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Broadband Network Solutions

Software Upgrade Procedure

PM&C 5.0 Incremental Upgrade

909-2207-001 Rev G, July 2013



CAUTION: Use only the Upgrade procedure included in the Upgrade Kit.
Before upgrading any system, please access Tekelec's Customer Support site and review any Technical Service Bulletins (TSBs) that relate to this upgrade.

Contact the Tekelec Customer Care Center and inform them of your upgrade plans prior to beginning this or any upgrade procedure.

Phone: 1-888-FOR-TKLC (1-888-367-8552) or 919-460-2150 (international)
FAX: 919-460-2126
EMAIL: support@tekelec.com

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1 INTRODUCTION

PM&C is an application that provides platform-level (as opposed to application-level) management functionality for HP c-Class enclosures, and rack mounted servers . 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 from one 5.0 software release to another. This is also known as a minor or incremental upgrade of a 5.0 series software release. Please note that a migration upgrade is also available from PM&C release 4.0 to PM&C release 5.0 [6].

The audience for this document includes these Tekelec PM&C GPS groups: Software System, Product Verification, Technical Communications, and Customer Service including Software Operations and New Product Introduction. This document provides step-by-step instructions to execute any Release 5.0 incremental upgrade using platform 6.0.

1.2 REFERENCES

1.2.1 EXTERNAL

n/a

1.2.2 INTERNAL (TEKELEC)

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

1. *Platform 6.0 Configuration Procedure Reference*, 909-2209-001, Current version , Tekelec
2. *Procedure, Formal Peer Review*, PD001866.doc, Current Version
3. *Software Upgrade Procedure Template*, TM005074, Current Version, Tekelec
4. *Acronym Guide*, MS005077, Current Version, Tekelec
5. *TVOE Upgrade*, 909-2211-001, Rev 1, Tekelec
6. *PM&C Migration 4.0 to 5.0*, 909-2208-001, Tekelec

1.3 SOFTWARE RELEASE NUMBERING

Refer to Engineering Release Notes, of both PM&C and TVOE, or other appropriate document with the most recent build numbers in order to identify the proper components that comprise the product's software release.

1.4 ACRONYMS AND TERMINOLOGY

Table 1. Acronyms and Terminology

Acronym/Term	Meaning
DHCP	Dynamic Host Configuration Protocol
ESWD	Electronic Software Delivery
External Media	USB, CD, or DVD containing a software image
HP c-Class	HP blade server offering
IPM	Initial Product Manufacturing
Management Server	HP ProLiant DL 360/DL 380 server on which TVOE is installed and a PM&C guest resides.
NetBackup Feature	Feature that provides support of the Symantec NetBackup client utility on an application server.

Acronym/Term	Meaning
Redundant Management Server	HP ProLiant DL360/DL380 server on which TVOE is installed and a PM&C guest resides 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.

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.

This product recommends the latest firmware be installed as provided in the Tekelec HP Solutions Firmware Upgrade Pack (795-0000-4XX) which can be obtained from the Tekelec Customer Support Center download site (ESWD). In the Download Center follow the links for Product List, Tekelec, HP Solutions Firmware to locate and download the current release. Use the Upgrade Procedures and Release Notes documents contained in the Pack to assess whether a firmware upgrade is necessary.

This product requires that each HP c-Class enclosure that is managed by the PM&C 5.0 server has installed redundant OAs.

Upgrade of the PM&C application should be done prior to an upgrade of any other application. The application release notes should indicate which release of PM&C is required.

1.6 SUPPORTED INTERNET BROWSERS AND VERSIONS

Table 2. Supported Internet Browsers and Versions

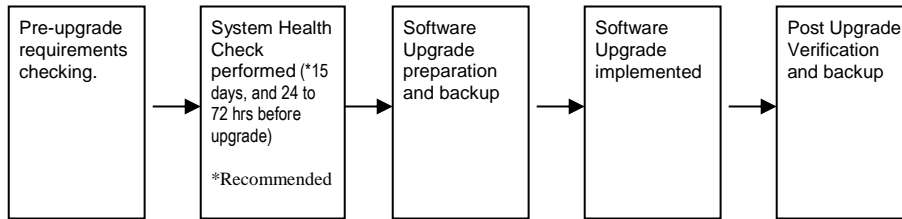
PM&C release	Supported Browsers and Versions
PM&C 5.0 release	Microsoft® Internet Explorer 7.0 or 8.0

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 is upgraded subsequent to the primary PM&C.

Figure 1: Upgrade Process – PM&C Upgrade



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 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.

Call the Tekelec Customer Care Center at 1-888-FOR-TKLC (1-888-367-8552); or 1-919-460-2150 (international) prior to executing this upgrade to ensure that the proper media are available for use.

Before upgrade, users must complete the 4.2 Software Upgrade Preparation 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.

*** WARNING ***

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 Tekelec 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. PM&C 5.0.X-50.XX.X Upgrade kit (DVD or USB or ESWD)
3. TVOE 2.0.X-80.XX.X Disaster Recovery Kit (DVD and Document)
4. Platform 6.0 Configuration Reference, 909-2209-001
5. Network access to the PM&C TVOE host iLO
6. Capability to log into the PM&C guest via a network connection to allow remote access for Tekelec Customer Service personnel.
7. Capability to log into the PM&C's web UI.
8. Terminal device or equivalent interface.
9. TVOE ISO image file or media (if upgrade of PM&C TVOE host expected).
10. Referring Application Release Notes

3.1.1 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/passwords (root user)	
PM&C TVOE host Network addresses (TVOE IP address)	
PM&C Guest Name	
PM&C User IDs/passwords (root user)	
PM&C GUI User IDs/passwords (pmacadmin)	
PM&C Network addresses (PM&C IP address)	
OA administrator account login credentials	
iLO login credentials	

3.1.2 APPLICATION ISO IMAGE FILE / MEDIA

The Target Release ISO image file must already be at the customer site; either ESWD onto PM&C or delivered on external media.

This file is necessary to perform the upgrade.

- The PM&C application ISO image file for PM&C 5.0 will be in the following format:
 - **872-2441-101-5.0.x_50.y.z-PMAC-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.

3.2 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 insure 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.

Note: This product recommends the latest firmware be installed. This procedure is not included in the overview and time estimates below

Table 4. Pre-Upgrade Overview

Elapsed Time (Hours: Minutes)		Downtime (Hours: Minutes)		Activity	Impact
This Step	Cum.	This Step	Cum.	Pre-Upgrade Procedures	
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.
15	25			Backup PM&C provision and configuration databases.	PM&C provision and configuration databases are backed up.

3.3 UPGRADE EXECUTION OVERVIEW

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

Table 5. Upgrade Execution Overview

Elapsed Time (Hours: Minutes)		Downtime (Hours: Minutes)		Activity	Impact
This Step	Cum.	This Step	Cum.	Upgrade Procedures	
30	55	30	30	Execute the upgrade on PM&C	PM&C Software is upgraded

3.4 POST UPGRADE OVERVIEW

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

Table 6. Post Upgrade Overview

Elapsed Time (Hours: Minutes)		Downtime (Hours: Minutes)		Activity	Impact
This Step	Cum.	This Step	Cum.	Post-Upgrade Procedures	
10	65	10	40	Perform System Health check	Notify Tekelec Customer Service if system health check shows any problems with PM&C system. Backout may be necessary.
15	80			Backup PM&C provision and configuration databases.	PM&C provision and configuration databases are backed up post-upgrade.
10	90			Accept the upgrade	Upgrade is accepted and backout is no longer available

3.5 BACKOUT(REJECT) PROCEDURE OVERVIEW

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

Table 7. Backout Procedure Overview

Elapsed Time (Hours or Minutes)		Downtime (Minutes)		Activity	Impact
This Step	Cum.	This Step	Cum.	Backout (Reject) Setup Procedures	
-	-	-	-	Contact Tekelec Customer Service	Apprise Tekelec Customer Service of the situation and get guidance on proceeding.
30	120	30	70	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.

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 PREPARATION

NOTE: The PM&C Healthcheck procedure below should be executed

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

Determining whether a firmware upgrade is needed should be done well before the actual maintenance window to allow time for planning for the extra time needed, gathering the required materials, and performing the firmware upgrade preparations that the firmware Upgrade Document specifies if upgrades are needed.

If any error or failure conditions are discovered then **do not proceed with the upgrade**. Contact Tekelec Technical Services for assistance in resolving the failure conditions. Migration will have to be rescheduled to a later date.

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

S T E P #	This procedure verifies that all pre-upgrade requirements have been met.	
	Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.	
	Should this procedure fail, contact the Tekelec Customer Care Center and ask for UPGRADE ASSISTANCE .	
1. <input type="checkbox"/>	Verify all materials required are present	Materials are listed in <i>3.1 Required Materials</i> .
2. <input type="checkbox"/>	Verify passwords for PM&C systems are available	Refer to <i>Table 3. Software Upgrade Required Data</i> , for a list of users. Fill in the username and password information in the table for later reference.
3. <input type="checkbox"/>	Contact Tekelec Customer Care Center	Contact the Tekelec Customer Care Center and inform them of your plans to upgrade this system

<p>4. <input type="checkbox"/></p>	<p>Verify this site's PM&C managed HP c-Class enclosures are configured with dual OAs.</p>	<p>The HP c-Class enclosures managed by PM&C are required to be configured in the dual OA configuration beginning with Platform 5.0 release.</p> <p>If necessary, open the IE web browser and enter:</p> <p>https://<PM&C Management Network IP ></p> <p>Login with pmacadmin credentials in <i>Table 3. Software Upgrade Required Data</i>.</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, verify that each enclosure has "Bay 1 OA IP" and "Bay 2 OA IP" addresses populated.</p> <p>If the HP c-Class enclosures are not configured with dual OAs, contact the Tekelec Customer Care Center and ask for assistance.</p>
<p>5. <input type="checkbox"/></p>	<p>Verify the firmware on all equipment is up to date.</p>	<p>The following is the basic procedure to follow for verifying and upgrading the firmware.</p> <ol style="list-style-type: none"> 1) Obtain the latest HP Solutions Firmware Upgrade Pack (795-0000-4XX), where XX is the latest revision number, from ESWD. 2) Obtain and review the Release Notes document from the latest HP Solutions Firmware Upgrade Pack. 3) Obtain the Firmware Upgrade Procedure document from the latest HP Solutions Firmware Upgrade Pack. 4) Determine which firmware needs upgrading. In the Upgrade Procedures document, follow the section titled Firmware Upgrade Planning, which provides a way to assess which components/devices need to be upgraded and the approximate time it will take. The Release Notes document contains rules to follow if upgrading different hardware types simultaneously. 5) Perform the firmware upgrade procedures for each component/device requiring an upgrade. The following is the recommended order. <ol style="list-style-type: none"> 1. 4948, 4948E, and 4948E-F switches. 2. Onboard Administrator (OA). 3. 1Gb Ethernet Pass-Thru Modules. 4. Cisco 3020, HP 6120XG, and Brocade SAN enclosure switches. 5. BL460 and BL620 blade servers. 6. P2000 and MSA2012fc external storage controllers. 7. D2700 enclosure cascaded from a P2000. 8. DL380, DL360, and ML350 rack mount servers.
<p>6. <input type="checkbox"/></p>	<p>Verify the Management Server TVOE is at the appropriate release.</p>	<p>Use <i>Appendix E</i> to determine if an upgrade of the TVOE host is required. Upgrade of the TVOE host may require its own maintenance window.</p>

