	
Host:	hostnameec9b22c43725	169.254.129.1	pmacU17-3	TPD (x86_64)	7.2.0.0.0-88.25.0											
Guest:	pmacU17-3															
Guest Host Ip:																

Procedure 12. Post Upgrade Procedure to Edit PM&C NUMA Tuning

<p>2. <input type="checkbox"/></p>	<p>Decide if NUMA Tuning is required</p>	<p>Login to PM&C guest console as detailed in Appendix B Accessing The PM&C Guest Console</p> <p>Execute the following command: <code>[admusr@pmacU17-3~]\$ sudo pmaccli getVirtGuest --ip=<Guest Host Ip> --guest=<PM&C guest name></code></p> <p>Note:The following images are for illustrative purposes only.</p> <pre>[admusr@pmacU17-3 ~]# sudo pmaccli getVirtGuest --ip=fe80::223:7dff:fede:f408 --guest=pmacU17-3 pmacU17-3: MEMORY(MB) :2048 WATCHDOG:ON POWERSTATE:1 UUID:03e85994-f6d0-4d4d-9452-77e5f25c29dd metadata: VERSION() CREATED() EDITED() vcpus:1 VCPUPIN() CPUSET() NUMA() PLACEMENTRULE(LEGACY) vnics: control43: 52:54:00:df:7a:29: (null) control - (null)</pre> <p>In the output of the above command, if both VCPUPIN and CPUSET have empty values, proceed to the next step, otherwise exit the procedure.</p>
<p>3. <input type="checkbox"/></p>	<p>Login to PM&C TVOE Host</p>	<p>Login to the TVOE host console, using Appendix A Accessing The PM&C TVOE Host Console</p>

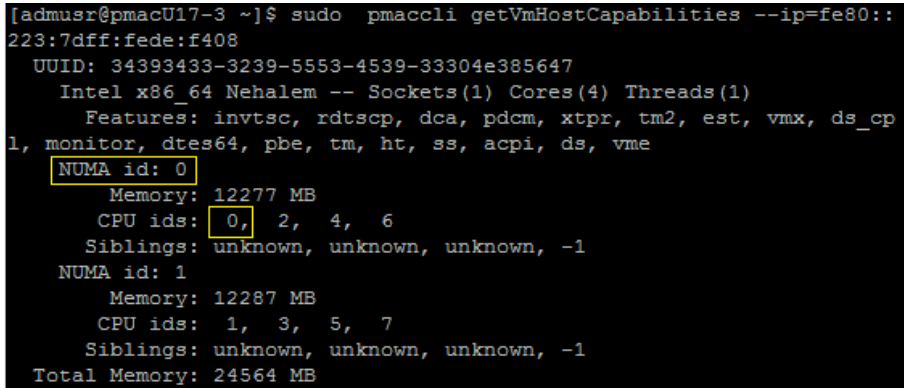
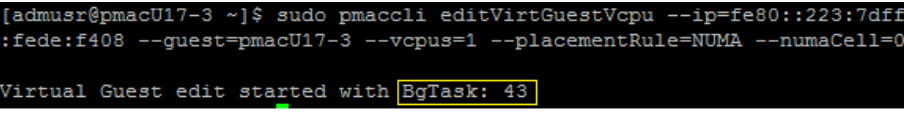
Procedure 12. Post Upgrade Procedure to Edit PM&C NUMA Tuning

<p>4. <input type="checkbox"/></p>	<p>Get Reserved CPUs on PM&C TVOE Host</p>	<p>In the Putty session to PM&C TVOE Host, execute the following command: <code>[admusr@tvoeU17 ~]\$ sudo cat /usr/TKLC/tvoe/etc/host_resources.cfg</code></p> <p>Note down the first CPU number listed next to RESERVED_CPU: Reserved CPU</p> <p>Note:The following images are for illustrative purposes only.</p>  <pre>[admusr@tvoeU17 ~]\$ sudo cat /usr/TKLC/tvoe/etc/host_resources.cfg # # Copyright (C) 2003, 2016, Oracle and/or its affiliates. All rights reserved. # # This file is sourced by the TVOEmem and TVOEcpu RC scripts. The # intent of this file is to allow the default amount of TVOE host # reserved memory and default host CPUs to be overridden. # # See the respective RC script for a more detailed description on # how these values are used. # # The amount of memory(kB) to reserve for the TVOE host. The default # is 2GiB = 2048 MiB = 2097152 KiB. RESERVED_KB=2097152 # # The CPUs that are to be reserved for the TVOE host. The default is # CPU 0. RESERVED_CPUS=0,2</pre> <p>Reserved CPU to be noted is 0, in the above screenshot.</p>
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


Procedure 12. Post Upgrade Procedure to Edit PM&C NUMA Tuning

<p>5. <input type="checkbox"/></p>	<p>Get the allocated vcpus for the PM&C</p>	<p>In a Putty session to PM&C guest, execute the following command: [admusr@pmacU17-3~]\$ sudo pmaccli getVirtGuest --ip=<Guest Host Ip> --guest=<PM&C guest name></p> <p>Note down the value next to vcpus:</p> <table border="1" data-bbox="516 474 987 520"> <tr> <td>vcpus</td> <td></td> </tr> </table> <p>Note:The following images are for illustrative purposes only.</p> <pre data-bbox="516 604 1419 1020"> [admusr@pmacU17-3 ~]\$ sudo pmaccli getVirtGuest --ip=fe80::223:7dff:fede:f408 --guest=pmacU17-3 pmacU17-3: MEMORY(MB):2048 WATCHDOG:ON POWERSTATE:1 UUID:a39e9ff6-9bb0-4c6e-b1c1-11c9beb4916c metadata: VERSION(1.0) CREATED(08/03/16 11:55:06AM) EDITED(08/19/16 02:09:26AM) vcpus:1 VCPUPIN() CPUSSET(1-7) NUMA(0-1) PLACEMENTRULE(LEGACY) vnic: control43: 52:54:00:57:01:f6: (null) control - (null) management: 52:54:00:cd:15:41: (null) management - (null) vdisks: vgguests / pmacU17-3.img (51200) PRIMARY prdisk(1) vgguests / pmacU17-3_logs.img (10240) logs prdisk(0) vgguests / pmacU17-3_images.img (20480) images prdisk(0) </pre> <p>Vcpus to be noted is 1, in the above screenshot.</p>	vcpus	
vcpus				

Procedure 12. Post Upgrade Procedure to Edit PM&C NUMA Tuning

<p>6. <input type="checkbox"/></p>	<p>Identify the NUMA where PM&C's host CPUs are reserved</p>	<p>In a Putty session to PM&C guest, execute the following command: [admusr@pmacU17-3~]\$ sudo pmaccli getVmHostCapabilities --ip=<Guest Host Ip></p> <p>Note down the NUMA id to which the Reserved CPU (from Step# 2) belongs:</p> <table border="1" data-bbox="516 478 987 520"> <tr> <td>NUMA id</td> <td></td> </tr> </table> <p>Note:The following images are for illustrative purposes only.</p>  <p>NUMA id to be noted is 0 in the above screenshot as the Reserved CPU 0 (from Step# 2) belongs to the NUMA id 0.</p>	NUMA id	
NUMA id				
<p>7. <input type="checkbox"/></p>	<p>Edit the PM&C NUMA Tuning</p>	<p>In a Putty session to PM&C guest, execute the following using the NUMA id gathered in the previous step: [admusr@pmacU17-3~]\$ sudo pmaccli editVirtGuestVcpu --ip=<Guest Host Ip> --guest=<PM&C guest Name> --vcpus=<vcpus> --placementRule=NUMA --numaCell=<NUMA id></p> <p>Note down the value next the BgTask:</p> <table border="1" data-bbox="516 1318 987 1360"> <tr> <td>BgTask</td> <td></td> </tr> </table> <p>Note:The following images are for illustrative purposes only.</p>  <p>BgTask to be noted is 43, in the above screenshot.</p>	BgTask	
BgTask				

Procedure 12. Post Upgrade Procedure to Edit PM&C NUMA Tuning

<p>8. <input type="checkbox"/></p>	<p>Wait for the Edit Guest background task to complete</p>	<p>In a GUI session to PM&C guest, Under the Main Menu, Navigate to the 'Background Task Monitoring' view. Verify that the 'Edit Guest' task with the Id, <BgTask> has completed successfully.</p> <p>Note:The following images are for illustrative purposes only.</p> <table border="1" data-bbox="513 499 1414 611"> <thead> <tr> <th>ID</th> <th>Task</th> <th>Target</th> <th>Status</th> <th>State</th> </tr> </thead> <tbody> <tr> <td> 43</td> <td>Edit Guest</td> <td>Host IP: ...:7dff:fede:f408 Guest: pmacU17-3</td> <td>Guest editing completed (pmacU17-3)</td> <td>COMPLETE</td> </tr> </tbody> </table>	ID	Task	Target	Status	State	 43	Edit Guest	Host IP: ...:7dff:fede:f408 Guest: pmacU17-3	Guest editing completed (pmacU17-3)	COMPLETE
ID	Task	Target	Status	State								
 43	Edit Guest	Host IP: ...:7dff:fede:f408 Guest: pmacU17-3	Guest editing completed (pmacU17-3)	COMPLETE								
<p>9. <input type="checkbox"/></p>	<p>Shut down the PM&C guest</p>	<p>Shutdown the PM&C guest as detailed in Appendix H Shutdown PM&C Guest</p>										
<p>10. <input type="checkbox"/></p>	<p>Start the PM&C guest</p>	<p>Using the virsh utility on the PM&C TVOE Host, start the PM&C guest. Query the list of guests until the PM&C guest is "running".</p> <pre>[admusr@tvoeU17~]\$ sudo /usr/bin/virsh list --all Id Name State ----- 20 <PM&C guest name> shut off [admusr@tvoeU17~]\$ sudo /usr/bin/virsh start <PM&C guest name> Domain <PM&C guest name> started [admusr@tvoeU17 ~]\$ sudo /usr/bin/virsh list --all Id Name State ----- 20 <PM&C guest name> running</pre>										
<p>11. <input type="checkbox"/></p>	<p>Monitor the PM&C guest until it comes up</p>	<p>In a Putty session to PM&C TVOE Host, execute the following command: [admusr@tvoeU17 ~]\$ sudo /usr/bin/virsh console <PM&C guest name></p> <p>Wait for the PM&C guest login prompt to appear.</p>										
<p>12. <input type="checkbox"/></p>	<p>Login to PM&C</p>	<p>Login to PM&C guest console as detailed in Appendix B Accessing The PM&C Guest Console</p>										

Procedure 12. Post Upgrade Procedure to Edit PM&C NUMA Tuning

<p>13. <input type="checkbox"/></p>	<p>Verify the PM&C NUMA Tuning</p>	<p>In a Putty session to PM&C guest, execute the following command: [admusr@pmacU17-3~]\$ sudo pmaccli getVirtGuest --ip=<Guest Host Ip> --guest=<PM&C guest name></p> <p>Verify that the output contains the following:</p> <ul style="list-style-type: none"> • NUMA is set to <NUMA id> • PLACEMENTRULE is set to NUMA <p>Note:The following images are for illustrative purposes only.</p> <pre>[admusr@pmacU17-3 ~]\$ sudo pmaccli getVirtGuest --ip=fe80::223:7dff:fed e:f408 --guest=pmacU17-3 pmacU17-3: MEMORY(MB):2048 WATCHDOG:ON POWERSTATE:1 UUID:a39e9ff6-9bb0-4c6e-b1c1-11c9beb4916c metadata: VERSION(1.0) CREATED(08/03/16 11:55:06AM) EDITED(08/22/16 03:06:27AM) vcpus:1 VCPUPIN() CPuset(4,6) NUMA(0) PLACEMENTRULE(NUMA) vnics: control43: 52:54:00:57:01:f6: (null) control - (null) management: 52:54:00:cd:15:41: (null) management - (null) vdisks: vgguests / pmacU17-3.img (51200) PRIMARY prdisk(1) vgguests / pmacU17-3_logs.img (10240) logs prdisk(0) vgguests / pmacU17-3_images.img (20480) images prdisk(0)</pre>
<p>---End of Procedure---</p>		

Procedure 13. Post Upgrade Configuration for netConfig

S T E P #	Use this procedure to provide instructions to configure netConfig. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. If this procedure fails, see Section 1.2.																	
	Task	Description																
1. <input type="checkbox"/>	List and record the devices in the current netConfig repository	List the devices managed by the netConfig utility to be used in future steps. Execute: <pre>[admusr@pmac ~]\$ sudo /usr/TKLC/plat/bin/netConfig --repo listDevices</pre> Sample output: Devices: Device: 6125G_IOBAY4 Vendor: HP Model: 6125 Access: Network: 10.240.8.10 Access: OOB: Service: oa_service_en1 Console: 4 Init Protocol Configured Live Protocol Configured Device: C3020_IOBAY8 Vendor: Cisco Model: 3020 Access: Network: 10.240.8.14 Init Protocol Configured Live Protocol Configured Device: 6120XG_IOBAY6 Vendor: HP Model: 6120 Access: Network: 10.240.8.12 Init Protocol Configured Live Protocol Configured Device: cClass-switch1B Vendor: Cisco Model: 4948E Access: Network: 10.240.8.3 Access: OOB: Service: console_service Console: switch1B_console Init Protocol Configured Live Protocol Configured																
		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Device Name</th> <th style="text-align: center;">Type (Vendor & Model)</th> </tr> </thead> <tbody> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </tbody> </table>	Device Name	Type (Vendor & Model)														
Device Name	Type (Vendor & Model)																	

Procedure 13. Post Upgrade Configuration for netConfig

<p>2. <input type="checkbox"/></p>	<p>List and record ssh services in the current netConfig repository.</p>	<p>List the services in the current netConfig repository. Identify the SSH services(s) for use in future steps, wherever the <ssh_service> variable is seen.</p> <p>Execute: <pre>[admusr@pmac ~]\$ sudo /usr/TKLC/plat/bin/netConfig --repo listServices</pre> </p> <p>Sample output: Services:</p> <pre>... Service Name: ssh_service Type: ssh Host: 10.240.8.4 Options: password: 390F1FAE4A420 user: admusr Service Name: ssh_service_mgmt2 Type: ssh Host: 10.240.16.4 Options: password: 390F1FAE4A420 user: admusr</pre>			
<table border="1" style="width: 100%; margin: 10px auto;"> <thead> <tr> <th style="text-align: center;">Service Name (ssh)</th> </tr> </thead> <tbody> <tr> <td style="height: 20px;"> </td> </tr> <tr> <td style="height: 20px;"> </td> </tr> </tbody> </table>			Service Name (ssh)		
Service Name (ssh)					

Procedure 13. Post Upgrade Configuration for netConfig

<p>3.</p>	<p>List and record OA services in the current netConfig repository.</p>	<p>List the services in the current netConfig repository. Identify the OA service(s) for use in future steps, wherever the <oa_service> variable is seen.</p> <p>Execute:</p> <pre>[admusr@pmac ~]\$ sudo /usr/TKLC/plat/bin/netConfig --repo listServices</pre> <p>Sample output:</p> <p>Services:</p> <pre>... Service Name: oa_service_en1 Type: oa Host: 10.240.8.5 Options: password: C6BBEF35A06FCE81F7850A13525E21D3 user: root</pre> <p>For each OA service, identify the OA service name, and current OA IP address. Also identify the second OA IP address if available. The following step will reconfigure the netConfig OA service with both OA IP addresses.</p> <table border="1" data-bbox="565 961 1458 1234"> <thead> <tr> <th>Variable</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td><OA_service_name> (acquired above)</td> <td></td> </tr> <tr> <td><OA_ipAddress_A> (acquired above)</td> <td></td> </tr> <tr> <td><OA_ipAddress_B> (acquired directly from standby OA or from site IP plan documentation)</td> <td></td> </tr> </tbody> </table>	Variable	Value	<OA_service_name> (acquired above)		<OA_ipAddress_A> (acquired above)		<OA_ipAddress_B> (acquired directly from standby OA or from site IP plan documentation)	
Variable	Value									
<OA_service_name> (acquired above)										
<OA_ipAddress_A> (acquired above)										
<OA_ipAddress_B> (acquired directly from standby OA or from site IP plan documentation)										

Procedure 13. Post Upgrade Configuration for netConfig

<p>4.</p>	<p>Recreate OA service with both OA IP addresses.</p>	<p>The following step should be executed to assign both primary and secondary OA ip addresses in the netConfig repository. Use variable values acquired in the previous step to recreate the OA service in this step.</p> <p>Delete the existing OA service: <pre>[admusr@pmac ~]\$ sudo netConfig --repo deleteService name=<OA_service_name></pre> Are you sure you want to delete <OA_service_name> (y/n)? y Deleting service <OA_service_name>...</p> <p>Recreate the OA service with both IPs: <pre>[admusr@pmac ~]\$ sudo netConfig --repo addService name=<OA_service_name></pre> Service type [ssh, tftp, oa, conserver]? oa Primary OA IP? <OA_ipAddress_A> Secondary OA IP? <OA_ipAddress_B> OA username? : root OA password? Verify password: Add service for <OA_service_name> successful</p> <p>Note: If no OA services existed when inspected in the previous step, the “netConfig –repo deleteService” command is unnecessary. The OA service(s) should still be created for any managed enclosure OAs regardless.</p>										
<p>5.</p> <p><input type="checkbox"/></p>	<p>Gather network access information</p>	<p>The following information must be identified:</p> <table border="1" data-bbox="565 1100 1458 1440"> <thead> <tr> <th>Variable</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td><management_vlanID> (4948/4948E/4948E-F only)</td> <td></td> </tr> <tr> <td><switch_management_ip> (see note 1)</td> <td></td> </tr> <tr> <td><switch_management_netmask> (4948/4948E/4948E-F only) (see note 2)</td> <td></td> </tr> <tr> <td><control_vlanID> (4948/4948E/4948E-F only)</td> <td></td> </tr> </tbody> </table> <p>Note: For Platform 7.0, IPv4 address must be in CIDR notation, IPv6 address must be in address/prefix notation. For Platform 6.7, only an IPv4 and netmask is applicable.</p>	Variable	Value	<management_vlanID> (4948/4948E/4948E-F only)		<switch_management_ip> (see note 1)		<switch_management_netmask> (4948/4948E/4948E-F only) (see note 2)		<control_vlanID> (4948/4948E/4948E-F only)	
Variable	Value											
<management_vlanID> (4948/4948E/4948E-F only)												
<switch_management_ip> (see note 1)												
<switch_management_netmask> (4948/4948E/4948E-F only) (see note 2)												
<control_vlanID> (4948/4948E/4948E-F only)												
<p>6.</p> <p><input type="checkbox"/></p>	<p>Standardize switch configurations in PM&C 6.0</p>	<p>If the target PM&C version is 6.2 and the source prior to PM&C 6.2, execute steps 7-14 below, and Appendix I.</p>										
<p>7.</p> <p><input type="checkbox"/></p>	<p>Repository changes for pre-5.7 upgrades</p>	<p>Use the information gathered in step 2 to update repository entries. Note: Some upgrade paths may not require changes, but the steps may still be performed.</p>										
<p>8.</p>	<p>Upgrade the repository for all 4948/4948E/</p>	<p>Note: If there are no 4948/4948E/4948E-F switches in the repository, skip this step. Execute the following commands to upgrade the repository for a</p>										

Procedure 13. Post Upgrade Configuration for netConfig

<input type="checkbox"/>	4948E-F Switches	<p>4948/4948E/4948E-F. Determine the current <FW_image> on the switch:</p> <pre>[admusr@pmac ~]\$ sudo /usr/TKLC/plat/bin/netConfig getFirmware --device=<switch_name></pre> <p>Version: 122-54.X0 License: entservicesk9 Flash: <FW_image></p> <p>Note: It is important to capture the exact filename output for <FW_image> Edit the repository:</p> <p>Note: The output from the command below contains sample information. Only enter information that is bold. For all other entries, press [Enter] to use the current data from the repository.</p> <p>Example output for PM&C 5.7:</p> <pre>[admusr@pmac ~]\$ sudo /usr/TKLC/plat/bin/netConfig --repo editDevice name=<switch_name></pre> <p>Access network address [10.240.8.2]: Access OOB service [console_service]: Access OOB console [switch1A_console]: Firmware service []: <ssh_service> Firmware filename [cat4500e-entservicesk9-mz.122-54.X0.bin]:<FW_image> IP version for management interface (4 or 6)? [4]: What is the IPv4 address for management? [0.0.0.0]: <switch_management_ip> What is the subnet mask for the management address? [255.255.255.0]: <switch_management_netmask> Is the management interface a port or a vlan? [vlan]: What is the VLAN ID of the management VLAN? [2]: <management_vlanID> What is the name of the management VLAN? [management]: What switchport connects to the management server? [GE40]: What is the switchport mode (access trunk) for the management server port? [trunk]: What are the allowed vlans for the management server port? [1,2]: <control_vlanID>,<management_vlanID> <p>Init OOB Credentials Platform access username [plat]: Platform user password [***...]: Device console password [***...]: Device privileged mode password [***...]:</p> <p>Live Network Credentials</p> </p>
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Procedure 13. Post Upgrade Configuration for netConfig

		<pre> Platform access username [plat]: Platform user password [***...]: Device privileged mode password [***...]: Live OOB Credentials Platform access username [plat]: Device console password [***...]: Device privileged mode password [***...]: Device named <switch_name> successfully edited. Example output for PM&C 6.0: [admusr@pmac ~]\$ sudo /usr/TKLC/plat/bin/netConfig --repo editDevice name=<switch_name> Initialization Management Options What is the IPv4 (CIDR notation) or IPv6 (address/prefix notation) address for management? [switch_management_ip]: Access OOB service [oa_service_en#]: Access OOB console [IO_BAY#]: Firmware service [ssh_service]: Firmware filename [6125xlg-cmw710-system-r2403.bin]: <FW_image> Init OOB Credentials Platform access username [plat]: Platform user password [***...]: Device console password [***...]: Device privileged mode password [***...]: Live Network Credentials Platform access username [plat]: Platform user password [***...]: Device privileged mode password [***...]: Live OOB Credentials Platform access username [plat]: Device console password [***...]: Device privileged mode password [***...]: Device named <switch_name> successfully edited. Repeat this step for each 4948/4948E/4948E-F in the repository. </pre>
<p>9. <input type="checkbox"/></p>	<p>Upgrade the repository for all 3020 Switches</p>	<p>Note: If there are no 3020 switches in the repository, skip this step. Execute the following commands to upgrade the repository for a 3020. Determine the current <FW_image> on the switch:</p> <pre> [admusr@pmac ~]\$ sudo /usr/TKLC/plat/bin/netConfig getFirmware </pre>

