

**Oracle® Communications  
Tekelec Platform**

TVOE 2.5 Disaster Recovery

Release 2.5

**909-2275-001**

Dec 2013

**ORACLE®**

Oracle Communications Tekelec Platform TVOE 2.5 Disaster Recovery, Release 2.5

Copyright ©2010, 2013 Oracle and/or its affiliates. All rights reserved.

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish, or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

If this is software or related documentation that is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. Government, the following notice is applicable:

U.S. GOVERNMENT END USERS: Oracle programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, delivered to U.S. Government end users are "commercial computer software" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, use, duplication, disclosure, modification, and adaptation of the programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, shall be subject to license terms and license restrictions applicable to the programs. No other rights are granted to the U.S. Government.

This software or hardware is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use this software or hardware in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy, and other measures to ensure its safe use. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software or hardware in dangerous applications.

Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

Intel and Intel Xeon are trademarks or registered trademarks of Intel Corporation. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. AMD, Opteron, the AMD logo, and the AMD Opteron logo are trademarks or registered trademarks of Advanced Micro Devices. UNIX is a registered trademark of The Open Group.

This software or hardware and documentation may provide access to or information on content, products, and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services.



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

**Before upgrading any system, please access Oracle's Tekelec Customer Support site and review any Technical Service Bulletins (TSBs) that relate to this upgrade.**

Refer to Appendix A: for instructions on accessing this site.

Contact Oracle's 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

# TABLE OF CONTENTS

<b>1</b>	<b>INTRODUCTION.....</b>	<b>5</b>
1.1	PURPOSE AND SCOPE .....	5
1.2	REFERENCES .....	5
1.3	TERMINOLOGY .....	5
<b>2</b>	<b>PREREQUISITES .....</b>	<b>6</b>
2.1	REQUIRED TOOLS FOR TVOE DISASTER RECOVERY PROCEDURE.....	6
2.1.1	<i>Files</i> .....	6
2.1.2	<i>Documents</i> .....	6
2.1.3	<i>Information</i> .....	6
2.2	NETWORK CONNECTIONS .....	6
2.3	ASSUMPTION & RESTRICTIONS .....	6
<b>3</b>	<b>TVOE DISASTER RECOVERY PROCEDURE.....</b>	<b>7</b>
3.1	RESTORE TVOE CONFIGURATION FROM BACKUP MEDIA .....	7
3.2	SUPPORTING PROCEDURES.....	19
<b>APPENDIX A:</b>	<b>ACCESSING ORACLE'S TEKELEC CUSTOMER SUPPORT SITE .....</b>	<b>27</b>

## LIST OF PROCEDURES

Procedure 1: Restore TVOE configuration from backup media .....	7
<b>Procedure 2: Standalone TVOE IPM</b> .....	19
<b>Procedure 3: PM&amp;C Aided TVOE IPM</b> .....	19
<b>Procedure 4: Configure Network</b> .....	20
<b>Procedure 5: Restore TVOE backup ISO using Netbackup</b> .....	22
<b>Procedure 6: Restore TVOE backup ISO using SCP</b> .....	24
<b>Procedure 7: Delete TVOE host key from PM&amp;C</b> .....	25
<b>Procedure 8: Determine IPv6 Link Local Address</b> .....	26

# 1 INTRODUCTION

## 1.1 Purpose and Scope

In a disaster scenario in which the TVOE host has been lost, the procedures contained herein can be used to recover the TVOE host to its state at the time of the last backup. The disaster recovery requires that a TVOE host backup image has been stored on a customer medium and is available. The scope of this disaster recovery includes only the TVOE host. Guests WILL NOT be restored during this procedure.

NOTE: These procedures are intended to be run by Tekelec personnel. This document assumes that the user has basic knowledge of the server’s hardware, and at least an intermediate skill set with the Linux environment.

## 1.2 References

- [1] Platform 6.5 Configuration Procedure Reference, 909-2209-001, Latest, Tekelec
- [2] TPD Initial Product Manufacture, 909-2130-001, Latest, Tekelec

**Table 1: Acronyms**

Acronym	Meaning
iLO	Integrated Lights Out manager
IPM	Initial Product Manufacture
PM&C	Platform Management and Configuration application
TPD	Tekelec Platform Distribution
TVOE	Tekelec Virtual Operating Environment

## 1.3 Terminology

**Table 2: Terminology**

<b>Link Local IPv6 Address</b>	An IPv6 address that is assigned automatically to every IPv6 enabled network interface and can only be used within the segment of a local network. This means it is a non-routable address and can only be accessed from machines that are on the same link.
--------------------------------	--

## 2 PREREQUISITES

### 2.1 Required Tools for TVOE Disaster Recovery procedure

#### 2.1.1 Files

The following files or media are required in order to run a Disaster Recovery procedure on a TVOE host:

- TVOE IPM media
- TVOE Backup ISO image

#### 2.1.2 Documents

The following documents are required in order to run a Disaster Recovery procedure on a TVOE host:

- 909-2249-001 Platform 6.5 Configuration Procedure Reference
- 909-2130-001 TPD Initial Product Manufacture

#### 2.1.3 Information

The following information is required in order to run a Disaster Recovery procedure for the TVOE host.

**Table 3: Required Information**

Item	Value
TVOE iLO IP Address	
TVOE iLO username	
TVOE iLO password	
TVOE IP address	
TVOE admusr password	
TVOE tvoeadmin password	
TVOE tvoexfer password	
TVOE platcfg password	
Customer Server* username	
Customer Server* password	

\* The machine used to copy the backup image to the TVOE host.

### 2.2 Network Connections

The user must have network connectivity to the iLO of the TVOE server as well as network connectivity to a network interface on the TVOE server.

### 2.3 Assumption & Restrictions

- This is a software disaster recovery for the TVOE host which will not recover the hardware.
- If there was a hardware failure then it should be resolved and the system should be in a healthy state before executing this procedure.
- This procedure only recovers the TVOE host. Guests previously installed on the TVOE will not be recovered by this procedure.

- TVOE backups must be from the same version of TVOE as the newly installed TVOE.
- TVOE backups can only be used on servers of the same hardware type as the server the backup was created on.
- TVOE backups have been stored somewhere safe by the customer at an earlier point in time and are to be transferred to the TVOE host over the network.