<p>7. <input type="checkbox"/></p>	<p>Log in to the PM&C TVOE host as the "root" user.</p>	<p>NOTE: If you did not need to upgrade the TVOE release in step 6, skip this step.</p> <p>If necessary, connect to the IP address assigned to the PM&C TVOE host using information from <i>Table 3. Software Upgrade Required Data</i>.</p> <pre>login as: root root@192.168.176.24's password: Last login: Sat Jun 2 19:48:34 2012 from 10.25.81.26 [root@tvoe ~]#</pre>
<p>8. <input type="checkbox"/></p>	<p>Start the PM&C guest</p>	<p>NOTE: If you did not need to upgrade the TVOE release in step 6, skip this step.</p> <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># virsh list --all Id Name State ----- 20 pmacU14-1 shut off # virsh start pmacU14-1 Domain pmacU14-1 started # virsh list --all Id Name State ----- 20 pmacU14-1 running</pre>
<p>9. <input type="checkbox"/></p>	<p>Verify Redundant Management Server TVOE is at the appropriate release.</p>	<p>NOTE: This step is optional and applies only if this system is configured with a Redundant Management Server.</p> <p>Use <i>Appendix E</i> to determine if an upgrade of the redundant PM&C guest's TVOE host is required. Upgrade of the TVOE host may require its own maintenance window.</p>
<p>10. <input type="checkbox"/></p>	<p>Log in to the redundant PM&C TVOE host as the "root" user.</p>	<p>NOTE: If you did not need to upgrade the TVOE release in step 9, skip this step.</p> <p>If necessary, connect to the IP address assigned to the redundant PM&C TVOE host using information from <i>Table 3. Software Upgrade Required Data</i>.</p> <pre>login as: root root@192.168.176.24's password: Last login: Sat Jun 2 19:48:34 2012 from 10.25.81.26 [root@tvoe ~]#</pre>
<p>11. <input type="checkbox"/></p>	<p>Start the redundant PM&C guest</p>	<p>NOTE: If you did not need to upgrade the TVOE release in step 9, skip this step.</p> <p>Using virsh utility on TVOE host of the redundant PM&C guest, start the redundant PM&C guest. Query the list of guests until the redundant PM&C guest is "running".</p> <pre># virsh list --all Id Name State ----- 20 pmac-redundant shut off # virsh start pmac-redundant Domain pmac-redundant started # virsh list --all Id Name State ----- 20 pmac-redundant running</pre>

Procedure 2: Execute the Healthcheck Procedure on the primary PM&C

<p>S T E P #</p>	<p>This procedure executes a health check on the PM&C.</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 Tekelec Customer Service for assistance in resolving the failure conditions. Upgrade will have to be rescheduled to a later date.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>Should this procedure fail, contact the Tekelec Customer Care Center and ask for UPGRADE ASSISTANCE.</p>	
<p>1. <input type="checkbox"/></p>	<p>Execute the system health check.</p>	<p>Execute the <i>Appendix D, PM&C System Health Check</i>.</p> <p>If any error or failure conditions are discovered then do not proceed with upgrade. Contact Tekelec Customer Service to work to resolve the failure conditions. Upgrade will have to be rescheduled to a later date.</p>





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

<p>S T E P #</p>	<p>This procedure prepares the PM&C for a remote upgrade.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>Should this procedure fail, contact the Tekelec Customer Care Center and ask for UPGRADE ASSISTANCE.</p>	
<p>1. <input type="checkbox"/></p>	<p>If this upgrade is to be performed remotely, get the ISO image onto the system.</p>	<p>Obtain a copy of the Target-release PM&C 5.0 ISO image file and place that copy using SCP into the /var/TKLC/upgrade directory of the PM&C.</p>

Procedure 4: Check/Modify OA Power Supply Redundancy

<p>S T E P #</p>	<p>This procedure configures Enclosure power supply redundancy in the HP Onboard Administrator.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>Should this procedure fail, contact the Tekelec Customer Care Center and ask for UPGRADE ASSISTANCE.</p>	
<p>1. <input type="checkbox"/></p>	<p>Access the PM&C GUI</p>	<p>If necessary, open the IE web browser and enter:</p> <p>https://<PM&C Management Network IP ></p> <p>Login with pmacadmin credentials in <i>Table 3. Software Upgrade Required Data</i>.</p>
<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 ></p> <p>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 <i>Table 3. Software Upgrade Required Data.</i></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>

<p>6.</p> <p><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, select the second radio button, “Power Supply Redundant”.</p> <p>AC-powered Enclosures:</p> <div style="border: 1px solid gray; padding: 10px; margin: 10px 0;"> <p>Power Management</p> <p>Power Mode: <i>Select the power subsystem's redundant operation mode.</i></p> <p><input type="radio"/> AC Redundant: <i>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.</i></p> <div style="display: flex; align-items: center; margin: 5px 0;">  (2 plus 2 configuration shown) </div> <p><input checked="" type="radio"/> Power Supply Redundant: <i>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.</i></p> <div style="display: flex; align-items: center; margin: 5px 0;">  (3 plus 1 configuration shown) </div> <p><input type="radio"/> Not Redundant: <i>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.</i></p> </div> <p>DC-powered Enclosures:</p> <div style="border: 1px solid gray; padding: 10px; margin: 10px 0;"> <p>Power Management</p> <p>Power Mode: <i>Select the power subsystem's redundant operation mode.</i></p> <p><input type="radio"/> Redundant: <i>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.</i></p> <div style="display: flex; align-items: center; margin: 5px 0;">  (2 plus 2 configuration shown) </div> <p><input checked="" type="radio"/> Power Supply Redundant: <i>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.</i></p> <div style="display: flex; align-items: center; margin: 5px 0;">  (3 plus 1 configuration shown) </div> <p><input type="radio"/> Not Redundant: <i>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.</i></p> </div> <p>Click the Apply button at the bottom of the page.</p>
<p>7.</p> <p><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>

Procedure 5: Backup OA configuration to PM&C

<p>S T E P #</p>	<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.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>Should this procedure fail, contact the Tekelec Customer Care Center and ask for UPGRADE ASSISTANCE.</p>	
<p>1.</p> <p><input type="checkbox"/></p>	<p>Backup the OA configuration to the PM&C.</p>	<p>Execute Procedure 3.6.5, “Store OA Configuration on Management Server” in <i>Platform 6.0 Configuration Procedure Reference</i>, 909-2209-001, Current version , Tekelec.</p>

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

<p>S T E P #</p>	<p>This procedure executes a health check on the redundant PM&C (if present).</p> <p>NOTE: This procedure is only executed if the site contains a redundant PM&C. This is noted in the title of the procedure.</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 Tekelec Customer Service for assistance in resolving the failure conditions. Upgrade will have to be rescheduled to a later date.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>Should this procedure fail, contact the Tekelec Customer Care Center and ask for UPGRADE ASSISTANCE.</p>	
<p>1.</p> <p><input type="checkbox"/></p>	<p>Execute the redundant PM&C system health check</p>	<p>Execute <i>Appendix D, PM&C System Health Check</i> for redundant PM&C.</p> <p>If any error or failure conditions are discovered then do not proceed with upgrade. Contact Tekelec Customer Service to work to resolve the failure conditions. Upgrade will have to be rescheduled to a later date.</p>

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

<p>S T E P #</p>	<p>This procedure prepares the redundant PM&C for a remote upgrade.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>Should this procedure fail, contact the Tekelec Customer Care Center and ask for UPGRADE ASSISTANCE.</p>	
<p>1.</p> <p><input type="checkbox"/></p>	<p>If this upgrade is to be performed remotely, get the ISO image onto the redundant system.</p>	<p>Obtain a copy of the Target-release PM&C 5.0 ISO image file and place that copy using SCP into the /var/TKLC/upgrade directory of the redundant PM&C.</p>

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

S T E P #	This procedure backs up all necessary PM&C database data to the redundant PM&C. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, contact the Tekelec Customer Care Center and ask for <u>UPGRADE ASSISTANCE</u> .	
	1. <input type="checkbox"/>	Backup the PM&C database to redundant PM&C
Section 4.2 has been completed.		

5 SOFTWARE UPGRADE PROCEDURE

See the warning block in Section 4.2 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.

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

S T E P #	<p>This procedure provides instructions to perform a software upgrade of the PM&C.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.</p>	
1. <input type="checkbox"/>	<p>Insert the PM&C 5.0 media into the Management Server</p>	<p>NOTE: If you have executed Procedure 3, Prepare the primary PM&C for a remote upgrade, skip to step 5.</p> <p>Insert the PM&C 5.0 media (in section 3.1 <i>Required Materials</i>) into the Management Server.</p>
2. <input type="checkbox"/>	<p>Log in to the PM&C GUI.</p>	<p>NOTE: If you have executed Procedure 3, Prepare the primary PM&C for a remote upgrade, skip to step 5.</p> <p>Open IE web browser and enter: https://<PM&C Management Network IP ></p> <p>Login with pmacadmin credentials in <i>Table 3. Software Upgrade Required Data.</i></p>

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

<p>3. <input type="checkbox"/></p>	<p>Attach the PM&C ISO media to the PM&C guest.</p>	<p>NOTE: If you have executed Procedure 3, Prepare the primary PM&C for a remote upgrade, skip to step 5.</p> <p>Using the PM&C GUI, navigate to the VM Management page. Select the PM&C Guest to get to the “View VM Guest” page. Select the “media” tab on the “View VM Guest” page. 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 3.1.2).</p> 
<p>4. <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>5. <input type="checkbox"/></p>	<p>Access the PM&C command prompt console</p>	<p>Access the PM&C command prompt console as detailed in <i>Appendix A, Accessing the PM&C Console command prompt</i>.</p>
<p>6. <input type="checkbox"/></p>	<p>Run the “platcfg” utility.</p>	<pre>[root@pmacDev902 ~]# su - platcfg</pre>

