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Broadband Network Solutions

Software Upgrade Procedure

PM&C Migration 4.0 to 5.0

909-2208-001 Revision E, Jul 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)
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1. INTRODUCTION

This Software Migration Procedure details the steps to be taken to migrate a hardware-native PM&C 4.0 (4.0.0_40.24.0 or newer) installation to a virtual guest PM&C 5.0 hosted by TVOE running on the same hardware (Management Server). As of PM&C 5.0, PM&C will only be supported in a virtualized environment.

1.1 Purpose and Scope

This document describes methods utilized and procedures executed to perform a software migration on an in-service PM&C 4.0 to PM&C Release 5.0 (Platform 6.0). The audience for this document includes Tekelec customers as well as these PM&C BNS groups: Software Development, Design Verification, Product Verification, Documentation, and Customer Service including Software Operations and First Office Application.

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 Platform Configuration Procedure*, 909-2209-001, Current Version, Tekelec
- [2] *PM&C 3x/4.x Disaster Recovery*, 909-1638-001, Current Version, Tekelec
- [3] *Fresh Install (C Class Blades)*, 909-1578-001, Current Version, Tekelec
- [4] *Initial Product Manufacture*, 909-2130-001, Current Version, Tekelec
- [5] *Procedure, Formal Peer Review*, PD001866.doc, Current Version
- [6] *Software Upgrade Procedure Template*, TM005074, Current Version, Tekelec

1.3 Software Release Numbering

This procedure applies to installation of PM&C 5.0, a component of Platform 6.0 and 5.2.

1.4 Acronyms

Table 1. Acronyms

Acronym	Meaning
DHCP	Dynamic Host Configuration Protocol
HP c-Class	HP blade server offering
ILO	Integrated Lights-Out management processor in the HP RMS server
IPM	Initial Product Manufacturing
OS	Operating System (e.g. TPD)
PM&C	Platform Management and Configuration application
PMAC	Platform Management and Configuration application
RMS	Rack Mount Server
RPM	RPM Package Manager
TPD	Tekelec Platform Distribution
TVOE	Tekelec Virtual Operating Environment
GA	General Availability
LA	Limited Availability

1.5 Terminology

Table 2. Terminology

Term	Meaning
Backout (abort)	The process to take a system back to a Source Release prior to completion of upgrade to Target Release. Includes preservation of databases and system configuration.
Management Server	Management server in a context of PM&C 4.0 is an HP ProLiant DL 360 or DL 380 server on which the PM&C 4.0 application is installed. Management server in a context of PM&C 5.0 is an HP ProLiant DL 360 or DL 380 server on which TVOE is installed and a PM&C guest resides.
Migration	An indirect upgrade which involves change to the underlying hardware and/or the OS.
Rollback	The process to take a system from a Target Release back to a Source Release including preservation of databases and system configuration.
Source Release	Software release to upgrade from.
Target Release	Software release to upgrade to.
Upgrade Media	CD or DVD disks or USB media

1.6 Recommendations

Never attempt migration of the PM&C application when the Management Server on which it is running is unhealthy. Follow the pre-migration procedures for testing system health, and do not proceed with migration 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.

This product recommends that no additional configuration changes (such as DHCP range changes) are made during migration other than those directly required by migration to recreate pre-migration system configuration. Any configuration changes not directed in this document should be executed outside of the migration process.

1.7 Supported Internet Browsers and Versions

Table 3. Supported Internet Browsers and Versions

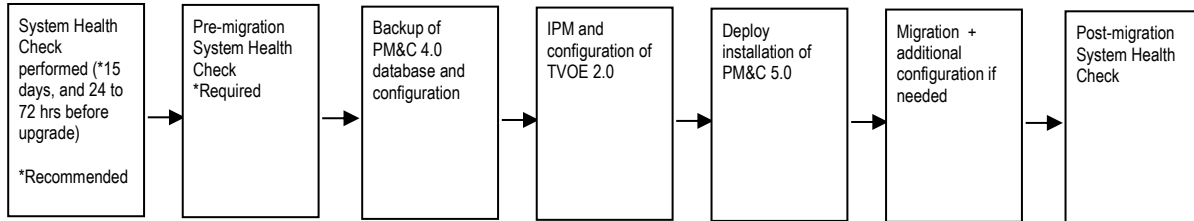
PM&C release	Supported Browsers and Versions
PM&C 4.0 release	Microsoft® Internet Explorer 6.0
PM&C 5.0 release	Microsoft® Internet Explorer 7.0 or 8.0

2. GENERAL DESCRIPTION

Figure 1 shows the general steps for all processes of performing a software 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.

Figure 1. Migration Process



3. MIGRATION OVERVIEW

This section provides a brief overview of the recommended method for migrating the Source Release PM&C software that is installed and running on a Management Server to the Target Release PM&C software running as a guest on TVOE on the Management Server. The basic migration process and approximate time required is outlined in Table 4, Table 5, and Table 6 with the backout procedure shown in Table 7.

If the optional redundant Management Server is present, it will be freshly installed after the migration is complete. This optional procedure is not included in the overview and time estimates below.

3.1 Required Materials

1. A valid PM&C root user login ID and password with all user privileges.
2. Capability to log into the Management Server via its ILO for installing TVOE.
3. Capability to log into the Management Server via a network connection to allow remote access for Tekelec Technical Services personnel.
4. Capability to log into the PM&C's web UI.
5. PM&C 5.0.X-50.XX.X Upgrade kit (DVD or USB or ESWD)
6. TVOE 2.0.X-80.XX.X Disaster Recovery Kit (DVD and Document)
7. TPD 5.0.0-72.44.0 Disaster Recovery Kit (DVD and Document)
8. PM&C 4.0 895-1436-204 Upgrade Kit
9. PM&C 3x/4.x Disaster Recovery, (Document) 909-1638-001
10. Platform 6.0 Configuration Reference, 909-2209-001
11. At least one blank optical media disk if backup to physical media is required.
12. **Additional management IP address for use by the TVOE. If redundant Management Server is present, it will need an additional management IP Address for the TVOE as well.**
13. **PM&C 5.0 is not supported on a TVOE host with 72 GB disks or smaller (see procedure 1 step 1 to verify disks size). A disk upgrade/swap will be required if the Management Server has 72 GB disks or smaller**

3.2 Pre-Migration Overview

The pre-migration procedures shown in *Table 4* may be executed outside of the maintenance window if desired.

Pre-Migration healthcheck should be run a minimum of 24 to 72 hours before the scheduled migration upgrade. An additional run 15 days in advance is recommended. If the system fails the healthcheck, then the failure conditions must be corrected and migration rescheduled for a later date.

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

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

Table 4. Pre-Migration Overview

Elapsed Time (Hours: Minutes)		Downtime (Hours: Minutes)		Activity	Impact
This Step	Cum.	This Step	Cum.		
00:05	00:05	00:00	00:00	Perform System Healthcheck as part of Software Migration Preparation (Refer to section 4.3)	Do not proceed with migration if system health check shows any problems with the Management Server.

3.3 Migration Execution Overview

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

Table 5. Migration Execution Overview

Elapsed Time (Hours: Minutes)		Downtime (Hours: Minutes)		Activity	Impact
This Step	Cum.	This Step	Cum.		
00:05	00:05	00:00	00:00	Perform System Healthcheck as outlined in Appendix E.	Do not proceed with migration if system health check shows any problems with the Management Server.
00:30	00:35	00:00	00:00	Configure power supply redundancy in each Enclosure managed by this PM&C. NOTE: The duration of this step will depend on the number of Enclosures being managed by this PM&C. This time estimate is based on three Enclosures.	Configuration of power supply redundancy is correct.
00:30	01:05	00:00	00:00	Backup PM&C provision and configuration databases, provisioned .iso images, and other files.	PM&C databases and files are backed up.
00:45	01:50	00:45	00:45	Install TVOE 2.0	TVOE configuration completed.
00:15	02:05	00:15	01:00	Deploy PM&C 5.0	PM&C 5.0 is installed but not yet configured.
00:20	02:25	00:20	01:20	Restore PM&C provision and configuration databases.	PM&C databases are updated from the backups of PM&C 4.0, and PM&C is initialized. Migration to PM&C 5.0 is complete.