Procedure 13. Post Upgrade Configuration for netConfig

		<pre> --device=<switch_name> Version: 122-58.SE1 License: ipbasek9 Flash: <FW_image> Note: It is important to capture the exact filename output for <FW_image> Edit the repository: Note: The output from the command below contains sample information. Only enter information that is bold. For all other entries, press [Enter] to use the current data from the repository. [admusr@pmac ~]\$ sudo /usr/TKLC/plat/bin/netConfig --repo editDevice name=<switch_name> Access network address [10.240.8.13]: Firmware service []: tftp_service Firmware filename [cbs30x0-ipbasek9-tar.122-58.SE1.tar]: <FW_image> Init Network Credentials Platform access username [plat]: Platform user password [***...]: Device privileged mode password [***...]: Live Network Credentials Platform access username [plat]: Platform user password [***...]: Device privileged mode password [***...]: Device named <switch_name> successfully edited. Repeat this step for each 3020 in the repository. </pre>
<p>10. <input type="checkbox"/></p>	<p>Upgrade the repository for all 6120 Switches</p>	<p>Note: If there are no 6120 switches in the repository, skip this step. Execute the following commands to upgrade the repository for a 6120. Determine the current <FW_image> on the switch:</p> <pre> [admusr@pmac ~]\$ sudo /usr/TKLC/plat/bin/netConfig getFirmware --device=<switch_name> Version: <preformatted_FW_image> Flash: Secondary Note: The <preformatted_FW_image> needs to be converted to a proper filename needed for the next command. Convert any “” to an “_” and add “.swi” to the end. For example, if the output above is “Z.14.46” the resulting filename should be “Z_14_46.swi” for the command below. The formatted FW filename shall be referred to as <FW_image> in the command below. Edit the repository: Note: The output from the command below contains sample information. Only enter information that is bold. For all other entries, press [Enter] to use the current data from the repository. </pre>

Procedure 13. Post Upgrade Configuration for netConfig

		<pre> Example output for PM&C 5.7: [admusr@pmac ~]\$ sudo /usr/TKLC/plat/bin/netConfig --repo editDevice name=<switch_name> Access network address [10.240.8.12]: Firmware service []: <ssh_service> Firmware filename [Z_14_37.swi]: <FW_image> Init Network Credentials Platform access username [plat]: Platform user password [***...]: Device privileged mode password [***...]: Live Network Credentials Platform access username [plat]: Platform user password [***...]: Device privileged mode password [***...]: Device named <switch_name> successfully edited. Example output for PM&C 6.0: [admusr@pmac ~]\$ sudo /usr/TKLC/plat/bin/netConfig --repo editDevice name=<switch_name> Initialization Management Options What is the IPv4 (CIDR notation) or IPv6 (address/prefix notation) address for management? [switch_management_ip]: Access OOB service [oa_service_en#]: Access OOB console [IO_BAY#]: Firmware service []:<ssh_service> Firmware filename [Z_14_37.swi]: <FW_image> Init OOB Credentials Platform access username [plat]: Platform user password [***...]: Device console password [***...]: Device privileged mode password [***...]: Live Network Credentials Platform access username [plat]: Platform user password [***...]: Device privileged mode password [***...]: Live OOB Credentials Platform access username [plat]: Device console password [***...]: Device privileged mode password [***...]: Device named <switch_name> successfully edited. </pre>
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Procedure 13. Post Upgrade Configuration for netConfig

		<p>Repeat this step for each 6120 in the repository.</p>
<p>11. <input type="checkbox"/></p>	<p>Upgrade the repository for all 6125G Switches</p>	<p>Note: If there are no 6125G switches in the repository, skip this step. Execute the following commands to upgrade the repository for a 6125G. Determine the current <FW_image> on the switch: <pre>[admusr@pmac ~]\$ sudo /usr/TKLC/plat/bin/netConfig getFirmware --device=<switch_name></pre> <p>Version: 5.20.99 Flash:<FW_image> Release: 2106</p> <p>Note: It is important to capture the exact filename output for <FW_image> Edit the repository:</p> <p>Note: The output from the command below contains sample information. Only enter information that is bold. For all other entries, press [Enter] to use the current data from the repository. Example output for PM&C 5.7:</p> <pre>[admusr@pmac ~]\$ sudo /usr/TKLC/plat/bin/netConfig --repo editDevice name=<switch_name></pre> <p>Access network address [10.240.8.14]: Access OOB service [oa_service]: Access OOB console [2]: Firmware service []: <ssh_service> Firmware filename [6125-cmw520-r2105.bin]:<FW_image> Init OOB Credentials Platform access username [plat]: Platform user password [***...]: Device console password [***...]: Device privileged mode password [***...]: Live Network Credentials Platform access username [plat]: Platform user password [***...]: Device privileged mode password [***...]: Live OOB Credentials Platform access username [plat]: Device console password [***...]: Device privileged mode password [***...]: Device named <switch_name> successfully edited.</p> <p>Example output for PM&C 6.0:</p> <pre>[admusr@pmac ~]\$ sudo /usr/TKLC/plat/bin/netConfig --repo editDevice name=<switch_name></pre> </p>

Procedure 13. Post Upgrade Configuration for netConfig

		<pre> Initialization Management Options What is the IPv4 (CIDR notation) or IPv6 (address/prefix notation) address for management? [switch_management_ip]: Access OOB service [oa_service_en#]: Access OOB console [IO_BAY#]: Firmware service []:<ssh_service> Firmware filename []: <FW_image> Init OOB Credentials Platform access username [plat]: Platform user password [***...]: Device console password [***...]: Device privileged mode password [***...]: Live Network Credentials Platform access username [plat]: Platform user password [***...]: Device privileged mode password [***...]: Live OOB Credentials Platform access username [plat]: Device console password [***...]: Device privileged mode password [***...]: Device named <switch_name> successfully edited Repeat this step for each 6125G in the repository. </pre>
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Procedure 13. Post Upgrade Configuration for netConfig

<p>12. <input type="checkbox"/></p>	<p>Upgrade the repository for all 6125XLG Switches</p>	<p>Note: If there are no 6125XLG switches in the repository, skip this step. Execute the following commands to upgrade the repository for a 6125XLG. Determine the current <FW_image> on the switch:</p> <pre>[admusr@pmac ~]\$ sudo /usr/TKLC/plat/bin/netConfig getFirmware --device=<switch_name></pre> <p>Version: 7.1.045 Flash: = <FW_image> Release: 2403</p> <p>Note: It is important to capture the exact filename output for <FW_image> Edit the repository: The output from the command below contains sample information. Depending on your specific upgrade path and current setup some information may need to be updated and some may not. Check the default values (values in brackets []) carefully to decide whether update is needed. To accept default values press [Enter]. The value for Firmware service must be as listed below.</p> <p>Note: If the default management address is not in CIDR (IPv4) or address/prefix (IPv6) notation then it must be replaced with an address with correct notation</p> <pre>[admusr@host ~]\$ sudo /usr/TKLC/plat/bin/netConfig --repo editDevice name=<switch_name></pre> <pre> Initialization Management Options What is the IPv4 (CIDR notation) or IPv6 (address/prefix notation) address for management? [switch_management_ip]: Access OOB service [oa_service_en#]: Access OOB console [IO_BAY#]: Firmware service [ssh_service]: <ssh_service> Firmware filename [6125xlg-cmw710-system-r2403.bin]: <FW_image> Init OOB Credentials Platform access username [plat]: Platform user password [***...]: Device console password [***...]: Device privileged mode password [***...]: Live Network Credentials Platform access username [plat]: Platform user password [***...]: Device privileged mode password [***...]: Live OOB Credentials Platform access username [plat]: Device console password [***...]: Device privileged mode password [***...]: Device named <switch_name> successfully edited. </pre> <p>Repeat this step for each 6125XLG in the repository.</p>
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Procedure 13. Post Upgrade Configuration for netConfig

<p>13. <input type="checkbox"/></p>	<p>Verify the ssh_service configuration</p>	<p>For each service found in Step 2, execute the following command to verify that the ssh_service is using the admusr credentials:</p> <pre>[admusr@pmac ~]\$ sudo /usr/TKLC/plat/bin/netConfig --repo showService name=<ssh_service></pre> <pre>Service Name: <ssh_service> Type: ssh Host: 10.240.8.4 Options: password: C20F7D639AE7E7 user: root</pre> <p>Repeat this step for each <ssh_service> found in Step 2. If the user in the output is admusr, skip the rest of this procedure. Otherwise proceed to the next step for each ssh service not configured for admusr.</p>
<p>14. <input type="checkbox"/></p>	<p>Recreate the ssh_service with admusr credentials on PM&C guest console</p>	<p>The ssh service(s) must be deleted and re-added.</p> <p>To delete the ssh_service:</p> <pre>[admusr@pmac ~]\$ sudo /usr/TKLC/plat/bin/netConfig --repo deleteService name=<ssh_service></pre> <pre>Are you sure you want to delete <ssh_service> (y/n)? y Deleting device <ssh_service>...</pre> <p>Recreate the ssh_service with the admusr user:</p> <pre>[admusr@pmac ~]\$ sudo /usr/TKLC/plat/bin/netConfig --repo addService name=<ssh_service></pre> <pre>Service type [ssh, conserver, oa, tftp]? ssh SSH host IP? <pmac_mgmtVLAN_ip_address> SSH username? admusr SSH password? <admusr_password> Verify Password: <admusr_password> Add service for <ssh_service> successful [admusr@pmac ~]\$</pre>
<p>---End of Procedure---</p>		

Procedure 14. Post Upgrade Configuration of larger PM&C ISO Image Repository area

S T E P #	This procedure provides instructions to verify the PM&C ISO image repository size. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. If this procedure fails, see Section 1.2.																														
	Task	Description																													
<p>1.</p> <p><input type="checkbox"/></p>	<p>Determine if the PM&C ISO image repository needs to be enlarged.</p>	<p>It is required that PM&C ISO repository is 61440 MB (60 GB) in any PM&C release.</p> <p>Note: Using the primary PM&C GUI, navigate to the Main Menu->VM Management page. Select the primary PM&C Guest to get to the “View guest” page. Click the “Virtual Disks” link. In the “Virtual Disks” table scroll to the entry with Guest Dev Name “images”.</p> <div style="border: 1px solid black; padding: 5px;"> <p>View guest pmacU16-2</p> <p>VM Info Software Network Media</p> <p>Summary Virtual Disks Virtual NICs</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="5">Virtual Disks</th> </tr> <tr> <th>Primary</th> <th>Size (MB)</th> <th>Host Pool</th> <th>Host Vol Name</th> <th>Guest Dev Name</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">YES</td> <td style="text-align: center;">51200</td> <td style="text-align: center;">vgguests</td> <td style="text-align: center;">pmacU16-2.img</td> <td style="text-align: center;">PRIMARY</td> </tr> <tr> <td style="text-align: center;">NO</td> <td style="text-align: center;">10240</td> <td style="text-align: center;">vgguests</td> <td style="text-align: center;">pmacU16-2_logs.img</td> <td style="text-align: center;">logs</td> </tr> <tr> <td style="text-align: center;">NO</td> <td style="text-align: center;">20480</td> <td style="text-align: center;">vgguests</td> <td style="text-align: center;">pmacU16-2_images.img</td> <td style="text-align: center;">images</td> </tr> </tbody> </table> </div> <p>Note down the following values:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Size (MB)</td> <td style="width: 50%;"></td> </tr> <tr> <td>Host Vol Name</td> <td></td> </tr> </table> <p>Note: If the Size (MB) is smaller than 61440 MB (60 GB) proceed to the next step. Otherwise, skip the rest of this procedure.</p>	Virtual Disks					Primary	Size (MB)	Host Pool	Host Vol Name	Guest Dev Name	YES	51200	vgguests	pmacU16-2.img	PRIMARY	NO	10240	vgguests	pmacU16-2_logs.img	logs	NO	20480	vgguests	pmacU16-2_images.img	images	Size (MB)		Host Vol Name	
Virtual Disks																															
Primary	Size (MB)	Host Pool	Host Vol Name	Guest Dev Name																											
YES	51200	vgguests	pmacU16-2.img	PRIMARY																											
NO	10240	vgguests	pmacU16-2_logs.img	logs																											
NO	20480	vgguests	pmacU16-2_images.img	images																											
Size (MB)																															
Host Vol Name																															

Procedure 14. Post Upgrade Configuration of larger PM&C ISO Image Repository area

<p>2. <input type="checkbox"/></p>	<p>Locate the IPv6 address of PM&C TVOE host</p>	<p>Using the Main Menu, navigate to Software -> Software Inventory page.</p> <p>Locate the entry belonging to the PM&C guest.</p> <table border="1" data-bbox="576 422 1490 506"> <tr> <td>Host</td> <td>hostname02be2be44427</td> <td>169.254.132.1</td> <td>pmacU16-2.localdomain</td> <td>TPD (x86_64)</td> <td>7.2.0.0.0-88.2.0</td> </tr> <tr> <td>Guest:</td> <td colspan="5">pmacU16-2</td> </tr> </table> <p>Now, click on the IP Address field of the PM&C guest entry, this will bring up “Ident Information” window:</p> <div data-bbox="576 636 1068 934" style="border: 1px solid gray; padding: 5px;"> <p>Ident information ✕</p> <p>Guest Host: TVOE2 Guest Host IP: fe80::dad3:85ff:feba:8b18 Guest Name: pmacDev802 IPv6:::1 RMS IP: 192.168.176.26 RMS Name: TVOE2</p> </div> <p>Note down the following values:</p> <table border="1" data-bbox="576 982 1471 1029"> <tr> <td>Guest Host IP:</td> <td></td> </tr> </table>	Host	hostname02be2be44427	169.254.132.1	pmacU16-2.localdomain	TPD (x86_64)	7.2.0.0.0-88.2.0	Guest:	pmacU16-2					Guest Host IP:	
Host	hostname02be2be44427	169.254.132.1	pmacU16-2.localdomain	TPD (x86_64)	7.2.0.0.0-88.2.0											
Guest:	pmacU16-2															
Guest Host IP:																
<p>3. <input type="checkbox"/></p>	<p>If necessary, access the PM&C guest console</p>	<p>If necessary, access the PM&C guest console as detailed in Appendix B Accessing The PM&C Guest Console</p>														
<p>4. <input type="checkbox"/></p>	<p>Enlarge the PM&C ISO repository</p>	<p>Execute the following command with appropriate values gathered in steps 1 and 2:</p> <pre>[admusr@pmac2 ~]\$ sudo /usr/TKLC/smac/bin/pmaccli enlargeIsoImageRepository --ip=<Guest_Host_IP> --guest=<pmac_guest_name> --volname=<Host_Vol_Name> --volpool=vgguests --volsize=61440</pre> <p>For example, enlarging repository of PM&C guest with name pmac2 to 61440 MB would be similar to this:</p> <pre>[admusr@pmac2 ~]\$ sudo /usr/TKLC/smac/bin/pmaccli enlargeIsoImageRepository --ip=fe80::dad3:85ff:feba:8b18 -- guest=pmac2 --volname=pmac2_images.img --volpool=vgguests -- volsize=61440</pre> <p>Successful resize of pmac2_images.img to 61440 MB.</p>														

Procedure 14. Post Upgrade Configuration of larger PM&C ISO Image Repository area

<p>5. <input type="checkbox"/></p>	<p>Verify the size of PM&C ISO repository</p>	<p>Using the primary PM&C GUI, navigate to the VM Management page. Select the primary PM&C Guest to get to the “View guest” page. Click the “Virtual Disks” link. In the “Virtual Disks” table, scroll to the entry with Guest Dev Name “images”.</p> <div style="border: 1px solid #ccc; padding: 10px; margin: 10px 0;"> <p>View guest pmacU16-2</p> <p>VM Info Software Network Media</p> <p>Summary <u>Virtual Disks</u> Virtual NICs</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th colspan="5">Virtual Disks</th> </tr> <tr> <th>Primary</th> <th>Size (MB)</th> <th>Host Pool</th> <th>Host Vol Name</th> <th>Guest Dev Name</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>51200</td> <td>vsguests</td> <td>pmacU16-2.img</td> <td>PRIMARY</td> </tr> <tr> <td>NO</td> <td>10240</td> <td>vsguests</td> <td>pmacU16-2_logs.img</td> <td>logs</td> </tr> <tr> <td>NO</td> <td style="border: 2px solid red; border-radius: 50%; text-align: center;">61440</td> <td>vsguests</td> <td>pmacU16-2_images.i mg</td> <td>images</td> </tr> </tbody> </table> </div> <p>Ensure the Size(MB) now is 61440.</p>	Virtual Disks					Primary	Size (MB)	Host Pool	Host Vol Name	Guest Dev Name	YES	51200	vsguests	pmacU16-2.img	PRIMARY	NO	10240	vsguests	pmacU16-2_logs.img	logs	NO	61440	vsguests	pmacU16-2_images.i mg	images
Virtual Disks																											
Primary	Size (MB)	Host Pool	Host Vol Name	Guest Dev Name																							
YES	51200	vsguests	pmacU16-2.img	PRIMARY																							
NO	10240	vsguests	pmacU16-2_logs.img	logs																							
NO	61440	vsguests	pmacU16-2_images.i mg	images																							
<p>---End of Procedure---</p>																											

Procedure 15 Post Upgrade NetBackup Configuration

<p>S T E P #</p>	<p>Use this procedure to validate the post upgrade NetBackup configuration if it is present. Note: If the NetBackup Feature has not been configured for this system skip this step. <i>Check off (✓) each step as it is completed.</i> If this procedure fails, see Section 1.2.</p>	
	<p>Task</p>	<p>Description</p>
<p>1. <input type="checkbox"/></p>	<p>Validate the PM&C NetBackup configuration when applicable.</p>	<p>If the NetBackup Feature has been configured for this system execute Procedure “PM&C Guest Migrate NetBackup Client to New File System” in the appropriate Platform Configuration Guide for the release being upgraded to.</p> <p>Note: The NetBackup client software is delivered by default to the “/usr” partition. This partition is configured by TPD and has limited space, and is not designed to share this partition with third party applications. With a NetBackup client installed the “/usr” partition does not have sufficient room to perform upgrades of the TPD based application. The creation of a NetBackup virtual disk, partition, alleviates the upgrade issue.</p>
<p>---End of Procedure---</p>		


Procedure 16. Post Upgrade Configuration of larger PM&C temporary ISO import area

S T E P #	<p>Use this procedure to provide instructions on how to enlarge the PM&C ISO image temporary import area up to 20480 MB (20 GB).</p> <p>Note: This procedure can be executed only on PM&C 5.7 or later releases.</p> <p>Note: Only execute this procedure if it is required by application.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, see Section 1.2.</p>	
	Task	Description
1. <input type="checkbox"/>	<p>Access the PM&C guest console</p>	<p>If necessary, access the PM&C guest console as detailed in Appendix B Accessing The PM&C Guest Console.</p>
2. <input type="checkbox"/>	<p>Determine if the PM&C ISO temporary import area needs to be enlarged</p>	<p>Execute the following command:</p> <pre>[admusr@pmac ~]\$ sudo /bin/df -h grep isoimages</pre> <p>In the sample output below , there is no entry related to /var/TKLC/smac/image/isoimages/home/smacftpusr, which would be there if the ISO temporary import area was enlarged during PM&C deployment or afterwards. The ISO temporary import area in the example above has at the most 5 GB available.</p> <pre>/dev/mapper/vgroot-smac_isoimages 5.0G 147M 4.6G 4% /var/TKLC/smac/image/isoimages</pre> <p>In the following sample there is an additional entry, indicating that the ISO temporary import area /var/TKLC/smac/image/isoimages/home/smacftpusr has altogether 20 GB available from an EVD.</p> <pre>/dev/mapper/vgroot-smac_isoimages 5.0G 147M 4.6G 4% /var/TKLC/smac/image/isoimages /dev/vdd 20G 173M 19G 1% /var/TKLC/smac/image/isoimages/ home/smacftpusr</pre> <p>If the application requires the repository to be larger than the size reported by the command above, proceed to the next step. Otherwise, skip the rest of this procedure.</p> <p>Note: To be able to transfer an application ISO image to the PM&C, this area must be large enough for the largest ISO image file size anticipated at the site.</p>

Procedure 16. Post Upgrade Configuration of larger PM&C temporary ISO import area

<p>3. <input type="checkbox"/></p>	<p>Log in to the primary PM&C GUI.</p>	<p>If needed, open IE web browser and enter: https://<PM&C Management Network IP > Log in with administrator credentials from Table 3. Software Upgrade Required Data.</p>																																										
<p>4. <input type="checkbox"/></p>	<p>Navigate to the “Edit guest” page of the primary PM&C guest</p>	<p>Using the primary PM&C GUI, navigate to the VM Management page. Select the primary PM&C Guest to get to the “View guest” page. Click "Edit".</p>																																										
<p>5. <input type="checkbox"/></p>	<p>Determine whether the “isoimages” virtual disk exists</p>	<p>Click on the “Virtual Disks” link. In the “Virtual Disks” table, locate the entry with Guest Dev Name “isoimages”. If you cannot find the “isoimages” entry, skip to step 13. Otherwise, proceed to step 6.</p>																																										
<p>6. <input type="checkbox"/></p>	<p>Delete the “isoimages” vdisk</p>	<p>Note: When the vdisk is deleted, any files stored on it will be destroyed, so be sure to copy any files you would like to keep to a safe location.</p> <p>Select the entry for the “isoimages” virtual disk. Click on the “Delete” button.</p> <div data-bbox="574 953 1468 1499" style="border: 1px solid black; padding: 5px;"> <p>Edit guest pmacU16-2</p> <p>VM Info Software Network Media</p> <p>Summary Virtual Disks Virtual NICs</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="5" style="text-align: left;">Virtual Disks</th> <th style="text-align: right;">Add</th> <th style="text-align: right;">Delete</th> </tr> <tr> <th>Primary</th> <th>Size (MB)</th> <th>Host Pool</th> <th>Host Vol Name</th> <th>Guest Dev Name</th> <th colspan="2"></th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>51200</td> <td>vguests</td> <td>pmacU16-2.img</td> <td>PRIMARY</td> <td colspan="2"></td> </tr> <tr> <td>NO</td> <td>10240</td> <td>vguests</td> <td>pmacU16-2_logs.img</td> <td>logs</td> <td colspan="2"></td> </tr> <tr> <td>NO</td> <td>61440</td> <td>vguests</td> <td>pmacU16-2_images.i mg</td> <td>images</td> <td colspan="2"></td> </tr> <tr style="border: 2px dashed black;"> <td>NO</td> <td>15360</td> <td>vguests</td> <td>pmacU16-2_isoimag es.img</td> <td>isoimages</td> <td colspan="2"></td> </tr> </tbody> </table> <p style="text-align: right;">Save Cancel</p> </div> <p>Verify that the “isoimages” vdisk is no longer listed and click on the “Save” button.</p>	Virtual Disks					Add	Delete	Primary	Size (MB)	Host Pool	Host Vol Name	Guest Dev Name			YES	51200	vguests	pmacU16-2.img	PRIMARY			NO	10240	vguests	pmacU16-2_logs.img	logs			NO	61440	vguests	pmacU16-2_images.i mg	images			NO	15360	vguests	pmacU16-2_isoimag es.img	isoimages		
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Procedure 16. Post Upgrade Configuration of larger PM&C temporary ISO import area