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

<p>7. <input type="checkbox"/></p>	<p>Execute the following steps using the “Arrow” and the [ENTER] keys to navigate through the menu options:</p> <p>a) Select “Maintenance” to navigate to the Maintenance Menu.</p> <p>b) Select “Upgrade” to navigate to the Upgrade Menu.</p> <p>c) Finally, select “Initiate Upgrade” to start the upgrade process.</p>	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p style="text-align: center;">Main Menu</p> <pre> Maintenance Diagnostics Server Configuration Remote Consoles Network Configuration Exit </pre> </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p style="text-align: center;">Maintenance Menu</p> <pre> Upgrade Halt Server Backup and Restore View Mail Queues Restart Server Eject CDROM Save Platform Debug Logs Exit </pre> </div> <div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center;">Upgrade Menu</p> <pre> Validate Media Initiate Upgrade Exit </pre> </div>
<p>8. <input type="checkbox"/></p>	<p>The screen shown to the right may be displayed several times as the Platcfg utility searches for available upgrade media.</p>	<div style="border: 1px solid black; padding: 10px; text-align: center;"> <p style="text-align: center;">System Busy</p> <p style="font-size: 1.2em; margin-top: 20px;">Searching for upgrade media...</p> <p style="margin-top: 100px;">Please wait... █</p> </div>

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

<p>9.</p> <p><input type="checkbox"/></p>	<p>Select the target release level (use the "Arrow" keys if necessary) and press [ENTER].</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 - tklc 872-2441-101 Rev A 50.4.0 Exit </pre> <p>If the image was copied to the /var/TKLC/upgrade directory, then the menu would look similar to this:</p> <pre> Choose Upgrade Media Menu /dev/sr0 - CDROM 872-2441-101-5.0.0 50.4.0-PMAC-x86 64.iso - tklc 872-2441-101 Rev A 50.4.0 Exit </pre>
<p>10.</p> <p><input type="checkbox"/></p>	<p>Screens similar to the one shown to the right 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. Shutting down PMAC services: The runlevel transition complete RC file was created as /etc/rc3.d/S99local_runlevel_transition_complete. 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. sending kill command... please wait up to 30 seconds 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. 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. waiting for /etc/rc3.d/S99local_runlevel_transition_complete to disappear. waiting for /etc/rc3.d/S99local_runlevel_transition_complete to disappear. </pre>
<p>11.</p> <p><input type="checkbox"/></p>	<p>Screens similar to the one shown to the right will be displayed as the upgrade progresses.</p>	<pre> Using /mnt/upgrade/upgrade/upgrade_server as the upgrade command Current platform version: 6.0.0-80.13.0 Major Upgrade release boundary: 3.0.0-60.0.0 Upgrade is not considered a major upgrade Not considered a major upgrade... Current platform version: 6.0.0-80.13.0 No backout release boundary: 4.0.0-70.0.0 Backout will be supported... Running prepareUpgrade() for Upgrade::Policy::Platform upgrade policy... Running prepareUpgrade() for Upgrade::Policy::MBL upgrade policy... Running prepareUpgrade() for Upgrade::Policy::PMAC upgrade policy... Running prepareUpgrade() for Upgrade::Policy::TPD5to6Upgrade 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 9: PM&C Upgrade Procedure on the primary PM&C

<p>12. <input type="checkbox"/></p>	<p>If the upgrade completes successfully, the screen shown to the right will be displayed as the upgrade progresses.</p> <p>NOTE: If the PM&C upgrade fails to complete, contact Tekelec Customer Service for assistance;</p> <p>Tekelec Customer Care Center</p> <p>US: 1-888-367-8552</p> <p>Intl: +1-919-460-2150</p>	<pre>PMAC postTransactions method completed. Running post transactions script for Upgrade::Policy::TPD5to6Upgrade upgrade policy... Running post transactions script for Upgrade::Policy::PlatformLast upgrade policy... Executing ldconfig WARNING: Stale PID file /var/TKLC/run/RunAndLog/15378.pid detected! Enabling applications on the server Running prelink Enabling applications on the server... rsshRebuild: Rebuilding /var/TKLC/smac/image/isoimages chroot... Applications Enabled. Running /usr/TKLC/plat/bin/service_conf reconfig UPGRADE IS COMPLETE Upgrade returned success! Running postUpgrade() for Upgrade::Policy::Platform upgrade policy... Restarting alarmMgr.</pre>
<p>13. <input type="checkbox"/></p>	<p>Upon successful completion of the upgrade, the user should be returned to a login prompt.</p> <p>The output at the right would be seen with a console connection to the PM&C.</p>	<pre>Starting tklcTpdCardCfgSubagent service... [OK] Hitting smac-vmchkfs Running Start on smac-vmchkfs Setting up /dev/logs to mount at /var/TKLC/smac/logs /dev/logs /var/TKLC/smac/logs ext3 defaults 1 2 /dev/vdb /var/TKLC/smac/logs ext3 rw,relatime,errors=continue,barrier=1,data=ordered 0 0 Passed updateFilesystem: /dev/logs Setting up /dev/images to mount at /var/TKLC/smac/image/repository /dev/images /var/TKLC/smac/image/repository ext3 defaults 1 2 /dev/vdc /var/TKLC/smac/image/repository ext3 rw,relatime,errors=continue,barrier=1,data=ordered 0 0 Passed updateFilesystem: /dev/images 'TPD Up' notification(s) already sent: [OK] upstart: Starting tpdProvd... CentOS release 6.2 (Final) Kernel 2.6.32-220.7.1.el6prere16.0.0_80.13.0.x86_64 on an x86_64 pmacDev902 login:</pre>
<p>14. <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>
<p>15. <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 ></p> <p>Login with pmacadmin credentials in <i>Table 3. Software Upgrade Required Data.</i></p>

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

<p>16.</p> <input type="checkbox"/>	<p>Detach media from the PM&C guest.</p>	<p>NOTE: If you did not perform step 3 to attach the media to the PM&C guest, skip this step.</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 VM 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 VM Guest” page. Select the “media” tab on the “View VM Guest” page. Click the “Detach” button for the image previously attached.</p> <div style="text-align: center;"> <h3>View VM Guest</h3> </div> <p>Name: <input type="text" value="pmacDev902"/> Current Pow Host: RMS: myTVOE <input type="button" value="Change to..."/></p> <p><input type="button" value="VM Info"/> <input type="button" value="Software"/> <input type="button" value="Network"/> <input type="button" value="Media"/></p> <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><input type="button" value="Detach"/></td> <td>/var/TKLC/tvoe/mapping-isos/pmacDev902.iso</td> </tr> <tr> <td><input type="button" value="Detach"/></td> <td>/dev/sr1</td> </tr> </tbody> </table> </div> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> <p>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>tklc_872-2441-101_Rev_A_50.5.0</td> <td>/dev/sr1</td> </tr> <tr> <td><input type="button" value="Attach"/></td> <td>tklc_000-0000-000_Rev_A_80.15.0</td> <td>/var/TKLC/upgrade/TPD.install-6.0.0_80.15.0-CentOS6.2-x86_64.iso</td> </tr> </tbody> </table> </div>	Attached	Image Path	<input type="button" value="Detach"/>	/var/TKLC/tvoe/mapping-isos/pmacDev902.iso	<input type="button" value="Detach"/>	/dev/sr1	Attach	Label	Image Path	<input type="button" value="Attach"/>	tklc_872-2441-101_Rev_A_50.5.0	/dev/sr1	<input type="button" value="Attach"/>	tklc_000-0000-000_Rev_A_80.15.0	/var/TKLC/upgrade/TPD.install-6.0.0_80.15.0-CentOS6.2-x86_64.iso
Attached	Image Path																
<input type="button" value="Detach"/>	/var/TKLC/tvoe/mapping-isos/pmacDev902.iso																
<input type="button" value="Detach"/>	/dev/sr1																
Attach	Label	Image Path															
<input type="button" value="Attach"/>	tklc_872-2441-101_Rev_A_50.5.0	/dev/sr1															
<input type="button" value="Attach"/>	tklc_000-0000-000_Rev_A_80.15.0	/var/TKLC/upgrade/TPD.install-6.0.0_80.15.0-CentOS6.2-x86_64.iso															
<p>17.</p> <input type="checkbox"/>	<p>If present, remove the external media from the PM&C TVOE host server.</p>	<p>NOTE: If you did not perform step 1 to insert PM&C 5.0 media into the PM&C TVOE host server, skip this step.</p> <p>Remove the external media from the appropriate slot of the PM&C TVOE host server.</p>															
<p>18.</p> <input type="checkbox"/>	<p>Determine if the netConfig utility was used in a past release to configure switches</p>	<p>This step will help you to determines if netConfig was used to configure all switches in the system, and will point you to the correct next step to follow based on the answer.</p> <p>Execute: <pre>[root@pmac ~]# netConfig --repo listDevices</pre></p> <p>If the netConfig utility was used to configure switches, all of the enclosure as well as aggregation switches should be represented in the ouput.</p> <p>If all of the enclosure and aggregation switches are represented in the ouput, skip the rest of this procedure.</p> <p>Otherwise, proceed to the next step to perform SwitchConfig to netConfig Migration .</p>															

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

<p>19. <input type="checkbox"/></p>	<p>Perform SwitchConfig to netConfig Migration</p>	<p>NOTE: If you have determined that the netConfig Utility was used in the previous step, skip this step.</p> <p>Perform the following procedures in <i>Platform 6.0 Configuration Procedure Reference</i>, 909-2209-001, Current version , Tekelec:</p> <p>3.1.6. SwitchConfig to netConfig Repository Configuration 3.2.7 HP 6120XG switchconfig to netConfig Migration 3.2.8 Cisco 3020 switchconfig to netconfig Migration</p>
<p>Section 5.1 has been completed.</p>		

5.2 SOFTWARE UPGRADE COMPLETION ON THE PRIMARY PM&C

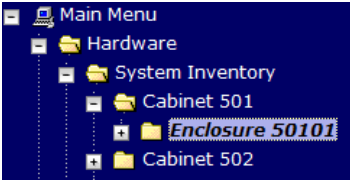
Procedure 10: Post Upgrade Verification on the primary PM&C