3.4 Post Migrate Overview

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

Table 6. Post Migration Overview

Elapsed Time (Hours: Minutes)		Downtime (Hours: Minutes)		Activity	Impact
This Step	Cum.	This Step	Cum.	Post-migration Execution	
00:05	01:45	00:05	01:10	Perform System Healthcheck	Notify Tekelec Customer Service if system health check shows any problems with PM&C system. Backout may be necessary.

3.5 Backout 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.		
01:00	02:45	01:00	02:10	Install TPD 5.0.0-72.44.0 and PM&C 4.0.0_40.24.0.	Software is installed.
00:30	03:15	00:30	02:40	Restore PM&C provision and configuration databases.	PM&C provision and configuration databases are restored from the PM&C 4.0 backup optical media.

4. MIGRATION PREPARATION

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

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

4.1 Network Migration Preparation

Using the installation site survey or the configuration profile, make note of the network configuration of the Management Server in *Table 9*. This configuration information may be used to re-create the network configuration on the TVOE installation. This is **not** an exhaustive list of required network settings and may duplicate information in the detailed site survey. Not all of the rows will be filled.

If needed, access the PM&C command prompt via SSH as detailed in *Appendix C, Accessing the PM&C command Prompt via SSH*. To print out the details of a device/bond, execute the following at the PM&C command prompt.

Table 8. Configuration capture hints

Values	Command
Network Address	# cat /etc/sysconfig/network-scripts/ifcfg- <i><interface></i>
Netmask	... NETMASK=255.255.255.0
IP Address	... IPADDR=169.254.116.4 NETWORK=169.254.116.0
Slave Interfaces	# cat /proc/net/bonding/ <i><bond></i> grep Interface Slave Interface: eth01 Slave Interface: eth02
Role	# pmacadm getNetworkInterfaces Device Name : bond0 Network Id : 1 ← IP Address : 169.254.116.4 Description : Control network for blades Device Name : bond0.2 Network Id : 2 ← IP Address : 10.240.4.5 Description : PMC Management Device Name : bond1 Network Id : 3 ← IP Address : 10.240.6.220 Description : Netbackup interface # pmacadm getNetworkRoles NetworkRole Id : 1 Network Role : control Network Id : 1 ← NetworkRole Id : 2 Network Role : management Network Id : 2 ← NetworkRole Id : 3 Network Role : netbackup Network Id : 3 ←
NTP Server IP Address	# grep ntp /etc/hosts 10.250.32.10 ntpserver1
SNMP NMS IP address/community string	Using platcfg, navigate to the following configuration form: Network Configuration -> SNMP Configuration -> NMS Configuration

Table 9. Network Layout Worksheet

Bond/Interface	Slave interfaces		Network Address	Netmask	IP address	Role control, management, netbackup, etc.
bond0			_____ <Ctrl_net_addr>	_____ <Ctrl_netmask >	_____ <Ctrl_ip_addr>	control <Ctrl_bridge>
For Segregated network environments						
bond1			_____ <Mgmt_net_addr>	_____ <Mgmt_netmask >	_____ <Mgmt_ip_addr>	management <Mgmt_bridge>
bond2			_____ <NB_net_addr>	_____ <NB_netmask >	_____ <NB_ip_addr>	netbackup <NB_bridge>
bond3						
For non-segregated network environments						
Tagged bond interface _____			_____ <Mgmt_net_addr>	_____ <Mgmt_netmask >	_____ <Mgmt_ip_addr>	management <Mgmt_bridge>
Tagged bond interface _____			_____ <NB_net_addr>	_____ <NB_netmask >	_____ <NB_ip_addr>	netbackup <NB_bridge>
Tagged bond interface _____						

4.2 Hardware Migration Preparation

Hardware upgrade is not in the scope of this document.

4.3 Software Migration Preparation

The migration procedure requires credentials for the procedure. The required info is specified here, but is not filled in. **NOTE: Due to the sensitive nature of the information below, do not fill this data in unless the document is physically secured!**

Table 10. Software Migration Preparation

Subject/Attribute	Value
PM&C root userid/password	
TPD/TVOE root userid/password	
iLO Address of Management Server	
iLO admin userid/password	
OA root userid/password	
TVOE hostname NEW	
PM&C hostname <PMAC_Name> NOTE: The hostname of the new PM&C must match the original PM&C hostname (including upper/lower case).	
Management Gateway Address <Mgmt_gateway_addr>	
TVOE Management Server IP NEW <TVOE_Mgmt_ip_addr>	
NTP Server IP address <i>(customer provided)</i>	
SNMP NMS IP address/community string <i>(customer provided)</i>	
Backup to physical media (Yes/No)	
Special files required by application to include in backup	
ISO images to include in the backup required by application	
Deploying PM&C 5.0 with netBackup (Yes/No)	

List switches that are part of the system: Cisco 4948/4948E/4948E-F, Cisco 3020, 6120XG	
If running a Redundant PM&C, some additional details will be needed.	
Redundant Management Server TVOE Management IP Address NEW	
Redundant PM&C IP Control Address	
Redundant PM&C IP Management Address	

5. SOFTWARE MIGRATION PROCEDURE

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.

***** WARNING *****

Note the minimum PM&C 4.0 release supported by this document is 4.0.0_40.24.0 PM&C release. If you determine in procedure 1 that your system does not meet this requirement, stop executing this procedure immediately and contact the Customer Care Center for assistance.

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.

Command steps that require user entry are indicated with **white-on-black step numbers**.

The shaded area within response steps must be verified in order to successfully complete that step.

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 *card location, terminal port # assignments, and system features*.

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.

5.1 Preparation for Software Migration

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 migration**. Contact Tekelec Technical Services for assistance in resolving the failure conditions. Migration will have to be rescheduled to a later date.

Note the minimum PM&C 4.0 release supported by this document is 4.0.0_40.24.0 PM&C release. If you determine in procedure 1 that your system does not meet this requirement, stop executing this procedure immediately and contact the Customer Care Center for assistance.

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

S T E P #	This procedure verifies that all pre-migration 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"/>	Access the PM&C command prompt via SSH	If needed, access the PM&C command prompt via SSH as detailed in <i>Appendix C, Accessing the PM&C command Prompt via SSH</i> .
2. <input type="checkbox"/>	Verify the PM&C minimum release is 4.0.0_40.24.0	<pre># appRev Install Time: Tue May 15 11:07:40 2012 Product Name: PMAC Product Release: 4.0.0_40.24.0 Part Number ISO: 872-2291-106 Part Number USB: 872-2291-106 Base Distro Product: TPD Base Distro Release: 5.0.0_72.44.0 Base Distro ISO: TPD.install-5.0.0_72.44.0-CentOS5.7-i386.iso OS: CentOS 5.7</pre> <p>NOTE: The minimum Product Release value must be 4.0.0_40.24.0 or newer. Migration from any older PM&C 4.0 release is not supported.</p> <p>The minimum Product Release value must be 4.0.0_40.24.0 or newer. If this is not the case, stop executing this procedure immediately and contact the Customer Care Center for assistance.</p>
3. <input type="checkbox"/>	Verify the disk size on the management server console	Use the following command to verify that disk size is greater than 72GB: <pre># fdisk -l grep Disk</pre> <p>If the disk size is less than 72 GB, please do not proceed with the upgrade. Contact the Tekelec Customer Care Center and ask for assistance.</p>
4. <input type="checkbox"/>	Verify all materials required are present.	Materials are listed in the “Required Materials” list in section 3.1 <i>Required Materials</i> .

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





<p>5. <input type="checkbox"/></p>	<p>Verify passwords for PM&C systems are available</p>	<p>Refer to <i>Table 10. Software Migration Preparation</i>, for a list of users. Fill in the username and password information in the table for later reference.</p>
<p>6. <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 10. Software Migration Preparation</i>.</p> <p>The Main Menu > Hardware > System Configuration page of the PM&C GUI contains a "Provisioned Enclosure" 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 1 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>7. <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.