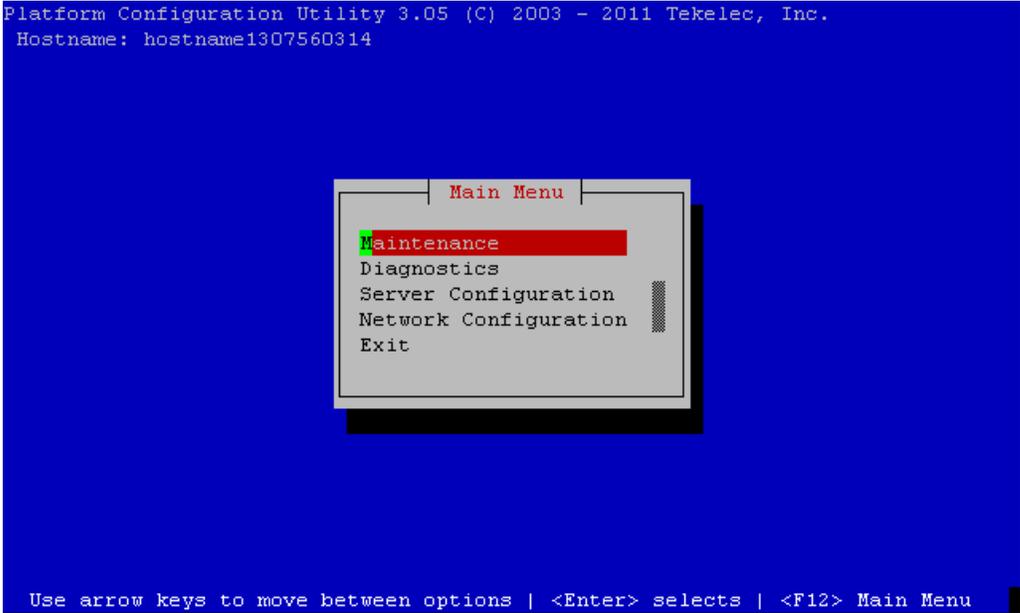
### 3 TVOE DISASTER RECOVERY PROCEDURE

#### 3.1 Restore TVOE configuration from backup media

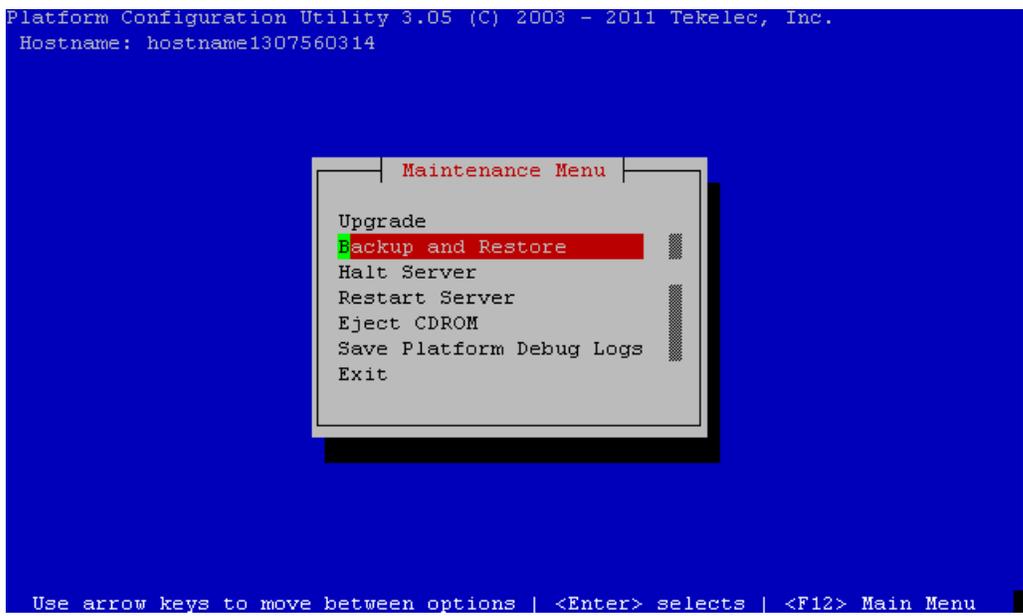
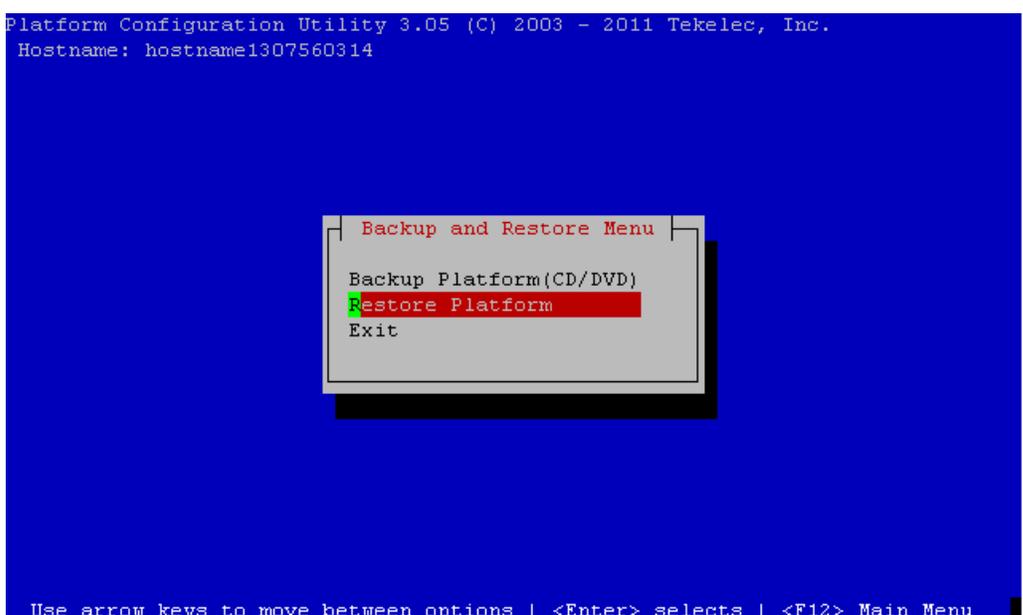
**Procedure 1: Restore TVOE configuration from backup media**

S T E P #	<p>This procedure provides instructions on how to restore the TVOE application configuration from backup media.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p><b>IF THIS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES (SEE 1.4 Customer Care Center FROM [1])</b></p>	
<b>NOTE: You must have a backup ISO image to perform this procedure.</b>		
1. <input type="checkbox"/>	<p>Install TVOE application.</p> <p>Check each box as each task is completed. Do not check the box if the task is not performed.</p>	<p>If PM&amp;C is available then IPM the TVOE application using the following procedure from this document:</p> <p><input type="checkbox"/> “Procedure 3: PM&amp;C Aided TVOE IPM”</p> <p>If PM&amp;C is not available, IPM the TVOE application using the following procedure from this document:</p> <p><input type="checkbox"/> “Procedure 2: Standalone TVOE IPM”</p>
2. <input type="checkbox"/>	<p>TVOE Server iLO:</p> <p>Configure network</p>	<p>Execute the following procedure to configure an IP address on the TVOE Server.</p> <p>Note: The IP address that is configured on the TVOE must be one that will be accessible via the network of the machine that currently holds the TVOE Backup ISO image. This could be a Netbackup Master Server, a Customer PC, etc..</p> <p><input type="checkbox"/> “Procedure 4: Configure Network”</p>

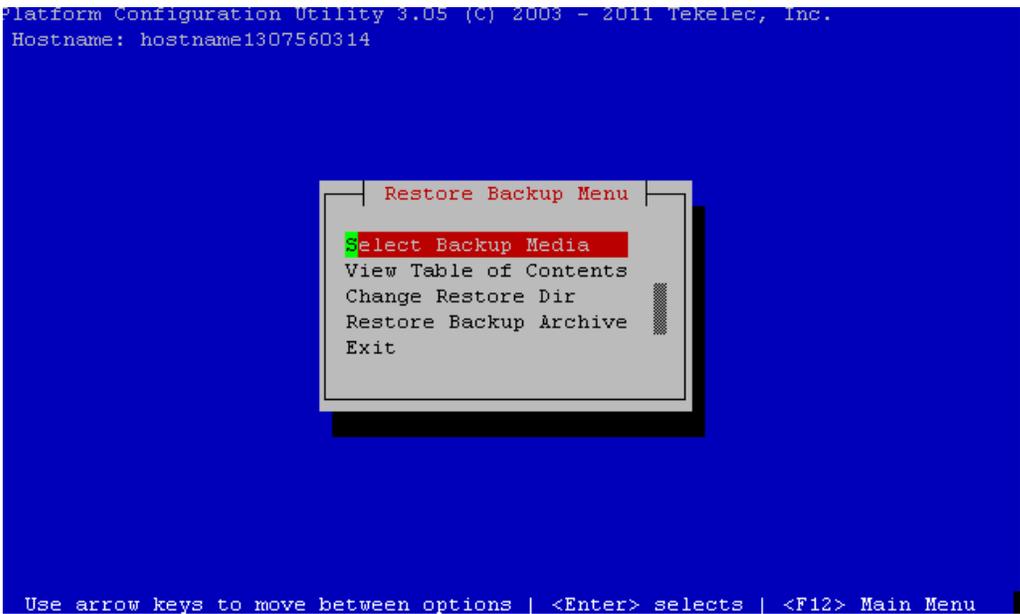
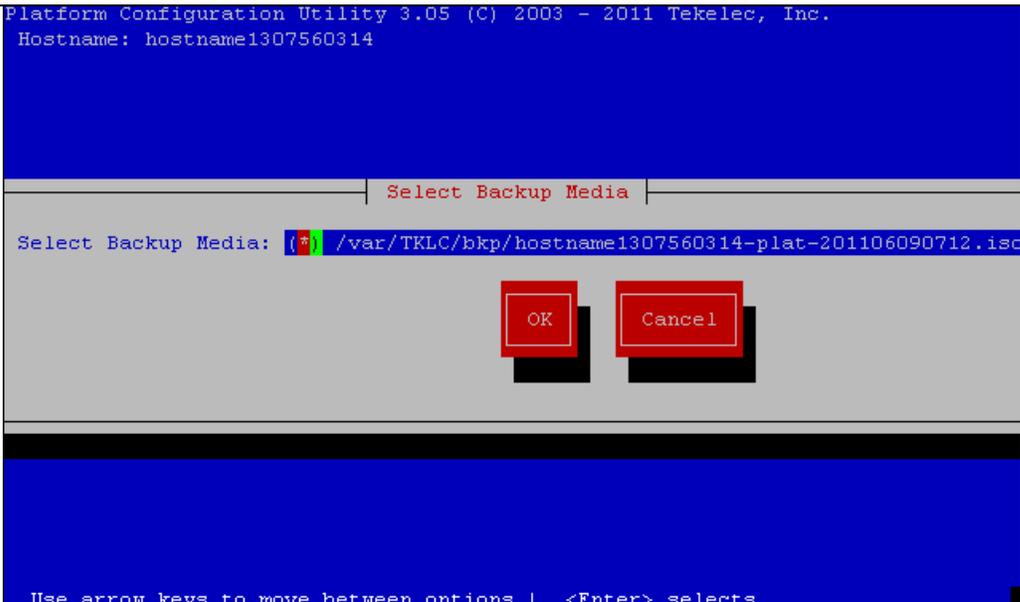
**Procedure 1: Restore TVOE configuration from backup media**