<p>S T E P #</p>	<p>This procedure provides instructions to verify the success of the upgrade.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.</p>	
<p>1. <input type="checkbox"/></p>	<p>If necessary, access the PM&C command prompt console</p>	<p>If necessary, access the PM&C command prompt console as detailed in <i>Appendix A, Accessing the PM&C Console command prompt</i>.</p>
<p>2. <input type="checkbox"/></p>	<p>After logging in, a notice similar to the one shown to the right will be displayed.</p>	<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. ===== [root@pmacDev902 ~]#</pre>
<p>3. <input type="checkbox"/></p>	<p>Verify that the date/time stamp of the upgrade log aligns with the time of the upgrade.</p>	<p>Execute the following command:</p> <pre>[root@pmacDev902 ~]# ls -l /var/TKLC/log/upgrade/upgrade.log -rw-rw-r--. 1 platcfg root 24759 Jun 6 08:52 /var/TKLC/log/upgrade/upgrade.log [root@pmacDev902 ~]#</pre>
<p>4. <input type="checkbox"/></p>	<p>Verify that the release has been updated.</p>	<p>Execute the following command:</p> <pre>[root@pmacDev902 ~]# appRev Install Time: Wed Jun 27 16:17:49 2012 Product Name: PMAC Product Release: 5.0.0_50.5.0 Part Number ISO: 872-2441-101 Part Number USB: 872-2441-101 Base Distro Product: TPD Base Distro Release: 6.0.0_80.15.0 Base Distro ISO: TPD.install-6.0.0_80.15.0-CentOS6.2-x86_64.iso OS: CentOS 6.2 [root@pmacDev902 ~]#</pre> <p>If the Product Release does not match the new target release number, then upgrade was not successful. Contact Tekelec Customer Service and do not proceed until instructed by a Tekelec Customer Care 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>NOTE: If the PM&C upgrade has failed, contact Tekelec Customer Service for assistance;</p> <p>Tekelec Customer Care Center</p> <p>US: 1-888-367-8552</p> <p>Intl: +1-919-460-2150</p>	<p>Examine the upgrade logs in the directory <code>/var/TKLC/log/upgrade</code> and verify that no errors were reported. Execute the following command on the PM&C:</p> <pre>[root@pmacDev902 ~]# grep COMPLETE /var/TKLC/log/upgrade/upgrade.log</pre> <p>Output like the following is expected (the timestamp will be different):</p> <pre>1338917852:: UPGRADE IS COMPLETE</pre> <p>Execute the following command: NOTE: This command can take over a minute to complete</p> <pre>[root@pmacDev902 ~]# verifyUpgrade</pre> <p>No output is expected</p> <p>If 'UPGRADE IS COMPLETE' is not in the output from the first command, or if any output showing errors result from the <code>verifyUpgrade</code> command, contact Tekelec Customer Service and do not proceed until instructed by a Tekelec Customer Care representative.</p>
<p>6. <input type="checkbox"/></p>	<p>Execute the system health check.</p>	<p>Execute the <i>Appendix D, PM&C System Health Check</i> .</p> <p>NOTE: Alarm about pending accept/reject such similar to the one below can be safely ignored in this step.</p> <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 error or failure conditions are discovered on the PM&C or PM&C application then do not proceed. Contact Tekelec Customer Service to work to resolve the failure conditions.</p>
<p>7. <input type="checkbox"/></p>	<p>Execute a reset of the PM&C features</p>	<p>Reset the PM&C features by executing the following at the command line:</p> <pre>[root@pmacDev902 ~]# pmacadm resetFeatures</pre> <p>Platform has been successfully reset</p> <p>NOTE: If you change the enabled features, restart sentry</p>
<p>8. <input type="checkbox"/></p>	<p>Restart the PM&C software</p>	<p>Force the PM&C software to restart.</p> <pre>[root@pmacDev902 ~]# sentry restart</pre> <pre>sending restart command... sentryd is shutting down all application software, please wait... sentryd is restarting...</pre> <pre>Tue Apr 23 13:42:47 2013 Command Complete.</pre> <p>Note: This will return before software has finished coming up. Software will be running within 2 minutes of issuing this command.</p>

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

<p>9. <input type="checkbox"/></p>	<p>Ensure remove all images that are not needed anymore from the PM&C</p>	<p>If necessary, remove the copy of the ISO image file from the /var/TKLC/upgrade directory.</p> <pre>[root@pmac ~]# ls /var/TKLC/upgrade/ 872-2441-101-5.0.2_50.16.1-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>root@pmac ~]# rm -f /var/TKLC/upgrade/<image_name.iso></pre> <p>For instance:</p> <pre>[root@pmac ~]# rm -f /var/TKLC/upgrade/872-2441-101-5.0.2_50.16.1-PMAC-x86_64.iso</pre> <p>Repeat this step as necessary to ensure there are no images left to be removed.</p>														
<p>10. <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 ></p> <p>Login with pmacadmin credentials in <i>Table 3. Software Upgrade Required Data</i>.</p>														
<p>11. <input type="checkbox"/></p>	<p>Verify the 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> 														
<p>12. <input type="checkbox"/></p>	<p>Verify the Software Inventory looks correct through the PM&C GUI.</p>	<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.</p> <p>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" data-bbox="521 1514 1466 1577"> <thead> <tr> <th>Ident</th> <th>IP Address</th> <th>Hostname</th> <th>Plat Name</th> <th>Plat Version</th> <th>App Name</th> <th>App Version</th> </tr> </thead> <tbody> <tr> <td>Enc:50303 Bay:5F</td> <td>169.254.119.10</td> <td>dev1</td> <td>TPD (x86_64)</td> <td>5.0.0-72.44.0</td> <td>TVOE</td> <td>1.0.0_72.44.0</td> </tr> </tbody> </table>	Ident	IP Address	Hostname	Plat Name	Plat Version	App Name	App Version	Enc:50303 Bay:5F	169.254.119.10	dev1	TPD (x86_64)	5.0.0-72.44.0	TVOE	1.0.0_72.44.0
Ident	IP Address	Hostname	Plat Name	Plat Version	App Name	App Version										
Enc:50303 Bay:5F	169.254.119.10	dev1	TPD (x86_64)	5.0.0-72.44.0	TVOE	1.0.0_72.44.0										

Procedure 11: Post-Upgrade Verification of NetBackup Configuration

S T E P #	This procedure validates the post upgrade NetBackup configuration. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, contact the Tekelec Customer Care Center and ask for <u>UPGRADE ASSISTANCE.</u>						
	1. <input type="checkbox"/> If NetBackup Feature enabled for this system, validate the PM&C NetBackup configuration when applicable.	If the NetBackup Feature has been configured for this system execute command recommended by the table below. 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. The upgrade issue was resolved in the TPD 6.0.0_80.22.0 release, and PM&C 5.0.0_50.10.0. <table border="1" style="margin-top: 20px; width: 100%;"> <thead> <tr> <th style="text-align: center;">PM&C Release</th> <th style="text-align: center;">Command</th> </tr> </thead> <tbody> <tr> <td>If upgrade to release before 5.0.0_50.10.0</td> <td>Continue with procedure.</td> </tr> <tr> <td>If upgrade to release 5.0.0_50.10 or after.</td> <td>Execute PM&C Guest Migrate NetBackup Client to New File System in <i>Platform 6.0 Configuration Procedure Reference</i>, 909-2209-001, Current version , Tekelec.</td> </tr> </tbody> </table>	PM&C Release	Command	If upgrade to release before 5.0.0_50.10.0	Continue with procedure.	If upgrade to release 5.0.0_50.10 or after.
PM&C Release	Command						
If upgrade to release before 5.0.0_50.10.0	Continue with procedure.						
If upgrade to release 5.0.0_50.10 or after.	Execute PM&C Guest Migrate NetBackup Client to New File System in <i>Platform 6.0 Configuration Procedure Reference</i> , 909-2209-001, Current version , Tekelec.						

Procedure 12: Post-Upgrade PM&C Backup on the primary PM&C

S T E P #	This procedure backs up all necessary PM&C database data post upgrade. NOTE: This procedure allows for a backup to a remote host. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, contact the Tekelec Customer Care Center and ask for <u>UPGRADE ASSISTANCE.</u>	
	1. <input type="checkbox"/> Backup the PM&C database.	Execute the procedure detailed in <i>Appendix B, PM&C System Backup.</i>
Section 5.2 has been completed.		


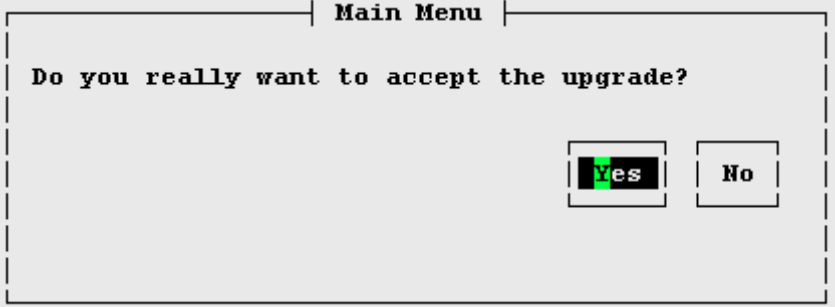
5.3 SOFTWARE UPGRADE ACCEPTANCE ON THE PRIMARY PM&C

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.

Procedure 13: Software Upgrade Acceptance on the primary PM&C

<p>S T E P #</p>	<p>This procedure finalizes the upgrade on the PM&C, once complete backout is no longer available/possible.</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>Should this procedure fail, contact the Tekelec Customer Care Center and ask for <u>UPGRADE ASSISTANCE</u>.</p>	
<p>1. <input type="checkbox"/></p>	<p>If necessary, access the PM&C command prompt console</p>	<p>If necessary, access the PM&C command prompt console as detailed in <i>Appendix A, Accessing the PM&C Console command prompt</i>.</p>
<p>2. <input type="checkbox"/></p>	<p>Run the “platcfg” utility.</p>	<pre>[root@pmacDev902 ~]# su - platcfg</pre>

Procedure 13: Software Upgrade Acceptance on the primary PM&C

<p>3. <input type="checkbox"/></p>	<p>Execute the following steps using the “Arrow” and the [ENTER] keys to navigate through the menu options:</p> <p>a) Select “Maintenance” to navigate to the Maintenance Menu.</p> <p>b) Select “Upgrade” to navigate to the Upgrade Menu.</p> <p>c) Finally, select “Accept Upgrade” to start the accept process.</p>	 <p>The first screenshot, titled 'Main Menu', shows a list of options: Maintenance (highlighted), Diagnostics, Server Configuration, Remote Consoles, Network Configuration, and Exit. The second screenshot, titled 'Maintenance Menu', shows options: Upgrade (highlighted), Halt Server, Backup and Restore, View Mail Queues, Restart Server, Eject CDROM, Save Platform Debug Logs, and Exit. The third screenshot, titled 'Upgrade Menu', shows options: Validate Media, Initiate Upgrade, Accept Upgrade (highlighted), Reject Upgrade, and Exit.</p>
<p>4. <input type="checkbox"/></p>	<p>Confirm the decision and execute the accept.</p>	 <p>The screenshot shows a dialog box titled 'Main Menu' with the text 'Do you really want to accept the upgrade?'. Below the text are two buttons: 'Yes' (highlighted) and 'No'.</p>

Procedure 13: Software Upgrade Acceptance on the primary PM&C

<p>5.</p> <input type="checkbox"/>	<p>Screens similar to the one shown to the right will be displayed as the accept progresses.</p>	<pre> 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" 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 Checking /var/TKLC/smac Checking /var/TKLC/smac/backup Checking /var/TKLC/smac/image/isoimages Checking /var/TKLC/smac/logs Checking /var/TKLC/smac/image/repository Starting cleanup of RCS repository. </pre>
<p>6.</p> <input type="checkbox"/>	<p>Verify the accept completes.</p>	<div style="border: 1px dashed black; padding: 10px; text-align: center;"> <p>Message</p> <p>The accept has completed.</p> <p>Press any key to continue... █</p> </div>
<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.