<p>7. <input type="checkbox"/></p>	<p>Confirm the change to the PM&C guest</p>	<p>A confirmation dialog will be presented with the message, "Changes to the PM&C guest will not take effect until after the next power cycle. Do you wish to continue?".</p>  <p>Click "OK" to continue.</p>										
<p>8. <input type="checkbox"/></p>	<p>Wait for the Edit Guest background task to complete</p>	<p>Navigate to the Background Task Monitoring view. Confirm that the Edit Guest task has completed successfully.</p> <table border="1" data-bbox="574 1016 1468 1100"> <thead> <tr> <th>ID</th> <th>Task</th> <th>Target</th> <th>Status</th> <th>State</th> </tr> </thead> <tbody> <tr> <td>9</td> <td>Edit Guest</td> <td>RMS: TVOE2 Guest: pmacU16-2</td> <td>Guest editing completed (pmacU16-2)</td> <td>COMPLETE</td> </tr> </tbody> </table>	ID	Task	Target	Status	State	9	Edit Guest	RMS: TVOE2 Guest: pmacU16-2	Guest editing completed (pmacU16-2)	COMPLETE
ID	Task	Target	Status	State								
9	Edit Guest	RMS: TVOE2 Guest: pmacU16-2	Guest editing completed (pmacU16-2)	COMPLETE								
<p>9. <input type="checkbox"/></p>	<p>Shut down the PM&C guest</p>	<p>Shut down the PM&C guest as detailed in Appendix H.</p>										
<p>10. <input type="checkbox"/></p>	<p>Start the PM&C guest</p>	<p>Using the virsh utility on the TVOE host of PM&C guest, start the PM&C guest. Query the list of guests until the PM&C guest is "running".</p> <pre data-bbox="574 1325 1279 1682"> [admusr@tvoe ~]\$ sudo /usr/bin/virsh list --all Id Name State ----- 20 pmac shut off [admusr@tvoe ~]\$ sudo /usr/bin/virsh start <pmac> Domain pmac started [admusr@tvoe ~]\$ sudo /usr/bin/virsh list --all Id Name State ----- 20 pmac running </pre>										


Procedure 16. Post Upgrade Configuration of larger PM&C temporary ISO import area

<p>11. <input type="checkbox"/></p>	<p>Monitor the PM&C guest until it comes up and verify that the temporary ISO import area does not exist</p>	<p>Execute: [admusr@tvoe ~]\$ sudo /usr/bin/virsh console <pmac></p> <p>Wait for the PM&C guest login prompt to appear. Log in as admusr as captured in Table 3. Software Upgrade Required Data and verify that the entry for the /var/TKLC/smac/image/isoimages/home/smacftpusr mount point is not displayed. An example is shown below:</p> <pre>[admusr@pmac2 ~]\$ sudo /bin/df -h grep isoimages /dev/mapper/vgroot-smac_isoimages 5.0G 147M 4.6G 4% /var/TKLC/smac/image/isoimages</pre>
<p>12. <input type="checkbox"/></p>	<p>Navigate to the “Edit guest” page of the primary PM&C guest</p>	<p>Using the primary PM&C GUI, navigate to the VM Management page. Select the primary PM&C Guest to get to the “View guest” page. Click on the “Virtual Disks” link and then click “Edit”.</p>

Procedure 16. Post Upgrade Configuration of larger PM&C temporary ISO import area

<p>13. <input type="checkbox"/></p>	<p>Add the “isoimages” vdisk to the PM&C guest.</p>	<p>Click the “Add” button. Enter the following data for the new isoimages virtual disk.</p> <ul style="list-style-type: none"> • Size (MB): <total_size_of_temporary_import_area> • Host Pool: "vgguests" • Host Vol Name: "<pmac_guest_name>_isoimages.img" • Guest Dev Name: "isoimages" <p>Note: Set the Size (MB) to a value large enough for the largest ISO image file size anticipated at the site. The size can be increased up to 20480 MB. For instance, the following image illustrates what a user would enter in order to achieve a 20480 MB ISO temporary import area on pmacU16-2.</p> <div style="border: 1px solid #ccc; padding: 10px; margin: 10px 0;"> <p>Edit guest pmacU16-2</p> <p>VM Info Software Network Media</p> <p>Summary Virtual Disks Virtual NICs</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th colspan="5" style="text-align: left;">Virtual Disks</th> <th style="text-align: right;">Add</th> <th style="text-align: right;">Delete</th> </tr> <tr> <th style="width: 10%;">Primary</th> <th style="width: 15%;">Size (MB)</th> <th style="width: 15%;">Host Pool</th> <th style="width: 25%;">Host Vol Name</th> <th style="width: 35%;">Guest Dev Name</th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">YES</td> <td style="text-align: center;">51200</td> <td style="text-align: center;">vgguests</td> <td style="text-align: center;">pmacU16-2.img</td> <td style="text-align: center;">PRIMARY</td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">NO</td> <td style="text-align: center;">10240</td> <td style="text-align: center;">vgguests</td> <td style="text-align: center;">pmacU16-2_logs.img</td> <td style="text-align: center;">logs</td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">NO</td> <td style="text-align: center;">61440</td> <td style="text-align: center;">vgguests</td> <td style="text-align: center;">pmacU16-2_images.i mg</td> <td style="text-align: center;">images</td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">NO</td> <td style="text-align: center;">20480</td> <td style="text-align: center;">vgguests</td> <td style="text-align: center;">pmacU16-2_isoimag es.img</td> <td style="text-align: center;">isoimages</td> <td></td> <td></td> </tr> </tbody> </table> </div> <p>Note: The "Guest Dev Name" must be set to "isoimages" for the PM&C application to mount the appropriate host device. The <pmac_guest_name> variable should be set to this PM&C guest's name to create a unique volume name on the TVOE host of the PM&C.</p> <p>Verify the new isoimages virtual disk data and click “Save”.</p>	Virtual Disks					Add	Delete	Primary	Size (MB)	Host Pool	Host Vol Name	Guest Dev Name			YES	51200	vgguests	pmacU16-2.img	PRIMARY			NO	10240	vgguests	pmacU16-2_logs.img	logs			NO	61440	vgguests	pmacU16-2_images.i mg	images			NO	20480	vgguests	pmacU16-2_isoimag es.img	isoimages		
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Procedure 16. Post Upgrade Configuration of larger PM&C temporary ISO import area

<p>14. <input type="checkbox"/></p>	<p>Confirm the change to the PM&C guest</p>	<p>A confirmation dialog will be presented with the message, "Changes to the PM&C guest will not take effect until after the next power cycle. Do you wish to continue?".</p>  <p>Click "OK" to continue.</p>										
<p>15. <input type="checkbox"/></p>	<p>Wait for the Edit Guest background task to complete</p>	<p>Navigate to the Background Task Monitoring view. Confirm that the Edit Guest task has completed successfully.</p> <table border="1" data-bbox="574 1016 1468 1100"> <thead> <tr> <th>ID</th> <th>Task</th> <th>Target</th> <th>Status</th> <th>State</th> </tr> </thead> <tbody> <tr> <td>9</td> <td>Edit Guest</td> <td>RMS: TVOE2 Guest: pmacU16-2</td> <td>Guest editing completed (pmacU16-2)</td> <td>COMPLETE</td> </tr> </tbody> </table>	ID	Task	Target	Status	State	9	Edit Guest	RMS: TVOE2 Guest: pmacU16-2	Guest editing completed (pmacU16-2)	COMPLETE
ID	Task	Target	Status	State								
9	Edit Guest	RMS: TVOE2 Guest: pmacU16-2	Guest editing completed (pmacU16-2)	COMPLETE								
<p>16. <input type="checkbox"/></p>	<p>Shut down the PM&C guest</p>	<p>Shut down the PM&C guest as detailed in Appendix H.</p>										
<p>17. <input type="checkbox"/></p>	<p>Start the PM&C guest</p>	<p>Using the virsh utility on TVOE host of PM&C guest, start the PM&C guest. Query the list of guests until the PM&C guest is "running".</p> <pre>[admusr@tvoe ~]\$ sudo /usr/bin/virsh list --all Id Name State ----- 20 pmac shut off [admusr@tvoe ~]\$ sudo /usr/bin/virsh start <pmac> Domain pmac started [admusr@tvoe ~]\$ sudo /usr/bin/virsh list --all Id Name State ----- 20 pmac running</pre>										

Procedure 16. Post Upgrade Configuration of larger PM&C temporary ISO import area

<p>18. <input type="checkbox"/></p>	<p>Monitor the PM&C guest until it comes up and verify the size of the “isoimages” vdisk</p>	<p>Execute: [admusr@tvoe ~]\$ sudo /usr/bin/virsh console <pmac></p> <p>Wait for the PM&C guest login prompt to appear. Log in as admusr as captured in Table 3. Software Upgrade Required Data and verify the disk size using the df command. An example is shown below:</p> <pre>[admusr@pmac2 ~]\$ sudo /bin/df -h grep isoimages /dev/mapper/vgroot-smac_isoimages 5.0G 147M 4.6G 4% /var/TKLC/smac/image/isoimages /dev/vdd 20G 173M 19G 1% /var/TKLC/smac/image/isoimages/ home/smacftpusr</pre>
<p>19. <input type="checkbox"/></p>	<p>Verify the size of PM&C ISO temporary import area</p> <p>NOTE: It may take up to 5 minutes for the PM&C GUI to be responsive and provide a login prompt.</p>	<p>Note: It can take up to 15 minutes for the PM&C to perform sufficient software discovery and enable navigation to the “View guest” page.</p> <p>Note: Using the primary PM&C GUI, navigate to the VM Management page. Select the primary PM&C Guest to get to the “View guest” page. Click on the “Virtual Disks” link. In the table, locate the entry with Guest Dev Name “isoimages”. Ensure that the Size (MB) field now reflects the new value.</p>
<p>---End of Procedure---</p>		

Procedure 17. Post Upgrade PM&C backup

<p>S T E P #</p>	<p>Use this procedure to back up all necessary PM&C database data post upgrade. <i>Check off (✓) each step as it is completed.</i> Boxes have been provided for this purpose under each step number. If this procedure fails, see Section 1.2.</p>	
	Task	Description
<p>1. <input type="checkbox"/></p>	<p>Backup the PM&C database.</p>	<p>Execute the procedure detailed in Appendix D PM&C System Backup</p>
<p>Section 5.2 has been completed.</p>		

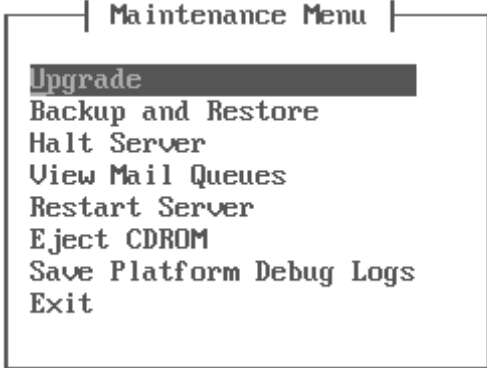
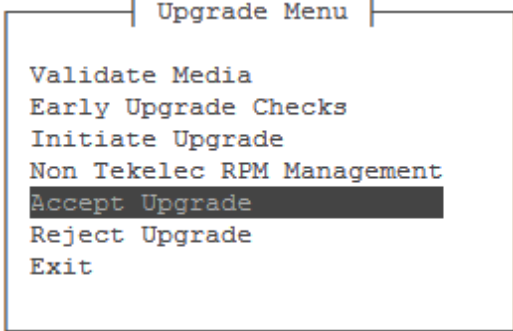
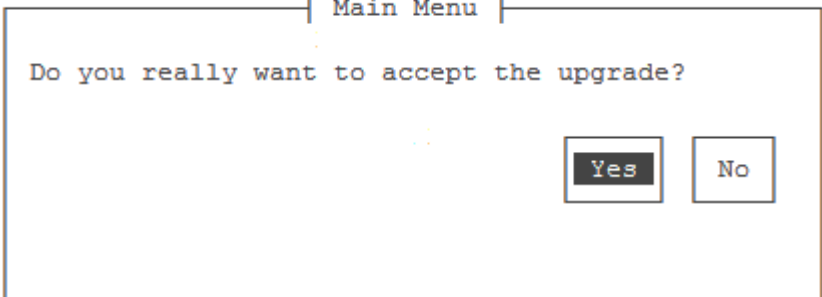
5.3 Software Upgrade Acceptance and Cleanup on the Primary PM&C

Once you verify the upgrade is complete and there are no issues on the PM&C, it is time to accept the upgrade. Please note that once you accept an upgrade, a backout to the previous release is not possible. If backout becomes necessary after an upgrade has been accepted, then a disaster recovery process is required. Keep the PM&C backup created in section 4.2 for this purpose. The following procedure identifies the steps required to accept the upgrade. Once the upgrade has been accepted it is safe to remove the media used for the upgrade.

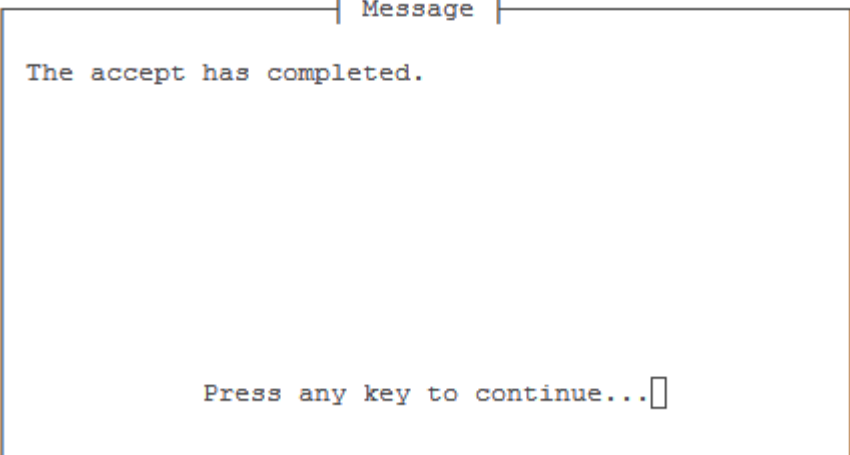
Procedure 18. Software Upgrade Acceptance on the primary PM&C

S T E P #	Use this procedure to finalize the upgrade on the PM&C, once complete, the backout is no longer available/possible. Note: This procedure should only be performed when a backout is no longer anticipated/desired. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. If this procedure fails, see Section 1.2.	
	Task	Description
1. <input type="checkbox"/>	If necessary, access the PM&C guest console	If necessary, access the PM&C guest console as detailed in Appendix B Accessing The PM&C Guest Console
2. <input type="checkbox"/>	Run the “platcfg” utility.	Execute: [admusr@pmac ~]\$ sudo su - platcfg
3. <input type="checkbox"/>	In “platcfg” utility Access the Maintenance menu	<p>Note: Use the “Arrow” and the [ENTER] keys to navigate through the menu options. Note: The following images is for illustrative purposes only.</p> <div style="border: 1px solid black; padding: 10px; margin: 10px auto; width: fit-content;"> <p style="text-align: center;"> Main Menu </p> <pre> Maintenance Diagnostics Server Configuration Remote Consoles Network Configuration Exit </pre> </div> <p>Select “Maintenance” to navigate to the Maintenance Menu.</p>

Procedure 18. Software Upgrade Acceptance on the primary PM&C

<p>4. <input type="checkbox"/></p>	<p>In “platcfg” utility access the Upgrade menu</p>	<p>Note: Use the “Arrow” and the [ENTER] keys to navigate through the menu options. Note: The following images is for illustrative purposes only.</p>  <p>Select “Upgrade” to navigate to the Upgrade Menu.</p>
<p>5. <input type="checkbox"/></p>	<p>In “platcfg” utility, select “Accept Upgrade” to start the accept process.</p>	<p>Note: Use the “Arrow” and the [ENTER] keys to navigate through the menu options. Note: The following images is for illustrative purposes only.</p>  <p>Select “Accept Upgrade” and press the [ENTER] key to start the accept process.</p>
<p>6. <input type="checkbox"/></p>	<p>Confirm the decision and execute the accept.</p>	

Procedure 18. Software Upgrade Acceptance on the primary PM&C

<p>7. <input type="checkbox"/></p>	<p>The “Accept Upgrade” process starts</p>	<p>Note: The following image is for illustrative purposes only.</p> <pre> Called with options: --accept Loading Upgrade::Backout::LVM Accepting Upgrade snapmgr: Logical volume "smac_root_snap" successfully removed snapmgr: Logical volume "smac_var_snap" successfully removed snapmgr: Logical volume "plat_usr_snap" successfully removed snapmgr: Logical volume "smac_backup_snap" successfully removed snapmgr: Logical volume "plat_root_snap" successfully removed snapmgr: Logical volume "plat_var_tklc_snap" successfully removed snapmgr: Logical volume "plat_var_snap" successfully removed snapmgr: Removed snapshot lv's related to tag "@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. Cleaning up RPM config backup files... Checking / Checking /boot Checking /tmp Checking /usr Checking /var Checking /var/TKLC Checking /usr/TKLC/smac </pre>
<p>8. <input type="checkbox"/></p>	<p>Verify the “Accept Upgrade” completes and exit the “platcfg” utility</p>	 <p>Press any key to return to the “Upgrade menu”. Use the arrow keys to select “Exit” and press the [ENTER] key to exit from all menus until the PM&C command prompt is displayed.</p>

Procedure 18. Software Upgrade Acceptance on the primary PM&C

<p>9. <input type="checkbox"/></p>	<p>If the TVOE host was upgraded using Appendix G</p>	<p>The upgrade of TVOE includes acceptance of the upgrade. This acceptance may have been intentionally delayed by the PM&C upgrade during the execution of Appendix G</p> <p>If the TVOE upgrade was delayed, then please return to TVOE host upgrade procedures outlined in the TVOE Software Upgrade document for the given version being upgraded.</p> <p>Continue the upgrade process with procedure 8, Stand Alone TVOE Upgrade Accept.</p>
<p style="text-align: center;">--End of Procedure--</p>		

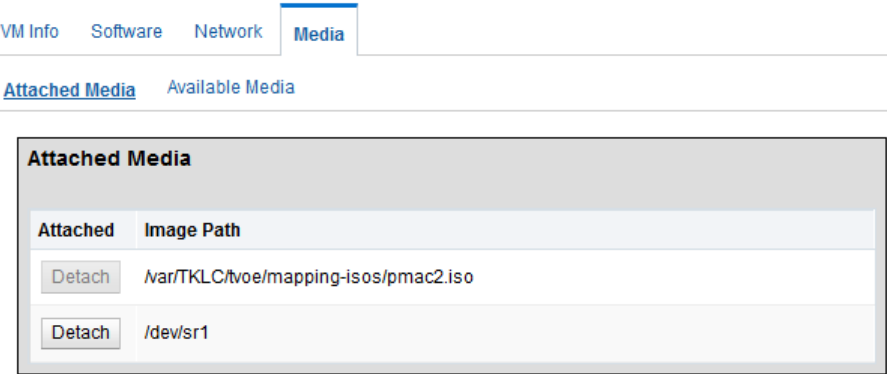
Procedure 19. Post Upgrade Cleanup of Upgrade Media

STEP #	Use this procedure to remove the upgrade media from the PM&C Note: The procedure should only be performed when a backout is no longer anticipated/desired. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. If this procedure fails, see Section 1.2.	
	Task	Description
<p>1.</p> <div style="border: 1px solid black; width: 20px; height: 20px; display: inline-block; margin-left: 5px;"></div>	<p>If this was a Remote Upgrade, then ensure images used for upgrade have been removed from PM&C</p>	<p>Execute the following command on the primary PM&C:</p> <pre>[admusr@pmac ~]\$ sudo /bin/ls /var/TKLC/upgrade/PMAC-*-x86_64.iso</pre> <p>If there are images that need to be removed, using the output of the command above, specify the full path of the image to be removed:</p> <pre>[admusr@pmac ~]\$ sudo /bin/rm -f /var/TKLC/upgrade/<image_name.iso></pre> <p>For instance:</p> <pre>[admusr@pmac ~]\$sudo /bin/rm -f /var/TKLC/upgrade/PMAC-5.7.0.0.0_57.10.0-x86_64.iso</pre> <p>Repeat this step as necessary to ensure there are no images left to be removed.</p>

Procedure 19. Post Upgrade Cleanup of Upgrade Media

<p>2. <input type="checkbox"/></p>	<p>If this was a local upgrade, Log in to the PM&C GUI.</p>	<p>Open IE web browser and enter: https://<PM&C Management Network IP ></p> <p>Login with administrator credentials from Table 3. Software Upgrade Required Data</p> <div data-bbox="578 485 1474 1161"></div>
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Procedure 19. Post Upgrade Cleanup of Upgrade Media

<p>3. <input type="checkbox"/></p>	<p>If upgrade was performed using external media, then detach the media</p>	<p>Note: It can take up to 15 minutes for the PM&C to perform sufficient software discovery to locate the PM&C TVOE host and enable navigation to the “View guest” page.</p> <p>Using the PM&C GUI, navigate to the VM Management page. Select the PM&C Guest to get to the “View guest” page. Select the “Media” tab on the “View guest” page. Click the “Detach” button for the image previously attached.</p> <p>View guest pmac2</p> 
<p>4. <input type="checkbox"/></p>	<p>If present, remove the external media from the PM&C TVOE host server.</p>	<p>Remove the external media from the appropriate slot of the PM&C TVOE host server.</p>
<p>Section 5.3 has been completed.</p>		

5.4 Software Upgrade Execution on the Redundant PM&C

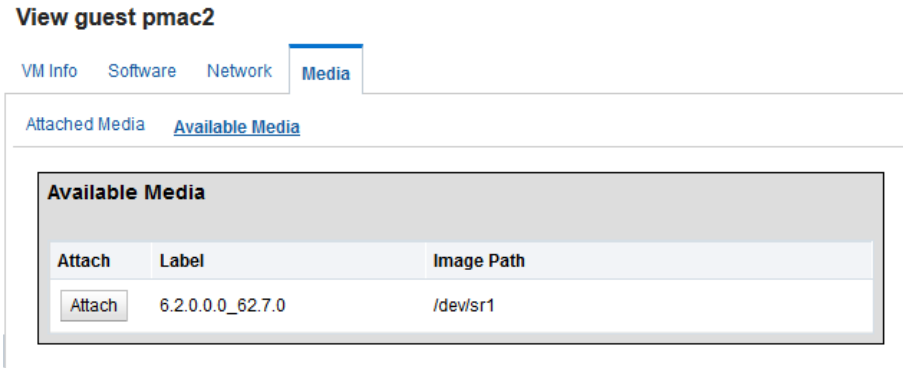
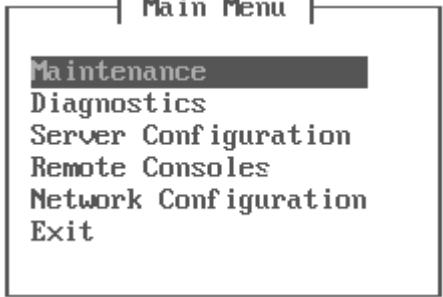
If the PM&C application ISO was delivered to the system remotely (via SCP or SFTP) then make sure the image is located in the /var/TKLC/upgrade directory prior to executing this procedure. This should have been done as part of the health check procedure.