Procedure 2. Execute the Healthcheck Procedure

S T E P #	<p>This procedure executes a health check on the Management Server.</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>	
1 <input type="checkbox"/>	<p>Execute the system healthcheck.</p>	<p>Execute the PM&C Healthcheck procedures in <i>Appendix E, System Health Check</i>.</p> <p>If any error or failure conditions are discovered then do not proceed with migration. Contact Tekelec Technical Services to work to resolve the failure conditions. Migration will have to be rescheduled to a later date.</p>

Procedure 3. Check / Modify OA Power Supply Redundancy

S T E 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 <u>UPGRADE ASSISTANCE</u>.</p>	
1. <input type="checkbox"/>	<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 >/gui</p> <p>Login with pmacadmin credentials in <i>Table 10. Software Migration Preparation</i>.</p>
2. <input type="checkbox"/>	<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 Enclosure" 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>
3. <input type="checkbox"/>	<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.</p> <p>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>
4. <input type="checkbox"/>	<p>Log in to the Active OA</p>	<p>Log in to the GUI of the active OA using OA root credentials defined in <i>Table 10. Software Migration Preparation</i>.</p>
5. <input type="checkbox"/>	<p>View the configuration of power supply redundancy in the Active OA GUI.</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 3, using the OA IP address of the next Enclosure in the “Provisioned Enclosures” table.</p>

Procedure 4. Backup OA configuration to PM&C

S T E P #	<p>This procedure backs up the OA configuration to the PM&C for inclusion in a backup of 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>Should this procedure fail, contact the Tekelec Customer Care Center and ask for <u>UPGRADE ASSISTANCE</u>.</p>	
1 <input type="checkbox"/>	<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>
2 <input type="checkbox"/>	<p>Log in to the Active OA</p>	<p>Log in to the GUI of the active OA using credentials defined in <i>Table 10. Software Migration Preparation</i>.</p>
3 <input type="checkbox"/>	<p>Store configuration file on local disk</p>	<p>Navigate to the Enclosure Information > Enclosure Settings > Configuration scripts</p> <p>On the Configuration scripts open the first configuration file (current settings for enclosure). Store this file on local disk.</p> <p>For example: Press ctrl+s, choose file name, path, and as type choose text file. f.e. you may choose the following syntax for the configuration file name: <enclosure ID>_<timetag>.conf</p>
4 <input type="checkbox"/>	<p>Access the PM&C command prompt via SSH</p>	<p>If needed, access the PM&C command prompt via SSH as detailed in <i>Appendix C, Accessing the PM&C command Prompt via SSH</i>.</p>
5 <input type="checkbox"/>	<p>Create OA backup directory on PM&C</p>	<p>Execute: # mkdir -p /usr/TKLC/smac/etc/OA_backups/OABackup</p>
6 <input type="checkbox"/>	<p>Copy the OA Configuration file to OA backup directory on PM&C</p>	<p>Use SCP or WinSCP to copy the file into the PM&C’s OA backup directory created in the previous step.</p> <p>For unix users: # scp ./<cabinet_enclosure_backup file>.conf \ root@<management_server_ip>:/usr/TKLC/smac/etc/OA_backups/OABackup</p>

Procedure 5. Backup the PM&C Application Databases

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 <u>UPGRADE ASSISTANCE</u>.</p>	
1. <input type="checkbox"/>	<p>Insert a blank optical media</p>	<p>Insert a blank optical media into the optical drive of the Management Server.</p> <p>NOTE: It is possible to perform the migration without physical backup media. If this desired, skip this step.</p>
2. <input type="checkbox"/>	<p>Access the PM&C command prompt via SSH</p>	<p>If needed, access the PM&C command prompt via SSH as detailed in <i>Appendix C, Accessing the PM&C command Prompt via SSH</i>.</p>

Procedure 5. Backup the PM&C Application Databases

3. □	Prepare special files for backup	If directed to backup special files by a referring document, perform the steps in <i>Appendix F, Including Files in Pre-Migrate backup</i> , to include special files for backup.
4. □	Perform a backup to optical media using the PM&C command prompt.	<p>Execute only one of the following, based on the blank optical media type.</p> <p>For CD backup:</p> <pre>[root@pmac]# pmacadm backup --media=CD-R</pre> <p>For DVD-R backup:</p> <pre>[root@pmac]# pmacadm backup --media=DVD-R</pre> <p>For DVD+R backup:</p> <pre>[root@pmac]# pmacadm backup --media=DVD+R</pre> <p>For backup to a file (no optical media for backup):</p> <pre>[root@pmac]# pmacadm backup</pre> <p>The output of the command should be similar to:</p> <pre>[root@pmac ~]# pmacadm backup PM&C backup been successfull initiated as task ID 429</pre> <p>Note the task ID in your command output.</p>
5. □	Access the PM&C GUI	<p>If necessary, open IE web browser and enter:</p> <p><a href="https://<PM&C Management Network IP >/gui">https://<PM&C Management Network IP >/gui</p> <p>Login with pmacadmin credentials in <i>Table 10. Software Migration Preparation</i>.</p>
6. □	Verify the backup task succeeds in PM&C GUI	Navigate to the Task Monitoring page on the PM&C GUI. Verify the backup task with the task ID noted in step 4 completes successfully.
7. □	Secure the backup using the PM&C command prompt.	<p>If using optical media for the backup:</p> <p>Remove the optical disk from the optical drive of the Management Server and label it “PM&C 4.0 backup”. Add the date and the original PM&C version to the media label as well.</p> <p>If not using optical media for the backup:</p> <p>It is vitally important that the most current backup file be copied off the Management Server before proceeding further.</p> <p>The Management Server will be re-IPMed and any data stored on it will be lost. The remote location should be reliable and available on the management network, or via the default route on the management network. The most recent backup can be determined using the following command:</p> <pre># ls -t /var/TKLC/smac/backup/*.pef head -1</pre> <p>Use any appropriate transfer protocol (scp, sftp, ftp, tftp, etc.) to secure the backup file onto the remote server, taking careful note of the location. The example below is for scp.</p> <pre># scp /var/TKLC/smac/backup/<pef-filename> <user>@<remote-server>:/safe/path/</pre>

Procedure 5. Backup the PM&C Application Databases

<p>8. <input type="checkbox"/></p>	<p>Manually back up any ISO images.</p>	<p>NOTE: If the PM&C has a redundant PM&C configured with a recent backup, skip this step.</p> <p>If the PM&C does not have a redundant PM&C configured with a recent backup, the migration will not include ISO images provisioned on the PM&C.</p> <p>Navigate to the Software →Manage Software Images page in the GUI, to see a list of the software provisioned on the PM&C. If the loss of the existing ISO images is not a problem, then no ISO backups need to be done, they will be removed from the provisioned data (reported in Task Monitoring) if they are not found after the migration.</p> <p>If loss of any of these ISO images is unacceptable, copy the desired ISO images from the PM&C server to a secure remote location using any method available (scp, ftp, sftp, etc.)</p>
<p>9. <input type="checkbox"/></p>	<p>Record the host name for later use.</p>	<p>Record the Management Server’s host name in <i>Table 10. Software Migration Preparation.</i></p>

5.2 Software Migration Execution

Procedure 6. Migration of PM&C from 4.0 Data

S T E P #	<p>This procedure performs the migration to PM&C 5.0</p> <p>NOTE: Be sure to capture a log of all lines appearing on the screen on the laptop, desktop, or other computer used when executing this procedure.</p> <p>NOTE: This procedure may generate notifications and traps on configured NMS systems. These are expected and should be accepted as they appear.</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"/>	Insert TVOE 2.0 media into the Management Server	Insert the TVOE 2.0 optical media or a USB (item 6 in section 3.1 <i>Required Materials</i>) into the management server.
2. <input type="checkbox"/>	Access the Management Server console	<p>Access the Management Server console as detailed in <i>Appendix B, Accessing the Management server Console</i>.</p> <p>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 Management Server. To capture the log, after launching remote console, press the record button at the bottom of the screen and provide a filename to begin recording the session.</p>
3. <input type="checkbox"/>	Install TVOE 2.0 on the Management Server	<p>Follow [4] <i>Initial Product Manufacture, 909-2130-001, Current Version, Tekelec</i>, section 3.1 through 3.4 to configure and IPM the DL360 or DL380 server.</p> <p>For a DL360/G5 server, the correct options to use for the IPM of the management server are: TPDnoraid console=tty0</p> <p>For a DL360 G6/G7 or DL380 G6 server, the correct options to use for the IPM of the management server are: TPDnoraid console=tty0 diskconfig=HPHW,force</p>
4. <input type="checkbox"/>	Verify IPM on the Management Server console	Follow [4] <i>Initial Product Manufacture, 909-2130-001, Current Version, Tekelec</i> , section 3.5 to verify the IPM completed successfully.
5. <input type="checkbox"/>	Setup the TVOE network on the Management Server console	Using the information gathered in Section 4.1 , recreate the network configuration on the TVOE (bond0 should be setup already) using Section 3.8.3. TVOE Network Configuration in the <i>Platform 6.0 Platform Configuration Procedure, 909-2209-001, Current Version, Tekelec</i> .
6. <input type="checkbox"/>	Insert the PM&C 4.0 backup optical media	<p>Insert the optical media labeled “PM&C 4.0 Backup” into the optical drive of the Management Server.</p> <p>NOTE: If backup optical media is not being used, skip to step 8.</p>