Procedure 14: PM&C Upgrade Procedure on the redundant PM&C

S T E P #	<p>This procedure provides instructions to perform a software upgrade of the redundant PM&C.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.</p>	
<p>1.</p> <input type="checkbox"/>	<p>Insert the PM&C 5.0 media into the Management Server</p>	<p>NOTE: If you have executed Procedure 7, Prepare the redundant PM&C for a remote upgrade, skip to step 4.</p> <p>Insert the PM&C 5.0 media (in section 3.1 <i>Required Materials</i>) into the Management Server.</p>
<p>2.</p> <input type="checkbox"/>	<p>Log in to the PM&C GUI.</p>	<p>NOTE: If you have executed Procedure 7, Prepare the redundant PM&C for a remote upgrade, skip to step 4.</p> <p>Open IE web browser and enter: https://<PM&C Management Network IP ></p> <p>Login with pmacadmin credentials in <i>Table 3. Software Upgrade Required Data</i>.</p>

Procedure 14: PM&C Upgrade Procedure on the redundant PM&C

<p>3. <input type="checkbox"/></p>	<p>Attach the PM&C ISO media to the redundant PM&C guest.</p>	<p>NOTE: If you have executed Procedure 7, Prepare the redundant PM&C for a remote upgrade, skip to step 4.</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 VM Guest” page. Select the “media” tab on the “View VM Guest” page. 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 3.1.2).</p> 
<p>4. <input type="checkbox"/></p>	<p>Access the redundant PM&C command prompt console</p>	<p>Access the redundant PM&C command prompt console as detailed in <i>Appendix A, Accessing the PM&C Console command prompt</i>.</p>
<p>5. <input type="checkbox"/></p>	<p>Run the “platcfg” utility.</p>	<pre>[root@pmacDev902 ~]# su - platcfg</pre>

Procedure 14: PM&C Upgrade Procedure on the redundant PM&C

<p>6.</p> <p><input type="checkbox"/></p>	<p>Execute the following steps using the “Arrow” and the [ENTER] keys to navigate through the menu options:</p> <p>a) Select “Maintenance” to navigate to the Maintenance Menu.</p> <p>b) Select “Upgrade” to navigate to the Upgrade Menu.</p> <p>c) Finally, select “Initiate Upgrade” to start the upgrade process.</p>	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p style="text-align: center;">Main Menu</p> <pre> Maintenance Diagnostics Server Configuration Remote Consoles Network Configuration Exit </pre> </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p style="text-align: center;">Maintenance Menu</p> <pre> Upgrade Halt Server Backup and Restore View Mail Queues Restart Server Eject CDROM Save Platform Debug Logs Exit </pre> </div> <div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center;">Upgrade Menu</p> <pre> Validate Media Initiate Upgrade Exit </pre> </div>
<p>7.</p> <p><input type="checkbox"/></p>	<p>The screen shown to the right may be displayed several times as the Platcfg utility searches for available upgrade media.</p>	<div style="border: 1px solid black; padding: 10px; text-align: center;"> <p style="text-align: center;">System Busy</p> <p style="font-size: 1.2em;">Searching for upgrade media...</p> <p style="font-size: 1.2em;">Please wait... █</p> </div>

Procedure 14: PM&C Upgrade Procedure on the redundant PM&C

<p>8.</p> <p><input type="checkbox"/></p>	<p>Select the target release level (use the "Arrow" keys if necessary) and press [ENTER].</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 - tklc 872-2441-101 Rev A 50.4.0 Exit </pre> <p>If the image was copied to the /var/TKLC/upgrade directory, then the menu would look similar to this:</p> <pre> Choose Upgrade Media Menu /dev/sr0 - CDROM 872-2441-101-5.0.0 50.4.0-PMAC-x86 64.iso - tklc 872-2441-101 Rev A 50.4.0 Exit </pre>
<p>9.</p> <p><input type="checkbox"/></p>	<p>Screens similar to the one shown to the right 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. Shutting down PMAC services: The runlevel transition complete RC file was created as /etc/rc3.d/S99local_runlevel_transition_complete. 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. sending kill command... please wait up to 30 seconds 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. 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. </pre>
<p>10.</p> <p><input type="checkbox"/></p>	<p>Screens similar to the one shown to the right will be displayed as the upgrade progresses.</p>	<pre> Using /mnt/upgrade/upgrade/upgrade_server as the upgrade command Current platform version: 6.0.0-80.13.0 Major Upgrade release boundary: 3.0.0-60.0.0 Upgrade is not considered a major upgrade Not considered a major upgrade... Current platform version: 6.0.0-80.13.0 No backout release boundary: 4.0.0-70.0.0 Backout will be supported... Running prepareUpgrade() for Upgrade::Policy::Platform upgrade policy... Running prepareUpgrade() for Upgrade::Policy::MBL upgrade policy... Running prepareUpgrade() for Upgrade::Policy::PMAC upgrade policy... Running prepareUpgrade() for Upgrade::Policy::TPD5to6Upgrade 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 14: PM&C Upgrade Procedure on the redundant PM&C

<p>11. <input type="checkbox"/></p>	<p>If the upgrade completes successfully, the screen shown to the right will be displayed as the upgrade progresses.</p> <p>NOTE: If the PM&C upgrade fails to complete, contact Tekelec Customer Service for assistance;</p> <p>Tekelec Customer Care Center</p> <p>US: 1-888-367-8552</p> <p>Intl: +1-919-460-2150</p>	<pre>PMAC postTransactions method completed. Running post transactions script for Upgrade::Policy::TPD5to6Upgrade upgrade policy... Running post transactions script for Upgrade::Policy::PlatformLast upgrade policy... Executing ldconfig WARNING: Stale PID file /var/TKLC/run/RunAndLog/15378.pid detected! Enabling applications on the server Running prelink Enabling applications on the server... rsshRebuild: Rebuilding /var/TKLC/smac/image/isoimages chroot... Applications Enabled. Running /usr/TKLC/plat/bin/service_conf reconfig UPGRADE IS COMPLETE Upgrade returned success! Running postUpgrade() for Upgrade::Policy::Platform upgrade policy... Restarting alarmMgr.</pre>
<p>12. <input type="checkbox"/></p>	<p>Upon successful completion of the upgrade, the user should be returned to a login prompt.</p> <p>The output at the right would be seen with a console connection to the PM&C.</p>	<pre>Starting tklcTpdCardCfgSubagent service... [OK] Hitting smac-vmchkfs Running Start on smac-vmchkfs Setting up /dev/logs to mount at /var/TKLC/smac/logs /dev/logs /var/TKLC/smac/logs ext3 defaults 1 2 /dev/vdb /var/TKLC/smac/logs ext3 rw,relatime,errors=continue,barrier=1,data=ordered 0 0 Passed updateFilesystem: /dev/logs Setting up /dev/images to mount at /var/TKLC/smac/image/repository /dev/images /var/TKLC/smac/image/repository ext3 defaults 1 2 /dev/vdc /var/TKLC/smac/image/repository ext3 rw,relatime,errors=continue,barrier=1,data=ordered 0 0 Passed updateFilesystem: /dev/images 'TPD Up' notification(s) already sent: [OK] upstart: Starting tpdProvd... CentOS release 6.2 (Final) Kernel 2.6.32-220.7.1.el6prere16.0.0_80.13.0.x86_64 on an x86_64 pmacDev902 login:</pre>
<p>13. <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>
<p>14. <input type="checkbox"/></p>	<p>Log in to the primary PM&C GUI.</p>	<p>Open IE web browser and enter: https://<PM&C Management Network IP ></p> <p>Login with pmacadmin credentials in <i>Table 3. Software Upgrade Required Data.</i></p>

Procedure 14: PM&C Upgrade Procedure on the redundant PM&C

<p>15.</p> <p><input type="checkbox"/></p>	<p>Detach media from the PM&C guest.</p>	<p>NOTE: If you did not perform step 3 to attach the media to the redundant PM&C guest, skip this step.</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 VM Guest” page.</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 VM Guest” page. Select the “media” tab on the “View VM Guest” page. Click the “Detach” button for the image previously attached.</p> <div style="text-align: center;"> <h3>View VM Guest</h3> </div> <p>Name: <input type="text" value="pmacDev902"/> Current Pow Host: RMS: myTVOE <input type="button" value="Change to..."/></p> <p><input type="button" value="VM Info"/> <input type="button" value="Software"/> <input type="button" value="Network"/> <input type="button" value="Media"/></p> <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><input type="button" value="Detach"/></td> <td>/var/TKLC/tvoe/mapping-isos/pmacDev902.iso</td> </tr> <tr> <td><input type="button" value="Detach"/></td> <td>/dev/sr1</td> </tr> </tbody> </table> </div> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> <p>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>tklc_872-2441-101_Rev_A_50.5.0</td> <td>/dev/sr1</td> </tr> <tr> <td><input type="button" value="Attach"/></td> <td>tklc_000-0000-000_Rev_A_80.15.0</td> <td>/var/TKLC/upgrade/TPD.install-6.0.0_80.15.0-CentOS6.2-x86_64.iso</td> </tr> </tbody> </table> </div>	Attached	Image Path	<input type="button" value="Detach"/>	/var/TKLC/tvoe/mapping-isos/pmacDev902.iso	<input type="button" value="Detach"/>	/dev/sr1	Attach	Label	Image Path	<input type="button" value="Attach"/>	tklc_872-2441-101_Rev_A_50.5.0	/dev/sr1	<input type="button" value="Attach"/>	tklc_000-0000-000_Rev_A_80.15.0	/var/TKLC/upgrade/TPD.install-6.0.0_80.15.0-CentOS6.2-x86_64.iso
Attached	Image Path																
<input type="button" value="Detach"/>	/var/TKLC/tvoe/mapping-isos/pmacDev902.iso																
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<input type="button" value="Attach"/>	tklc_000-0000-000_Rev_A_80.15.0	/var/TKLC/upgrade/TPD.install-6.0.0_80.15.0-CentOS6.2-x86_64.iso															
<p>16.</p> <p><input type="checkbox"/></p>	<p>If present, remove the external media from the appropriate slot of the redundant PM&C TVOE host.</p>	<p>Remove the external media from the appropriate slot of the redundant PM&C TVOE host.</p>															
<p>Section 5.4 has been completed.</p>																	

5.5 SOFTWARE UPGRADE COMPLETION ON THE REDUNDANT PM&C

Procedure 15: Post Upgrade Verification on the redundant PM&C

S T E P #	<p>This procedure provides instructions to perform to verify the success of the upgrade of the redundant PM&C.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.</p>	
1. <input type="checkbox"/>	<p>Access the redundant PM&C command prompt</p>	<p>Access the redundant PM&C command prompt as detailed in <i>Appendix A, Accessing the PM&C Console command prompt</i>.</p>
2. <input type="checkbox"/>	<p>After logging in, a notice similar to the one shown to the right will be displayed.</p>	<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. ===== [root@pmacDev902 ~]#</pre>
3. <input type="checkbox"/>	<p>Verify that the date/time stamp of the upgrade log aligns with the time of the upgrade.</p>	<p>Execute the following command:</p> <pre>[root@pmacDev902 ~]# ls -l /var/TKLC/log/upgrade/upgrade.log -rw-rw-r--. 1 platcfg root 24759 Jun 6 08:52 /var/TKLC/log/upgrade/upgrade.log [root@pmacDev902 ~]#</pre>
4. <input type="checkbox"/>	<p>Verify that the release has been updated.</p>	<p>Execute the following command:</p> <pre>[root@pmacDev902 ~]# appRev Install Time: Wed Jun 27 16:17:49 2012 Product Name: PMAC Product Release: 5.0.0_50.5.0 Part Number ISO: 872-2441-101 Part Number USB: 872-2441-101 Base Distro Product: TPD Base Distro Release: 6.0.0_80.15.0 Base Distro ISO: TPD.install-6.0.0_80.15.0-CentOS6.2-x86_64.iso OS: CentOS 6.2 [root@pmacDev902 ~]#</pre> <p>If the Product Release does not match the new target release number, then upgrade was not successful. Contact Tekelec Customer Service and do not proceed until instructed by a Tekelec Customer Care representative.</p>