The upgrade of the PM&C guest TVOE host may be executed in the same maintenance window as the PM&C. It is expected that the TVOE host upgrade is completed prior to the start of the PM&C upgrade. This procedure does not cover the procedural steps required for the upgrade of the TVOE host. Please see the appropriate references noted in the procedures of section 4.2.

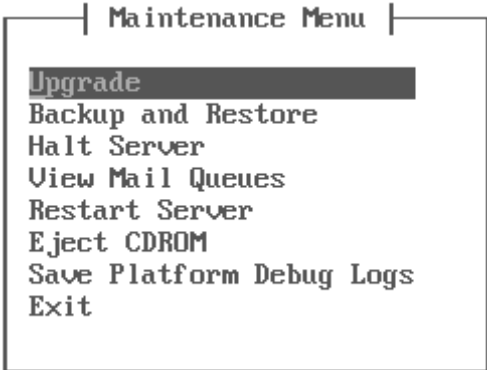
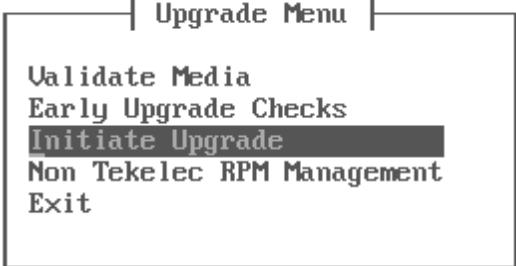
Procedure 20. PM&C Upgrade Procedure on the redundant PM&C

STEP #	Use this procedure to provide instructions to perform a software upgrade of the redundant PM&C. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. If this procedure fails, see Section 1.2.	
	Task	Description
1. <input type="checkbox"/>	Execute the system health check	Re-execute <i>Procedure 6: Execute the Health check Procedure for the redundant PM&C.</i>
2. <input type="checkbox"/>	For Remote Upgrade, verify correct ISO file is present, and then skip to Step 6	<p>If you executed <i>Procedure 7: Prepare the redundant PM&C for a remote upgrade</i>, then verify the correct ISO has been delivered to the redundant PM&C.</p> <ul style="list-style-type: none"> • Access the redundant PM&C Guest console using Appendix B • Verify the correct ISO file is located in the /var/TKLC/upgrade directory. • If the correct ISO is present, proceed to step 6. • If the correct ISO is NOT present, then redo Procedure 3 before proceeding.
3. <input type="checkbox"/>	Insert the media containing PM&C 6.0 image into the Management Server	Insert the media containing PM&C image (item Error! Reference source not found. in section 3.1 Required Materials) into the Management Server.
4. <input type="checkbox"/>	Log in to the PM&C GUI.	<p>Open IE web browser and enter: https://<PM&C Management Network IP ></p> <p>Login with administrator credentials from Table 3. Software Upgrade Required Data</p>

Procedure 20. PM&C Upgrade Procedure on the redundant PM&C

<p>5. <input type="checkbox"/></p>	<p>Attach the PM&C ISO media to the redundant PM&C guest.</p>	<p>Using the primary PM&C GUI, navigate to the VM Management page. Select the redundant PM&C Guest to get to the “View guest” page. Select the “Media” tab on the “View guest” page. Click the “Available Media” link. Click the “Attach” button for the image just inserted.</p> <p>Note: The “Label” field can help identify the PM&C upgrade media (see section 3.1).</p> <p>View guest pmac2</p> 
<p>6. <input type="checkbox"/></p>	<p>Access the redundant PM&C guest console</p>	<p>Execute Appendix B Accessing The PM&C Guest Console for the redundant PM&C.</p>
<p>7. <input type="checkbox"/></p>	<p>Run the “platcfg” utility.</p>	<p>Note: If you deviated from the previous step, please ensure that you are in admusr’s home directory before executing the following command.</p> <p>Execute (from redundant PM&C guest console): <pre>[admusr@pmac ~]\$ sudo su - platcfg</pre></p>
<p>8. <input type="checkbox"/></p>	<p>In “platcfg” utility Access the Maintenance menu</p>	<p>Note: Use the “Arrow” and the [ENTER] keys to navigate through the menu options. Note: The following images are for illustrative purposes only. The actual menu content will differ based on the current PM&C release.</p>  <p>Select “Maintenance” to navigate to the Maintenance Menu.</p>

Procedure 20. PM&C Upgrade Procedure on the redundant PM&C

<p>9. <input type="checkbox"/></p>	<p>In “platcfg” utility Access the Upgrade menu</p>	<p>Note: Use the “Arrow” and the [ENTER] keys to navigate through the menu options. Note: The following images are for illustrative purposes only. The actual menu content will differ based on the current PM&C release.</p>  <p>Select “Upgrade” to navigate to the Upgrade Menu.</p>
<p>10. <input type="checkbox"/></p>	<p>In “platcfg” utility select “Initiate Upgrade” to start the upgrade process.</p>	<p>Note: Use the “Arrow” and the [ENTER] keys to navigate through the menu options. Note: The following images are for illustrative purposes only. The actual menu content will differ based on the current PM&C release.</p>  <p>Select “Initiate Upgrade” to start the upgrade process</p>

Procedure 20. PM&C Upgrade Procedure on the redundant PM&C

<p>11. <input type="checkbox"/></p>	<p>Wait for the “Choose Upgrade Media Menu” screen</p>	<p>Note: Use the “Arrow” and the [ENTER] keys to navigate through the menu options. Note: The following images are for illustrative purposes only. The actual menu content will differ based on the current PM&C release.</p> <div data-bbox="581 428 1432 894" style="border: 1px solid black; padding: 10px; text-align: center;"> <pre> System Busy Searching for upgrade media... Please wait..._ </pre> </div> <p>Wait for the “Choose Upgrade Media Menu” screen to display before proceeding to the next step.</p>
<p>12. <input type="checkbox"/></p>	<p>Start the upgrade to the target release</p>	<p>Note: Use the “Arrow” and the [ENTER] keys to navigate through the menu options. Note: The following images are for illustrative purposes only. The actual menu content will differ based on the current PM&C release.</p> <p>If the image is located on virtual CD, then the menu would look similar to this:</p> <div data-bbox="587 1171 1409 1318" style="border: 1px solid black; padding: 10px;"> <pre> Choose Upgrade Media Menu /dev/sr0 - CDROM /dev/sr1 - 6.0.0.0.0_60.8.1 Exit </pre> </div> <p>If the image was copied to the /var/TKLC/upgrade directory of the redundant PM&C guest, then the menu would look similar to this:</p> <div data-bbox="587 1444 1432 1591" style="border: 1px solid black; padding: 10px;"> <pre> Choose Upgrade Media Menu /dev/sr0 - CDROM PMAC-6.0.0.0.0_60.8.1-x86_64.iso - 6.0.0.0.0_60.8.1 Exit </pre> </div> <p>Select the PM&C 6.2 target release and press the [ENTER] key.</p>

Procedure 20. PM&C Upgrade Procedure on the redundant PM&C

<p>13. <input type="checkbox"/></p>	<p>The upgrade begins Ensure that Early Upgrade Checks pass and the upgrade is started.</p>	<p>Note: The following images are for illustrative purposes only. The actual menu content will differ based on the current PM&C release.</p> <p>Screen similar to the one shown below will be displayed as the upgrade progresses.</p> <pre> Running earlyUpgradeChecks() for Upgrade::EarlyPolicy::PMAC upgrade policy... This is an upgrade of PMAC. Check for IN-PROGRESS BG Tasks. No IN-PROGRESS BG Tasks found, we can upgrade. Running earlyUpgradeChecks() for Upgrade::EarlyPolicy::TPDEarlyChecks upgrade policy... Verified server is not pending accept of previous upgrade Hardware architectures match Install products match. Verified server is alarm free! Early Upgrade Checks Have Passed! ← Initializing upgrade information... Shutting down PMAC services: The runlevel transition complete RC file was created as /et Changing to run-level 3... ***** * Waiting for run level 3 transition to finish * ***** waiting for /etc/rc3.d/S99local_runlevel_transition_complete to disappear. waiting for /etc/rc3.d/S99local_runlevel_transition_complete to disappear. waiting for /etc/rc3.d/S99local_runlevel_transition_complete to disappear. waiting for /etc/rc3.d/S99local_runlevel_transition_complete to disappear. sending kill command... please wait up to 60 seconds waiting for /etc/rc3.d/S99local_runlevel_transition_complete to disappear. waiting for /etc/rc3.d/S99local_runlevel_transition_complete to disappear. </pre>
<p>14. <input type="checkbox"/></p>	<p>Verify upgrade is progressing</p>	<p>Note: The following images are for illustrative purposes only.</p> <p>Screen similar to the one shown below will be displayed as the upgrade progresses.</p> <pre> Upgrade from current release 6.0.1-80.32.0 supported . Changing platform revision so must upgrade Determining the appropriate upgrade command... Using /mnt/upgrade/upgrade/upgrade_server as the upgrade command Current platform version: 6.0.1-80.32.0 No backout release boundary: 4.0.0-70.0.0 Backout will be supported... Running prepareUpgrade() for Upgrade::Policy::Platform upgrade policy... Preserving files so verifyUpgrade can run. preserveVerifyUpgradeFiles(): File does not exist! FILE: /mnt/upgrade/upgrade/etc/multiRpmAllowed.sed Skipping... Adding /etc/sysconfig/iptables to RCS... Adding /etc/sysconfig/ip6tables to RCS... Adding /usr/TKLC/plat/etc/alarms/alarms.xml to RCS... Adding /usr/TKLC/plat/etc/alarms/alarms.dtd to RCS... Running prepareUpgrade() for Upgrade::Policy::MBL upgrade policy... Running prepareUpgrade() for Upgrade::Policy::PMAC upgrade policy... Running prepareUpgrade() for Upgrade::Policy::PlatformLast upgrade policy... Initializing upgrade... Verify RCS repository and checkin files... RCSCHECK REPORT: /var/TKLC/log/upgrade/rcscheck.before.upgrade INFO: Checking rcs elements for unchecked in changes... </pre>

Procedure 20. PM&C Upgrade Procedure on the redundant PM&C

<p>15. <input type="checkbox"/></p>	<p>Upgrade completes successfully. NOTE: If the PM&C upgrade fails to complete, contact Oracle Customer Support</p>	<p>Note: The following images are for illustrative purposes only.</p> <p>If the upgrade completes successfully, the screen shown below will be displayed as the upgrade progresses.</p> <pre> PMAC postTransactions method completed. Running post transactions script for Upgrade::Policy::PlatformLast upgrade policy.. Executing ldconfig Updating RPM manifest file. FILE: /usr/TKLC/plat/etc/upgrade/rpm_manifest. RPM manifest file does not exist. Creating RPM manifest file. FILE: /usr/TKLC/plat/etc/upgrade/rpm_manifest. Adding /usr/TKLC/plat/etc/upgrade/rpm_manifest to RCS... Enabling applications on the server Running prelink Enabling applications on the server... File cleanup. MODE is --upgrade FILE is /mnt/upgrade/upgrade/etc/upg_delete_these_files rsshRebuild: Rebuilding /var/TKLC/smac/image/isoimages chroot... Applications Enabled. Running /usr/TKLC/plat/bin/service_conf reconfig UPGRADE IS COMPLETE Upgrade command returned success! Running postUpgrade() for Upgrade::Policy::Platform upgrade policy... Restarting alarmMgr. </pre> <p>Note: If the PM&C upgrade fails to complete, contact Oracle Customer Support for assistance.</p>
<p>Section 5.4 has been completed.</p>		

5.5 Software Upgrade Completion on the Redundant PM&C

Procedure 21. Post Upgrade Verification on the redundant PM&C

STEP #	Task	Description
	Use this procedure to verify the success of the redundant PM&C upgrade. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. If this procedure fails, see Section 1.2.	
1. <input type="checkbox"/>	If necessary, access the redundant PM&C guest console	If necessary, access the redundant PM&C guest console as detailed in Appendix B Accessing The PM&C Guest Console
2. <input type="checkbox"/>	After logging in, a notice similar to the one shown to the right will be displayed.	<pre> Last login: Wed Jun 6 08:39:14 on ttyS0 ===== This system has been upgraded but the upgrade has not yet been accepted or rejected. Please accept or reject the upgrade soon. ===== [admusr@pmac ~]\$ </pre>
3. <input type="checkbox"/>	Verify that the date/time stamp of the upgrade log aligns with the time of the upgrade.	Execute the following command: <pre> [admusr@pmac ~]\$ sudo /bin/ls -l /var/TKLC/log/upgrade/upgrade.log -rw-rw-r-- 1 platcfg root 113112 Nov 11 14:16 /var/TKLC/log/upgrade/upgrade.log [admusr@pmac ~]\$ </pre>
4. <input type="checkbox"/>	Verify that the release has been updated.	Execute the following command: <pre> [admusr@pmac ~]\$ sudo /usr/TKLC/plat/bin/appRev Install Time: Thu Apr 30 09:28:31 2015 Product Name: PMAC Product Release: 6.2.0.0.0_62.8.0 Base Distro Product: TPD Base Distro Release: 7.2.0.0.0_88.8.0 3. Base Distro ISO: TPD.install-7.2.0.0.0_88.8.0- OracleLinux6.6-x86_64.iso ISO name: PMAC-6.2.0.0.0_62.8.0-x86_64.iso OS: OracleLinux 6.6 [admusr@pmac ~]\$ </pre> <p>If the Product Release does not match the new target release number, then upgrade was not successful. Contact Oracle Customer Support and do not proceed until instructed by an Oracle representative.</p>

Procedure 21. Post Upgrade Verification on the redundant PM&C

<p>5. <input type="checkbox"/></p>	<p>Verify upgrade completion through the upgrade log. NOTE: If the PM&C upgrade has failed, contact Oracle Customer Support</p>	<p>Execute the following command on the redundant PM&C: <pre>[admusr@pmac ~]\$ grep COMPLETE /var/TKLC/log/upgrade/upgrade.log</pre> <pre>1371492983:: UPGRADE IS COMPLETE</pre> <p>Note: Output like above is expected (the timestamp will be different). Now execute the following command: <pre>[admusr@pmac ~]\$ sudo /usr/TKLC/plat/bin/verifyUpgrade</pre> <p>Note: This command can take over a minute to complete. No output is expected, only the prompt should return Note: If 'UPGRADE IS COMPLETE' is not in the output from the first command, or if any output showing errors result from the verifyUpgrade command, contact Oracle Customer Support and do not proceed until instructed by an Oracle representative.</p> </p></p>
<p>6. <input type="checkbox"/></p>	<p>Execute the redundant PM&C system health check.</p>	<p>Execute the Appendix C PM&C System Health Check for the redundant PM&C. Note: Alarm about pending accept/reject such similar to the one below can be safely ignored in this step. <pre>SEQ: 1 UPTIME: 185 BIRTH: 1372167411 TYPE: SET ALARM: TKSPLATMI33 tpdServerUpgradePendingAccept 1.3.6.1.4.1.323.5.3.18.3.1.3.33</pre> <p>If any other error or failure conditions are discovered on the redundant PM&C system then do not proceed. Contact Oracle Customer Support to work to resolve the failure conditions.</p> </p>
<p>End of Procedure</p>		

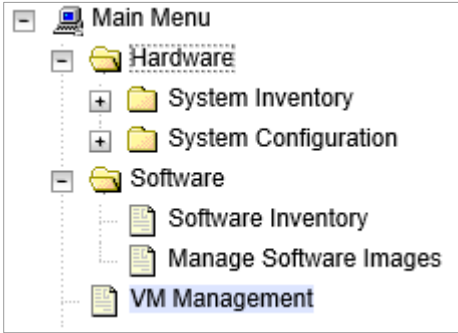
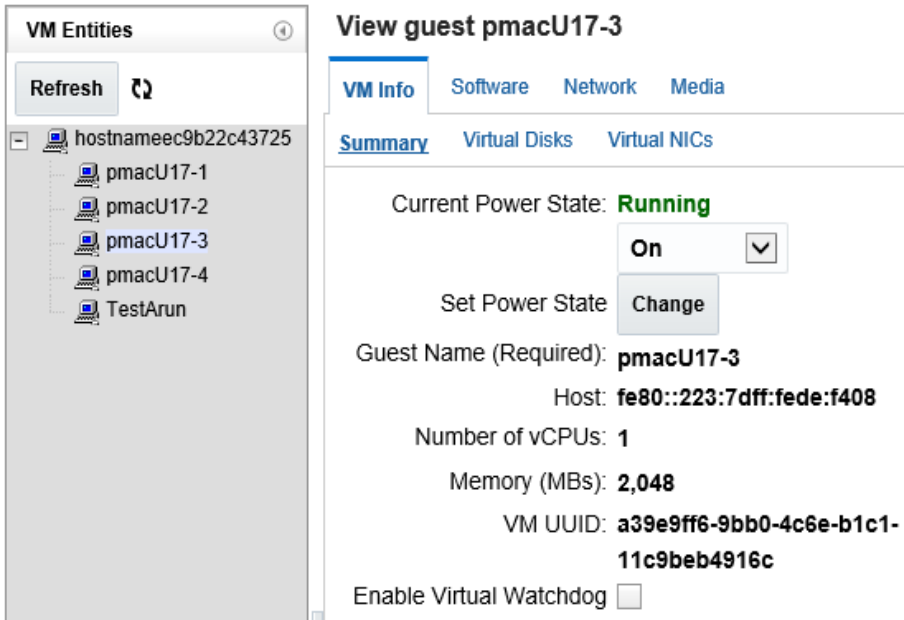
Procedure 22. Post Upgrade Procedure to Enable redundant PM&C Virtual Watchdog

<p>S T E P #</p>	<p>This procedure provides instructions to enable Virtual Watchdog of the redundant PM&C and should be executed after upgrade to PM&C 6.2 release. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. If this procedure fails, see Section 1.2.</p>	
	<p>Task</p>	<p>Description</p>

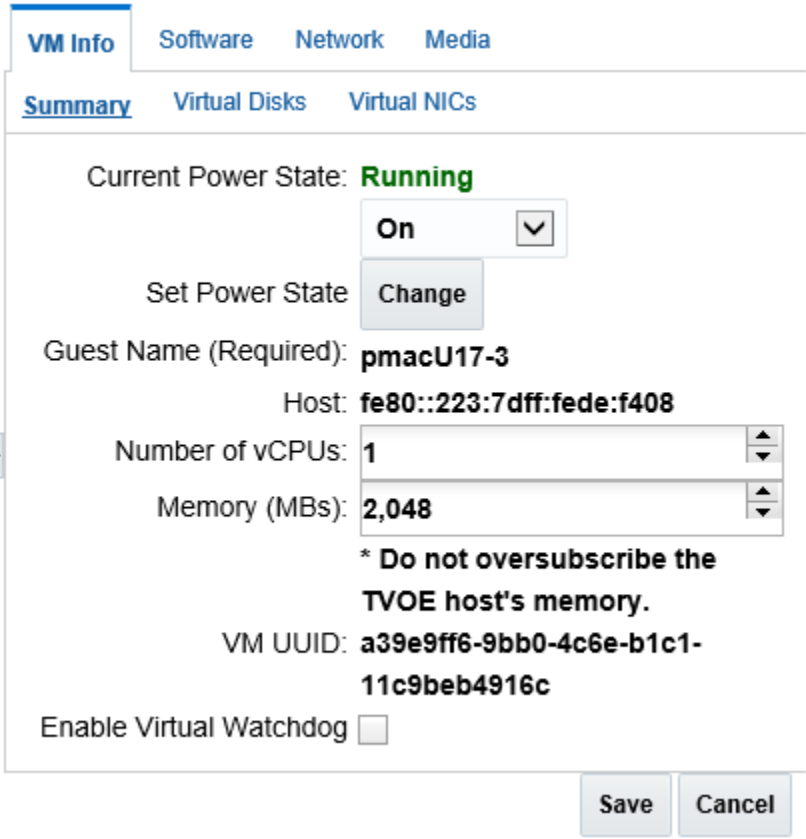
Procedure 22. Post Upgrade Procedure to Enable redundant PM&C Virtual Watchdog

<p>1. <input type="checkbox"/></p>	<p>Access the redundant PM&C GUI</p>	<p>Open the IE web browser and enter: https://<Redundant PM&C Management Network IP > Login with administrator credentials from Table 3. Software Upgrade Required Data</p> <p>Note:The following images are for illustrative purposes only.</p> <div data-bbox="574 508 1468 1184" style="border: 1px solid black; padding: 10px;"></div> <p>Welcome message is displayed after the successful login.</p> <div data-bbox="574 1272 1468 1444" style="border: 1px solid black; padding: 10px;"><p>This is the user-defined welcome message. It can be modified using the 'General Options' page, reached via the Main Menu's 'Administration' submenu.</p><p>Login Name: guidadmin Last Login Time: 2016-08-17 11:16:54 Last Login IP Address: 10.178.62.230 Recent Failed Login Attempts: 0</p></div>
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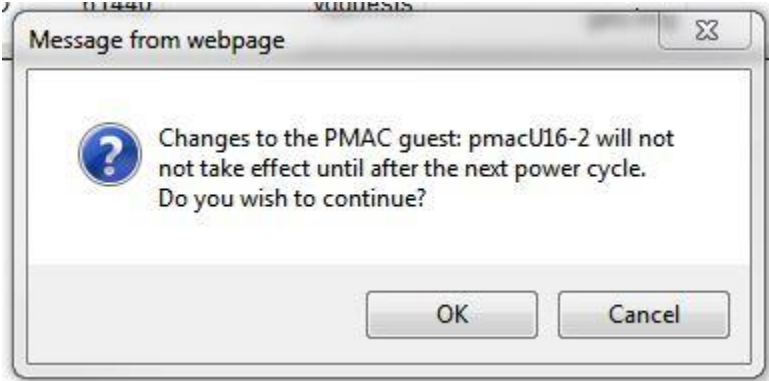
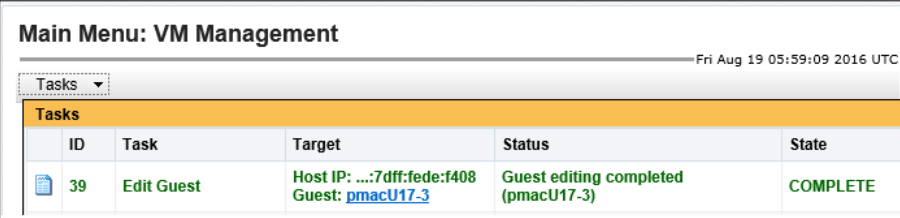
Procedure 22. Post Upgrade Procedure to Enable redundant PM&C Virtual Watchdog