Procedure 6. Migration of PM&C from 4.0 Data

7. <input type="checkbox"/>	Mount the backup media on the Management Server using console	Mount the backup optical media to the Management Server. For a sample of mounting a optical media: # getCDROM DV-W28E-RW sr0 /dev/sr0 # mount -t iso9660 /dev/sr0 /mnt/upgrade/
8. <input type="checkbox"/>	Copy the backup file to the Management Server using console	NOTE: Note that when you are copying the file to a new location, you are to rename it to PMAC40migrate.pef If using backup optical media: Copy the backup file off of the optical media. # cp /mnt/upgrade/*.pef /tmp/PMAC40migrate.pef # If not using backup media: Copy the backup file from the remote location, using an appropriate transfer protocol. Note, the file is renamed. The example below shows scp. # scp <user>@<remote-server>:/safe/path/<pef-filename> /tmp/PMAC40migrate.pef
9. <input type="checkbox"/>	Unmount the Backup Media from the Management Server using console	NOTE: If backup optical media is not being used, skip this step. Unmount and eject the backup media. # cd # umount /mnt/upgrade
10. <input type="checkbox"/>	Remove the Backup Media from the Management Server	NOTE: If backup optical media is not being used, skip this step. Remove the optical media.
11. <input type="checkbox"/>	Insert the PM&C 5.0 media into the Management Server using console	Insert the PM&C 5.0 media (item 5 in section 3.1 <i>Required Materials</i>). into the Management Server. Alternatively, if you are using an ESWD image, use SCP to move it to the /var/TKLC/upgrade directory of the TVOE.
12. <input type="checkbox"/>	Mount the PM&C 5.0 media on the Management Server console	Mount the PM&C Install/Upgrade media to the Management Server. For a sample of mounting a DVD media: # getCDROM DV-W28E-RW sr0 /dev/sr0 # mount -t iso9660 /dev/sr0 /mnt/upgrade/ For a sample of mounting USB media: # mkdir /mnt/usb # mount -t vfat /dev/sdb1 /mnt/usb # mount -o loop /mnt/usb/<iso-file> /mnt/upgrade For a sample of mounting image in /var/TKLC/upgrade directory: # mount -o loop /var/TKLC/upgrade/<iso-file> /mnt/upgrade

Procedure 6. Migration of PM&C from 4.0 Data

<p>13. ■</p> <p>Validate PM&C media on the Management Server console</p>	<p>Execute the self validating media script (this may take a minute):</p> <pre># cd /mnt/upgrade/upgrade # .validate/validate_cd Validating cdrom... UMVT Validate Utility v2.2.2, (c)Tekelec, June 2012 Validating <device or ISO> Date&Time: 2012-10-25 10:07:01 Volume ID: tklc_872-2441-106_Rev_A_50.11.0 Part Number: 872-2441-106_Rev_A Version: 50.11.0 Disc Label: PMAC Disc description: PMAC The media validation is complete, the result is: PASS</pre> <p>CDROM is Valid</p>
---	---

Procedure 6. Migration of PM&C from 4.0 Data

14.

Deploy the PM&C 5.0 using the Management Server console.

Using the pmac-deploy script, deploy the PM&C instance using the configuration captured in the customer site survey, *Table 9* and *Table 10*.

NOTE: The only difference from the fresh deployment of a PM&C is the **--migrate** option. Be sure to include this option.

NOTE: Two examples are provided below, but pmac-deploy should only be executed once.

For this example, deploy a PM&C without netbackup feature

```
# cd /mnt/upgrade/upgrade
# ./pmac-deploy --guest=<PMAC_Name> --hostname=<PMAC_Name>
--controlBridge=<Ctrl_Bridge>
--controlIP=<Ctrl_ip_addr> --controlNM=<Ctrl_netmask>
--managementBridge=<Mgmt_bridge>
--managementIP=<Mgmt_ip_addr> --managementNM=<Mgmt_netmask>
--routeGW=<Mgmt_gateway_addr>
--ntpserver=<TVOE_Mgmt_ip_addr>
--migrate=/tmp/PMAC40migrate.pef
```

For this example, deploy a PM&C with the netbackup feature if instructed to do so by the referring application documentation.

```
# cd /mnt/upgrade/upgrade
# ./pmac-deploy --guest=<PMAC_Name> --hostname=<PMAC_Name>
--controlBridge=<Ctrl_Bridge>
--controlIP=<Ctrl_ip_addr> --controlNM=<Ctrl_netmask>
--managementBridge=<Mgmt_bridge>
--managementIP=<Mgmt_ip_addr> --managementNM=<Mgmt_netmask>
--routeGW=<Mgmt_gateway_addr>
--ntpserver=<TVOE_Mgmt_ip_addr>
--bridge=<NB_Bridge> --nic=netbackup
--netbackupVol --migrate=/tmp/PMAC40migrate.pef
```

NOTE: Any failures will be reported in the command output.

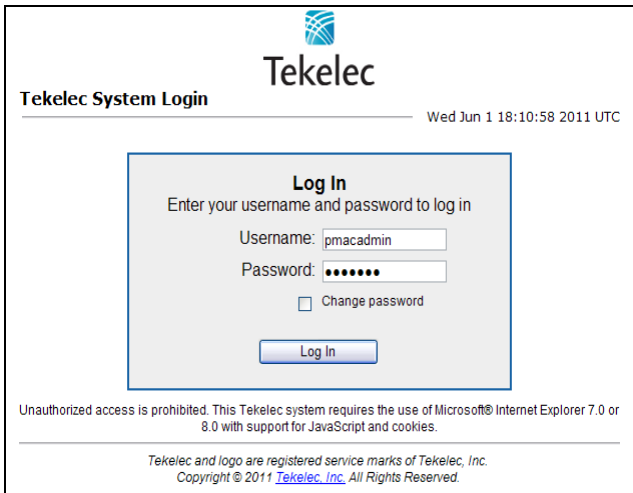
The following flines appear in the output as the deployment successfully completes:

```
Executing "/usr/bin/virsh autostart pmac"
Domain pmac marked as autostarted
```

```
Executing "/usr/bin/virsh start pmac"
Domain pmac started
#
```

Procedure 6. Migration of PM&C from 4.0 Data

<p>15.</p>	<p>Setup conserver serial access on the Management Server console</p>	<p>NOTE: If there are no aggregation Cisco 4948/4848E/4948E-F switches in this deployment, skip to the next step.</p> <p>Setup conserver serial access for switch1A and switch1B and open the firewall to allow for future tftp use in this procedure.</p> <p>Using the management server iLo console configure the conserver service to enable serial access to the switches:</p> <p>For switch1A: <pre># conserverAdm --addConsole --name=switch1A_console --device=/dev/ttyS4</pre></p> <p>For switch1B: <pre># conserverAdm --addConsole --name=switch1B_console --device=/dev/ttyS5</pre></p> <p>Open the conserver port on the firewall of the Management Server: <pre># iptables -I INPUT -s <pmac_mgmtVLAN_ip_address>/255.255.255.255 -p all -j ACCEPT # service iptables save</pre></p> <p>You should be returned to the command line prompt. If so, continue to the next step; if not, contact Customer Care Center for assistance.</p>
<p>16.</p>	<p>Login to the PM&C guest console</p>	<p>Connect to the PM&C guest console as detailed in <i>Appendix D, Accessing the PM&C Guest Console</i>.</p>
<p>17.</p>	<p>Perform migration of the PM&C 4.0 provisioned data on the PM&C guest console.</p>	<pre>[root@pmac ~]# pmacadm migrate --fileName=automigrate-source.pef</pre>
<p>18.</p>	<p>Log in to the PM&C GUI.</p>	<p>Open IE web browser and enter: <a href="https://<PM&C Management Network IP >">https://<PM&C Management Network IP ></p> <p>Login with pmacadmin credentials in <i>Table 10. Software Migration Preparation</i>.</p>