Procedure 15: Post Upgrade Verification on the redundant PM&C

<p>5. <input type="checkbox"/></p>	<p>Verify upgrade completion through the upgrade log.</p> <p>NOTE: If the PM&C upgrade has failed, contact Tekelec Customer Service for assistance;</p> <p>Tekelec Customer Care Center</p> <p>US: 1-888-367-8552</p> <p>Intl: +1-919-460-2150</p>	<p>Examine the upgrade logs in the directory <code>/var/TKLC/log/upgrade</code> and verify that no errors were reported. Execute the following command on the redundant PM&C:</p> <pre>[root@redundantPmac ~]# grep COMPLETE /var/TKLC/log/upgrade/upgrade.log</pre> <p>Output like the following is expected (the timestamp will be different):</p> <pre>1338917852:: UPGRADE IS COMPLETE</pre> <p>Execute the following command: NOTE: This command can take over a minute to complete</p> <pre>[root@redundantPmac ~]# verifyUpgrade</pre> <p>No output is expected</p> <p>If 'UPGRADE IS COMPLETE' is not in the output from the first command, or if any output showing errors result from the <code>verifyUpgrade</code> command, contact Tekelec Customer Service and do not proceed until instructed by a Tekelec Customer Care representative.</p>
<p>6. <input type="checkbox"/></p>	<p>Execute the redundant PM&C system health check.</p>	<p>Execute the <i>Appendix D, PM&C System Health Check</i> for redundant PM&C.</p> <p>NOTE: Alarm about pending accept/reject such similar to the one below can be safely ignored in this step.</p> <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 error or failure conditions are discovered on the redundant PM&C or PM&C application then do not proceed. Contact Tekelec Customer Service to work to resolve the failure conditions.</p>
<p>7. <input type="checkbox"/></p>	<p>Ensure remove all images that are not needed anymore from the redundant PM&C</p>	<p>If necessary, remove the copy of the ISO image file from the <code>/var/TKLC/upgrade</code> directory.</p> <pre>[root@ redundantPmac ~]# ls /var/TKLC/upgrade/</pre> <pre>872-2441-101-5.0.2_50.16.1-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>root@redundantPmac ~]# rm -f /var/TKLC/upgrade/<image_name.iso></pre> <p>For instance:</p> <pre>[root@redundantPmac ~]# rm -f /var/TKLC/upgrade/872-2441-101-5.0.2_50.16.1-PMAC-x86_64.iso</pre> <p>Repeat this step as necessary to ensure there are no images left to be removed.</p>
<p>Section 5.5 has been completed.</p>		


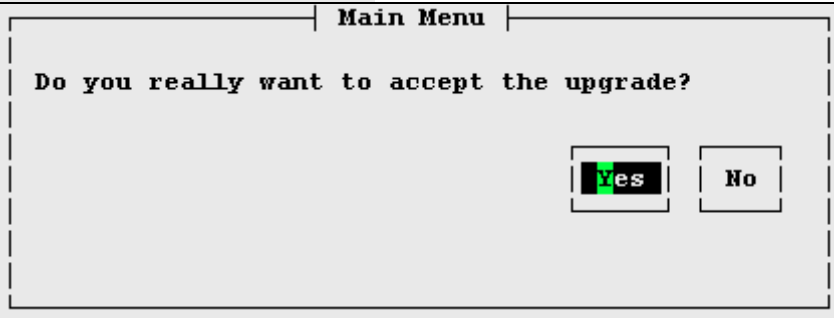
5.6 SOFTWARE UPGRADE ACCEPTANCE ON THE REDUNDANT PM&C

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.

Procedure 16: Post-Upgrade Acceptance on the redundant PM&C

<p>S T E P #</p>	<p>This procedure finalizes the upgrade on the redundant PM&C, once complete backout is no longer available/possible.</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>Should this procedure fail, contact the Tekelec Customer Care Center and ask for <u>UPGRADE ASSISTANCE</u>.</p>	
<p>1. <input type="checkbox"/></p>	<p>Access the redundant PM&C command prompt</p>	<p>Access the redundant PM&C command prompt as detailed in <i>Appendix A, Accessing the PM&C Console command prompt</i>.</p>
<p>2. <input type="checkbox"/></p>	<p>Run the "platcfg" utility.</p>	<pre>[root@pmacDev902 ~]# su - platcfg</pre>

Procedure 16: Post-Upgrade Acceptance on the redundant PM&C

<p>3. <input type="checkbox"/></p>	<p>Execute the following steps using the “Arrow” and the [ENTER] keys to navigate through the menu options:</p> <p>a) Select “Maintenance” to navigate to the Maintenance Menu.</p> <p>b) Select “Upgrade” to navigate to the Upgrade Menu.</p> <p>c) Finally, select “Accept Upgrade” to start the accept process.</p>	 <p>The first screenshot shows the 'Main Menu' with 'Maintenance' highlighted. The second screenshot shows the 'Maintenance Menu' with 'Upgrade' highlighted. The third screenshot shows the 'Upgrade Menu' with 'Accept Upgrade' highlighted.</p>
<p>4. <input type="checkbox"/></p>	<p>Confirm the decision and execute the accept.</p>	 <p>The screenshot shows a dialog box titled 'Main Menu' with the text 'Do you really want to accept the upgrade?' and two buttons: 'Yes' and 'No'.</p>

Procedure 16: Post-Upgrade Acceptance on the redundant PM&C

<p>5. <input type="checkbox"/></p>	<p>Screens similar to the one shown to the right will be displayed as the accept progresses.</p>	<pre> 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" 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 Checking /var/TKLC/smac Checking /var/TKLC/smac/backup Checking /var/TKLC/smac/image/isoimages Checking /var/TKLC/smac/logs Checking /var/TKLC/smac/image/repository Starting cleanup of RCS repository. </pre>
<p>6. <input type="checkbox"/></p>	<p>Verify the accept completes.</p>	<div style="border: 1px solid black; padding: 10px;"> <p style="text-align: center;">Message</p> <p style="text-align: center;">The accept has completed.</p> <p style="text-align: center;">Press any key to continue... █</p> </div>
<p>Section 5.6 has been completed.</p>		

6 RECOVERY PROCEDURES

Upgrade procedure recovery issues should be directed to the Tekelec Customer Care Center. Before executing any of these procedures, contact the Tekelec Customer Care Center at 1-888-FOR-TKLC (1-888-367-8552); or 1-919-460-2150 (international). 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 the Tekelec Customer Care Center at 1-888-FOR-TKLC (1-888-367-8552); or 1-919-460-2150 (international).
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.

Tekelec 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

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.

Procedure 17: PM&C Backout(reject) Procedure

S T E P #	This procedure executes a backout of PM&C application software to the previous version.	
	Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.	
	IF THIS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.	
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"/>	Access the PM&C command prompt	If necessary, access the PM&C command prompt as detailed in <i>Appendix A, Accessing the PM&C Console command prompt</i> .
3. <input type="checkbox"/>	Run the “platcfg” utility.	[root@pmacDev902 ~]# su - platcfg

Procedure 17: PM&C Backout(reject) Procedure

<p>4. <input type="checkbox"/></p>	<p>Execute the following steps using the “Arrow” and the [ENTER] keys to navigate through the menu options:</p> <p>a) Select “Maintenance” to navigate to the Maintenance Menu.</p> <p>b) Select “Upgrade” to navigate to the Upgrade Menu.</p> <p>c) Finally, select “Reject Upgrade” to start the backout process.</p>	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p style="text-align: center;">Main Menu</p> <p>Maintenance Diagnostics Server Configuration Remote Consoles Network Configuration Exit</p> </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p style="text-align: center;">Maintenance Menu</p> <p>Upgrade Halt Server Backup and Restore View Mail Queues Restart Server Eject CDROM Save Platform Debug Logs Exit</p> </div> <div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center;">Upgrade Menu</p> <p>Validate Media Initiate Upgrade Accept Upgrade Reject Upgrade Exit</p> </div>
<p>5. <input type="checkbox"/></p>	<p>Confirm the decision and execute the backout.</p>	<div style="border: 1px solid black; padding: 10px;"> <p style="text-align: center;">Main Menu</p> <p style="text-align: center;">Do you really want to reject the upgrade?</p> <p style="text-align: right;"> <input type="checkbox"/> Yes <input type="checkbox"/> No </p> </div>

Procedure 17: PM&C Backout(reject) Procedure

<p>6. <input type="checkbox"/></p>	<p>Screens similar to the ones shown to the right will be displayed as the backout progresses.</p>	<pre> Current platform version: 6.0.0-80.13.0 Called with options: --reject --noprompt Loading Upgrade::Backout::LVM Rejecting Upgrade Clearing Upgrade Accept/Reject alarm. Executing.. /var/TKLC/backout/backout_server ***** BACKOUT TO 06/06/2012 12:48:19 UTC ***** The backout type is LVM Scanning package database for config files... Disabling applications on the server... ...executing /var/TKLC/backout/appDisable/checkIpmStatus --backout ...executing /var/TKLC/backout/appDisable/pkgpatch-TKLCplat-lib --backout ...executing /var/TKLC/backout/appDisable/pkgpatch-ace --backout ...executing /var/TKLC/backout/appDisable/pkgpatch-j2re --backout ...executing /var/TKLC/backout/appDisable/pkgpatch-redhat-config-network-tui --b ackout ...executing /var/TKLC/backout/appDisable/postfix-users --backout Backout requires a reboot to fully complete </pre> <div data-bbox="519 688 1377 1155" style="border: 1px solid black; padding: 10px; margin: 10px 0;"> <p style="text-align: center;">Message</p> <p style="text-align: center;">The reject has completed. The system will now be rebooted.</p> <p style="text-align: center;">Press any key to continue... █</p> </div> <pre> A revert of Logical Volume Snapshots is performed 1338988007:: Removing boot archive lv Logical volume "bootarchive" successfully removed 1338988007:: ##### 1338988008:: reverting snapshot LVs 1338988008:: ##### 1338988008:: Reverting lvm snapshots Unable to find dmeventd. Merging of volume smac_root_snap started. smac_root: Merged: 4.3% smac_root: Merged: 0.0% Merge of snapshot into logical volume smac_root has finished. Logical volume "smac_root_snap" successfully removed Unable to find dmeventd. Merging of volume smac_var_snap started. smac_var: Merged: 0.0% smac_var: Merged: 0.0% Merge of snapshot into logical volume smac_var has finished. Logical volume "smac_var_snap" successfully removed Unable to find dmeventd. Merging of volume plat_usr_snap started. plat_usr: Merged: 0.9% </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>
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Procedure 17: PM&C Backout(reject) Procedure