<p>2. <input type="checkbox"/></p>	<p>Navigate to VM Management page</p>	<p>Using Main Menu > VM Management navigate to VM Management page.</p> <p>Note:The following images are for illustrative purposes only.</p>  <p>The pane called 'Main Menu: VM Management' should load.</p>
<p>3. <input type="checkbox"/></p>	<p>Select the redundant PM&C guest</p>	<p>Click on VM Host under 'VM Entities' Expand the VM Host if needed and select the redundant PM&C guest</p> <p>Note:The following images are for illustrative purposes only.</p>  <p>A pane called 'View guest <redundant PM&C guest name>' should load. If the 'Enable Virtual Watchdog' checkbox is not checked, proceed to the next step, otherwise exit the procedure.</p>

Procedure 22. Post Upgrade Procedure to Enable redundant PM&C Virtual Watchdog

<p>4. <input type="checkbox"/></p>	<p>Edit redundant PM&C Virtual Watchdog</p>	<p>Click on Edit button, check the 'Enable Virtual Watchdog' checkbox and click on the Save button.</p> <p>Note:The following images are for illustrative purposes only.</p> <p>Edit guest pmacU17-3</p> 
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Procedure 22. Post Upgrade Procedure to Enable redundant PM&C Virtual Watchdog

<p>5. <input type="checkbox"/></p>	<p>Confirm the change to the PM&C guest</p>	<p>A confirmation dialog will be presented with the message, "Changes to the PM&C guest will not take effect until after the next power cycle. Do you wish to continue?".</p>  <p>Click "OK" to continue.</p>										
<p>6. <input type="checkbox"/></p>	<p>Wait for the Edit Guest background task to complete</p>	<p>Click on the dropdown menu, 'Tasks', on the 'View guest <redundant PM&C guest name>' pane. Verify that the 'Edit Guest' Task has completed successfully.</p> <p>Note:The following images are for illustrative purposes only.</p>  <table border="1" data-bbox="574 1073 1468 1289"> <thead> <tr> <th>ID</th> <th>Task</th> <th>Target</th> <th>Status</th> <th>State</th> </tr> </thead> <tbody> <tr> <td>39</td> <td>Edit Guest</td> <td>Host IP: ...:7dff:fede:f408 Guest: pmacU17-3</td> <td>Guest editing completed (pmacU17-3)</td> <td>COMPLETE</td> </tr> </tbody> </table>	ID	Task	Target	Status	State	39	Edit Guest	Host IP: ...:7dff:fede:f408 Guest: pmacU17-3	Guest editing completed (pmacU17-3)	COMPLETE
ID	Task	Target	Status	State								
39	Edit Guest	Host IP: ...:7dff:fede:f408 Guest: pmacU17-3	Guest editing completed (pmacU17-3)	COMPLETE								
<p>7. <input type="checkbox"/></p>	<p>Shut down the redundant PM&C guest</p>	<p>Shutdown the redundant PM&C guest as detailed in Appendix H Shutdown PM&C Guest</p>										

Procedure 22. Post Upgrade Procedure to Enable redundant PM&C Virtual Watchdog

<p>8. <input type="checkbox"/></p>	<p>Start the redundant PM&C guest</p>	<p>Using the virsh utility on the redundant PM&C TVOE host , start the redundant PM&C guest. Query the list of guests until the redundant PM&C guest is "running".</p> <pre>[admusr@tvoeU17~]\$ sudo /usr/bin/virsh list --all Id Name State ----- 20 <redundant PM&C guest name> shut off [admusr@tvoeU17~]\$ sudo /usr/bin/virsh start <pmac> Domain <redundant PM&C guest name> started [admusr@tvoeU17 ~]\$ sudo /usr/bin/virsh list --all Id Name State ----- 20 <redundant PM&C guest name> running</pre>
<p>9. <input type="checkbox"/></p>	<p>Monitor the redundant PM&C guest until it comes up</p>	<p>In a Putty session to redundant PM&C TVOE Host, execute the following command:</p> <pre>[admusr@tvoeU17 ~]\$ sudo /usr/bin/virsh console <Redundant PM&C guest name></pre> <p>Wait for the redundant PM&C guest login prompt to appear.</p>


Procedure 22. Post Upgrade Procedure to Enable redundant PM&C Virtual Watchdog

<p>10. <input type="checkbox"/></p>	<p>Verify if the Virtual Watchdog is Enabled.</p>	<p>In the GUI session of the redundant PM&C guest, navigate to VM Management page using Main Menu > VM Management Click on VM Host under 'VM Entities' Expand the VM Host if needed and select the redundant PM&C guest</p> <p>Note:The following images are for illustrative purposes only.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> </div> <p>Verify in the pane 'View guest <redundant PM&C guest name>' that the 'Enable Virtual Watchdog' checkbox is checked.</p>
<p>---End of Procedure---</p>		

Procedure 23. Post Upgrade Procedure to Edit redundant PM&C NUMA Tuning

<p>S T E P #</p>	<p>This procedure provides instructions to edit the NUMA tuning of the redundant PM&C and should be executed after upgrade to PM&C 6.2 release. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. If this procedure fails, see Section 1.2.</p>	
	<p>Task</p>	<p>Description</p>

Procedure 23. Post Upgrade Procedure to Edit redundant PM&C NUMA Tuning

<p>1. <input type="checkbox"/></p>	<p>Locate the Ipv6 address of the redundant PM&C TVOE Host</p>	<p>Open the IE web browser and enter: https://<Redundant PM&C Management Network IP > Login with administrator credentials from Table 3. Software Upgrade Required Data</p> <p>Note:The following images are for illustrative purposes only.</p> <div data-bbox="574 506 1468 1184" style="border: 1px solid black; padding: 10px; text-align: center;">  </div> <p>Using the Main Menu, navigate to Software -> Software Inventory page. Locate the entry belonging to the redundant PM&C guest.</p> <table border="1" data-bbox="558 1293 1479 1367"> <tr> <td>Host:</td> <td>hostnameec9b22c43725</td> <td>169.254.129.1</td> <td>pmacU17-3</td> <td>TPD (x86_64)</td> <td>7.2.0.0.0-88.25</td> </tr> <tr> <td>Guest:</td> <td colspan="5">pmacU17-3</td> </tr> </table> <p>Now, click on the IP Address field of the redundant PM&C guest entry, this will bring up “Ident Information” window:</p> <div data-bbox="769 1493 1268 1803" style="border: 1px solid gray; padding: 5px; text-align: center;"> <p>Ident information ✕</p> <p>Guest Host : hostnameec9b22c43725 Guest Host IP Address : fe80::223:7dff:fede:f408 Guest Name : pmacU17-3 IPv6 Address :::1</p> </div> <p>Note down the value next to GuestHost IP:</p> <table border="1" data-bbox="574 1871 1479 1919"> <tr> <td>Guest Host Ip:</td> <td></td> </tr> </table>	Host:	hostnameec9b22c43725	169.254.129.1	pmacU17-3	TPD (x86_64)	7.2.0.0.0-88.25	Guest:	pmacU17-3					Guest Host Ip:	
Host:	hostnameec9b22c43725	169.254.129.1	pmacU17-3	TPD (x86_64)	7.2.0.0.0-88.25											
Guest:	pmacU17-3															
Guest Host Ip:																

Procedure 23. Post Upgrade Procedure to Edit redundant PM&C NUMA Tuning

<p>2. <input type="checkbox"/></p>	<p>Decide if NUMA Tuning is required</p>	<p>Login to PM&C guest console as detailed in Appendix B Accessing The PM&C Guest Console</p> <p>Execute the following command: <code>[admusr@pmacU17-3~]\$ sudo pmaccli getVirtGuest --ip=<Guest Host Ip> --guest=<redundant PM&C guest name></code></p> <p>Note:The following images are for illustrative purposes only.</p> <pre>[admusr@pmacU17-3 ~]# sudo pmaccli getVirtGuest --ip=fe80::223:7dff:fede:f408 --guest=pmacU17-3 pmacU17-3: MEMORY (MB):2048 WATCHDOG:ON POWERSTATE:1 UUID:03e85994-f6d0-4d4d-9452-77e5f25c29dd metadata: VERSION () CREATED () EDITED () vcpus:1 VCPUPIN () CPUSET () NUMA () PLACEMENTRULE (LEGACY) vnics: control43: 52:54:00:df:7a:29: (null) control - (null)</pre> <p>In the output of the above command, if both VCPUPIN and CPUSET have empty values, proceed to the next step, otherwise exit the procedure.</p>
<p>3. <input type="checkbox"/></p>	<p>Login to redundant PM&C TVOE Host</p>	<p>Login to the redundant PM&C TVOE Host console, using Appendix A Accessing The PM&C TVOE Host Console</p>

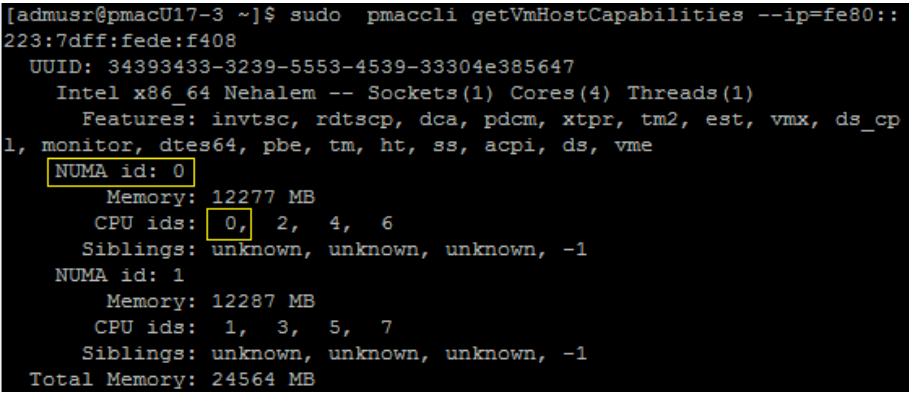
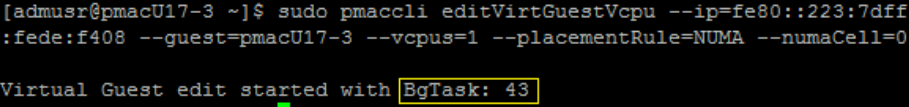
Procedure 23. Post Upgrade Procedure to Edit redundant PM&C NUMA Tuning

<p>4. <input type="checkbox"/></p>	<p>Get Reserved CPUs on redundant PM&C TVOE Host</p>	<p>In the Putty session to redundant PM&C TVOE Host, execute the following command: <code>[admusr@tvoeU17 ~]\$ sudo cat /usr/TKLC/tvoe/etc/host_resources.cfg</code></p> <p>Note down the first CPU number listed next to RESERVED_CPU: <table border="1" data-bbox="574 499 1045 548"> <tr> <td>Reserved CPU</td> <td></td> </tr> </table></p> <p>Note:The following images are for illustrative purposes only.</p> <pre data-bbox="558 636 1482 1108">[admusr@tvoeU17 ~]\$ sudo cat /usr/TKLC/tvoe/etc/host_resources.cfg # # Copyright (C) 2003, 2016, Oracle and/or its affiliates. All rights reserved. # # This file is sourced by the TVOEmem and TVOEcpu RC scripts. The # intent of this file is to allow the default amount of TVOE host # reserved memory and default host CPUs to be overridden. # # See the respective RC script for a more detailed description on # how these values are used. # # The amount of memory(kB) to reserve for the TVOE host. The default # is 2GiB = 2048 MiB = 2097152 KiB. RESERVED_KB=2097152 # # The CPUs that are to be reserved for the TVOE host. The default is # CPU 0. RESERVED_CPUS=0,2</pre> <p>Reserved CPU to be noted is 0, in the above screenshot.</p>	Reserved CPU	
Reserved CPU				

Procedure 23. Post Upgrade Procedure to Edit redundant PM&C NUMA Tuning

<p>5. <input type="checkbox"/></p>	<p>Get the allocated vcpus for the redundant PM&C</p>	<p>In a Putty session to redundant PM&C guest, execute the following command: <code>[admusr@pmacU17-3~]\$ sudo pmaccli getVirtGuest --ip=<Guest Host Ip> --guest=<redundant PM&C guest name></code></p> <p>Note down the value next to vcpus:</p> <table border="1" data-bbox="574 474 1045 520"> <tr> <td>vcpus</td> <td></td> </tr> </table> <p>Note:The following images are for illustrative purposes only.</p> <pre data-bbox="565 604 1474 1024">[admusr@pmacU17-3 ~]\$ sudo pmaccli getVirtGuest --ip=fe80::223:7dff:fedc:f408 --guest=pmacU17-3 pmacU17-3: MEMORY(MB):2048 WATCHDOG:ON POWERSTATE:1 UUID:a39e9ff6-9bb0-4c6e-b1c1-11c9beb4916c metadata: VERSION(1.0) CREATED(08/03/16 11:55:06AM) EDITED(08/19/16 02:09:26AM) vcpus:1 VCPUPIN() CPuset(1-7) NUMA(0-1) PLACEMENTRULE(LEGACY) vnic: control43: 52:54:00:57:01:f6: (null) control - (null) management: 52:54:00:cd:15:41: (null) management - (null) vdisks: vgguests / pmacU17-3.img (51200) PRIMARY prdisk(1) vgguests / pmacU17-3_logs.img (10240) logs prdisk(0) vgguests / pmacU17-3_images.img (20480) images prdisk(0)</pre> <p>Vcpus to be noted is 1, in the above screenshot.</p>	vcpus	
vcpus				

Procedure 23. Post Upgrade Procedure to Edit redundant PM&C NUMA Tuning

<p>6.</p> <p><input type="checkbox"/></p>	<p>Identify the NUMA where PM&C's host CPUs are reserved</p>	<p>In a Putty session to redundant PM&C guest, execute the following command: <code>[admusr@pmacU17-3~]\$ sudo pmaccli getVmHostCapabilities --ip=<Guest Host Ip></code></p> <p>Note down the NUMA id to which the Reserved CPU (from Step# 2) belongs:</p> <table border="1" data-bbox="574 478 1044 520"> <tr> <td>NUMA id</td> <td></td> </tr> </table> <p>Note:The following images are for illustrative purposes only.</p>  <p>NUMA id to be noted is 0 in the above screenshot as the Reserved CPU 0 (from Step# 2) belongs to the NUMA id 0.</p>	NUMA id	
NUMA id				
<p>7.</p> <p><input type="checkbox"/></p>	<p>Edit the redundant PM&C NUMA Tuning</p>	<p>In a Putty session to redundant PM&C guest, execute the following command using the NUMA id value gathered in the previous step: <code>[admusr@pmacU17-3~]\$ sudo pmaccli editVirtGuestVcpu --ip=<Guest Host Ip> --guest=<redundant PM&C guest Name> --vcpus=<vcpus> --placementRule=NUMA --numaCell=<NUMA id></code></p> <p>Note down the value next the BgTask:</p> <table border="1" data-bbox="574 1318 1044 1360"> <tr> <td>BgTask</td> <td></td> </tr> </table> <p>Note:The following image is for illustrative purposes only.</p>  <p>BgTask to be noted is 43, in the above screenshot.</p>	BgTask	
BgTask				

Procedure 23. Post Upgrade Procedure to Edit redundant PM&C NUMA Tuning

<p>8. <input type="checkbox"/></p>	<p>Wait for the Edit Guest background task to complete</p>	<p>In a GUI session to redundant PM&C guest, Under the Main Menu, Navigate to the 'Background Task Monitoring' view. Verify that the 'Edit Guest' task with the Id, <BgTask> has completed successfully.</p> <p>Note:The following image is for illustrative purposes only.</p> <table border="1" data-bbox="571 480 1468 585"> <thead> <tr> <th>ID</th> <th>Task</th> <th>Target</th> <th>Status</th> <th>State</th> </tr> </thead> <tbody> <tr> <td> 43</td> <td>Edit Guest</td> <td>Host IP: ...:7dff:fede:f408 Guest: pmacU17-3</td> <td>Guest editing completed (pmacU17-3)</td> <td>COMPLETE</td> </tr> </tbody> </table>	ID	Task	Target	Status	State	 43	Edit Guest	Host IP: ...:7dff:fede:f408 Guest: pmacU17-3	Guest editing completed (pmacU17-3)	COMPLETE
ID	Task	Target	Status	State								
 43	Edit Guest	Host IP: ...:7dff:fede:f408 Guest: pmacU17-3	Guest editing completed (pmacU17-3)	COMPLETE								
<p>9. <input type="checkbox"/></p>	<p>Shut down the redundant PM&C guest</p>	<p>Shutdown the redundant PM&C guest as detailed in Appendix H Shutdown PM&C Guest</p>										
<p>10. <input type="checkbox"/></p>	<p>Start the redundant PM&C guest</p>	<p>Using the virsh utility on the redundant PM&C TVOE host , start the redundant PM&C guest. Query the list of guests until the redundant PM&C guest is "running".</p> <pre data-bbox="571 842 1305 1192"> [admusr@tvoeU17~]\$ sudo /usr/bin/virsh list --all Id Name State ----- 20 <redundant PM&C guest name> shut off [admusr@tvoeU17~]\$ sudo /usr/bin/virsh start <pmac> Domain <redundant PM&C guest name> started [admusr@tvoeU17 ~]\$ sudo /usr/bin/virsh list --all Id Name State ----- 20 <redundant PM&C guest name> running </pre>										
<p>11. <input type="checkbox"/></p>	<p>Monitor the redundant PM&C guest until it comes up</p>	<p>In a Putty session to redundant PM&C TVOE Host, execute the following command: [admusr@tvoeU17 ~]\$ sudo /usr/bin/virsh console <Redundant PM&C guest name></p> <p>Wait for the redundant PM&C guest login prompt to appear.</p>										
<p>12. <input type="checkbox"/></p>	<p>Login to redundant PM&C</p>	<p>Login to redundant PM&C guest console as detailed in Appendix B Accessing The PM&C Guest Console</p>										

Procedure 23. Post Upgrade Procedure to Edit redundant PM&C NUMA Tuning

<p>13. <input type="checkbox"/></p>	<p>Verify the redundant PM&C NUMA Tuning</p>	<p>In a Putty session to redundant PM&C guest, execute the following command: [admusr@pmacU17-3~]\$ sudo pmaccli getVirtGuest --ip=<Guest Host Ip> --guest=<PM&C guest name></p> <p>Verify that the output contains the following:</p> <ul style="list-style-type: none"> • NUMA is set to <NUMA id> • PLACEMENTRULE is set to NUMA <p>Note:The following images are for illustrative purposes only.</p> <pre>[admusr@pmacU17-3 ~]\$ sudo pmaccli getVirtGuest --ip=fe80::223:7dff:fed e:f408 --guest=pmacU17-3 pmacU17-3: MEMORY(MB):2048 WATCHDOG:ON POWERSTATE:1 UUID:a39e9ff6-9bb0-4c6e-b1c1-11c9beb4916c metadata: VERSION(1.0) CREATED(08/03/16 11:55:06AM) EDITED(08/22/16 03:06:27AM) vcpus:1 VCPUPIN() CPuset(4,6) NUMA(0) PLACEMENTRULE(NUMA) vnics: control43: 52:54:00:57:01:f6: (null) control - (null) management: 52:54:00:cd:15:41: (null) management - (null) vdisks: vgguests / pmacU17-3.img (51200) PRIMARY prdisk(1) vgguests / pmacU17-3_logs.img (10240) logs prdisk(0) vgguests / pmacU17-3_images.img (20480) images prdisk(0)</pre>
<p>---End of Procedure---</p>		

Procedure 24. Post Upgrade Configuration of larger redundant PM&C ISO Image Repository area

S T E P #	Use this procedure to verify the PM&C ISO image repository size. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. If this procedure fails, see Section 1.2.																									
	Task	Description																								
1. <input type="checkbox"/>	Determine if the redundant PM&C ISO image repository needs to be enlarged	<p>Note: It is required that PM&C ISO repository is 61440 MB in any PM&C 6.2 release. Using the primary PM&C GUI, navigate to the VM Management page. Select the redundant PM&C Guest to get to the “View guest” page. Click on the “Virtual Disks” link. In the “Virtual Disks” table, locate the entry with Guest Dev Name “images”.</p> <p>View guest pmacU16-2</p> <div style="border: 1px solid #ccc; padding: 5px;"> <p>VM Info Software Network Media</p> <hr/> <p>Summary Virtual Disks Virtual NICs</p> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 5px;"> <p>Virtual Disks</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Primary</th> <th>Size (MB)</th> <th>Host Pool</th> <th>Host Vol Name</th> <th>Guest Dev Name</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">YES</td> <td style="text-align: center;">51200</td> <td style="text-align: center;">vgguests</td> <td style="text-align: center;">pmacU16-2.img</td> <td style="text-align: center;">PRIMARY</td> </tr> <tr> <td style="text-align: center;">NO</td> <td style="text-align: center;">10240</td> <td style="text-align: center;">vgguests</td> <td style="text-align: center;">pmacU16-2_logs.img</td> <td style="text-align: center;">logs</td> </tr> <tr> <td style="text-align: center;">NO</td> <td style="text-align: center;">20480</td> <td style="text-align: center;">vgguests</td> <td style="text-align: center;">pmacU16-2_images.img</td> <td style="text-align: center;">images</td> </tr> </tbody> </table> </div> </div> <p>Note down the following values:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Size (MB)</td> <td style="width: 50%;"></td> </tr> <tr> <td>Host Vol Name</td> <td></td> </tr> </table> <p>Note: If the Size (MB) is smaller than 61440 MB proceed to the next step. Otherwise, skip the rest of this procedure.</p>	Primary	Size (MB)	Host Pool	Host Vol Name	Guest Dev Name	YES	51200	vgguests	pmacU16-2.img	PRIMARY	NO	10240	vgguests	pmacU16-2_logs.img	logs	NO	20480	vgguests	pmacU16-2_images.img	images	Size (MB)		Host Vol Name	
Primary	Size (MB)	Host Pool	Host Vol Name	Guest Dev Name																						
YES	51200	vgguests	pmacU16-2.img	PRIMARY																						
NO	10240	vgguests	pmacU16-2_logs.img	logs																						
NO	20480	vgguests	pmacU16-2_images.img	images																						
Size (MB)																										
Host Vol Name																										

Procedure 24. Post Upgrade Configuration of larger redundant PM&C ISO Image Repository area