Procedure 6. Migration of PM&C from 4.0 Data

<p>19.</p> <p><input type="checkbox"/></p>	<p>Verify that the Migration Task completes in PM&C GUI</p>	<p>Navigate to the Task Monitoring page on the menu. Verify that the migration (“Restore”) background task completes successfully.</p> <p>NOTE: After the restore is complete you should see “Add Enclosure” tasks start for all previously provisioned enclosures. These should be allowed to complete before continuing.</p> <p>NOTE: After the migration is complete, you may see some tasks mentioning ISO images being deleted. This is normal behavior in the absence of a redundant PM&C. These ISO images may be re-provisioned manually.</p>
<p>20.</p> <p><input type="checkbox"/></p>	<p>Restore special files from backup on PM&C guest console</p>	<p>Perform the steps in <i>Appendix G, Restoring Files from Pre-migrate Backup</i>, to restore special files from backup, if needed.</p>
<p>21.</p> <p><input type="checkbox"/></p>	<p>Determine if the netConfig utility was used to configure switches in PM&C 4.0.</p>	<p>The use of netConfig utility for configuring switches was optional in PM&C 4.0. This step will help you to determine 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:</p> <pre>[root@pmac ~]# netConfig --repo listDevices</pre> <p>If the netConfig utility was used to configure switches, all of the switches listed in <i>Table 10. Software Migration Preparation</i> should be represented in the output.</p> <p>If all of the switches listed in <i>Table 10. Software Migration Preparation</i> are represented in the output, skip to step 23.</p> <p>Otherwise, proceed to the next step.</p>
<p>22.</p> <p><input type="checkbox"/></p>	<p>Perform Cisco 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 the <i>Platform 6.0 Platform Configuration Procedure</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>

Procedure 6. Migration of PM&C from 4.0 Data

23.

Configure netConfig network utility on PM&C guest console

NOTE: If there are no aggregation Cisco 4948/4848E/4948E-F switches in this deployment, skip this step.

Use netConfig to delete the console_service from prior to the migration:

```
[root@pmac ~]# netConfig --repo deleteService name=console_service
```

Use netConfig to create a repository entry that will use the conserver service that was configured in the previous steps. This command will give the user several prompts. The prompts with <variables> as the answers are site specific that the user MUST modify. Other prompts that don't have a <variable> as an answer must be entered EXACTLY as they are shown here.

```
[root@pmac ~]# netConfig --repo addService name=console_service
Service type? (tftp, ssh, conserver, oa) conserver
Service host? <pmac_mgmtVLAN_ip_address>
Enter an option name (q to cancel): user
Enter a value for user: platcfg
Enter an option name(q to cancel): password
Enter a value for password: <platcfg_password>
Verify password: <platcfg_password>
Enter an option name(q to cancel): q
Add service for console_service successful
```

To check that you entered the information correctly, use the following command:

```
[root@pmac ~]# netConfig --repo showService name=console_service
```

and check the output, which will be similar to the one shown below:

```
[root@pmac ~]# netConfig --repo showService name=console_service
Services:
Service Name: console_service
Type: conserver
Host: 10.240.8.4
Options:
password: D8396824B3B2B9EE
user: platcfg
[root@pmac ~]#
```


Procedure 6. Migration of PM&C from 4.0 Data

24.

Add the `tftp_service` for Cisco switches on PM&C guest console

NOTE: If there are no Cisco switches in this deployment, skip this step.

Check for the `tftp_service`, and add it if necessary

```
[root@pmac ~]# netConfig --repo listServices
```

SAMPE OUTPUT:

Services:

```
Service Name:  tftp_service
Type:         tftp
Host:        10.240.8.4
Options:
  dir: /var/TKLC/smac/image
```

If the `tftp_service` IS listed in the output of '`listServices`' skip to the next step.

If the `tftp_service` is NOT listed in the output of '`listServices`' add the service:

```
[root@pmac ~]# netConfig --repo addService name=tftp_service
Service type? (tftp, ssh, conserver, oa) tftp
Service host? <pmac_mgmtVLAN_ip_address>
Enter an option name (q to cancel): dir
Enter a value for dir: /var/TKLC/smac/image/
Enter an option name(q to cancel): q
Add service for tftp_service successful
```

To check that you entered the information correctly, use the following command:

```
[root@pmac ~]# netConfig --repo showService name=tftp_service
```

and check the output, which will be similar to the one shown below (Note: only the `tftp` service info has been shown in this example. If the previous step and this step were done correctly, both the `console_service` and `tftp_service` entries would show up)

```
[root@pmac ~]# netConfig --repo showService name=tftp_service
Services:
Service Name: tftp_service
Type: tftp
Host: 10.240.8.4
Options:
dir: /var/TKLC/smac/image
[root@pmac ~]#
```

Procedure 6. Migration of PM&C from 4.0 Data

25.

Add the ssh_service on PM&C guest console

NOTE: If you had to execute step 22, the switchConfig to netConfig Migration, skip this step.

Check for the ssh_service, and add it if necessary

```
[root@pmac ~]# netConfig --repo listServices
```

SAMPLE OUTPUT:

```
Services:
  Service Name:  ssh_service
  Type:         ssh
  Host:        10.240.8.4
  Options:
    password: D5477140ECECECEB
    user: root
```

If the ssh_service IS listed in the output of 'listServices' skip to the next step.

If the ssh_service is NOT listed in the output of 'listServices' add the service:

```
[root@pmac ~]# netConfig --repo addService name=ssh_service
Service type? (tftp, ssh, conserver, oa) ssh
Service host? <pmac_mgmtVLAN_ip_address>
Enter an option name <q to cancel>: user
Enter the value for user: <switch_backup_user>
Enter an option name <q to cancel>: password
Enter the value for password: <switch_backup_user_password>
Verify Password: <switch_backup_user_password>
Enter an option name <q to cancel>: q
Add service for ssh_service successful
[root@pmac ~]#
```

To ensure that you entered the information correctly, use the following command and inspect the output, which will be similar to the one shown below.

```
[root@pmac ~]# netConfig --repo showService name=ssh_service
Service Name: ssh_service
Type: ssh
Host: 10.250.62.85
Options:
password: C20F7D639AE7E7
user: root
[root@pmac ~]#
```

Procedure 6. Migration of PM&C from 4.0 Data

26.	<p>On PM&C guest console, determine if HP6120 switches login credentials are set.</p>	<p>NOTE: If there are no HP6120 switches in this deployment, skip this step.</p> <p>If you do not know the HP6120 switch names, execute:</p> <pre>[root@pmac ~]# netConfig --repo listDevices</pre> <p>Now look for the entries with Model 6120 and note the Device. For instance in the following selective output, the device values (switch names) are 6120XG_IOBAY1 and 6120XG_IOBAY2.</p> <pre>[root@pmac ~]# netConfig --repo listDevices Device: 6120XG_IOBAY1 Vendor: HP Model: 6120 Access: Network: 10.240.8.7 Init Protocol Configured Live Protocol Configured Device: 6120XG_IOBAY2 Vendor: HP Model: 6120 Access: Network: 10.240.8.8 Init Protocol Configured Live Protocol Configured</pre> <p>For ALL HP6120 switches in the deployment issue the following command to find out if the manager credentials were set:</p> <pre>[root@pmac ~]# netConfig showConfiguration --device=<switch_name> grep password</pre> <p>In the following example, the manager credentials exist for switch 6120XG_IOBAY1:</p> <pre>[root@pmac ~]# netConfig showConfiguration --device=6120XG_IOBAY1 grep password password manager user-name "plat" sha1 "23d2383e4415cfb30ac3a4bffdf93736c5d90b76"</pre> <p>If the manager credentials exist for all HP6120 switches, skip to step 28. Otherwise, proceed to the next step.</p>
27.	<p>Setup switches HP6120 login credentials on PM&C guest console</p>	<p>NOTE: If there are no HP6120 switches in this deployment, skip this step.</p> <p>For ALL HP6120 switches that did not have manager credentials set in the previous step, execute:</p> <pre>[root@pmac ~]# netConfig userConfigureCommand -- device=<switch_name> command="password manager user-name <switch_platform_username> plaintext <switch_platform_password>"</pre>