<p>3. <input type="checkbox"/></p>	<p>Restore TVOE Backup ISO image to the TVOE Server.</p>	<p>Restore the TVOE Backup ISO image to the TVOE Server by executing one of the following procedures:</p> <p>If using Netbackup to restore the TVOE Backup ISO image then execute:</p> <p><input type="checkbox"/> “Procedure 5: Restore TVOE backup ISO using Netbackup”</p> <p>If copying the TVOE Backup ISO from a remote location, such as a Customer PC, then execute:</p> <p><input type="checkbox"/> “Procedure 6: Restore TVOE backup ISO using SCP”</p>
<p>4. <input type="checkbox"/></p>	<p>TVOE Server iLO: Log in to iLO</p>	<p>Using the sections listed below from the <i>Platform 6.5 Configuration Procedure Reference</i>[1], log in to the iLO by using a ssh client to connect to the IP address of the TVOE server iLO.</p> <p><input type="checkbox"/> “Accessing the c-Class iLO Virtual Serial Port” [1]</p>
<p>5. <input type="checkbox"/></p>	<p>TVOE Server iLO: Log in to the platcfg menu.</p>	<p>Log in as the platcfg user.</p>
<p>6. <input type="checkbox"/></p>	<p>TVOE Server iLO: Select the “Maintenance” option</p>	

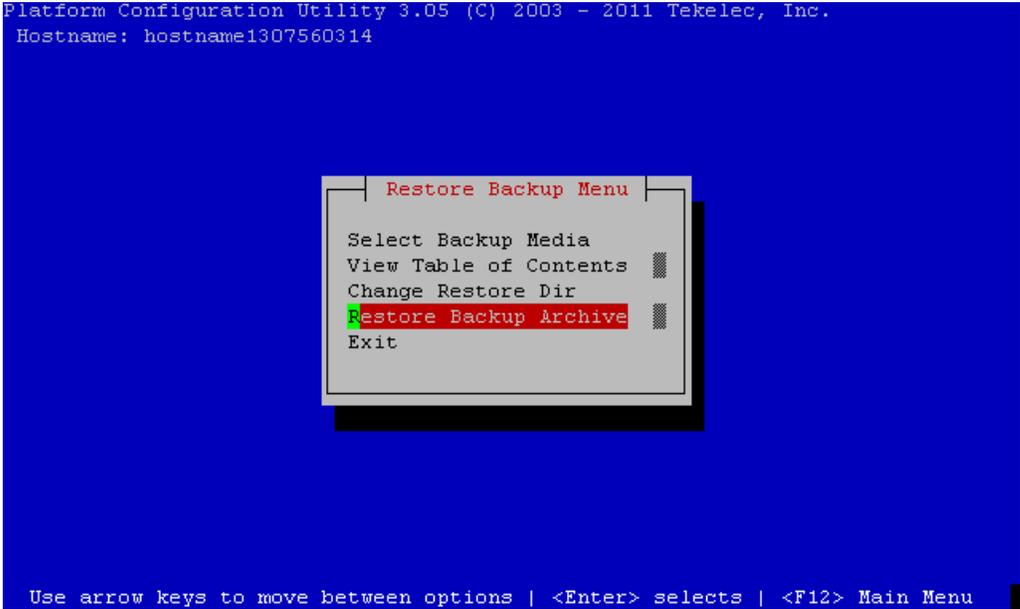
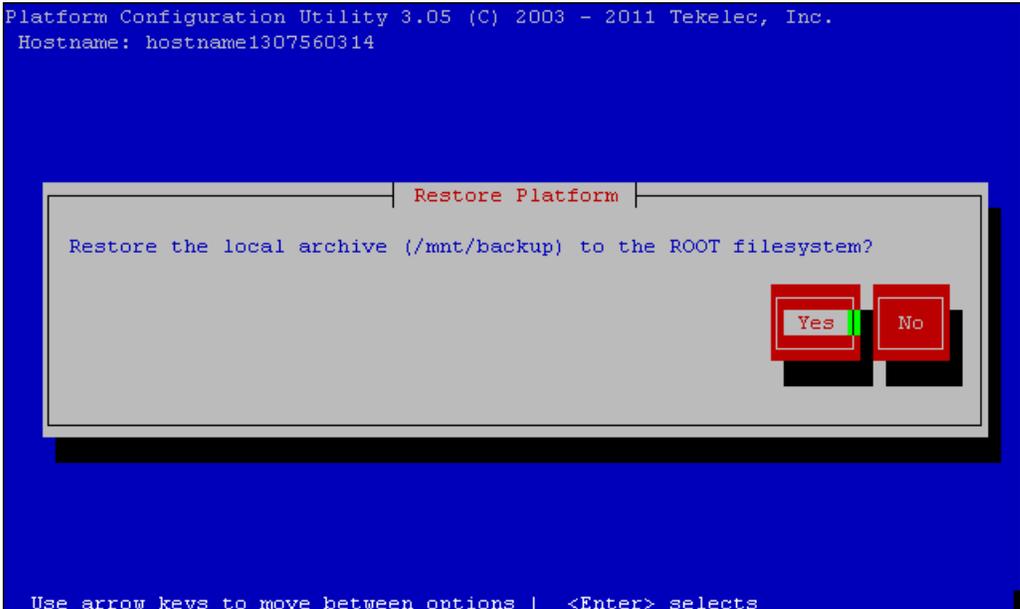
**Procedure 1: Restore TVOE configuration from backup media**

<p>7.</p> <input type="checkbox"/>	<p>TVOE Server iLO: Select the "Backup and Restore" option</p>	 <p>Platform Configuration Utility 3.05 (C) 2003 - 2011 Tekelec, Inc. Hostname: hostname1307560314</p> <p>Maintenance Menu</p> <ul style="list-style-type: none"><li>Upgrade</li><li><b>Backup and Restore</b></li><li>Halt Server</li><li>Restart Server</li><li>Eject CDROM</li><li>Save Platform Debug Logs</li><li>Exit</li></ul> <p>Use arrow keys to move between options   &lt;Enter&gt; selects   &lt;F12&gt; Main Menu</p>
<p>8.</p> <input type="checkbox"/>	<p>TVOE Server iLO: Select the "Restore Platform" option.</p>	 <p>Platform Configuration Utility 3.05 (C) 2003 - 2011 Tekelec, Inc. Hostname: hostname1307560314</p> <p>Backup and Restore Menu</p> <ul style="list-style-type: none"><li>Backup Platform(CD/DVD)</li><li><b>Restore Platform</b></li><li>Exit</li></ul> <p>Use arrow keys to move between options   &lt;Enter&gt; selects   &lt;F12&gt; Main Menu</p>