<p>2. <input type="checkbox"/></p>	<p>Locate the IPv6 address of redundant PM&C TVOE host</p>	<p>Using the Main Menu, navigate to Software → Software Inventory page.</p> <p>Locate the entry belonging to the redundant PM&C guest.</p> <table border="1" data-bbox="578 428 1482 512"> <tr> <td>Host:</td> <td>hostname02be2be44427</td> <td>169.254.132.1</td> <td>pmacU16-2.localdomain</td> <td>TPD (x86_64)</td> <td>7.2.0.0.0-88.2.0</td> </tr> <tr> <td>Guest:</td> <td colspan="5">pmacU16-2</td> </tr> </table> <p>Now, click on the IP Address field of the redundant PM&C guest entry, this will bring up “Ident information” window.</p> <div data-bbox="578 642 1070 940" style="border: 1px solid gray; padding: 5px;"> <p>Ident information ✕</p> <p>Guest Host: TVOE2</p> <p>Guest Host IP: fe80::dad3:85ff:feba:8b18</p> <p>Guest Name : pmacDev802</p> <p>IPv6 :::1</p> <p>RMS IP : 192.168.176.26</p> <p>RMS Name : TVOE2</p> </div> <p>Note down the following values:</p> <table border="1" data-bbox="578 1020 1471 1058"> <tr> <td>Guest Host IP:</td> <td></td> </tr> </table>	Host:	hostname02be2be44427	169.254.132.1	pmacU16-2.localdomain	TPD (x86_64)	7.2.0.0.0-88.2.0	Guest:	pmacU16-2					Guest Host IP:	
Host:	hostname02be2be44427	169.254.132.1	pmacU16-2.localdomain	TPD (x86_64)	7.2.0.0.0-88.2.0											
Guest:	pmacU16-2															
Guest Host IP:																
<p>3. <input type="checkbox"/></p>	<p>If necessary, access the primary PM&C guest console</p>	<p>If necessary, access the primary PM&C guest console as detailed in Appendix B Accessing The PM&C Guest Console</p>														
<p>4. <input type="checkbox"/></p>	<p>Enlarge the redundant PM&C ISO repository</p>	<p>Execute the following command with appropriate values gathered in steps 1 and 2:</p> <pre>[admusr@pmac2 ~]\$ sudo pmaccli enlargeIsoImageRepository --ip=<Guest_Host_IP> --guest=<redundant_pmac_guest_name> --volname=<Host_Vol_Name> --volpool=vgguests --volsize=61440</pre> <p>For example, enlarging repository of redundant PM&C guest with name pmac2 to 61440 MB would be similar to this:</p> <pre>[admusr@pmac2 ~]\$ sudo /usr/TKLC/smac/bin/pmaccli enlargeIsoImageRepository --ip=fe80::dad3:85ff:feba:8b18 --guest=pmac2 --volname=pmac2_images.img --volpool=vgguests --volsize=61440</pre> <p>Successful resize of pmac2_images.img to 61440 MB.</p>														

Procedure 24. Post Upgrade Configuration of larger redundant PM&C ISO Image Repository area

<p>5. <input type="checkbox"/></p>	<p>Verify the size of redundant PM&C ISO repository</p>	<p>Using the primary PM&C GUI, navigate to the VM Management page. Select the redundant PM&C Guest to get to the “View guest” page. Click on the “Virtual Disks” link. In the “Virtual Disks” table, scroll to the entry with Guest Dev Name “images”.</p> <div style="border: 1px solid #ccc; padding: 10px; margin: 10px 0;"> <p>View guest pmacU16-2</p> <p>VM Info Software Network Media</p> <p>Summary Virtual Disks Virtual NICs</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th colspan="5">Virtual Disks</th> </tr> <tr> <th>Primary</th> <th>Size (MB)</th> <th>Host Pool</th> <th>Host Vol Name</th> <th>Guest Dev Name</th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>51200</td> <td>vgguests</td> <td>pmacU16-2.img</td> <td>PRIMARY</td> </tr> <tr> <td>NO</td> <td>10240</td> <td>vgguests</td> <td>pmacU16-2_logs.img</td> <td>logs</td> </tr> <tr> <td>NO</td> <td style="border: 2px solid red; border-radius: 50%; text-align: center;">61440</td> <td>vgguests</td> <td>pmacU16-2_images.i mg</td> <td>images</td> </tr> </tbody> </table> </div> <p>Ensure the Size(MB) now is 61440.</p>	Virtual Disks					Primary	Size (MB)	Host Pool	Host Vol Name	Guest Dev Name	YES	51200	vgguests	pmacU16-2.img	PRIMARY	NO	10240	vgguests	pmacU16-2_logs.img	logs	NO	61440	vgguests	pmacU16-2_images.i mg	images
Virtual Disks																											
Primary	Size (MB)	Host Pool	Host Vol Name	Guest Dev Name																							
YES	51200	vgguests	pmacU16-2.img	PRIMARY																							
NO	10240	vgguests	pmacU16-2_logs.img	logs																							
NO	61440	vgguests	pmacU16-2_images.i mg	images																							
End of Procedure																											


Procedure 25. Post Upgrade Configuration of larger redundant PM&C temporary ISO import area

<p>S T E P #</p>	<p>Use this procedure to enlarge the redundant PM&C ISO image temporary import area up to 20480 MB (20 GB). Note: This procedure can be executed only on PM&C 5.7 and later releases. Note: Only execute this procedure if it is required by application. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. If this procedure fails, see Section 1.2.</p>	
	Task	Description
<p>1. <input type="checkbox"/></p>	<p>Access the PM&C guest console</p>	<p>If necessary, access the PM&C guest console as detailed in Appendix B Accessing The PM&C Guest Console.</p>

Procedure 25. Post Upgrade Configuration of larger redundant PM&C temporary ISO import area

<p>2. <input type="checkbox"/></p>	<p>Determine if the PM&C ISO temporary import area needs to be enlarged</p>	<p>Execute the following command:</p> <pre>[admusr@pmac ~]\$ sudo /bin/df -h grep isoimages</pre> <p>In the sample output below , there is no entry related to /var/TKLC/smac/image/isoimages/home/smacftpusr, which would be there if the ISO temporary import area was enlarged during PM&C deployment or afterwards. The ISO temporary import area in the example above has at the most 5 GB available.</p> <pre>/dev/mapper/vgroot-smac_isoimages 5.0G 147M 4.6G 4% /var/TKLC/smac/image/isoimages</pre> <p>In the following sample there is an additional entry, indicating that the ISO temporary import area /var/TKLC/smac/image/isoimages/home/smacftpusr has altogether 20 GB available from an EVD.</p> <pre>/dev/mapper/vgroot-smac_isoimages 5.0G 147M 4.6G 4% /var/TKLC/smac/image/isoimages /dev/vdd 20G 173M 19G 1% /var/TKLC/smac/image/isoimages/ home/smacftpusr</pre> <p>If the application requires the repository to be larger than the size reported by the command above, proceed to the next step. Otherwise, skip the rest of this procedure.</p> <p>Note: To be able to transfer an application ISO image to the PM&C, this area must be large enough for the largest ISO image file size anticipated at the site.</p>
<p>3. <input type="checkbox"/></p>	<p>Log in to the redundant PM&C GUI.</p>	<p>If needed, open IE web browser and enter:</p> <p>https://<PM&C Management Network IP ></p> <p>Log in with administrator credentials from Table 3. Software Upgrade Required Data.</p>
<p>4. <input type="checkbox"/></p>	<p>Navigate to the “Edit guest” page of the redundant PM&C guest</p>	<p>Using the redundant PM&C GUI, navigate to the VM Management page. Select the redundant PM&C Guest to get to the “View guest” page. Click "Edit".</p>
<p>5. <input type="checkbox"/></p>	<p>Determine whether the “isoimages” virtual disk exists</p>	<p>Click on the “Virtual Disks” link. In the “Virtual Disks” table, locate the entry with Guest Dev Name “isoimages”.</p> <p>If you cannot find the “isoimages” entry, skip to step 13. Otherwise, proceed to step 6.</p>

Procedure 25. Post Upgrade Configuration of larger redundant PM&C temporary ISO import area

<p>6.</p> <p><input type="checkbox"/></p>	<p>Delete the “isoimages” vdisk</p>	<p>Note: When the vdisk is deleted, any files stored on it will be destroyed, so be sure to copy any files you would like to keep to a safe location.</p> <p>Select the entry for the “isoimages” virtual disk. Click on the “Delete” button.</p> <p>Edit guest pmacU16-2</p> <p>VM Info Software Network Media</p> <p>Summary Virtual Disks Virtual NICs</p> <table border="1"> <thead> <tr> <th colspan="6">Virtual Disks</th> </tr> <tr> <th>Primary</th> <th>Size (MB)</th> <th>Host Pool</th> <th>Host Vol Name</th> <th>Guest Dev Name</th> <th></th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>51200</td> <td>vgguests</td> <td>pmacU16-2.img</td> <td>PRIMARY</td> <td></td> </tr> <tr> <td>NO</td> <td>10240</td> <td>vgguests</td> <td>pmacU16-2_logs.img</td> <td>logs</td> <td></td> </tr> <tr> <td>NO</td> <td>61440</td> <td>vgguests</td> <td>pmacU16-2_images.i mg</td> <td>images</td> <td></td> </tr> <tr style="border: 2px dashed blue;"> <td>NO</td> <td>15360</td> <td>vgguests</td> <td>pmacU16-2_isoimag es.img</td> <td>isoimages</td> <td></td> </tr> </tbody> </table> <p>Save Cancel</p> <p>Verify that the “isoimages” vidsk is no longer listed and click on the “Save” button.</p>	Virtual Disks						Primary	Size (MB)	Host Pool	Host Vol Name	Guest Dev Name		YES	51200	vgguests	pmacU16-2.img	PRIMARY		NO	10240	vgguests	pmacU16-2_logs.img	logs		NO	61440	vgguests	pmacU16-2_images.i mg	images		NO	15360	vgguests	pmacU16-2_isoimag es.img	isoimages	
Virtual Disks																																						
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NO	61440	vgguests	pmacU16-2_images.i mg	images																																		
NO	15360	vgguests	pmacU16-2_isoimag es.img	isoimages																																		
<p>7.</p> <p><input type="checkbox"/></p>	<p>Confirm the change to the PM&C guest</p>	<p>A confirmation dialog will be presented with the message, "Changes to the PM&C guest will not take effect until after the next power cycle. Do you wish to continue?".</p>  <p>Click "OK" to continue.</p>																																				

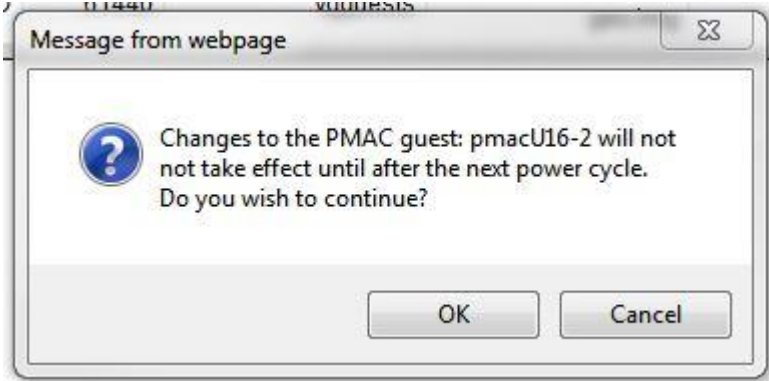
Procedure 25. Post Upgrade Configuration of larger redundant PM&C temporary ISO import area

<p>8. <input type="checkbox"/></p>	<p>Wait for the Edit Guest background task to complete</p>	<p>Navigate to the Background Task Monitoring view. Confirm that the Edit Guest task has completed successfully.</p> <table border="1" data-bbox="574 415 1466 499"> <thead> <tr> <th>ID</th> <th>Task</th> <th>Target</th> <th>Status</th> <th>State</th> </tr> </thead> <tbody> <tr> <td>9</td> <td>Edit Guest</td> <td>RMS: TVOE2 Guest: pmacU16-2</td> <td>Guest editing completed (pmacU16-2)</td> <td>COMPLETE</td> </tr> </tbody> </table>	ID	Task	Target	Status	State	9	Edit Guest	RMS: TVOE2 Guest: pmacU16-2	Guest editing completed (pmacU16-2)	COMPLETE
ID	Task	Target	Status	State								
9	Edit Guest	RMS: TVOE2 Guest: pmacU16-2	Guest editing completed (pmacU16-2)	COMPLETE								
<p>9. <input type="checkbox"/></p>	<p>Shut down the PM&C guest</p>	<p>Shut down the PM&C guest as detailed in Appendix H.</p>										
<p>10. <input type="checkbox"/></p>	<p>Start the PM&C guest</p>	<p>Using the virsh utility on the TVOE host of PM&C guest, start the PM&C guest. Query the list of guests until the PM&C guest is "running".</p> <pre data-bbox="574 722 1279 1079"> [admusr@tvoe ~]\$ sudo /usr/bin/virsh list --all Id Name State ----- 20 pmac shut off [admusr@tvoe ~]\$ sudo /usr/bin/virsh start <pmac> Domain pmac started [admusr@tvoe ~]\$ sudo /usr/bin/virsh list --all Id Name State ----- 20 pmac running </pre>										
<p>11. <input type="checkbox"/></p>	<p>Monitor the PM&C guest until it comes up and verify that the temporary ISO import area does not exist</p>	<p>Execute:</p> <pre data-bbox="574 1163 1308 1192"> [admusr@tvoe ~]\$ sudo /usr/bin/virsh console <pmac> </pre> <p>Wait for the PM&C guest login prompt to appear. Log in as admusr as captured in Table 3. Software Upgrade Required Data and verify that the entry for the /var/TKLC/smac/image/isoimages/home/smacftpusr mount point is not displayed. An example is shown below:</p> <pre data-bbox="574 1381 1466 1470"> [admusr@pmac2 ~]\$ sudo /bin/df -h grep isoimages /dev/mapper/vgroot-smac_isoimages 5.0G 147M 4.6G 4% /var/TKLC/smac/image/isoimages </pre>										
<p>12. <input type="checkbox"/></p>	<p>Navigate to the "Edit guest" page of the redundant PM&C guest</p>	<p>Using the redundant PM&C GUI, navigate to the VM Management page. Select the redundant PM&C Guest to get to the "View guest" page. Click on the "Virtual Disks" link and then click "Edit".</p>										

Procedure 25. Post Upgrade Configuration of larger redundant PM&C temporary ISO import area

<p>13. <input type="checkbox"/></p>	<p>Add the “isoimages” vdisk to the PM&C guest.</p>	<p>Click the “Add” button. Enter the following data for the new isoimages virtual disk.</p> <ul style="list-style-type: none"> • Size (MB): <total_size_of_temporary_import_area> • Host Pool: "vgguests" • Host Vol Name: "<pmac_guest_name>_isoimages.img" • Guest Dev Name: "isoimages" <p>Note: Set the Size (MB) to a value large enough for the largest ISO image file size anticipated at the site. The size can be increased up to 20480 MB. For instance, the following image illustrates what a user would enter in order to achieve a 20480 MB ISO temporary import area on pmacU16-2.</p> <div style="border: 1px solid #ccc; padding: 10px; margin: 10px 0;"> <p>Edit guest pmacU16-2</p> <p>VM Info Software Network Media</p> <p>Summary Virtual Disks Virtual NICs</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th colspan="5" style="text-align: left;">Virtual Disks</th> <th style="text-align: right;">Add</th> <th style="text-align: right;">Delete</th> </tr> <tr> <th>Primary</th> <th>Size (MB)</th> <th>Host Pool</th> <th>Host Vol Name</th> <th>Guest Dev Name</th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>YES</td> <td>51200</td> <td>vgguests</td> <td>pmacU16-2.img</td> <td>PRIMARY</td> <td></td> <td></td> </tr> <tr> <td>NO</td> <td>10240</td> <td>vgguests</td> <td>pmacU16-2_logs.img</td> <td>logs</td> <td></td> <td></td> </tr> <tr> <td>NO</td> <td>61440</td> <td>vgguests</td> <td>pmacU16-2_images.i mg</td> <td>images</td> <td></td> <td></td> </tr> <tr> <td>NO</td> <td>20480</td> <td>vgguests</td> <td>pmacU16-2_isoimag es.img</td> <td>isoimages</td> <td></td> <td></td> </tr> </tbody> </table> </div> <p>Note: The "Guest Dev Name" must be set to "isoimages" for the PM&C application to mount the appropriate host device. The <pmac_guest_name> variable should be set to this PM&C guest's name to create a unique volume name on the TVOE host of the PM&C.</p> <p>Verify the new isoimages virtual disk data and click “Save”.</p>	Virtual Disks					Add	Delete	Primary	Size (MB)	Host Pool	Host Vol Name	Guest Dev Name			YES	51200	vgguests	pmacU16-2.img	PRIMARY			NO	10240	vgguests	pmacU16-2_logs.img	logs			NO	61440	vgguests	pmacU16-2_images.i mg	images			NO	20480	vgguests	pmacU16-2_isoimag es.img	isoimages		
Virtual Disks					Add	Delete																																						
Primary	Size (MB)	Host Pool	Host Vol Name	Guest Dev Name																																								
YES	51200	vgguests	pmacU16-2.img	PRIMARY																																								
NO	10240	vgguests	pmacU16-2_logs.img	logs																																								
NO	61440	vgguests	pmacU16-2_images.i mg	images																																								
NO	20480	vgguests	pmacU16-2_isoimag es.img	isoimages																																								

Procedure 25. Post Upgrade Configuration of larger redundant PM&C temporary ISO import area

<p>14. <input type="checkbox"/></p>	<p>Confirm the change to the PM&C guest</p>	<p>A confirmation dialog will be presented with the message, "Changes to the PM&C guest will not take effect until after the next power cycle. Do you wish to continue?".</p>  <p>Click "OK" to continue.</p>										
<p>15. <input type="checkbox"/></p>	<p>Wait for the Edit Guest background task to complete</p>	<p>Navigate to the Background Task Monitoring view. Confirm that the Edit Guest task has completed successfully.</p> <table border="1" data-bbox="574 1016 1468 1100"> <thead> <tr> <th>ID</th> <th>Task</th> <th>Target</th> <th>Status</th> <th>State</th> </tr> </thead> <tbody> <tr> <td>9</td> <td>Edit Guest</td> <td>RMS: TVOE2 Guest: pmacU16-2</td> <td>Guest editing completed (pmacU16-2)</td> <td>COMPLETE</td> </tr> </tbody> </table>	ID	Task	Target	Status	State	9	Edit Guest	RMS: TVOE2 Guest: pmacU16-2	Guest editing completed (pmacU16-2)	COMPLETE
ID	Task	Target	Status	State								
9	Edit Guest	RMS: TVOE2 Guest: pmacU16-2	Guest editing completed (pmacU16-2)	COMPLETE								
<p>16. <input type="checkbox"/></p>	<p>Shut down the PM&C guest</p>	<p>Shut down the PM&C guest as detailed in Appendix H.</p>										
<p>17. <input type="checkbox"/></p>	<p>Start the PM&C guest</p>	<p>Using the virsh utility on TVOE host of PM&C guest, start the PM&C guest. Query the list of guests until the PM&C guest is "running".</p> <pre data-bbox="574 1325 1279 1682"> [admusr@tvoe ~]\$ sudo /usr/bin/virsh list --all Id Name State ----- 20 pmac shut off [admusr@tvoe ~]\$ sudo /usr/bin/virsh start <pmac> Domain pmac started [admusr@tvoe ~]\$ sudo /usr/bin/virsh list --all Id Name State ----- 20 pmac running </pre>										

Procedure 25. Post Upgrade Configuration of larger redundant PM&C temporary ISO import area

<p>18. <input type="checkbox"/></p>	<p>Monitor the PM&C guest until it comes up and verify the size of the “isoimages” vdisk</p>	<p>Execute: [admusr@tvoe ~]\$ sudo /usr/bin/virsh console <pmac></p> <p>Wait for the PM&C guest login prompt to appear. Log in as admusr as captured in Table 3. Software Upgrade Required Data and verify the disk size using the df command. An example is shown below:</p> <pre>[admusr@pmac2 ~]\$ sudo /bin/df -h grep isoimages /dev/mapper/vgroot-smac_isoimages 5.0G 147M 4.6G 4% /var/TKLC/smac/image/isoimages /dev/vdd 20G 173M 19G 1% /var/TKLC/smac/image/isoimages/ home/smacftpusr</pre>
<p>19. <input type="checkbox"/></p>	<p>Verify the size of PM&C ISO temporary import area</p> <p>NOTE: It may take up to 5 minutes for the PM&C GUI to be responsive and provide a login prompt.</p>	<p>Note: It can take up to 15 minutes for the PM&C to perform sufficient software discovery and enable navigation to the “View guest” page.</p> <p>Note: Using the redundant PM&C GUI, navigate to the VM Management page. Select the redundant PM&C Guest to get to the “View guest” page. Click on the “Virtual Disks” link. In the table, locate the entry with Guest Dev Name “isoimages”. Ensure that the Size (MB) field now reflects the new value.</p>
<p>Section 5.5 has been completed</p>		

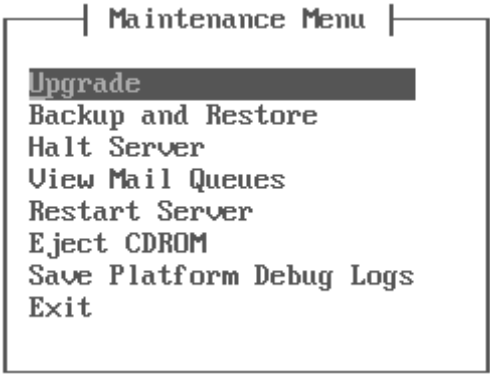
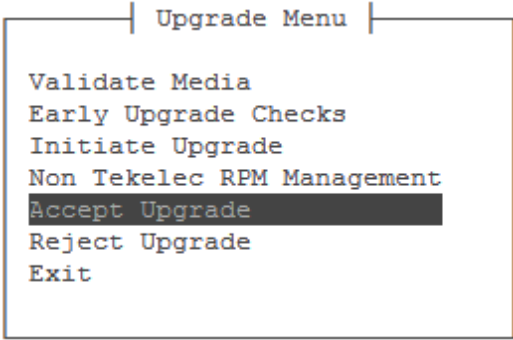
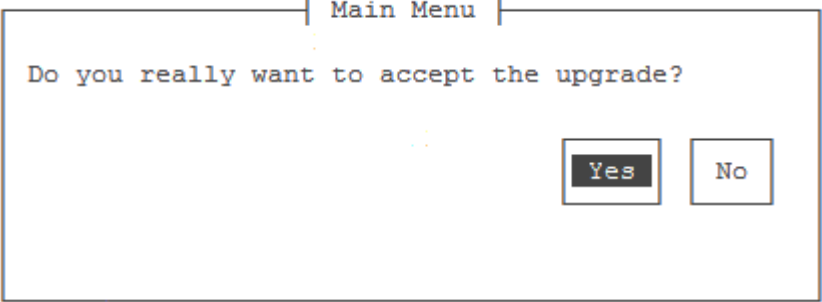
5.6 Software Upgrade Acceptance and Cleanup on the Redundant PM&C

Once you are satisfied that this release of PM&C is acceptable, it is time to accept the upgrade. Please note that once you accept an upgrade, a backout to the previous release is not possible. If backout becomes necessary after an upgrade has been accepted, then a disaster recovery process is required. The following procedure identifies the steps required to accept the upgrade. Once the upgrade has been accepted it is safe to remove the media used for the upgrade.