Procedure 6. Migration of PM&C from 4.0 Data

28. <input type="checkbox"/>	Verify HP6120 switches access on PM&C guest console	<p>NOTE: If there are no HP6120 switches in this deployment, skip this step.</p> <p>Verify that netConfig can access all HP6120 switches:</p> <pre>[root@pmac ~]# netConfig getVersion --device=<switch_name></pre> <p>SAMPLE OUTPUT:</p> <pre>Firmware Version: Z.14.32</pre> <p>If netConfig returns an error contact Customer Care Center for assistance.</p>
29. <input type="checkbox"/>	Backup all aggregation 4948 switches on PM&C guest console	<p>NOTE: If there are no aggregation Cisco 4948/4848E/4948E-F switches in this deployment, skip this step.</p> <p>Perform Procedure 3.1.5 (Backup Cisco 4948/4948E/4948E-F Switch and/or Cisco 3020 Enclosure Switch (netconfig)) for ALL 4948 switches in <i>Platform 6.0 Platform Configuration Procedure</i>, 909-2209-001, Current Version, Tekelec.</p>
30. <input type="checkbox"/>	Backup all 3020 switches on PM&C guest console	<p>NOTE: If there are no 3020 switches in this deployment, skip this step.</p> <p>Perform Procedure 3.1.5 (Backup Cisco 4948/4948E/4948E-F Switch and/or Cisco 3020 Enclosure Switch (netconfig)) for ALL 3020 switches in <i>Platform 6.0 Platform Configuration Procedure</i>, 909-2209-001, Current Version, Tekelec.</p>
31. <input type="checkbox"/>	Backup all 6120 switches on PM&C guest console	<p>NOTE: If there are no 6120 switches in this deployment, skip this step.</p> <p>Perform procedure 3.2.5 (Backup 6120XG Enclosure Switch) for ALL 6120 switches in <i>Platform 6.0 Platform Configuration Procedure</i>, 909-2209-001, Current Version, Tekelec.</p>
32. <input type="checkbox"/>	Re-provision ISO images	<p>If needed, re-provision any ISO images backed up in Procedure 3 using the procedure 3.8.9 Adding ISO Images to the PM&C Repository in <i>Platform 6.0 Platform Configuration Procedure</i>, 909-2209-001, Current Version, Tekelec.</p>
33. <input type="checkbox"/>	Configure NetBackup client software.	<p>If applicable install and configure the NetBackup client software. To do this perform 3.8.14 PM&C NetBackup Client Installation and Configuration in <i>Platform 6.0 Platform Configuration Procedure</i>, 909-2209-001, Current Version, Tekelec.</p> <p>Have the customer execute the remote backup to verify the configuration.</p>
34. <input type="checkbox"/>	End PM&C guest console session.	<p>Press <ctrl>] to exit the PM&C guest console.</p>
35. <input type="checkbox"/>	Unmount PM&C 5.0 media from Management Server console	<p>In the management server iLO console session, execute:</p> <pre># cd # umount /mnt/upgrade</pre> <p>If using USB media, also execute:</p> <pre># umount /mnt/usb</pre>

Procedure 6. Migration of PM&C from 4.0 Data

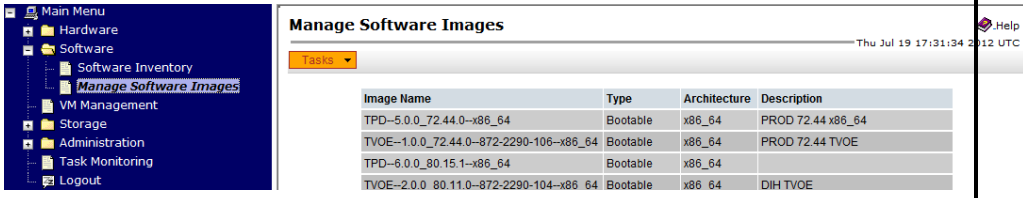
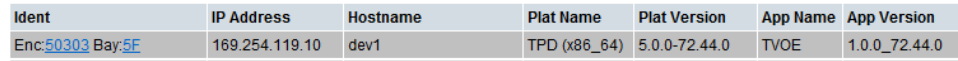
<p>36. <input type="checkbox"/></p>	<p>Remove the PM&C 5.0 media from the Management Server</p>	<p>If using physical PM&C 5.0 media , remove it from the Management Server.</p> <p>If not using physical media, execute:</p> <pre>[root@tvoe ~]# ls /var/TKLC/upgrade/ 872-2525-101-2.5.0_82.17.0-TVOE-x86_64.iso</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@tvoe ~]# rm -f /var/TKLC/upgrade/<image_name.iso></pre> <p>For instance:</p> <pre>[root@tvoe ~]# rm -f /var/TKLC/upgrade/872-2525-101-2.5.0_82.17.0-TVOE-x86_64.iso</pre> <p>Repeat this step as necessary to ensure there are no images left to be removed.</p>
<p>The procedure has been completed.</p>		

5.3 Software Migration Completion

Procedure 7. Software Migration Completion

<p>S T E P #</p>	<p>This procedure verifies that the post-migration system is healthy.</p> <p>NOTE: Be sure to capture a log of all lines appearing on the screen on the laptop, desktop, or other computer used when executing this procedure.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</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>Perform post-migration health checks</p>	<p>Execute the health check procedure as detailed in <i>Appendix E, System Health Check</i>.</p>

<p>2.</p> <p><input type="checkbox"/></p>	<p>Log in to the PM&C GUI.</p>	<p>If necessary, open IE web browser and enter: <a href="https://<PM&C Management Network IP >">https://<PM&C Management Network IP ></p> <p>Login with pmacadmin credentials in <i>Table 10. Software Migration Preparation.</i></p> <div data-bbox="513 312 1141 800" data-label="Image"> </div>
<p>3.</p> <p><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: Output similar to that shown will appear on the terminal window.</p> <p>NOTE: The hardware discovery may take some time to complete. The screen capture assumes discovery is complete for all enclosures.</p> <div data-bbox="513 1100 860 1650" data-label="Image"> </div>

<p>4.</p> <p><input type="checkbox"/></p>	<p>Verify Software Images in the PM&C GUI.</p>	<p>Navigate to the Manage Software Images GUI to verify all images that you wish to have are available for installation/upgrade.</p> <p>NOTE: Output similar to that shown will appear on the terminal window.</p>  <p>The screenshot shows a navigation menu on the left with 'Manage Software Images' selected. The main content area displays a table titled 'Manage Software Images' with the following data:</p> <table border="1"> <thead> <tr> <th>Image Name</th> <th>Type</th> <th>Architecture</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>TPD-5.0.0_72.44.0-x86_64</td> <td>Bootable</td> <td>x86_64</td> <td>PROD 72.44 x86_64</td> </tr> <tr> <td>TVOE-1.0.0_72.44.0-872-2290-106-x86_64</td> <td>Bootable</td> <td>x86_64</td> <td>PROD 72.44 TVOE</td> </tr> <tr> <td>TPD-6.0.0_80.15.1-x86_64</td> <td>Bootable</td> <td>x86_64</td> <td></td> </tr> <tr> <td>TVOE-2.0.0_80.11.0-872-2290-104-x86_64</td> <td>Bootable</td> <td>x86_64</td> <td>DIH TVOE</td> </tr> </tbody> </table>	Image Name	Type	Architecture	Description	TPD-5.0.0_72.44.0-x86_64	Bootable	x86_64	PROD 72.44 x86_64	TVOE-1.0.0_72.44.0-872-2290-106-x86_64	Bootable	x86_64	PROD 72.44 TVOE	TPD-6.0.0_80.15.1-x86_64	Bootable	x86_64		TVOE-2.0.0_80.11.0-872-2290-104-x86_64	Bootable	x86_64	DIH TVOE
Image Name	Type	Architecture	Description																			
TPD-5.0.0_72.44.0-x86_64	Bootable	x86_64	PROD 72.44 x86_64																			
TVOE-1.0.0_72.44.0-872-2290-106-x86_64	Bootable	x86_64	PROD 72.44 TVOE																			
TPD-6.0.0_80.15.1-x86_64	Bootable	x86_64																				
TVOE-2.0.0_80.11.0-872-2290-104-x86_64	Bootable	x86_64	DIH TVOE																			
<p>5.</p> <p><input type="checkbox"/></p>	<p>Verify the Software Inventory looks correct through the PM&C GUI.</p>	<p>NOTE: Output similar to that shown will appear on the terminal window.</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. Verify that all the servers are listed and have the details filled in (assuming TPD or TVOE is installed on the server).</p>  <p>The screenshot shows a table with the following data:</p> <table border="1"> <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																
<p>6.</p> <p><input type="checkbox"/></p>	<p>If needed, setup redundant PM&C</p>	<p>If there is a redundant Management Server present, and the primary PM&C is healthy and running properly, the redundant PM&C can be deployed. To do this execute procedure 3.8.12 Install PM&C on redundant DL360 or DL 380 in <i>Platform 6.0 Platform Configuration Procedure</i>, 909-2209-001, Current Version, Tekelec.</p> <p>If applicable install and configure the NetBackup client software. To do this perform 3.8.14 PM&C NetBackup Client Installation and Configuration in <i>Platform 6.0 Platform Configuration Procedure</i>, 909-2209-001, Current Version, Tekelec.</p>																				
<p>7.</p> <p><input type="checkbox"/></p>	<p>Gather captured session logs.</p> <p>Exit all GUI and terminal sessions</p>	<p>Gather captured logs of all lines appearing on the screen on the laptop, desktop, or other computer used when executing this procedure.</p>																				
<p>Procedure is complete.</p>																						