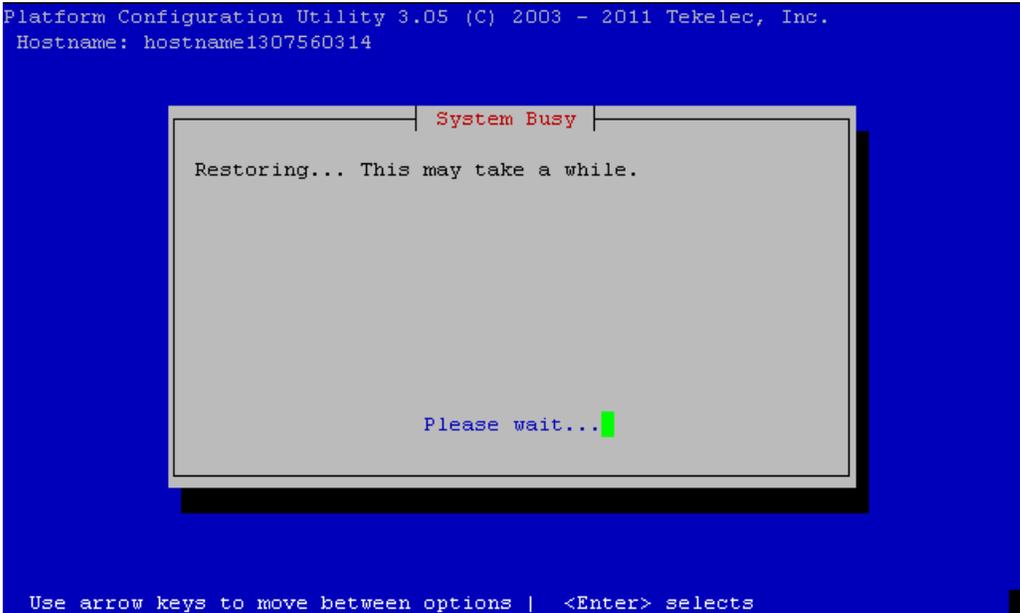
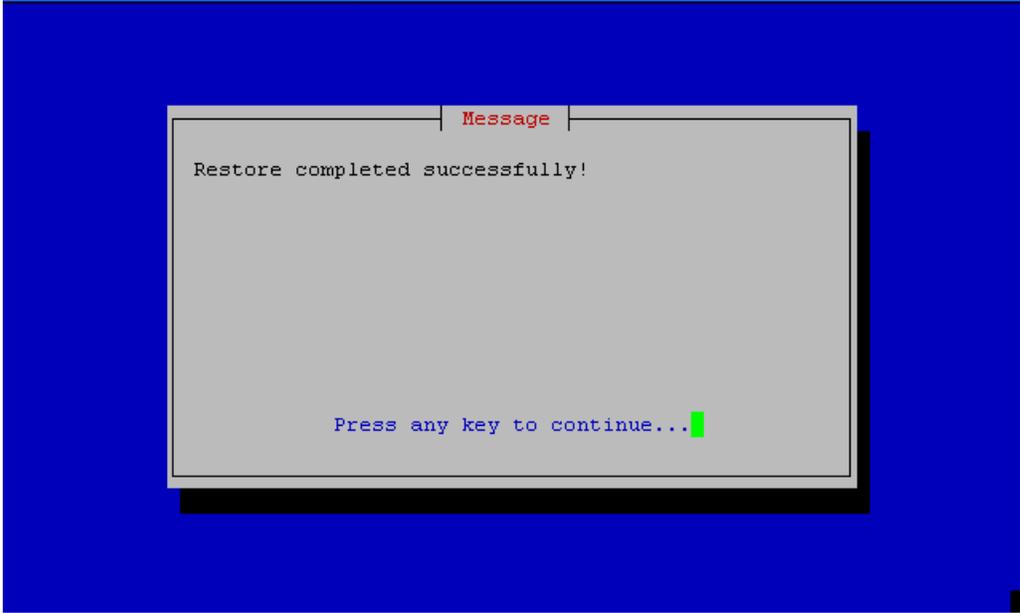
**Procedure 1: Restore TVOE configuration from backup media**

<p>9.</p> <input type="checkbox"/>	<p>TVOE Server iLO: Select the "Select Backup Media" option</p>	 <p>Platform Configuration Utility 3.05 (C) 2003 - 2011 Tekelec, Inc. Hostname: hostname1307560314</p> <p>Restore Backup Menu</p> <ul style="list-style-type: none"><li>Select Backup Media</li><li>View Table of Contents</li><li>Change Restore Dir</li><li>Restore Backup Archive</li><li>Exit</li></ul> <p>Use arrow keys to move between options   &lt;Enter&gt; selects   &lt;F12&gt; Main Menu</p>
<p>10.</p> <input type="checkbox"/>	<p>TVOE Server iLO: Select the desired archive.</p>	 <p>Platform Configuration Utility 3.05 (C) 2003 - 2011 Tekelec, Inc. Hostname: hostname1307560314</p> <p>Select Backup Media</p> <p>Select Backup Media: /var/TKLC/bkp/hostname1307560314-plat-201106090712.isc</p> <p>OK Cancel</p> <p>Use arrow keys to move between options   &lt;Enter&gt; selects</p>

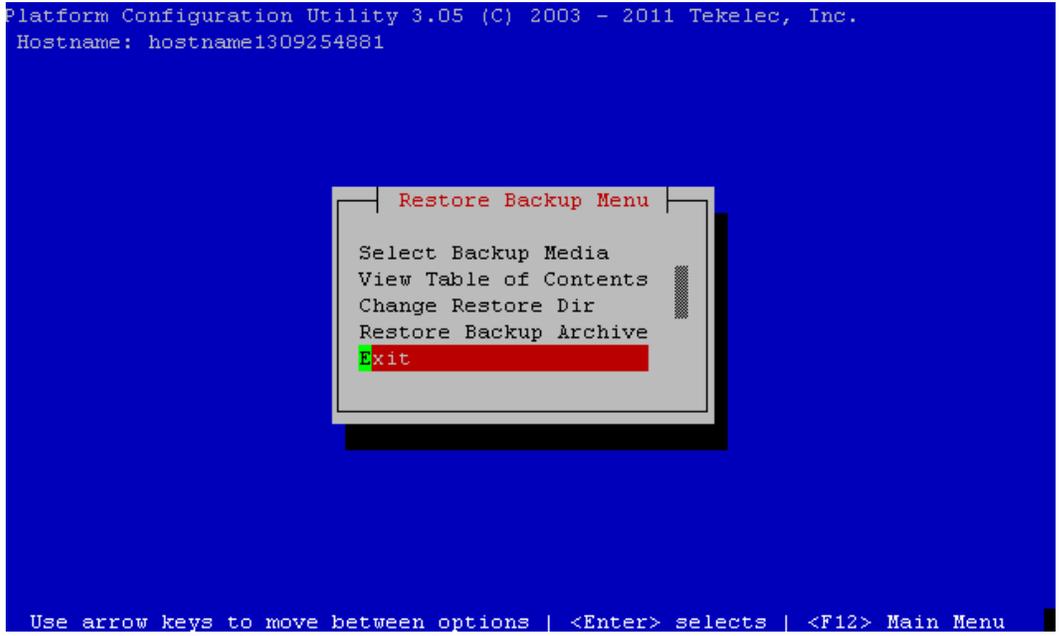
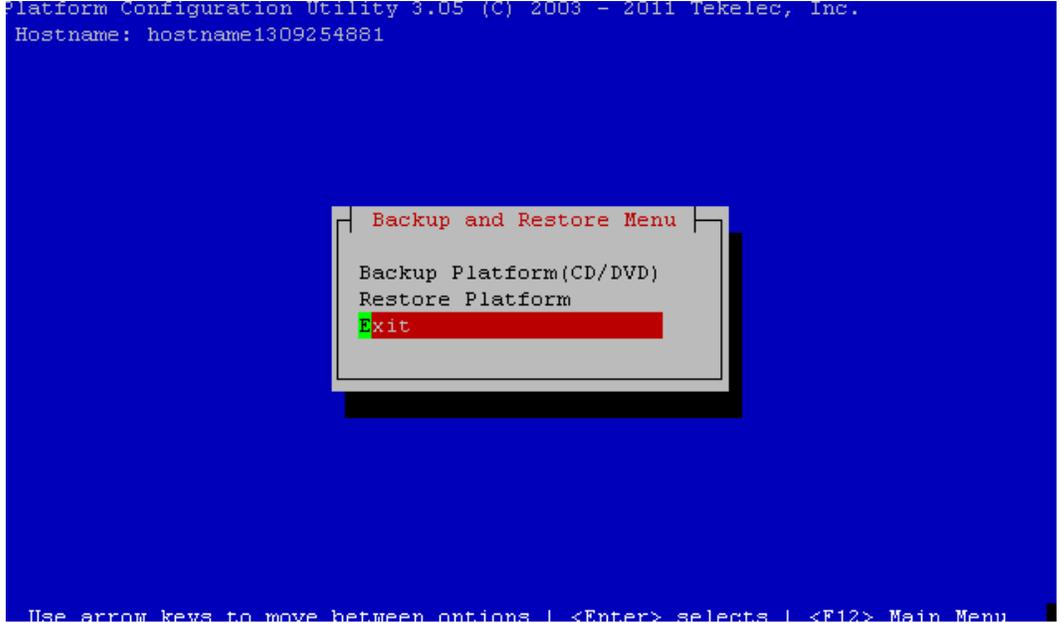
**Procedure 1: Restore TVOE configuration from backup media**

<p><b>11.</b> <input type="checkbox"/></p>	<p>TVOE Server iLO:  Select the "Restore Backup Archive" option.</p>	 <p>Platform Configuration Utility 3.05 (C) 2003 - 2011 Tekelec, Inc. Hostname: hostname1307560314</p> <pre>Restore Backup Menu Select Backup Media View Table of Contents Change Restore Dir Restore Backup Archive Exit</pre> <p>Use arrow keys to move between options   &lt;Enter&gt; selects   &lt;F12&gt; Main Menu</p>
<p><b>12.</b> <input type="checkbox"/></p>	<p>TVOE Server iLO:  Confirm restore</p>	 <p>Platform Configuration Utility 3.05 (C) 2003 - 2011 Tekelec, Inc. Hostname: hostname1307560314</p> <pre>Restore Platform Restore the local archive (/mnt/backup) to the ROOT filesystem? Yes No</pre> <p>Use arrow keys to move between options   &lt;Enter&gt; selects</p>