Procedure 26. Post Upgrade Acceptance on the redundant PM&C

S T E P #	Use this procedure to finalize the upgrade on the redundant PM&C, once complete, the backout is no longer available/possible. Note: This procedure should only be performed when a backout is no longer anticipated/desired. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. If this procedure fails, see Section 1.2.	
	Task	Description
1. <input type="checkbox"/>	If necessary, access the redundant PM&C guest console	If necessary, access the redundant PM&C guest console as detailed in Appendix B Accessing The PM&C Guest Console
2. <input type="checkbox"/>	Run the “platcfg” utility.	Execute: [admusr@pmac ~]\$ sudo su - platcfg
3. <input type="checkbox"/>	In “platcfg” utility Access the Maintenance menu	Note: Use the “Arrow” and the [ENTER] keys to navigate through the menu options. Note: The following image is for illustrative purposes only. <div style="border: 1px solid black; padding: 10px; margin: 10px auto; width: fit-content;"> <p style="text-align: center;"> Main Menu </p> <pre style="font-family: monospace; margin: 0;"> Maintenance Diagnostics Server Configuration Remote Consoles Network Configuration Exit </pre> </div> Select “Maintenance” to navigate to the Maintenance Menu.

Procedure 26. Post Upgrade Acceptance on the redundant PM&C

<p>4. <input type="checkbox"/></p>	<p>In “platcfg” utility access the Upgrade menu</p>	<p>Note: Use the “Arrow” and the [ENTER] keys to navigate through the menu options. Note: The following image is for illustrative purposes only.</p>  <p>Select “Upgrade” to navigate to the Upgrade Menu.</p>
<p>5. <input type="checkbox"/></p>	<p>In “platcfg” utility, select “Accept Upgrade” to start the accept process.</p>	<p>Note: Use the “Arrow” and the [ENTER] keys to navigate through the menu options. Note: The following image is for illustrative purposes only.</p>  <p>Select “Accept Upgrade” and press the [ENTER] key to start the accept process.</p>
<p>6. <input type="checkbox"/></p>	<p>Confirm the decision and execute the accept.</p>	

Procedure 26. Post Upgrade Acceptance on the redundant PM&C

<p>7. <input type="checkbox"/> The "Accept Upgrade" process starts</p>		<p>Note: The following image is for illustrative purposes only.</p> <pre>Called with options: --accept Loading Upgrade::Backout::LVM Accepting Upgrade snapmgr: Logical volume "smac_root_snap" successfully removed snapmgr: Logical volume "smac_var_snap" successfully removed snapmgr: Logical volume "plat_usr_snap" successfully removed snapmgr: Logical volume "smac_backup_snap" successfully removed snapmgr: Logical volume "plat_root_snap" successfully removed snapmgr: Logical volume "plat_var_tkic_snap" successfully removed snapmgr: Logical volume "plat_var_snap" successfully removed snapmgr: Removed snapshot lv's related to tag "@upgrade" Executing common accept tasks Setting POST_UPGRADE_ACTION to ACCEPT in upgrade info. Cleaning backout directory. Cleaning Upgrade Accept/Reject alarm. Cleaning message from MOTD. Cleaning up RPM config backup files... Checking / Checking /boot Checking /tmp Checking /usr Checking /var Checking /var/TKLC Checking /usr/TKLC/smac</pre>
<p>8. <input type="checkbox"/> Verify the "Accept Upgrade" completes and exit the "platcfg" utility</p>		<pre>----- Message ----- The accept has completed. Press any key to continue...<input type="checkbox"/></pre> <p>Press any key to return to the "Upgrade menu". Use the arrow keys to select "Exit" and press the [ENTER] key to exit from all menus until the PM&C command prompt is displayed.</p>

Procedure 26. Post Upgrade Acceptance on the redundant PM&C

<p>9. <input type="checkbox"/></p>	<p>If the TVOE host was upgraded using Error! Reference source not found..</p>	<p>The upgrade of TVOE includes acceptance of the upgrade. This acceptance may have been intentionally delayed by the PM&C upgrade during the execution of Error! Reference source not found..</p> <p>If the TVOE upgrade was delayed, then please return to TVOE host upgrade procedures outlined in the TVOE Software Upgrade document for the release being upgraded.</p> <p>Continue the upgrade process with procedure 8, Stand Alone TVOE Upgrade Accept.</p>
<p>--End of Procedure--</p>		

Procedure 27. Post Upgrade Cleanup of Upgrade Media

<p>S T E P #</p>	<p>Use this procedure to remove the upgrade media from the redundant PM&C.</p> <p>Note: This procedure should only be performed when a backout is no longer anticipated/desired.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, see Section 1.2.</p>	
	Task	Description
<p>1. <input type="checkbox"/></p>	<p>If this was a Remote Upgrade, then ensure images used for upgrade have been removed from PM&C</p>	<p>Execute the following command on the redundant PM&C: <pre>[admusr@pmac ~]\$ sudo /bin/ls /var/TKLC/upgrade/PMAC-6.2.0.0.0_62.8.0-x86_64.iso</pre> </p> <p>If there are images that need to be removed, using the output of the command above, specify the full path of the image to be removed: <pre>[admusr@pmac ~]\$ sudo /bin/rm -f /var/TKLC/upgrade/<image_name.iso></pre> </p> <p>For instance: <pre>[admusr@pmac ~]\$sudo /bin/rm -f /var/TKLC/upgrade/PMAC-6.2.0.0.0_62.8.0-x86_64.iso</pre> </p> <p>Repeat this step as necessary to ensure there are no images left to be removed.</p>
<p>2. <input type="checkbox"/></p>	<p>If this was a local upgrade, Log in to the primary PM&C GUI.</p>	<p>If needed, open IE web browser and enter: <a href="https://<PM&C Management Network IP >">https://<PM&C Management Network IP ></p> <p>Login with administrator credentials from Table 3. Software Upgrade Required Data</p>

Procedure 27. Post Upgrade Cleanup of Upgrade Media

<p>3. <input type="checkbox"/></p>	<p>If upgrade was performed using external media, then detach the media from the redundant PM&C guest.</p>	<p>Note: It can take up to 15 minutes for the PM&C to perform sufficient software discovery to locate the PM&C TVOE host and enable navigation to the “View guest” page. Using the primary PM&C GUI, navigate to the VM Management page. Select the redundant PM&C Guest to get to the “View guest” page. Select the “Media” tab on the “View guest” page. Click the “Detach” button for the image previously attached.</p> <p>View guest pmac2</p> <p>VM Info Software Network Media</p> <hr/> <p>Attached Media Available Media</p> <hr/> <div style="border: 1px solid #ccc; padding: 5px;"> <p>Attached Media</p> <table border="1"> <thead> <tr> <th>Attached</th> <th>Image Path</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;"><input type="button" value="Detach"/></td> <td>/var/TKLC/tvoe/mapping-isos/pmac2.iso</td> </tr> <tr> <td style="text-align: center;"><input type="button" value="Detach"/></td> <td>/dev/sr1</td> </tr> </tbody> </table> </div>	Attached	Image Path	<input type="button" value="Detach"/>	/var/TKLC/tvoe/mapping-isos/pmac2.iso	<input type="button" value="Detach"/>	/dev/sr1
Attached	Image Path							
<input type="button" value="Detach"/>	/var/TKLC/tvoe/mapping-isos/pmac2.iso							
<input type="button" value="Detach"/>	/dev/sr1							
<p>4. <input type="checkbox"/></p>	<p>If present, remove the external media from the redundant PM&C TVOE host server.</p>	<p>Remove the external media from the appropriate slot of the redundant PM&C TVOE host server.</p>						
<p>Section 5.6 has been completed.</p>								

6 Recovery Procedures

Upgrade procedure recovery issues should be directed to Oracle Customer Support. Before executing any of these procedures, contact Oracle Customer Support. In the event that a full installation is needed, the PM&C Installation Procedures also need to be performed. Persons performing the upgrade should be familiar with these documents.

6.1 Backout (reject) Setup Procedures

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

WARNING

Do not attempt to perform these backout procedures without first contacting Oracle Customer Support

See Section 1.2

Backout of an initial installation is not supported.

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

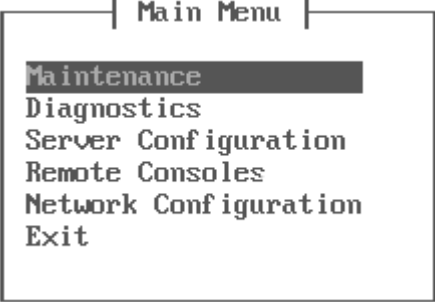
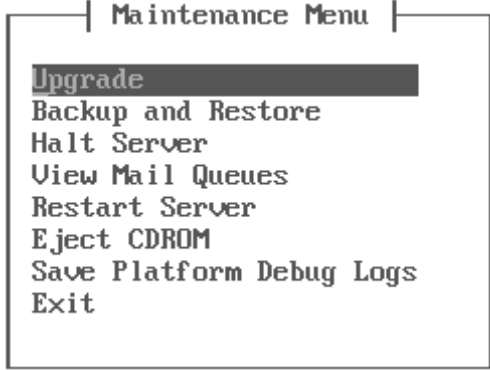
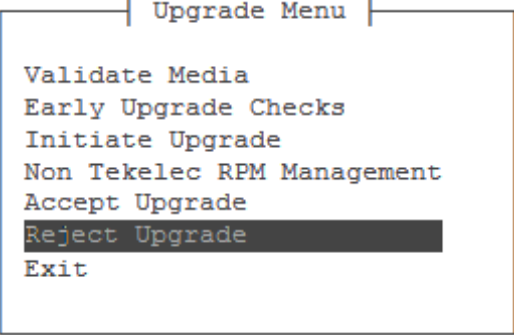
Oracle Customer Support personnel will require login access to the affected PM&C, probe the server for the root cause of the problem, and execute whatever setup or cleanup is necessary in order to prepare the PM&C for backout.

6.2 Recovery Procedures

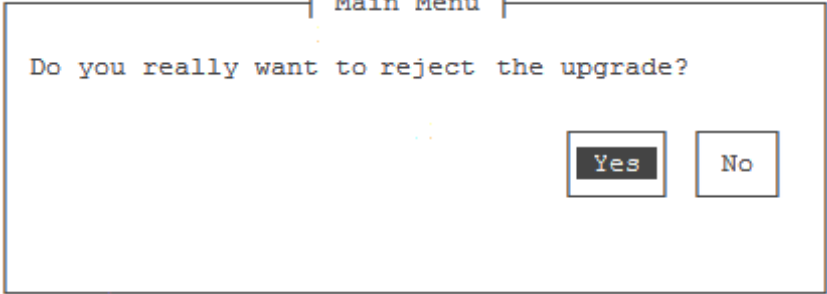
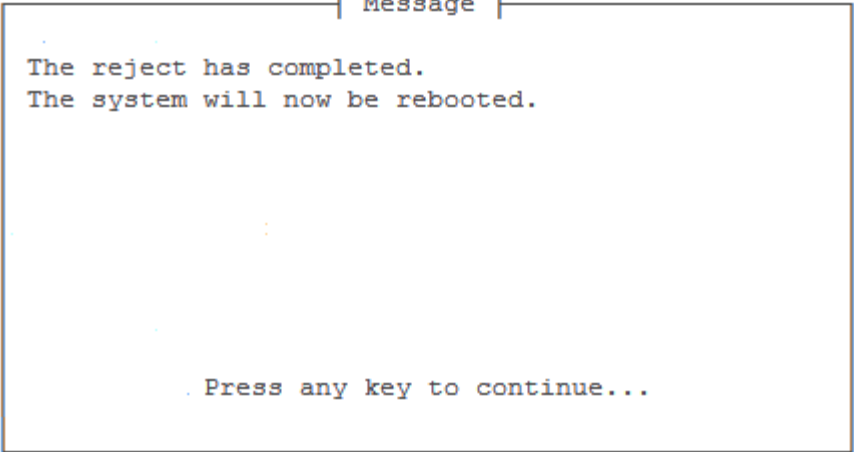
Procedure 28. PM&C Backout(reject) Procedure

S T E P #	Use this procedure to execute a backout of PM&C applications software to the previous version.	
	Note: No matter what the initial cause of the upgrade problem, only once all necessary corrective steps have been taken to prepare for the backout(reject), then the following procedure can be executed to perform a backout(reject).	
	Note: This procedure can also be used for a failed upgrade on the redundant PM&C.	
	Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. If this procedure fails, see Section 1.2.	
	Task	Description
1. <input type="checkbox"/>	Close any active browser sessions to the PM&C.	If you have any open browsers connected to the PM&C, close them before proceeding.
2. <input type="checkbox"/>	If necessary, access the PM&C guest console	If necessary, access the PM&C guest console as detailed in Appendix B Accessing The PM&C Guest Console
3. <input type="checkbox"/>	Run the “platcfg” utility.	Execute: [admusr@pmac ~]\$ sudo su - platcfg

Procedure 28. PM&C Backout(reject) Procedure

<p>4. <input type="checkbox"/></p>	<p>In “platcfg” utility Access the Maintenance menu</p>	<p>Note: Use the “Arrow” and the [ENTER] keys to navigate through the menu options. Note: The following image is for illustrative purposes only.</p>  <p>Select “Maintenance” to navigate to the Maintenance Menu.</p>
<p>5. <input type="checkbox"/></p>	<p>In “platcfg” utility access the Upgrade menu</p>	<p>Note: Use the “Arrow” and the [ENTER] keys to navigate through the menu options. Note: The following image is for illustrative purposes only.</p>  <p>Select “Upgrade” to navigate to the Upgrade Menu.</p>
<p>6. <input type="checkbox"/></p>	<p>In “platcfg” utility, select “Reject Upgrade” to start the reject process.</p>	<p>Note: Use the “Arrow” and the [ENTER] keys to navigate through the menu options. Note: The following image is for illustrative purposes only.</p>  <p>Select “Reject Upgrade” and press the [ENTER] key to start the reject process.</p>

Procedure 28. PM&C Backout(reject) Procedure

<p>7. <input type="checkbox"/></p>	<p>Confirm the decision and execute the backout.</p>	
<p>8. <input type="checkbox"/></p>	<p>The "Reject Upgrade" process starts</p>	<p>Note: The following image is for illustrative purposes only.</p> <pre> Current platform version: 6.5.0-82.14.0 Called with options: --reject --noprompt Loading Upgrade::Backout::LVM Rejecting Upgrade Executing.. Upgrade::Backout::LVM->reject() Setting POST_UPGRADE_ACTION to REJECT in upgrade info. Clearing Upgrade Accept/Reject alarm. Executing.. /var/TKLC/backout/backout_server ***** BACKOUT TO 06/18/2013 14:16:53 UTC ***** The backout type is LVM Scanning package database for config files... Disabling applications on the server... Applications Disabled. RCS_VERSION=1.3 Cleaning backout directory. Rebuilding RPM database. This may take a moment... </pre>
<p>9. <input type="checkbox"/></p>	<p>Backout requires reboot</p>	<p>Note: The following image is for illustrative purposes only.</p> 

Procedure 28. PM&C Backout(reject) Procedure

<p>10. <input type="checkbox"/></p>	<p>A revert of Logical Volume Snapshots is performed</p>	<p>Note: The following image is for illustrative purposes only.</p> <pre> 1371567984:: Removing boot archive lv Logical volume "bootarchive" successfully removed 1371567984:: ##### 1371567984:: reverting snapshot LVs 1371567984:: ##### 1371567984:: Reverting lvm snapshots /sbin/dmccore: stat failed: No such file or directory Merging of volume smac_root_snap started. smac_root: Merged: 94.1% smac_root: Merged: 100.0% Merge of snapshot into logical volume smac_root has finished. Logical volume "smac_root_snap" successfully removed /sbin/dmccore: stat failed: No such file or directory Merging of volume smac_var_snap started. smac var: Merged: 99.6% </pre> <p>Finally, after reverting LVM snapshots completes, a second reboot is performed to reload the system as it existed prior to the original upgrade.</p>
<p>11. <input type="checkbox"/></p>	<p>Wait for PM&C login prompt</p>	<p>Upon successful completion of the upgrade, the user should be returned to a login prompt.</p>
<p>12. <input type="checkbox"/></p>	<p>Login with correct credentials</p>	<p>Use platform admusr credentials from Table 3. Software Upgrade Required Data</p>
<p>13. <input type="checkbox"/></p>	<p>If present, remove the external media from the PM&C TVOE host server.</p>	<p>Remove the external media from the appropriate slot of the PM&C TVOE host server.</p>
<p>14. <input type="checkbox"/></p>	<p>Verify the backout completed.</p>	<p>Execute the following command to verify source PM&C release:</p> <pre> [admusr@pmac ~]\$ sudo /usr/TKLC/plat/bin/appRev Install Time: Mon Nov 11 14:16:32 2013 Product Name: PMAC Product Release: 5.7.0_57.3.0 Part Number ISO: 872-2586-101 Part Number USB: 872-2586-101 Base Distro Product: TPD Base Distro Release: 6.7.0_84.4.0 Base Distro ISO: TPD.install-6.7.0_84.4.0-OracleLinux6.4- x86_64.iso OS: OracleLinux 6.4 </pre> <p>If correct Product Release is not displayed, contact Oracle Customer Support and do not proceed until instructed by an Oracle representative.</p>

Procedure 28. PM&C Backout(reject) Procedure

15. <input type="checkbox"/>	Execute the system health check.	Execute Appendix C PM&C System Health Check Unless otherwise instructed, if any error or failure conditions are discovered on the PM&C or PM&C application then do <i>not</i> proceed. Contact Oracle Customer Support to work to resolve the failure conditions.
16. <input type="checkbox"/>	Clear browser cache	Clear your browser's cache to ensure that your browser has the latest client-side code loaded. Refer to your browser's documentation if necessary.
Section 6.2 has been completed.		

Appendix A. Accessing The PM&C TVOE Host Console

Procedure 29. Accessing the PM&C 5.7, 6.0, or 6.2 TVOE Host Console

S T E P #	Use this procedure to access the console of a TVOE host in PM&C 5.7, 6.0, or 6.2 system	
	Note: Be sure to capture a log of all lines appearing on the screen on the laptop, desktop, or other computer used when executing this procedure.	
	Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.	
	If this procedure fails, see Section 1.2.	
	Task	Description
1. <input type="checkbox"/>	Login to Management Server iLO/iLOM.	Access the Management Server iLO/iLOM using <i>Appendix F How to Access a Server Console Remotely</i> , in the appropriate Platform Configuration Guide for the release being upgrade to 6.2. If necessary refer to Table 3. Software Upgrade Required Data for login credentials.
2. <input type="checkbox"/>	Login to TVOE as admusr	If necessary login with the admusr credentials captured in Table 3. Software Upgrade Required Data [admusr@tvoe ~]\$
3. <input type="checkbox"/>	Exit this procedure and return to the procedure which referred you.	Return to the next step in the referring procedure.
This procedure has been completed.		

Appendix B. Accessing The PM&C Guest Console

Procedure 30. Accessing the PM&C 5.7, 6.0, or 6.2 Guest console

S T E P #	<p>Use this procedure to access the virtualized PM&C 6.2 guest console running on a TVOE hypervisor.</p> <p>Note: Be sure to capture a log of all lines appearing on the screen on the laptop, desktop, or other computer used when executing this procedure.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. If this procedure fails, see Section 1.2.</p>	
	Task	Description
1. <input type="checkbox"/>	Access the TVOE host console	Login to the TVOE host console, using <i>Appendix A Accessing The PM&C TVOE Host Console</i>
2. <input type="checkbox"/>	Determine the name of the PM&C guest	<p>At the TVOE console, list the guests and locate the one representing the PM&C:</p> <pre>[admusr@tvoe ~]\$ sudo /usr/bin/virsh list Id Name State ----- 11 pmac running [admusr@tvoe ~]\$</pre>
3. <input type="checkbox"/>	Login to PM&C guest console as the admusr.	<p>Connect to the console and login as the admusr captured in Table 3. Software Upgrade Required Data (this example assumes the PM&C is currently at release 6.0).</p> <p>It may be necessary to press return to get a prompt</p> <pre>[admusr@tvoe ~]\$ sudo /usr/bin/virsh console <PMAC_Name> Connected to domain <PMAC_Name> Escape character is ^] Oracle Linux Server release 6.5 Kernel 2.6.32-431.20.3.el6prere17.0.0.0_86.12.0.x86_64 on an x86_64 <PMAC_Name> login: admusr Password: [admusr@<PMAC_Name> ~]\$</pre>
4. <input type="checkbox"/>	Exit this procedure and return to the procedure which referred you.	Return to the next step in the referring procedure.