6. RECOVERY PROCEDURES

Migration 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 OAP Site Installation Procedure also needs to be performed. Persons performing the migration should be familiar with these documents.

6.1 Backout Procedures

Execute this section only if there is a problem and it is desired to revert back to the pre-migration 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).

Procedure 8. Migration Backout Procedure

S T E P #	This procedure backs out the migration by reinstalling the PM&C 4.x software and recovering the data. NOTE: Be sure to capture a log of all lines appearing on the screen on the laptop, desktop, or other computer used when executing this procedure. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. Should this procedure fail, contact the Tekelec Customer Care Center and ask for UPGRADE ASSISTANCE .	
1. <input type="checkbox"/>	Install TPD 5.0 on the Management Server.	IPM the Management Server using the instructions and installation disk included in the . When setting the hostname, restore the original hostname, which is saved in <i>Table 10. Software Migration Preparation</i> .
2. <input type="checkbox"/>	Install PM&C 4.0 on the Management Server.	Install PM&C 4.0 using PM&C 4.0 895-1436-204 Upgrade Kit, following the instructions in document 909-1578-001, Section 2.1, Procedure 5 (“Install PM&C application”) .
3. <input type="checkbox"/>	Restore the customer’s databases.	Restore the 4.0 databases using the procedure Restore PM&C Server From Backup Media in <i>PM&C 3x/4.x Disaster Recovery, (Document) 909-1638-001</i> .
4. <input type="checkbox"/>	Execute the system healthcheck.	Execute <i>Appendix E, System Health Check</i> . If any error or failure conditions are discovered, contact Tekelec Technical Services to work to resolve the failure conditions.
5. <input type="checkbox"/>	If present, remove the optical media from the management server.	Remove the optical media from the appropriate slot of the management server.
The procedure has been completed.		

APPENDIX A. ACCESING THE MANAGEMENT SERVER VIA SSH

Procedure 9. Accessing the Management Server command prompt via SSH

<p>S T E P #</p>	<p>This procedure provides instructions on how to access the Management Server’s command prompt on a HP c-Class system.</p> <p>NOTE: Be sure to capture a log of all lines appearing on the screen on the laptop, desktop, or other computer used when executing this procedure.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT THE TEKELEC CUSTOMER CARE CENTER AND ASK FOR ASSISTANCE.</p>	
<p>1. <input type="checkbox"/></p>	<p>Login as the “root” user to Management Server using SSH.</p>	<p>Using a laptop or desktop computer connected to the customer network, use an SSH terminal program to connect to the IP address assigned to the Management Server and login as TVOE/TPD root user defined in <i>Table 10. Software Migration Preparation</i>.</p> <pre>Last login: Fri Apr 6 07:59:08 2007 from 192.168.69.75 [root@foo-1060101-a ~]#</pre>
<p>2. <input type="checkbox"/></p>	<p>Execute the <i>screen</i> utility to start a saved shell.</p>	<pre>[root@foo-1060101-a ~]# screen -R [root@foo-1060101-a ~]#</pre>
<p>3. <input type="checkbox"/></p>	<p>Exit this procedure and return to the procedure which referred you.</p>	<p>Return to the next step in the referring procedure.</p>
<p>The procedure has been completed.</p>		

APPENDIX B. ACCESSING THE MANAGEMENT SERVER CONSOLE

Procedure 10. Accessing the Management Server Console

<p>S T E P #</p>	<p>This procedure provides instructions on how to access the Management Server’s Console on a HP c-Class system.</p> <p>NOTE: Be sure to capture a log of all lines appearing on the screen on the laptop, desktop, or other computer used when executing this procedure.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT THE TEKELEC CUSTOMER CARE CENTER AND ASK FOR ASSISTANCE.</p>	
<p>1. <input type="checkbox"/></p>	<p>Login as the admin user to Management Server iLO.</p>	<p>Using a laptop or desktop computer connected to the customer network, navigate internet explorer to the iLO address assigned to the Management Server and login as the iLO admin user captured in defined in <i>Table 10. Software Migration Preparation</i>.</p> <p>Navigate to Remote Console -> Remote Console to launch the remote console in a new window.</p> <p>It may be necessary to login using the TPD/TVOE root user captured in <i>Table 10. Software Migration Preparation</i>. [root@foo-1060101-a ~]#</p>
<p>2. <input type="checkbox"/></p>	<p>Exit this procedure and return to the procedure which referred you.</p>	<p>Return to the next step in the referring procedure.</p>
<p>The procedure has been completed.</p>		

APPENDIX C. ACCESSING THE PM&C COMMAND PROMPT VIA SSH

Procedure 11. Accessing the PM&C command prompt via SSH

<p>S</p> <p>T</p> <p>E</p> <p>P</p> <p>#</p>	<p>This procedure provides instructions on how to access the PM&C command using SSH.</p> <p>NOTE: Be sure to capture a log of all lines appearing on the screen on the laptop, desktop, or other computer used when executing this procedure.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT THE TEKELEC CUSTOMER CARE CENTER AND ASK FOR ASSISTANCE.</p>	
<p>1.</p> <p><input type="checkbox"/></p>	<p>Login as the “root” user to PM&C command prompt using SSH.</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 application and login with PM&C root credentials defined in <i>Table 10. Software Migration Preparation</i>.</p> <pre>Last login: Fri Apr 6 07:59:08 2007 from 192.168.69.75</pre> <pre>[root@pmac ~]#</pre>
<p>2.</p> <p><input type="checkbox"/></p>	<p>Execute the <i>screen</i> utility to start a saved shell.</p>	<pre>[root@pmac ~]# screen -R</pre> <pre>[root@pmac ~]#</pre>
<p>3.</p> <p><input type="checkbox"/></p>	<p>Exit this procedure and return to the procedure which referred you.</p>	<p>Return to the next step in the referring procedure.</p>
<p>The procedure has been completed.</p>		

APPENDIX D. ACCESSING THE PM&C GUEST CONSOLE

Procedure 12. Accessing the PM&C Guest console

<p>S T E P #</p>	<p>This procedure provides instructions on how to access the virtualized PM&C guest console running on a TVOE hypervisor.</p> <p>NOTE: Be sure to capture a log of all lines appearing on the screen on the laptop, desktop, or other computer used when executing this procedure.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT THE TEKELEC CUSTOMER CARE CENTER AND ASK FOR ASSISTANCE.</p>	
<p>1. <input type="checkbox"/></p>	<p>Access the Management Server console</p>	<p>Login to management server console, using <i>Appendix B, Accessing the Management server Console</i>.</p>
<p>2. <input type="checkbox"/></p>	<p>Login to PM&C guest console as the PM&C root user.</p>	<p>Connect to the console and login as the PM&C root user captured in <i>Table 10. Software Migration Preparation</i>. It may be necessary to press return to get a prompt</p> <pre>[root@foo-1060101-a ~]# virsh console <PMAC_Name> Connected to domain <PMAC_Name> 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 <PMAC_Name> login: root Password: [root@<PMAC_Name> ~]#</pre>
<p>3. <input type="checkbox"/></p>	<p>Exit this procedure and return to the procedure which referred you.</p>	<p>Return to the next step in the referring procedure.</p>
<p>The procedure has been completed.</p>		

APPENDIX E. SYSTEM HEALTH CHECK

This appendix contains procedure used to verify the health of a PM&C and/or Management Server system. If the Management Server or PM&C application are in a failure state, then migration must not be attempted.