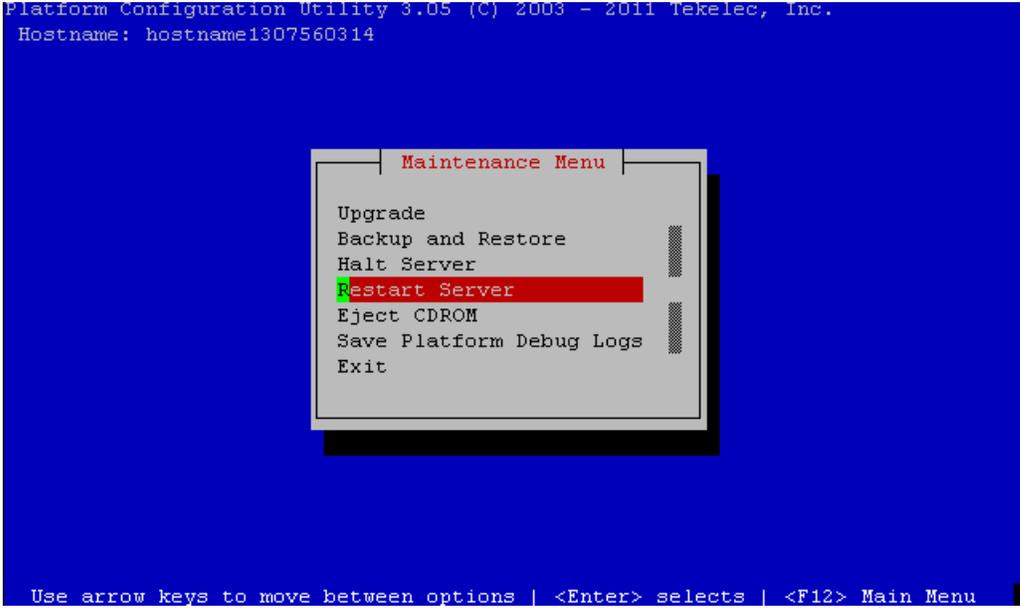
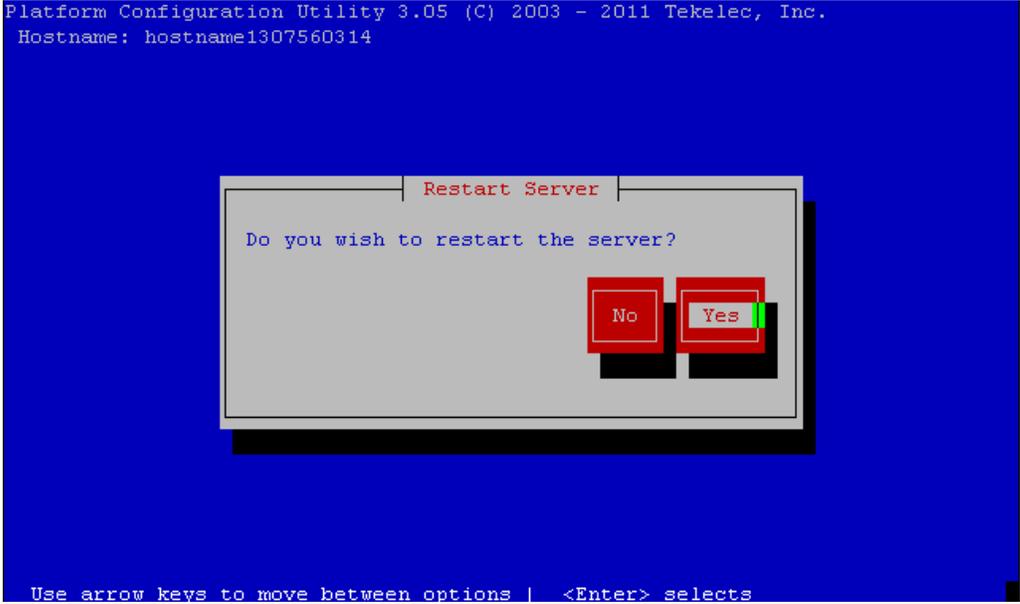
**Procedure 1: Restore TVOE configuration from backup media**

<p>13.</p> <input type="checkbox"/>	<p>TVOE Server iLO:</p> <p>Wait for restore to complete. This will typically take less than 5 minutes.</p>	 <p>Platform Configuration Utility 3.05 (C) 2003 - 2011 Tekelec, Inc. Hostname: hostname1307560314</p> <p>System Busy</p> <p>Restoring... This may take a while.</p> <p>Please wait... █</p> <p>Use arrow keys to move between options   &lt;Enter&gt; selects</p>
<p>14.</p> <input type="checkbox"/>	<p>TVOE Server iLO:</p> <p>Restore is complete</p>	 <p>Message</p> <p>Restore completed successfully!</p> <p>Press any key to continue... █</p> <p><b>Note:</b> <i>If any failures are reported contact Tekelec TAC (see 1.4 Customer Care Center from[1]) for information on how to proceed.</i></p>

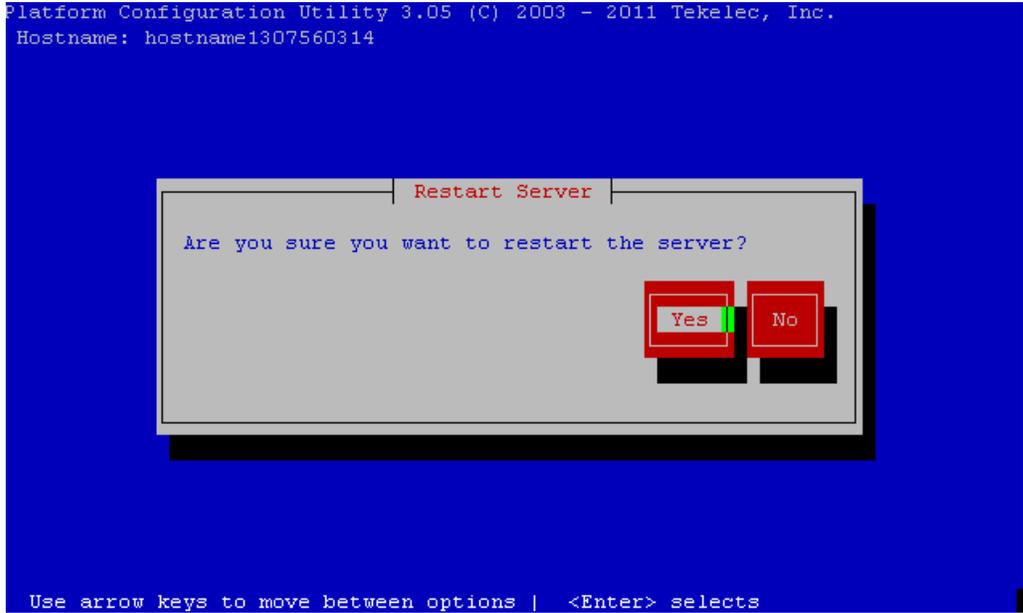
**Procedure 1: Restore TVOE configuration from backup media**

<p>15.</p> <input type="checkbox"/>	<p>TVOE Server iLO:  Exit out of the Restore Backup Menu.</p>	 <p>Platform Configuration Utility 3.05 (C) 2003 - 2011 Tekelec, Inc. Hostname: hostname1309254881</p> <p>Restore Backup Menu</p> <p>Select Backup Media View Table of Contents Change Restore Dir Restore Backup Archive Exit</p> <p>Use arrow keys to move between options   &lt;Enter&gt; selects   &lt;F12&gt; Main Menu</p>
<p>16.</p> <input type="checkbox"/>	<p>TVOE Server iLO:  Exit out of the Backup and Restore Menu.</p>	 <p>Platform Configuration Utility 3.05 (C) 2003 - 2011 Tekelec, Inc. Hostname: hostname1309254881</p> <p>Backup and Restore Menu</p> <p>Backup Platform (CD/DVD) Restore Platform Exit</p> <p>Use arrow keys to move between options   &lt;Enter&gt; selects   &lt;F12&gt; Main Menu</p>