<p>7. <input type="checkbox"/></p>	<p>Wait for PM&C login prompt</p>	<p>Upon successful completion the user should be returned to a login prompt.</p>
<p>8. <input type="checkbox"/></p>	<p>Login with PM&C root credentials</p>	<p>Login with PM&C root credentials from <i>Table 3. Software Upgrade Required Data.</i></p>
<p>9. <input type="checkbox"/></p>	<p>Verify the backout completed.</p>	<p>Execute the following command to verify source PM&C release:</p> <pre>[root@pmacDev902 ~]# appRev Install Time: Wed Jun 27 16:17:49 2012 Product Name: PMAC Product Release: 5.0.0_50.5.0 Part Number ISO: 872-2441-101 Part Number USB: 872-2441-101 Base Distro Product: TPD Base Distro Release: 6.0.0_80.15.0 Base Distro ISO: TPD.install-6.0.0_80.15.0-CentOS6.2-x86_64.iso OS: CentOS 6.2</pre> <p>[root@pmacDev902 ~]#</p> <p>If source release is not displayed, contact Tekelec Customer Service and do not proceed until instructed by a Tekelec Customer Care representative.</p>
<p>10. <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>
<p>11. <input type="checkbox"/></p>	<p>Execute the system health check.</p>	<p>Execute the PM&C Health check procedures in the <i>Appendix D, PM&C System Health Check.</i></p> <p>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 Tekelec Customer Service to work to resolve the failure conditions.</p>
<p>12. <input type="checkbox"/></p>	<p>If present, remove the optical media from the PM&C TVOE host server.</p>	<p>Remove the optical media from the appropriate slot of the PM&C TVOE host server.</p>
<p>Section 6.2 has been completed.</p>		

Appendix A **ACCESSING THE PM&C CONSOLE COMMAND PROMPT**

NOTE: Be sure to capture a log of all lines appearing on the screen on the laptop, desktop, or other computer used to connect to the PM&C.

Procedure 18: Accessing the PM&C console command prompt

<p>S T E P #</p>	<p>This procedure provides instructions on how to access the PM&C’s console command prompt on a TVOE host.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.</p>	
<p>1. <input type="checkbox"/></p>	<p>Log in to the PM&C TVOE host as the “root” user.</p>	<p>Using a laptop or desktop computer connected to the customer network, use a SSH terminal program to connect to the IP address assigned to the PM&C TVOE host.</p> <p>Login with TVOE root credentials from <i>Table 3. Software Upgrade Required Data</i></p> <pre>login as: root root@192.168.176.24's password: Last login: Sat Jun 2 19:48:34 2012 from 10.25.81.26 [root@hp90907U07 ~]#</pre>
<p>2. <input type="checkbox"/></p>	<p>Login to PM&C guest console as the PM&C root.</p>	<p>Use the virsh utility to connect to the PM&C guest console.</p> <pre>[root@hp90907U07 ~]# virsh console pmacDev902 Connected to domain pmacDev902 Escape character is ^] CentOS release 6.2 (Final) Kernel 2.6.32-220.7.1.el6prere16.0.0_80.13.0.x86_64 on an x86_64 pmacDev902 login:</pre> <p>Press the “Enter” key to obtain access to the login prompt if it is not displayed.</p> <p>NOTE: If, after typing the virsh console command, you get garbage characters or output is not quite right, then more than likely there is a stuck "virsh console" command already being run on the TVOE host. Exit out of the "virsh console", then run "ps -ef grep virsh", then kill the existing process "kill -9 <PID>". Then execute the "virsh console X" command. Your console session should now run as expected.</p>

Procedure 18: Accessing the PM&C console command prompt

<p>3. <input type="checkbox"/></p>	<p>Log in as the “root” user.</p>	<p>Login as the PM&C root captured in <i>Table 3. Software Upgrade Required Data.</i></p> <pre>CentOS release 6.2 (Final) Kernel 2.6.32-220.7.1.el6prere16.0.0_80.13.0.x86_64 on an x86_64 pmacDev902 login: root Password: Last login: Tue Jun 5 08:22:56 on ttyS0 [root@pmacDev902 ~]#</pre>
<p>4. <input type="checkbox"/></p>	<p>Execute the <i>screen</i> utility to start a saved shell.</p>	<pre>[root@pmac8010402 ~]# screen [root@pmac8010402 ~]#</pre>
<p>5. <input type="checkbox"/></p>	<p>Exit this procedure and return to the procedure which referred you this one.</p>	<p>Return to next step in referring procedure.</p>
<p>Appendix A has been completed.</p>		

Appendix B **PM&C SYSTEM BACKUP**

Procedure 19: Primary PM&C backup

S T E P #	<p>This procedure backs up all necessary PM&C database data.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>Should this procedure fail, contact the Tekelec Customer Care Center and ask for UPGRADE ASSISTANCE.</p>	
<p>1.</p> <input type="checkbox"/>	<p>Execute the "pmacadm backup" in order to backup the PM&C DB / configuration to local disk.</p> <p>See the output example to the right.</p>	<pre>[root@PMACDev3 ~]# pmacadm backup PM&C backup been successfully initiated as task ID 7 [root@PMACDev3 ~]#</pre> <p>NOTE: The backup runs as a background task. To check that status of the background task use the PM&C GUI Task Monitor page, or issue the command "pmaccli getBgTasks". The result should eventually be "PM&C Backup successful" and the background task should indicate "COMPLETE".</p> <p>NOTE: The "pmacadm backup" command uses a naming convention which includes a date/time stamp in the file name (Example file name: backupPmac_20111025_100251.pef). In the example provided, the backup file name indicates that it was created on 10/25/2011 at 10:02:51 am server time.</p>
<p>2.</p> <input type="checkbox"/>	<p>Verify the backup was successful by viewing the command output.</p> <p>NOTE: If the PM&C backup fails, for assistance, contact Tekelec Customer Care Center</p> <p>US: 1-888-367-8552</p> <p>Intl: +1-919-460-2150</p>	<p>If the background task shows that the backup failed, then the backup did not complete successfully.</p> <p>The output of pmaccli getBgTasks should look similar to this:</p> <p>For example:</p> <pre>2: Backup PM&C COMPLETE - PM&C Backup successful Step 2: of 2 Started: 2012-07-05 16:53:10 running: 4 sinceUpdate: 2 taskRecordNum: 2 Server Identity: Physical Blade Location: Blade Enclosure: Blade Enclosure Bay: Guest VM Location: Host IP: Guest Name: TPD IP: Rack Mount Server: IP: Name: ::</pre>
<p>3.</p> <input type="checkbox"/>	<p>The backup file must be transferred off-host to provide recovery in the event of a disaster.</p>	<p>Execute the following command to locate the latest backup file (output similar to the following is observed):</p> <pre>[root@PMACDev3 ~]# cd /var/TKLC/smac/backup [root@PMACDev3 backup]# ls -alrt backupPmac* -rw-r--r-- 1 pmacd pmacd 14233 Aug 3 13:56 backupPmac_20110803_135646.pef [root@PMACDev3 backup]#</pre> <p>Transfer the file to a remote server using scp. The command would be something like:</p> <pre>[root@PMACDev3 backup]# scp backupPmac_20110803_135646.pef user@host:path</pre>
Appendix B has been completed.		

Appendix C **PM&C SYSTEM BACKUP TO REDUNDANT PM&C**

Procedure 20: Redundant PM&C backup

S T E P #	<p>This procedure backs up all necessary PM&C database data from the primary PM&C to the redundant PM&C.</p> <p>NOTE: This 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>Should this procedure fail, contact the Tekelec Customer Care Center and ask for UPGRADE ASSISTANCE.</p>	
1. <input type="checkbox"/>	<p>Access the primary PM&C guest console</p>	<p>Access the primary PM&C guest console as detailed in <i>Appendix A, Accessing the PM&C Console command prompt</i>.</p>
2. <input type="checkbox"/>	<p>Execute the “pmacadm backup” command in order to backup PM&C DB / configuration to the redundant PM&C.</p> <p>See the output example to the right.</p>	<p>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>[root@PMACDev3 ~]# pmacadm backup --media="Remote Server" PM&C backup been successfully initiated as task ID 7 [root@PMACDev3 ~]#</pre> <p>NOTE: The “pmacadm backup –media=”Remote Server”” command transfers the normally generated backup file (backupPmac_20111025_100251.pef indicating that it was created on 10/25/2011 at 10:02:51 am server time) to the redundant PM&C. In addition, it transfers any and all of the images provisioned in the Software Inventory (not previously transferred).</p>
3. <input type="checkbox"/>	<p>Verify the backup was successful by viewing the command output.</p> <p>NOTE: If the PM&C backup has failed, contact Tekelec Customer Service for assistance;</p> <p>Tekelec Customer Care Center</p> <p>US: 1-888-367-8552</p> <p>Intl: +1-919-460-2150</p>	<p>If the background task shows that the backup failed, then the backup did not complete successfully.</p> <p>The output of pmaccli getBgTasks should look similar to this:</p> <p>For example:</p> <pre>2: Backup PM&C COMPLETE - PM&C Backup successful Step 2: of 2 Started: 2012-07-05 16:53:10 running: 4 sinceUpdate: 2 taskRecordNum: 2 Server Identity: Physical Blade Location: Blade Enclosure: Blade Enclosure Bay: Guest VM Location: Host IP: Guest Name: TPD IP: Rack Mount Server: IP: Name: ::</pre>
Appendix C has been completed.		

Appendix D PM&C SYSTEM HEALTH CHECK

This appendix contains two procedures used to verify the health of a PM&C system. If the PM&C is in a failure state, then upgrade must not be attempted.

NOTE: Be sure to capture a log of all lines appearing on the screen on the laptop, desktop, or other computer used to connect to the PM&C.