Appendix C. PM&C System Health Check

Procedure 31. PM&C 5.7, 6.0, or 6.2 System Health Check

S T E P #	Use this procedure to perform a PM&C 6.2 system health check.	
	<p>Note: Be sure to capture a log of all lines appearing on the screen on the laptop, desktop, or other computer used when executing this procedure.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. If this procedure fails, see Section 1.2.</p>	
	Task	Description
1. <input type="checkbox"/>	Access the PM&C guest console	If necessary, access the PM&C guest console as detailed in Appendix B Accessing The PM&C Guest Console
2. <input type="checkbox"/>	Run the “sentry status” command to verify the status of the PM&C application.	<pre>[admusr@pmac ~]\$ sudo /usr/TKLC/smac/bin/sentry status sending status command... PM&C Sentry Status ----- sentryd started: Thu May 31 07:47:31 2012 Current activity mode: ACTIVE Process PID Status StartTS NumR ----- - ---- smacTalk 5932 running Sun Dec 6 07:47:31 2009 1 smacMon 5935 running Sun Dec 6 07:47:31 2009 1 hpiPortAudit 5951 running Sun Dec 6 07:47:31 2009 1 snmpEventHandler 5962 running Sun Dec 6 07:47:31 2009 1 eclipseHelp 5971 running Sun Dec 6 07:47:31 2009 2 Thu June 7 11:09:44 2012 Command Complete. [admusr@pmac ~]\$</pre> <p>Note: There will be no entry displayed for the eclipseHelp process on PM&C 6.0 and 6.2 systems -- this is expected.</p>
3. <input type="checkbox"/>	Run alarmMgr on PM&C instance.	<pre>[admusr@pmac ~]\$ sudo /usr/TKLC/plat/bin/alarmMgr -- alarmStatus [admusr@pmac ~]\$</pre>

Procedure 31. PM&C 5.7, 6.0, or 6.2 System Health Check

<p>4. <input type="checkbox"/></p>	<p>If any error messages are displayed by the alarmMgr command, if sentry shows any PM&C processes not running, or alarmMgr shows any failures, then there is a problem with the Management Server or PM&C application.</p> <p>Contact Oracle Customer Support for information on how to proceed.</p>	<p>If sentry shows any PM&C processes not running, then the healthcheck was not successful.</p> <p>Contact Oracle Customer Support for information on how to proceed.</p> <p>Otherwise, if alarmMgr shows no alarms and sentry shows all processes running, then PM&C appears to be running normally.</p>
<p>5. <input type="checkbox"/></p>	<p>Verify that the backup directory contains recent backup archive files.</p>	<p>Execute the following command:</p> <pre>[admusr@pmac ~]\$ sudo /bin/ls -al /var/TKLC/smac/backup/ total 40 drwxrwxr-x 4 pmacadmin pmacbackup 4096 Jun 5 16:18 . drwxr-xr-x 9 pmacadmin smac 4096 May 25 16:33 .. -rw-rw-r-- 1 pmacd pmacd 11014 Jun 5 16:18 backupPmac_20120605_161825.pef drwx----- 2 pmacadmin pmacbackup 16384 May 25 16:32 lost+found drwxr-xr-x 2 pmacadmin pmacbackup 4096 May 25 16:32 tvoeBackup [admusr@pmac ~]\$</pre> <p>Verify that recent backups are present. The date of the backup is coded in the backup archive file name: backupPmac_<YYYY><MM><DD>_<hh><mm><ss>.pef You should see backup archive files for any backups performed as part of this upgrade procedure.</p>
<p>6. <input type="checkbox"/></p>	<p>If recent backup archive files do not exist, health check fails.</p>	<p>If no recent backup archive files are present, the health check fails.</p> <p>Contact Oracle Customer Support for resolution of the backup issue.</p>
<p>7. <input type="checkbox"/></p>	<p>Exit the PM&C guest console</p>	<p>Exit the PM&C guest console following instructions in <i>Appendix I How to Exit a Guest Console Session on an iLO</i>, in the appropriate Platform Configuration Guide for the release being upgraded to 6.2.</p>
<p>8. <input type="checkbox"/></p>	<p>Run alarmMgr on Management Server console.</p>	<pre>[admusr@tvoe ~]\$ sudo /usr/TKLC/plat/bin/alarmMgr -- alarmStatus [admusr@tvoe ~]\$</pre> <p>If alarmMgr shows no alarms then the management server appears to be running normally. Otherwise Contact Oracle Customer Support for information on how to proceed.</p>
<p>This procedure has been completed.</p>		

Appendix D. PM&C System Backup

Procedure 32. Primary PM&C 5.7,6.0, or 6.2 backup

STEP #	Task	Description
Use this procedure to back up all necessary PM&C 5.7, 6.0 or 6.2 database data. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. If this procedure fails, see Section 1.2.		
1. <input type="checkbox"/>	Access the primary PM&C guest console	If necessary, access the primary PM&C guest console as detailed in Appendix B Accessing The PM&C Guest Console
2. <input type="checkbox"/>	Perform the backup to local disk.	<pre>[admusr@pmac ~]\$ sudo /usr/TKLC/smac/bin/pmacadm backup</pre> PM&C backup been successfully initiated as task ID 7 <pre>[admusr@pmac ~]\$</pre> The output of the command should be indicate success of starting a background task. Note the task ID in your command output.
3. <input type="checkbox"/>	Access the PM&C GUI	If necessary, open IE web browser and enter: https://<PM&C Management Network IP > Login with administrator credentials from Table 3. Software Upgrade Required Data.
4. <input type="checkbox"/>	Verify the backup task succeeds in PM&C GUI.	Navigate to the Task Monitoring page on the PM&C GUI. Verify the backup task with the task ID noted in step 2 completes successfully. If the PM&C backup fails, contact Oracle Customer Support for assistance.
5. <input type="checkbox"/>	The backup file must be transferred off-host to provide recovery in the event of a disaster.	Execute the following command to locate the latest backup file (output similar to the following is observed): <pre>[admusr@pmac ~]\$ sudo /bin/ls -al /var/TKLC/smac/backup/</pre> <pre>-rw-rw-r-- 1 pmacd pmacd 11014 Jun 5 16:18</pre> <pre>backupPmac_20120605_161825.pef</pre> Transfer the file to a remote server using scp.
<p>This procedure has been completed.</p>		

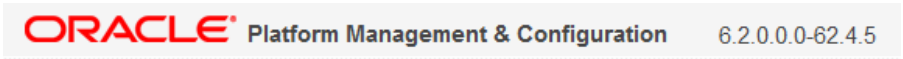
Appendix E. PM&C System Backup To Redundant PM&C

Procedure 33. PM&C 5.7, 6.0, or 6.2 backup to redundant PM&C

S T E P #	<p>Use this procedure to up all necessary PM&C database data from the primary PM&C 5.7, 6.0, or 6.2 to the redundant PM&C.</p> <p>Note: The procedure requires that a redundant PM&C be installed, configured, and have network connectivity.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If this procedure fails, see Section 1.2.</p>	
	Task	Description
1. <input type="checkbox"/>	Access the primary PM&C guest console	If necessary, access the primary PM&C guest console as detailed in Appendix B Accessing The PM&C Guest Console
2. <input type="checkbox"/>	In the primary PM&C guest console perform the backup to the redundant PM&C.	<p>Note: The following command transfers the new backup file to the redundant PM&C. In addition, it transfers any and all of the images provisioned in the Software Inventory (not previously transferred).</p> <p>Note: The --media option must be used with the pmacadm backup command. The value assigned to the media must indicate the desire to backup data to the redundant PM&C</p> <p>Note: The IP Address of the redundant Management Sever must have been provisioned on the Manage Backup Data GUI screen.</p> <pre>[admusr@pmac ~]\$ sudo /usr/TKLC/smac/bin/pmacadm --media="Remote Server"</pre> <p>PM&C backup been successfully initiated as task ID 8</p> <pre>[admusr@pmac ~]\$</pre> <p>The output of the command should be indicate success of starting a background task. Note the task ID in your command output.</p>
3. <input type="checkbox"/>	Access the primary PM&C GUI	<p>If necessary, open IE web browser and enter:</p> <p>https://<PM&C Management Network IP ></p> <p>Login with administrator credentials from Table 3. Software Upgrade Required Data</p>
4. <input type="checkbox"/>	Verify the backup task succeeds in primary PM&C GUI.	<p>Navigate to the Task Monitoring page on the primary PM&C GUI. Verify the backup task with the task ID noted in step 2 completes successfully.</p> <p>If the PM&C backup fails, contact Oracle Customer Support for assistance.</p>
This procedure has been completed		

Appendix F. Determine The Current PM&C Version

Procedure 34. Determine the current PM&C version

S T E P #	Use this procedure to determine the current PM&C version. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. If this procedure fails, see Section 1.2.	
	Task	Description
1. <input type="checkbox"/>	Access the PM&C GUI	If necessary, open IE web browser and enter: https://<PM&C Management Network IP > Login with administrator credentials from Table 3. Software Upgrade Required Data.
2. <input type="checkbox"/>	Determine the PM&C release running.	The top most header on the Welcome Page should contain the Release Number. It should start with “ Platform Management & Configuration ” and then indicate the PM&C release number which should start with 6.2: 
3. <input type="checkbox"/>	Return to the referring procedure	Return to the referring procedure.
This procedure has been completed.		

Appendix G. Determine If PM&C TVOE Host Requires Upgrade

Procedure 35. Determine if PM&C 5.7, 6.0, or 6.2 TVOE host requires upgrade

S T E P #	Use this procedure to determine if the PM&C 5.7, 6.0, or 6.2 TVOE host needs upgrading. Note: If the PM&C TVOE host cannot be upgrade at this time, then PM&C upgrade must not be attempted. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. If this procedure fails, see Section 1.2.	
	Task	Description
1. <input type="checkbox"/>	Access the TVOE host console	Login to the TVOE host console, using Appendix A Accessing The PM&C TVOE Host Console If needed, exit the PM&C guest console following instructions in <i>Appendix I How to Exit a Guest Console Session on an iLO</i> , in the appropriate Platform Configuration Guide for the release being upgraded to.
2. <input type="checkbox"/>	Determine the release of TVOE running.	<pre>[admusr@tvoe ~]\$ sudo /usr/TKLC/plat/bin/appRev Install Time: Mon Apr 27 15:47:04 2015 Product Name: TVOE Product Release: 3.2.0.0.0_88.8.0 Base Distro Product: TPD Base Distro Release: 7.2.0.0.0_88.8.0 Base Distro ISO: TPD.install-7.0.0.0.0_86.8.0- OracleLinux6.6-x86_64.iso ISO name: TVOE-3.2.0.0.0_86.8.0-x86_64.iso OS: OracleLinux 6.6</pre>
3. <input type="checkbox"/>	Compare the product release shown above against the supported release of TVOE noted in the Application release notes.	If a newer TVOE release is specified, then you must upgrade the PM&C TVOE host before upgrade of the PM&C can commence, using the procedure that follows.
This procedure has been completed.		

Procedure 36. Upgrade the PM&C 5.7, 6.0, or 6.2 TVOE host

S T E P #	<p>Use this procedure to upgrade the PM&C 5.7, 6.0, or 6.2 TVOE host.</p> <p>Note: This procedure is executed either during the same maintenance window or in a separate maintenance window from the PM&C upgrade.</p> <p>Note: If the PM&C TVOE host cannot be upgraded at this time, then PM&C upgrade must not be attempted.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under step number.</p> <p>If this procedure fails, see Section 1.2.</p>	
	Task	Description
1. <input type="checkbox"/>	<p>Shutdown all running guests in preparation for the TVOE upgrade</p>	<p>An upgrade of a TVOE host will shutdown all guest OS (including PM&C) during the upgrade. However, prior to upgrading the TVOE host, ensure that all guests on that host are properly shutdown.</p> <p>Shutdown the PM&C guest as detailed in <i>Appendix H Shutdown PM&C Guest</i></p> <p>Note: Shut down all additional non-PM&C guests as detailed in application document. The upgrade of the TVOE will automatically restart each guest that was shut down.</p>
2. <input type="checkbox"/>	<p>Perform the TVOE upgrade</p>	<p>Execute all Stand Alone TVOE host upgrade procedures outlined in the TVOE Software Upgrade document for the release being upgraded.</p>
3. <input type="checkbox"/>	<p>Access the TVOE host console</p>	<p>Login to the TVOE host console, using <i>Appendix A Accessing The PM&C TVOE Host Console</i></p>
4. <input type="checkbox"/>	<p>Ensure all images that have been used during upgrade have been removed from TVOE</p>	<p>Execute:</p> <pre>[admusr@tvoe ~]\$ sudo /bin/ls /var/TKLC/upgrade/ TVOE-3.2.0.0.0_88.9.0-x86_64.iso</pre> <p>If there are images that need to be removed, using the output of the command above, specify the full path of the image to be removed:</p> <pre>[admusr@tvoe ~]\$ sudo /bin/rm -f /var/TKLC/upgrade/<image_name.iso></pre> <p>For instance:</p> <pre>[admusr@tvoe ~]\$ sudo /bin/rm -f /var/TKLC/upgrade/TVOE- 3.2.0.0.0_88.9.0-x86_64.iso</pre> <p>Repeat this step as necessary to ensure there are no images left to be removed.</p>
5. <input type="checkbox"/>	<p>If present, remove the external media from the PM&C TVOE host server.</p>	<p>Remove the external media from the appropriate slot of the PM&C TVOE host server.</p>

Procedure 36. Upgrade the PM&C 5.7, 6.0, or 6.2 TVOE host

6. <input type="checkbox"/>	Start the PM&C guest	<p>Using virsh utility on TVOE host of PM&C guest, start the PM&C guest. Query the list of guests until the PM&C guest is "running".</p> <pre>[admusr@tvoe ~]\$ sudo /usr/bin/virsh list --all Id Name State ----- 20 pmac shut off [admusr@tvoe ~]\$ sudo /usr/bin/virsh start <pmac> Domain pmac started [admusr@tvoe ~]\$ sudo /usr/bin/virsh list --all Id Name State ----- 20 pmac running</pre>
This procedure has been completed.		

Appendix H. Shutdown PM&C Guest

This appendix contains a procedure used to perform a shutdown of the PM&C guest.

Procedure 37. Shutdown the PM&C 5.7, 6.0, or 6.2 Guest

S T E P #	Use this procedure to shut down a PM&C 5.7 or later Guest. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. If this procedure fails, see Section 1.2.																																					
	Task	Description																																				
1. <input type="checkbox"/>	Log in to the primary PM&C GUI.	<p>If needed, open IE web browser and enter: https://<PM&C Management Network IP ></p> <p>Login with administrator credentials from Table 3. Software Upgrade Required Data</p>																																				
2. <input type="checkbox"/>	Check for any background tasks in-progress on PM&C	<p>On the PM&C GUI, navigate to the Task Monitoring page. Verify all tasks show as complete (either green, 100% progress or red, failed) and not in-progress (blue with <100% progress). If any tasks show as in-progress (blue) then wait for the task to complete prior to going to the next step.</p> <p>Main Menu: Task Monitoring Wed Jul 15 15:59:38 2015 UTC</p> <div style="border: 1px solid #ccc; padding: 5px; margin-bottom: 10px;"> <p>Filter ▾</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>ID</th> <th>Task</th> <th>Target</th> <th>Status</th> <th>State</th> <th>Task Output</th> <th>Running Time</th> <th>Start Time</th> <th>Progress</th> </tr> </thead> <tbody> <tr> <td>34</td> <td>Add Image</td> <td></td> <td style="color: red;">Temporary mount Failure: ISO image file already exists /var/TKLC/smac/image/repository/PMAC-6.2.0.0_62.7.0-x86_64.iso</td> <td style="color: red;">FAILED</td> <td>N/A</td> <td>0:00:19</td> <td>2015-07-15 11:16:42</td> <td style="color: red;">23%</td> </tr> <tr> <td>33</td> <td>Add Image</td> <td></td> <td style="color: green;">Done: device://dev/sr1</td> <td style="color: green;">COMPLETE</td> <td>N/A</td> <td>0:00:38</td> <td>2015-07-15 11:15:30</td> <td style="color: green;">100%</td> </tr> <tr> <td>32</td> <td>Backup PM&C</td> <td></td> <td style="color: green;">PM&C Backup successful</td> <td style="color: green;">COMPLETE</td> <td>N/A</td> <td>0:00:13</td> <td>2015-07-15 05:00:01</td> <td style="color: green;">100%</td> </tr> </tbody> </table> <p style="text-align: center;"> <input type="button" value="Delete Completed"/> <input type="button" value="Delete Failed"/> <input type="button" value="Delete Selected"/> </p> </div> <p>Note: If desired, you can delete all of the Complete and Failed tasks using the “Delete Completed” and “Delete Failed” buttons. This will leave only the in-progress tasks.</p>	ID	Task	Target	Status	State	Task Output	Running Time	Start Time	Progress	34	Add Image		Temporary mount Failure: ISO image file already exists /var/TKLC/smac/image/repository/PMAC-6.2.0.0_62.7.0-x86_64.iso	FAILED	N/A	0:00:19	2015-07-15 11:16:42	23%	33	Add Image		Done: device://dev/sr1	COMPLETE	N/A	0:00:38	2015-07-15 11:15:30	100%	32	Backup PM&C		PM&C Backup successful	COMPLETE	N/A	0:00:13	2015-07-15 05:00:01	100%
ID	Task	Target	Status	State	Task Output	Running Time	Start Time	Progress																														
34	Add Image		Temporary mount Failure: ISO image file already exists /var/TKLC/smac/image/repository/PMAC-6.2.0.0_62.7.0-x86_64.iso	FAILED	N/A	0:00:19	2015-07-15 11:16:42	23%																														
33	Add Image		Done: device://dev/sr1	COMPLETE	N/A	0:00:38	2015-07-15 11:15:30	100%																														
32	Backup PM&C		PM&C Backup successful	COMPLETE	N/A	0:00:13	2015-07-15 05:00:01	100%																														
3. <input type="checkbox"/>	Access the PM&C guest console	If necessary, access the PM&C guest console as detailed in Appendix B Accessing The PM&C Guest Console																																				

Procedure 37. Shutdown the PM&C 5.7, 6.0, or 6.2 Guest

<p>4. <input type="checkbox"/></p>	<p>Shutdown PM&C Guest</p>	<p>Assuming no in-progress tasks exist, then it is safe to shut down the PM&C guest.</p> <p>Execute the following command: <pre>[admusr@pmac ~]\$ sudo /usr/bin/halt -p</pre> Broadcast message from root@pmacDev901 (/dev/ttyS0) at 11:20 ...</p> <p>The system is going down for power off NOW! <pre>[admusr@pmac ~]\$</pre></p> <p>Eventually the virsh console session is closed and you are returned to the TVOE host command prompt:</p> <p>Halting system... Power down.</p> <pre>[admusr@tvoe ~]\$</pre>
<p>5. <input type="checkbox"/></p>	<p>Verify PM&C guest is shutdown</p>	<p>From the TVOE host command prompt execute the following command: <pre>[admusr@tvoe ~]\$ sudo /usr/bin/virsh list --all</pre> <pre>Id Name State</pre> <pre>-----</pre> <pre>- pmac shut off</pre> <pre>[admusr@tvoe ~]\$</pre></p> <p>This should show the guest state as “shut off”.</p> <p>Note: You will want to be sure all guests are in the shut off state as well.</p>
<p>This procedure has been completed.</p>		

Appendix I. Upgrade Devices For 7.2 NetConfig

This appendix contains a procedure used to perform required Platform 7.2 switch configurations with netConfig. The commands below will modify switch configurations to bring them in-line with Platform 7.2 initialized switches, without going through the disruptive process of re-initializing and restoring switch configurations of in-service switches. Though Platform 7.2 supports more than one upgrade path, the procedure below is written generically to apply to any valid Platform 7.2 upgrade path. Some commands below may have already been executed during a previous upgrade. If this is the case, some commands may return a notice that an object or setting was not found, as it was removed in a previous upgrade operation.

Procedure 38. Post Upgrade Configuration of netConfig baseline level set for switch configurations

STEP #	Task	Description
Use this procedure to standardize post inits switch configurations. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. If this procedure fails, see Section 1.2.		
1. <input type="checkbox"/>	Platform 7.0 updates	Commands in this section are only applicable when upgrading to Platform 7.2. Note: Depending on the specific upgrade path some of the commands below may have already been completed during original or subsequent initializations. If this is the case, a command line message indicating the setting already exists or does not exist may be received. Ignore these messages; no action is required beyond completion of the following commands. An example would be removing a community string from an SNMP community. In this case, the message “SNMP community not found: <community_string>” may be seen.
2. <input type="checkbox"/>	Reconfigure all 3020 enclosure switches	Note: If there are no Cisco 3020 switches in the repository, skip this step. Execute the following for all 3020 devices: <pre>[admusr@pmac ~]\$ sudo /usr/TKLC/plat/bin/netConfig userConfigureCommand --device=<switch_name> command="line vty 0" commandPrompt="config-line" subcommand="exec-timeout 15" [admusr@pmac ~]\$ sudo /usr/TKLC/plat/bin/netConfig userConfigureCommand --device=<switch_name> command="aaa authentication login onconsole local" [admusr@pmac ~]\$ sudo /usr/TKLC/plat/bin/netConfig userConfigureCommand --device=<switch_name> command="line con 0" commandPrompt="config-line" subcommand="login authentication onconsole" [admusr@pmac ~]\$ sudo /usr/TKLC/plat/bin/netConfig userConfigureCommand --device=<switch_name> command="vtp mode transparent" [admusr@pmac ~]\$ sudo /usr/TKLC/plat/bin/netConfig userConfigureCommand --device=<switch_name> command="vtp mode off" [admusr@pmac ~]\$ sudo /usr/TKLC/plat/bin/netConfig userConfigureCommand --device=<switch_name> command="no service config" [admusr@pmac ~]\$ sudo /usr/TKLC/plat/bin/netConfig saveConfiguration --device=<switch_name> [admusr@pmac ~]\$ sudo /usr/TKLC/plat/bin/netConfig reboot --device=<switch_name></pre>

Procedure 38. Post Upgrade Configuration of netConfig baseline level set for switch configurations

<p>3. <input type="checkbox"/></p>	<p>Reconfigure all 6120 enclosure switches</p>	<p>Note: If there are no 6120 switches in the repository, skip this step. Execute the following for all 6120 devices: [admusr@pmac ~]\$ sudo /usr/TKLC/plat/bin/netConfig userConfigureCommand --device=<switch_name> command="no web-management" [admusr@pmac ~]\$ sudo /usr/TKLC/plat/bin/netConfig userConfigureCommand --device=<switch_name> command=" trunk-load-balance L3-based " [admusr@pmac ~]\$ sudo /usr/TKLC/plat/bin/netConfig userConfigureCommand --device=<switch_name> command='no snmp-server community "public" unrestricted' [admusr@pmac ~]\$ sudo /usr/TKLC/plat/bin/netConfig saveConfiguration --device=<switch_name></p>
<p>4. <input type="checkbox"/></p>	<p>Reconfigure all aggregation switches</p>	<p>Note: If there are no Cisco 4948 switches in the repository, skip this step. Execute the following for all 4948 devices: For Cisco 4948: [admusr@pmac ~]\$ sudo /usr/TKLC/plat/bin/netConfig userConfigureCommand --device=<switch_name> command="vtp mode transparent" [admusr@pmac ~]\$ sudo /usr/TKLC/plat/bin/netConfig saveConfiguration --device=<switch_name> For Cisco 4948E, E-F [admusr@pmac ~]\$ sudo /usr/TKLC/plat/bin/netConfig userConfigureCommand --device=<switch_name> command="vtp mode off" 4. [admusr@pmac ~]\$ sudo /usr/TKLC/plat/bin/netConfig saveConfiguration --device=<switch_name></p>
<p>5. <input type="checkbox"/></p>	<p>6125 enclosure switches</p>	<p>No action is necessary for 6125G and XLG devices.</p>

Procedure 38. Post Upgrade Configuration of netConfig baseline level set for switch configurations

<p>6. <input type="checkbox"/></p>	<p>Backup all switch configurations</p>	<p>Execute the following command against each platform switch using their corresponding ssh_service:</p> <pre>[admusr@pmac ~]\$ sudo /usr/TKLC/plat/bin/netConfig backupConfiguration --device=<switch_name> service=<ssh_service> filename=<switch_name>-backup</pre> <p>Verify switch configuration was backed up by cat <switch_name>-backup and inspect its contents to ensure it reflects the latest known good switch configurations. Then, copy the files over to the backup directory.</p> <pre>\$ sudo /bin/ls -i ~<switch_backup_user>/<switch_name>-backup* \$ sudo /bin/cat ~<switch_backup_user>/<switch_name>-backup* \$ sudo /bin/chmod 644 <switch_name>-backup* \$ sudo /bin/mv -i ~admusr/<switch name>-backup* /usr/TKLC/smac/etc/switch/backup/</pre>
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This procedure has been completed.

Appendix J. Locate Product Documentation on the Oracle Help Center Site

Oracle Communications customer documentation is available on the web at the Oracle Help Center (OHC) site, <http://docs.oracle.com>. You do not have to register to access these documents. Viewing these files requires Adobe Acrobat Reader, which can be downloaded at <http://www.adobe.com>.

1. Access the Oracle Help Center site at <http://docs.oracle.com>.
2. Click Industries.
3. Under the Oracle Communications subheading, click the Oracle Communications documentation link. The Communications Documentation page appears. Most products covered by these documentation sets will appear under the headings “Network Session Delivery and Control Infrastructure” or “Platforms.”
4. Click on your Product and then the Release Number. A list of the entire documentation set for the selected product and release appears.
5. To download a file to your location, right-click the PDF link, select Save target as (or similar command based on your browser), and save to a local folder.