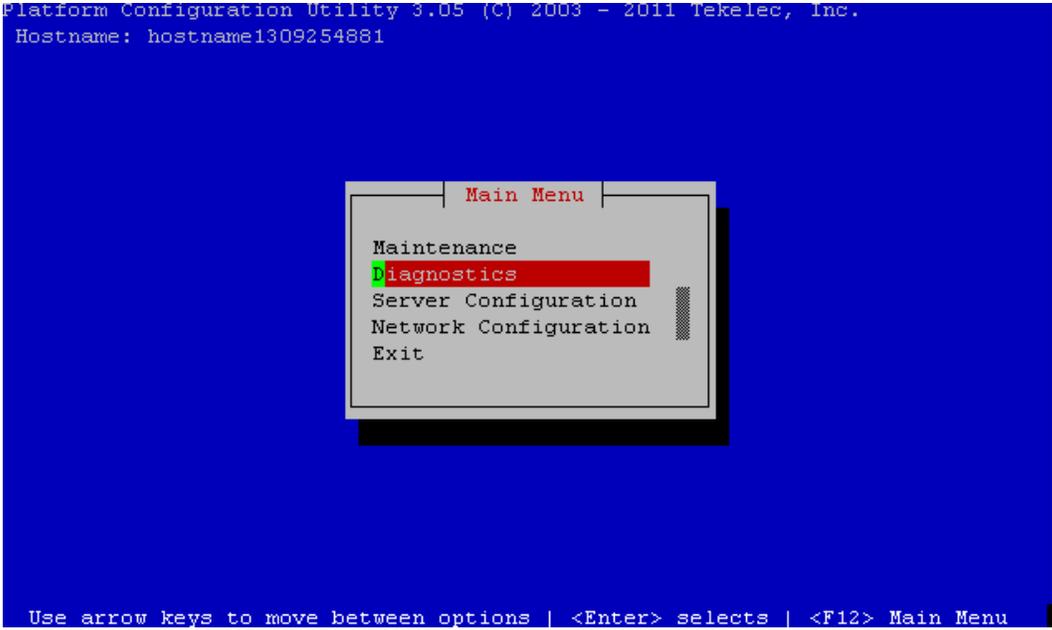
**Procedure 1: Restore TVOE configuration from backup media**

<p>17.</p> <input type="checkbox"/>	<p>TVOE Server iLO: Select the "Restart Server" option.</p>	 <p>Platform Configuration Utility 3.05 (C) 2003 - 2011 Tekelec, Inc. Hostname: hostname1307560314</p> <p>Maintenance Menu</p> <ul style="list-style-type: none"><li>Upgrade</li><li>Backup and Restore</li><li>Halt Server</li><li><b>Restart Server</b></li><li>Eject CDROM</li><li>Save Platform Debug Logs</li><li>Exit</li></ul> <p>Use arrow keys to move between options   &lt;Enter&gt; selects   &lt;F12&gt; Main Menu</p>
<p>18.</p> <input type="checkbox"/>	<p>TVOE Server iLO: Select yes to restart server.</p>	 <p>Platform Configuration Utility 3.05 (C) 2003 - 2011 Tekelec, Inc. Hostname: hostname1307560314</p> <p>Restart Server</p> <p>Do you wish to restart the server?</p> <p>No Yes</p> <p>Use arrow keys to move between options   &lt;Enter&gt; selects</p>

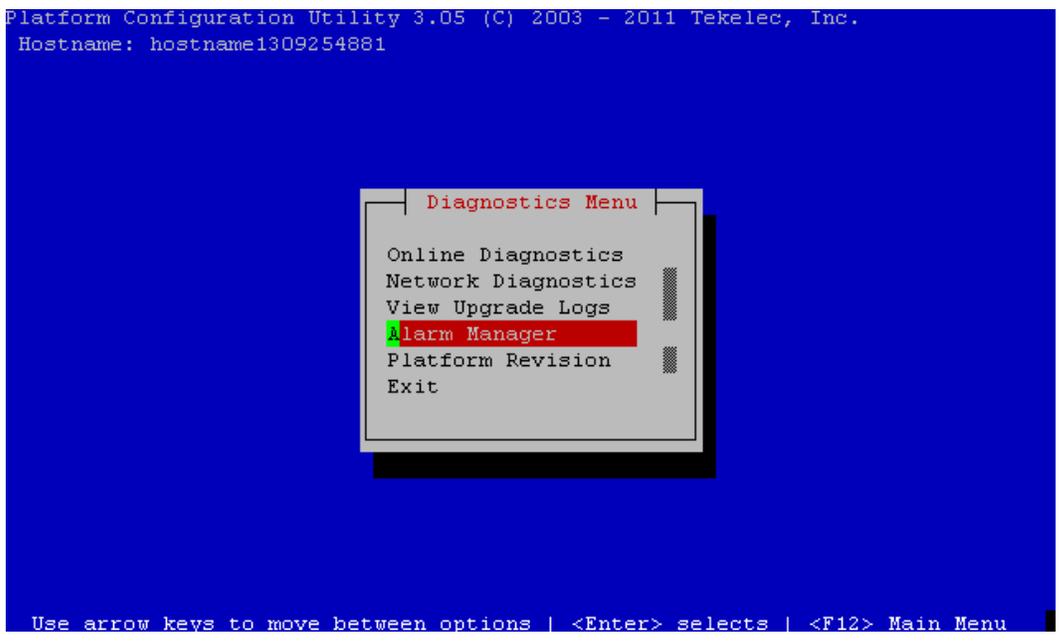
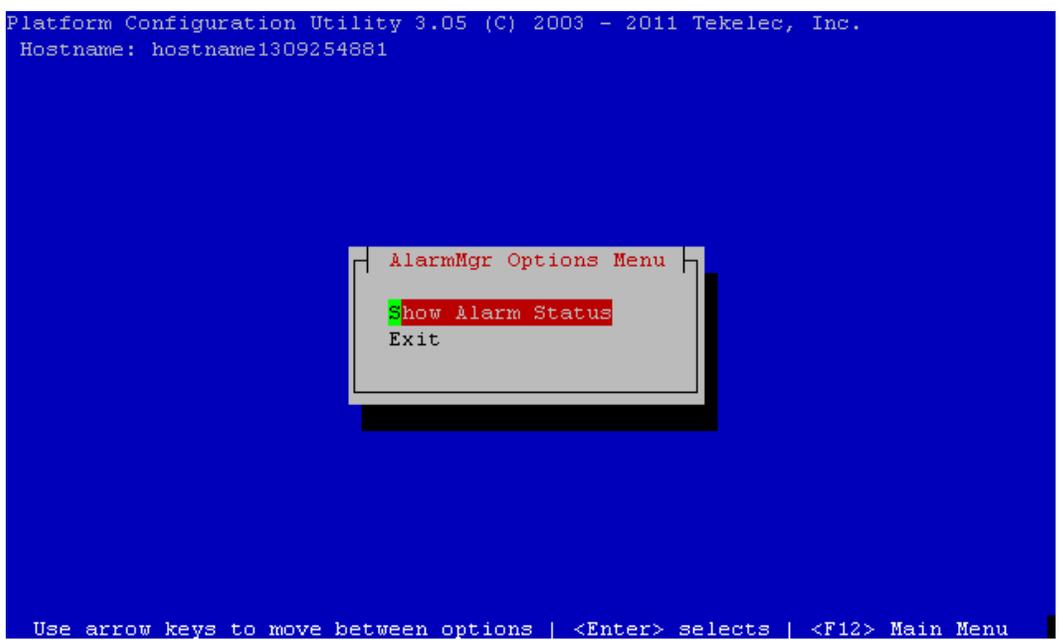
**Procedure 1: Restore TVOE configuration from backup media**

<p>19.</p> <input type="checkbox"/>	<p>TVOE Server iLO:  Confirm reboot.</p>	 <p>Platform Configuration Utility 3.05 (C) 2003 - 2011 Tekelec, Inc.          Hostname: hostname1307560314</p> <p>Restart Server</p> <p>Are you sure you want to restart the server?</p> <p>Yes No</p> <p>Use arrow keys to move between options   &lt;Enter&gt; selects</p>
<p>20.</p> <input type="checkbox"/>	<p>TVOE Server iLO:  Wait for reboot to successfully complete. This should typically take less than 20 minutes to complete.</p>	<pre> n2.conf [ OK ] Starting syscheck: [ OK ] Starting hpacucliStatus: [ OK ] Starting TKLCwatchdog: [ OK ] Starting tpdProvd: [ OK ]     Using Proliant High Performance         IPMI based System Health Monitor     Using standard Linux IPMI device driver Starting ipmi drivers: [ OK ]     Starting Proliant High Performance         IPMI based System Health Monitor (hpsmxd): [ OK ] Verifying disk configuration for S.M.A.R.T.: [ OK ] [ OK ] atd: [ OK ] Starting libvirt daemon: [ OK ] Checking network config files: [ OK ] Starting smartd: [ OK ] completeTasks started: Thu Jun 30 04:39:07 2011 LOG FILE: /var/TKLC/log/TaskMgr/completeTasks.log  Red Hat Enterprise Linux Server release 5.5 (Tikanga) Kernel 2.6.18-194.17.4.el5 on an x86_64  hostname1309254881 login: █         </pre>
<p>21.</p> <input type="checkbox"/>	<p>TVOE Server iLO:  Log in as tvoadmin user.</p>	<p>Log in as the tvoadmin user.</p>