Procedure 13. System Health Check

<p>S T E P #</p>	<p>This procedure provides instructions on how to perform a healthcheck on the Management Server and/or the PM&C application instance.</p> <p>NOTE: Be sure to capture a log of all lines appearing on the screen on the laptop, desktop, or other computer used when executing this procedure</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT THE TEKELEC CUSTOMER CARE CENTER AND ASK FOR ASSISTANCE.</p>	
<p>1. <input type="checkbox"/></p>	<p>Access the PM&C command prompt via SSH</p>	<p>If necessary, access the PM&C command prompt as detailed in <i>Appendix C, Accessing the PM&C command Prompt via SSH.</i></p>
<p>2. <input type="checkbox"/></p>	<p>Run the “sentry status” command to verify the status of the PM&C application.</p>	<p>NOTE: On a PM&C 4.0 system, the output will include a “snmpSubagent” line.</p> <p>NOTE: On a PM&C 5.0 system, the output will not include a “snmpSubagent” line.</p> <pre>[root@pmac ~]# sentry status sending status command... PM&C Sentry Status ----- sentryd started: Thu May 31 07:47:31 2012 Current activity mode: ACTIVE Process PID Status StartTS NumR ----- smacTalk 5932 running Sun Dec 6 07:47:31 2009 1 smacMon 5935 running Sun Dec 6 07:47:31 2009 1 hpiPortAudit 5951 running Sun Dec 6 07:47:31 2009 1 snmpEventHandler 5962 running Sun Dec 6 07:47:31 2009 1 snmpSubagent 5964 running Sun Dec 6 07:47:31 2009 1 eclipseHelp 5971 running Sun Dec 6 07:47:31 2009 2 Thu June 7 11:09:44 2012 Command Complete. [root@pmac ~]#</pre>
<p>3. <input type="checkbox"/></p>	<p>Run alarmMgr on PM&C instance.</p>	<pre>[root@pmac ~]# alarmMgr --alarmStatus [root@pmac ~]#</pre>

Procedure 13. System Health Check

<p>4. <input type="checkbox"/></p>	<p>If any error messages are displayed by the alarmMgr command, if sentry shows any PM&C processes not running, or alarmMgr shows any failures, then there is a problem with the Management Server or PM&C application.</p> <p>Contact Tekelec Technical Services for information on how to proceed.</p>	<p>If sentry shows any PM&C processes not running, then the healthcheck was not successful. Contact Tekelec Technical Services for information on how to proceed.</p> <p>Otherwise, if alarmMgr shows no alarms and sentry shows all processes running, then PM&C appears to be running normally.</p>
<p>5. <input type="checkbox"/></p>	<p>If POST-MIGRATION, access the management server via SSH.</p>	<p>NOTE: If executing on PRE-MIGRATION system skip this step.</p> <p>Access the management server command prompt as detailed in <i>Appendix A, Accesing the Management Server via SSH</i>.</p>
<p>6. <input type="checkbox"/></p>	<p>If POST-MIGRATION, run alarmMgr from management server command prompt</p>	<p>NOTE: If executing on PRE-MIGRATION system skip this step.</p> <pre>[root@foo-1060101-a ~]#alarmMgr --alarmStatus [root@foo-1060101-a ~]#</pre> <p>If alarmMgr shows no alarms then the management server appears to be running normally. Otherwise Contact Tekelec Technical Services for information on how to proceed.</p>

APPENDIX F. INCLUDING FILES IN PRE-MIGRATE BACKUP

The PM&C backup is a selective backup, not everything on the system is backed up, only what is required for the personality of the PM&C to persist in a disaster or migration scenario. This appendix explains how to include files, that would not typically be backed up, in the pre-migrate backup. The files will not be restored to their original location, they will need to be manually restored after the data migration step. Including large files could prevent the backup to the optical media from completing successfully, and should be used only for irreplaceable files.

Some potential files to consider bringing forward during the migration are listed below

- /usr/TKLC/plat/etc/vlan.conf - Although the use of switchconfig, which uses the vlan.conf file, is deprecated, there may be useful data in this file. The preferred tool for switch configuration is netConfig.
- /home/<custom_linux_user>/ - If there are any non-standard users defined on the 4.0 PM&C, the home directories will not be brought forward.

Procedure 14. Include Miscellaneous Files in Pre-migrate Backup

<p>S T E P #</p>	<p>This procedure provides instructions on how to include a file in the backup of the PM&C on the Management Server.</p> <p>NOTE: Be sure to capture a log of all lines appearing on the screen on the laptop, desktop, or other computer used when executing this procedure.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT THE TEKELEC CUSTOMER CARE CENTER AND ASK FOR ASSISTANCE.</p>	
<p>1. <input type="checkbox"/></p>	<p>Access the PM&C command prompt via SSH</p>	<p>If necessary, access the PM&C command prompt as detailed in <i>Appendix C, Accessing the PM&C command Prompt via SSH.</i></p>
<p>2. <input type="checkbox"/></p>	<p>Create a directory to contain the extra files</p>	<pre># mkdir /usr/TKLC/smac/etc/4.0migration</pre>
<p>3. <input type="checkbox"/></p>	<p>Complete this step for each desired directory or file</p>	<pre># cp -rp --parents <file_or_dir> /usr/TKLC/smac/etc/4.0migration/</pre> <p>Repeat for each file and/or directory desired.</p>
<p>The procedure has been completed.</p>		

APPENDIX G. RESTORING FILES FROM PRE-MIGRATE BACKUP

Procedure 15. Restore Miscellaneous Files in After Migration

S T E P #	<p>This procedure provides instructions on how to restore a file in the backup of the PM&C on the PM&C guest.</p> <p>NOTE: Be sure to capture a log of all lines appearing on the screen on the laptop, desktop, or other computer used when executing this procedure.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>IF THIS PROCEDURE FAILS, CONTACT THE TEKELEC CUSTOMER CARE CENTER AND ASK FOR ASSISTANCE.</p>	
1. <input type="checkbox"/>	Access the PM&C command prompt via SSH	If necessary, access the PM&C command prompt as detailed in <i>Appendix C, Accessing the PM&C command Prompt via SSH</i> .
2. <input type="checkbox"/>	Restore the files	<p>WARNING: You will be prompted to confirm for each file. This will overwrite existing files, which will be backed up in place with the '~' suffix.</p> <pre># cp -rpb /usr/TKLC/smac/etc/4.0migration/* /</pre>
The procedure has been completed.		

APPENDIX I. CUSTOMER SIGN OFF

Sign Off Record

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

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

Sign your name, showing approval of this procedure, and fax this page and the **above completed** table (SWOPS Sign Off.) to Tekelec, FAX # 919-460-3669.

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

Site: Location: _____

Customer:(Print) _____

Phone: _____

Fax: _____

Start Date: _____

Completion Date: _____

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

Tekelec Signature: _____

Date: _____

Customer Signature: _____

Date: _____

APPENDIX J. 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.

1. Go to Tekelec's Customer Support login page at <https://support.tekelec.com/index.asp>
2. Enter your assigned username and chosen password and click **Login**.

Or, if you do not have access to the Customer Support site, click **Need an Account?**
Follow instructions on the screen.

Note: After 20 minutes of inactivity, you will be logged off, and you must repeat this step to regain access.

3. After successful login, select a product from the Product Support drop-down menu.
4. Select a release number from the Product Support Release drop-down menu.
5. Locate the Upgrade Procedures section.
6. To open the procedure in the same window, click the procedure name. To open the procedure in a new window, right-click the procedure name and select **Open in New Window**.
7. To download the procedure, right-click the procedure name and select **Save Target As**.