Procedure 21: PM&C Health Check

<p>S T E P #</p>	<p>This procedure provides instructions on how to perform a health check on the PM&C guest.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.</p>	
<p>1. <input type="checkbox"/></p>	<p>If necessary, access the PM&C guest console command prompt</p>	<p>If necessary, access the PM&C guest console command prompt as detailed in <i>Appendix A, Accessing the PM&C Console command prompt</i>.</p>
<p>2. <input type="checkbox"/></p>	<p>At the command prompt, run the “sentry status” command to verify the status of the PM&C application.</p>	<pre>[root@pmacDev902 ~]# sentry status sending status command... PM&C Sentry Status ----- sentryd started: Tue Jun 5 15:15:13 2012 Current activity mode: ACTIVE Process PID Status StartTS NumR ----- smacTalk 8990 running Tue Jun 5 15:15:13 2012 1 smacMon 9011 running Tue Jun 5 15:15:13 2012 1 hpiPortAudit 9037 running Tue Jun 5 15:15:13 2012 1 snmpEventHandler 9061 running Tue Jun 5 15:15:13 2012 1 eclipseHelp 9065 running Tue Jun 5 15:15:13 2012 1 Tue Jun 5 16:16:27 2012 Command Complete. [root@pmacDev902 ~]#</pre>
<p>3. <input type="checkbox"/></p>	<p>At the command prompt, run the alarmMgr utility.</p>	<pre>[root@pmacDev902 ~]# alarmMgr --alarmStatus [root@pmacDev902 ~]#</pre> <p>NOTE: If you have just performed an upgrade and have not yet accepted the upgrade, an alarm will exist indicating the need to accept the upgrade. An example is shown below:</p> <pre>SEQ: 8 UPTIME: 84 BIRTH: 1340670297 TYPE: SET ALARM: TKSPLATMI33 tpdServerUpgradePendingAccept 1.3.6.1.4.1.323.5.3.18.3.1.3.33</pre>
<p>4. <input type="checkbox"/></p>	<p>Verify there is no problem with the PM&C or PM&C application.</p> <p>Contact Tekelec Customer Service for information on how to proceed.</p>	<p>If sentry shows any PM&C processes not running or alarmMgr shows any failures, then the health check was not successful.</p> <p>If the health check was not successful, contact Tekelec Customer Service for information on how to proceed.</p> <p>Otherwise, PM&C appears to be running normally.</p>

Procedure 22: PM&C TVOE Host Health Check

<p>S T E P #</p>	<p>This procedure provides instructions on how to perform a health check on the PM&C TVOE Host.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.</p>	
<p>1. <input type="checkbox"/></p>	<p>Log in to the PM&C TVOE host as the “root” user.</p>	<p>Using a laptop or desktop computer connected to the customer network, use a SSH terminal program to connect to the IP address assigned to the PM&C TVOE host.</p> <pre>login as: root root@192.168.176.24's password: Last login: Sat Jun 2 19:48:34 2012 from 10.25.81.26 [root@hp90907U07 ~]#</pre>
<p>2. <input type="checkbox"/></p>	<p>At the command prompt, run the alarmMgr utility</p>	<pre>[root@hp90907U07 ~]# alarmMgr --alarmStatus [root@hp90907U07 ~]#</pre> <p>NOTE: If you have just performed an upgrade and have not yet accepted the upgrade, an alarm will exist indicating the need to accept the upgrade. An example is shown below:</p> <pre>SEQ: 8 UPTIME: 84 BIRTH: 1340670297 TYPE: SET ALARM: TKSPLATMI33 tpdServerUpgradePendingAccept 1.3.6.1.4.1.323.5.3.1 8.3.1.3.33</pre>
<p>3. <input type="checkbox"/></p>	<p>Verify there is no problem with the PM&C TVOE host.</p> <p>Contact Tekelec Customer Service for information on how to proceed.</p>	<p>If the health check was not successful, contact Tekelec Customer Service for information on how to proceed.</p> <p>Otherwise, PM&C TVOE host appears to be running normally.</p>

Procedure 23: PM&C Verify Backup Files Exist

<p>S T E P #</p>	<p>This procedure provides instructions on how to verify that the PM&C backup archive files exist, proving that the backup process is running correctly.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.</p>	
<p>1. <input type="checkbox"/></p>	<p>If necessary, access the PM&C guest console command prompt</p>	<p>If necessary, access the PM&C guest console as detailed in <i>Appendix A, Accessing the PM&C Console command prompt</i>.</p>
<p>2. <input type="checkbox"/></p>	<p>Verify that the backup directory contains recent backup archive files.</p>	<p>Execute the following command:</p> <pre>[root@pmacDev902 ~]# 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 [root@pmacDev902 ~]#</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</p> <p>You should see backup archive files for any backups performed as part of this upgrade procedure.</p>
<p>3. <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 Tekelec Customer Service for resolution of the backup issue.</p>
<p>Appendix D has been completed.</p>		

Appendix E DETERMINE IF PM&C TVOE HOST REQUIRES UPGRADE

This appendix contains a procedure used to determine if the PM&C TVOE host requires an upgrade to support the new release of PM&C. If the PM&C TVOE host cannot be upgraded at this time, then PM&C upgrade must not be attempted.

Procedure 24: Determine if PM&C TVOE host requires upgrade

<p>S T E P #</p>	<p>This procedure provides instructions on how to determine if the PM&C TVOE host needs upgrading.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.</p>	
<p>1. <input type="checkbox"/></p>	<p>Log in to the PM&C TVOE host as the “root” user.</p>	<p>Using a laptop or desktop computer connected to the customer network, use a SSH terminal program to connect to the IP address assigned to the PM&C TVOE host.</p> <pre>login as: root root@192.168.176.24's password: Last login: Sat Jun 2 19:48:34 2012 from 10.25.81.26 [root@hp90907U07 ~]#</pre>
<p>2. <input type="checkbox"/></p>	<p>Determine the release of TVOE running.</p>	<pre>[root@hp90907U07 ~]# appRev Install Time: Thu Jun 14 11:00:08 2012 Product Name: TVOE Product Release: 2.0.0_80.15.0 Part Number ISO: 872-2290-104 Part Number USB: 872-2290-104 Base Distro Product: TPD Base Distro Release: 6.0.0_80.15.0 Base Distro ISO: TPD.install-6.0.0_80.15.0-CentOS6.2-x86_64.iso OS: CentOS 6.2</pre>
<p>3. <input type="checkbox"/></p>	<p>Compare the product release shown above against the supported release of TVOE noted in the referring Application release notes.</p>	<p>If a newer TVOE release is specified, then you must upgrade the PM&C TVOE host before upgrade of the PM&C can commence.</p> <p>If upgrade is necessary continue to step 4, otherwise this procedure is complete.</p>
<p>4. <input type="checkbox"/></p>	<p>Prepare for the TVOE upgrade</p>	<p>An upgrade of a TVOE host will shut down 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>Shut down the PM&C guest as detailed in <i>Appendix F, Shutdown PM&C Guest</i>. Shut down all additional non-PM&C guests as detailed in referring application document.</p>

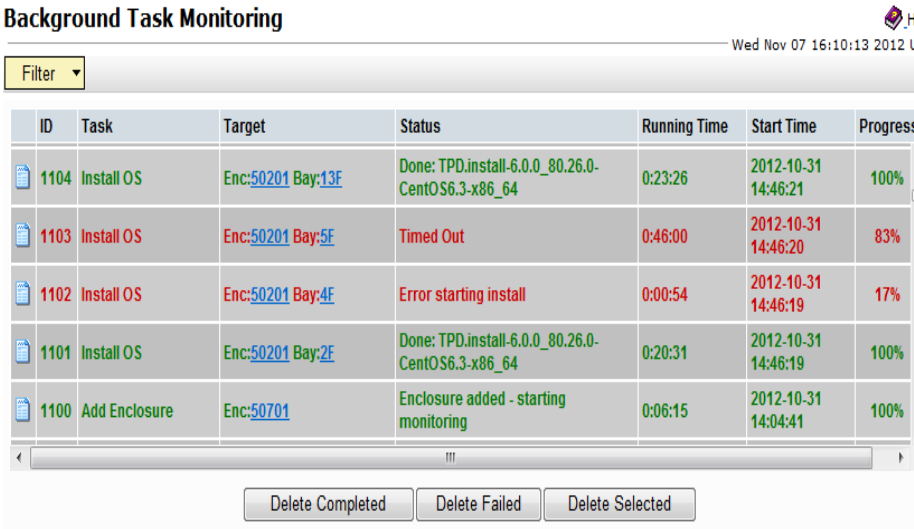
Procedure 24: Determine if PM&C TVOE host requires upgrade

5. <input type="checkbox"/>	Perform the TVOE upgrade	Upgrade the TVOE host. Follow the following procedures outlined in 909-2211-001 to upgrade the PM&C TVOE host <ul style="list-style-type: none">• Stand Alone TVOE host upgrade• TVOE Post-Upgrade Validation• Stand Alone TVOE upgrade Accept
Appendix E has been completed.		

Appendix F SHUTDOWN PM&C GUEST

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

Procedure 25: Shutdown the PM&C Guest

<p>S T E P #</p>	<p>This procedure provides instructions on how to properly shut down a PM&C Guest.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR ASSISTANCE.</p>	
<p>1. <input type="checkbox"/></p>	<p>Check for any background tasks in-progress on PM&C</p>	<p>On the PM&C GUI, navigate to the Background Tasks page. Verify all tasks show as complete (either green, 100% progress or red, failed) and not in-progress (blue with <100% progress).</p> <p>If any tasks show as in-progress (blue) then wait for the task to complete prior to going to the next step.</p> <p>Background Task Monitoring</p>  <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>

Procedure 25: Shutdown the PM&C Guest

<p>2. <input type="checkbox"/></p>	<p>Shutdown PM&C Guest</p>	<p>Assuming no in-progress tasks exist, then it is safe to shutdown the PM&C guest.</p> <p>Access the primary PM&C guest console command prompt as detailed in <i>Appendix A, Accessing the PM&C Console command prompt</i>.</p> <p>Execute the following command: <pre>[root@pmaDev902 ~]# halt -p</pre></p> <p>Broadcast message from root@pmaDev901 <pre>(/dev/ttyS0) at 11:20 ...</pre></p> <p>The system is going down for power off NOW! <pre>[root@pmaDev901 ~]#</pre></p> <p>Eventually the virsh console session is closed and you are returned to the TVOE host command prompt: <pre>Halting system... Power down.</pre></p> <pre>[root@hp91216u24 ~]#</pre>
<p>3. <input type="checkbox"/></p>	<p>Verify PM&C guest is shutdown</p>	<p>From the TVOE host command prompt execute the following command: <pre>[root@hp91216u24 ~]# virsh list --all</pre></p> <pre>Id Name State ----- - pmaDev901 shut off</pre> <pre>[root@hp91216u24 ~]#</pre> <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>Appendix F has been completed.</p>		

Appendix G ACCESSING TEKELEC'S CUSTOMER SUPPORT SITE

Access to the Tekelec's Customer Support site is restricted to current Tekelec customers. This section describes how to log into Tekelec's Customer Support site and how to locate upgrade procedures. Viewing these files requires Adobe Acrobat Reader, which can be downloaded at www.adobe.com.

1. Log into the Tekelec new Customer Support site at support.tekelec.com.

Note: If you have not registered for this new site, click the **Register Here** link. Have your customer number available. The response time for registration requests is 24 to 48 hours.

2. Click the **Product Support** tab.
3. Use the Search field to locate a document by its part number, release number, document name, or document type. The Search field accepts both full and partial entries.
4. Click a subject folder to browse through a list of related files.
5. To download a file to your location, right-click the file name and select **Save Target As**.