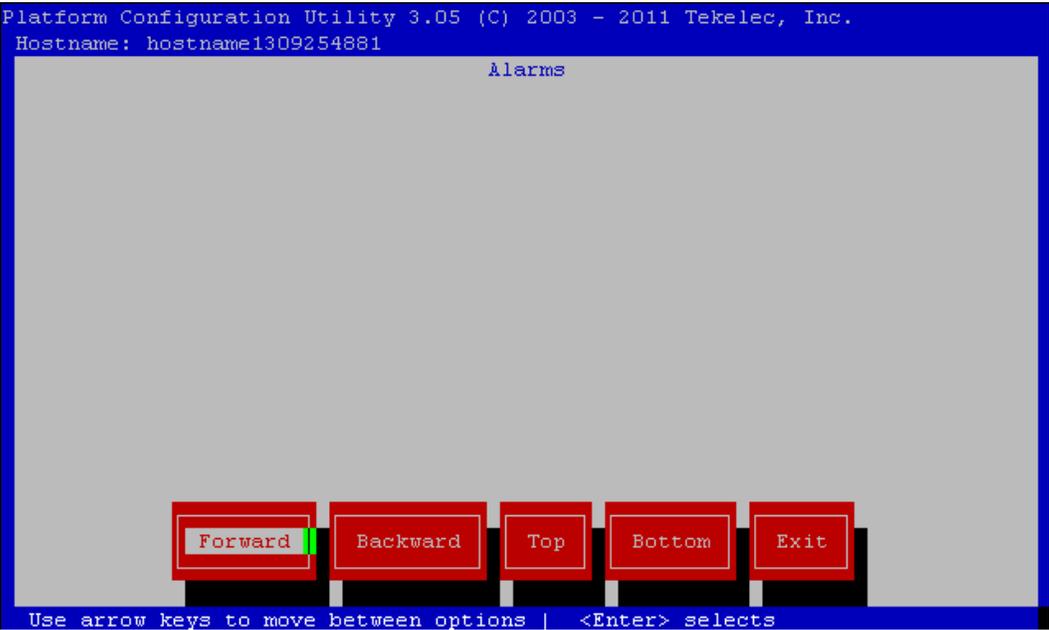
**Procedure 1: Restore TVOE configuration from backup media**

22. <input type="checkbox"/>	TVOE Server iLO:  Verify storage pools are active.	Execute the following command and verify all storage pools are listed and are in the active state:  <code>% virsh -c "qemu:///system" pool-list</code>
23. <input type="checkbox"/>	TVOE Server iLO:  Log in as platcfg user.	Log out by typing <b>exit</b> at the command prompt and pressing <b>Enter</b> . Log in as the platcfg user.
24. <input type="checkbox"/>	TVOE Server iLO:  Select the "Diagnostics" option.	 <p>The screenshot shows the Platform Configuration Utility 3.05 Main Menu. The text at the top reads: "Platform Configuration Utility 3.05 (C) 2003 - 2011 Tekelec, Inc. Hostname: hostname1309254881". The menu options are: Maintenance, Diagnostics (highlighted with a red bar), Server Configuration, Network Configuration, and Exit. At the bottom, it says: "Use arrow keys to move between options   &lt;Enter&gt; selects   &lt;F12&gt; Main Menu".</p>

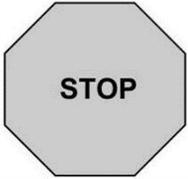
**Procedure 1: Restore TVOE configuration from backup media**

<p>25.</p> <input type="checkbox"/>	<p>TVOE Server iLO:  Select the "Alarm Manager" option.</p>	 <p>Platform Configuration Utility 3.05 (C) 2003 - 2011 Tekelec, Inc. Hostname: hostname1309254881</p> <p><b>Diagnostics Menu</b></p> <ul style="list-style-type: none"><li>Online Diagnostics</li><li>Network Diagnostics</li><li>View Upgrade Logs</li><li><b>Alarm Manager</b></li><li>Platform Revision</li><li>Exit</li></ul> <p>Use arrow keys to move between options   &lt;Enter&gt; selects   &lt;F12&gt; Main Menu</p>
<p>26.</p> <input type="checkbox"/>	<p>TVOE Server iLO:  Select the "Show Alarm Status" option.</p>	 <p>Platform Configuration Utility 3.05 (C) 2003 - 2011 Tekelec, Inc. Hostname: hostname1309254881</p> <p><b>AlarmMgr Options Menu</b></p> <ul style="list-style-type: none"><li><b>Show Alarm Status</b></li><li>Exit</li></ul> <p>Use arrow keys to move between options   &lt;Enter&gt; selects   &lt;F12&gt; Main Menu</p>

**Procedure 1: Restore TVOE configuration from backup media**

<p>27.</p> <input type="checkbox"/>	<p>TVOE Server iLO:</p> <p>Examine the output and determine if any errors or failures were reported.</p>	 <p><b>Note:</b> If any failures are reported contact Tekelec TAC (see 1.4 Customer Care Center from[1]) for information on how to proceed.</p>
<p>28.</p> <input type="checkbox"/>	<p>TVOE Server iLO:</p> <p>Log out of TVOE iLO.</p>	<p>Using the sections listed below from the <i>Platform 6.5 Configuration Procedure Reference</i>[1], log out of the iLO.</p> <p><input type="checkbox"/> “Accessing the c-Class iLO Virtual Serial Port” [1]</p>
<p>29.</p> <input type="checkbox"/>	<p>Remove TVOE SSH key from PM&amp;C.</p>	<p>If this TVOE Server will host PM&amp;C or there is no PM&amp;C in the network then no work is necessary for this step.</p> <p>Remove the TVOE remote host key from the PM&amp;C in the network by executing the following procedure from this document:</p> <p><input type="checkbox"/> “Procedure 7: Delete TVOE host key from PM&amp;C ”</p>

**Procedure 1: Restore TVOE configuration from backup media**



**The Restore of TVOE has been completed and guests may now be installed.  
No other procedures in this document should be executed.**

**3.2 Supporting Procedures**

**Procedure 2: Standalone TVOE IPM**

S T E P #	<p>This procedure provides instructions on how to install the TVOE application without a PM&amp;C.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p><b>IF THIS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES (SEE 1.4 Customer Care Center FROM[1])</b></p>	
1. <input type="checkbox"/>	<p>Install TVOE application.</p> <p>Check each box as each task is completed.</p>	<p>Using the sections listed below from the <i>Platform 6.5 Configuration Procedure Reference</i> [1], reinstall the TVOE application in accordance with the checklist shown:</p> <p><input type="checkbox"/> “TPM DL360 or DL380 Server” [1]</p> <p><b>NOTE:</b> The version of TVOE used for this procedure must match the backed up version of TVOE.</p>

**Procedure 3: PM&C Aided TVOE IPM**

S T E P #	<p>This procedure provides instructions on how to install the TVOE application using a PM&amp;C.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p><b>IF THIS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES (SEE 1.4 Customer Care Center FROM[1])</b></p>	
<p><b>NOTE: In addition to the requirements listed in Section 2, this procedure also requires the following:</b></p> <ul style="list-style-type: none"> <li>• PM&amp;C IP Address</li> <li>• PM&amp;C GUI Password</li> </ul>		

**Procedure 3: PM&C Aided TVOE IPM**

1. <input type="checkbox"/>	Install TVOE application.  Check each box as each task is completed.	Use the sections listed below from the <i>Platform 6.5 Configuration Procedure Reference</i> [1], to reinstall the TVOE application with the aid of PM&C:  <input type="checkbox"/> “IPM Servers Using PM&C Application” [1]  <b>NOTE:</b> The version of TVOE used for this procedure must match the backed up version of TVOE.
--------------------------------	--	--

**Procedure 4: Configure Network**

S T E P #	This procedure provides instructions on how to configure an IP address and default route on the TVOE Server. Once an IP address is configured it can then be used to transfer the TVOE backup ISO image to the TVOE Server.  Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.  <b>IF THIS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES (SEE 1.4 Customer Care Center FROM[1])</b>	
1. <input type="checkbox"/>	TVOE Server iLO:  Log in to iLO	Using the sections listed below from the <i>Platform 6.5 Configuration Procedure Reference</i> [1], log in to the iLO by using a ssh client to connect to the IP address of the TVOE server iLO.  <input type="checkbox"/> “Accessing the c-Class iLO Virtual Serial Port” [1]
2. <input type="checkbox"/>	TVOE Server iLO:  Log into the server	Log in as the admusr user.
3. <input type="checkbox"/>	TVOE Server iLO:  Remove live network configuration.	Remove any live interface configuration on the TVOE by executing the following command:  <pre>\$ sudo /sbin/service network stop</pre> An example of the output is shown below:  <pre>\$ sudo /sbin/service network stop Shutting down interface control: [ OK ] Shutting down interface bond0: [ OK ] Shutting down loopback interface: [ OK ]</pre>
4. <input type="checkbox"/>	TVOE Server iLO:  Bring the loopback interface up.	The loopback interface was also brought down in the previous step. Bring it back up by executing the following command:  <pre>\$ sudo /sbin/ifup lo</pre>

**Procedure 4: Configure Network**

<p>5.</p> <input type="checkbox"/>	<p>TVOE Server iLO:  Set up a vlan device if needed.</p>	<p>If a vlan tagged interface is needed then create it and bring it up using the following two commands. &lt;DEVICE&gt; is the name of the vlan device that is being created, &lt;PHYSDEV&gt; is the name of the physical interface to build the vlan device on top of, and &lt;VLAN&gt; is the number of the vlan.</p> <pre>\$ sudo /sbin/ip link add dev &lt;DEVICE&gt; link &lt;PHYSDEV&gt; type vlan id &lt;VLAN&gt; \$ sudo /sbin/ip link set up &lt;PHYSDEV&gt;</pre> <p>There should be no output from the commands. An example is shown below:</p> <pre>\$ sudo /sbin/ip link add dev eth01.3 link eth01 type vlan id 3 \$ sudo /sbin/ip link set up eth01</pre> <p><b>NOTE:</b> &lt;DEV&gt; in the following steps would now be "eth01.3"</p>
<p>6.</p> <input type="checkbox"/>	<p>TVOE Server iLO:  Set up IP address on ethernet device.</p>	<p>On the command line execute the following command to add an IP address to the system. The &lt;IP&gt; and &lt;NETMASK&gt; will need to be on a network that is accessible from the machine currently hosting the TVOE backup ISO image; this could be a Netbackup Master server, a customer system or a PM&amp;C. The device &lt;DEV&gt; will need to be physically attached to a network segment that can be reached from the machine hosting the TVOE backup ISO image.</p> <pre>\$ sudo /sbin/ip addr add &lt;IP&gt;/&lt;NETMASK&gt; dev &lt;DEV&gt;</pre> <p>There should be no output from the command. An example is shown below:</p> <pre>\$ sudo /sbin/ip addr add 10.25.6.170/255.255.255.0 dev eth01</pre>
<p>7.</p> <input type="checkbox"/>	<p>TVOE Server iLO:  Bring up the ethernet device.</p>	<p>On the command line execute the following command to bring up the interface &lt;DEV&gt;.</p> <pre>\$ sudo /sbin/ip link set up &lt;DEV&gt;</pre> <p>There should be no output from the command. An example is shown below:</p> <pre>\$ sudo /sbin/ip link set up eth01</pre>

**Procedure 4: Configure Network**

8. <input type="checkbox"/>	TVOE Server iLO:  Add route if necessary.	<p>If a default route needs to be configured (this is the case when the IP and netmask configured in the previous steps are on a different network than the IP and netmask of the server hosting the TVOE backup ISO image) then execute the following command. &lt;GATEWAY&gt; is the IP address of the gateway.</p> <pre>\$ sudo /sbin/ip route add default via &lt;GATEWAY&gt;</pre> <p>There should be no output from the command. An example is shown below:</p> <pre>\$ sudo /sbin/ip route add default via 10.25.6.1</pre>
9. <input type="checkbox"/>	TVOE Server iLO:  Log out of TVOE iLO.	<p>Using the sections listed below from the <i>Platform 6.5 Configuration Procedure Reference</i>[1], log out of the iLO.</p> <p><input type="checkbox"/> “Accessing the c-Class iLO Virtual Serial Port” [1]</p>

**Procedure 5: Restore TVOE backup ISO using Netbackup**

S T E P #	<p>This procedure will restore the TVOE Backup ISO image to the TVOE host by pushing it via Netbackup.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p><b>IF THIS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES (SEE 1.4 Customer Care Center FROM[1])</b></p>	
<p><b>NOTE: In addition to the requirements listed in Section 2, this procedure also requires the following:</b></p> <ul style="list-style-type: none"> <li>• TVOE has been configured with an IP address in <i>Procedure 4: Configure Network</i></li> </ul>		
1. <input type="checkbox"/>	TVOE Server iLO:  Log in to iLO	<p>Using the sections listed below from the <i>Platform 6.5 Configuration Procedure Reference</i>[1], log in to the iLO by using a ssh client to connect to the IP address of the TVOE server iLO.</p> <p><input type="checkbox"/> “Accessing the c-Class iLO Virtual Serial Port” [1]</p>

**Procedure 5: Restore TVOE backup ISO using Netbackup**

<p>2.</p> <input type="checkbox"/>	<p>TVOE Server iLO: Install Netbackup Client.</p>	<p>Using the sections listed below from the <i>Platform 6.5 Configuration Procedure Reference</i>[1], install and configure the Netbackup Client on TVOE.</p> <p><input type="checkbox"/> “TVOE Netbackup Client Configuration” [1]</p>
<p>3.</p> <input type="checkbox"/>	<p>NetBackup Server: Restore TVOE Backup ISO.</p>	<p>Interface with the Netbackup Master Server and initiate a restore of the TVOE Backup ISO image.</p> <p><b>NOTE:</b> Once restored, the ISO image will be in /var/TKLC/bkp/ on the TVOE Server.</p>
<p>4.</p> <input type="checkbox"/>	<p>TVOE Server iLO: Log out of TVOE iLO.</p>	<p>Using the sections listed below from the <i>Platform 6.5 Configuration Procedure Reference</i>[1], log out of the iLO.</p> <p><input type="checkbox"/> “Accessing the c-Class iLO Virtual Serial Port” [1]</p>

**Procedure 6: Restore TVOE backup ISO using SCP**

S T E P #	<p>This procedure will restore the TVOE backup ISO image to the TVOE host by pushing it via SCP from a remote location, such as a Customer PC, where the Backup ISO image is located.</p> <p>Check off (√) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p><b>IF THIS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES (SEE 1.4 Customer Care Center FROM[1])</b></p>
-----------------------	---

**NOTE: In addition to the requirements listed in Section 2, this procedure also requires the following:**

- TVOE has been configured with an IP address in *Procedure 4: Configure Network*

1.	<p>Customer PC:</p> <p><input type="checkbox"/> Copy Backup ISO image to TVOE</p>	<p>Using the IP address configured on the TVOE Server (this was done in <i>Procedure 4: Configure Network</i>), transfer the Backup ISO image to TVOE. The Backup ISO image should be copied into the backup directory within the tvoexfer user’s home directory.</p> <p><b>***NOTE: If you do not have a backup ISO image then you cannot proceed.***</b></p> <p>— <b>Linux</b></p> <ul style="list-style-type: none"> <li>• From the command line of a Linux machine use the following command to copy the Backup ISO image to the TVOE host:</li> </ul> <pre># scp &lt;path_to_image&gt; tvoexfer@&lt;TVOE_IP&gt;:backup/</pre> <p>Where <b>&lt;path_to_image&gt;</b> is the path to the Backup ISO image local to the Customer PC and <b>&lt;TVOE_IP&gt;</b> is the TVOE IP address. If the IP is an IPv4 address then <b>&lt;TVOE_IP&gt;</b> will be a normal dot-decimal notation (e.g. “10.240.6.170”). If the IP is an IPv6 link local address then <b>&lt;TVOE_IP&gt;</b> will be need to be scoped such as “[fe80::21e:bff:fe76:5e1c%control]” where <b>control</b> is the name of the interface on the machine that is initiating the transfer and it must be on the same link as the interface on the TVOE host.</p> <p>IPv4 Example:</p> <pre># scp /path/to/image.iso tvoexfer@10.240.6.170:backup/</pre> <p>IPv6 Example:</p> <pre># scp /path/to/image.iso tvoexfer@[fe80::21e:bff:fe76:5e1c%control]:backup/</pre> <p>— <b>Windows</b></p> <ul style="list-style-type: none"> <li>• Use WinSCP to copy the Backup ISO image into the backup directory within the tvoexfer user’s home directory. Refer to “Appendix A: Using WinSCP” from <i>Platform 6.5 Configuration Procedure Reference [1]</i> for help using WinSCP.</li> </ul>
----	---	--

**Procedure 7: Delete TVOE host key from PM&C**

S T E P #	<p>This procedure provides instructions on how to delete the TVOE host SSH key from PM&amp;C. This is only needed if PM&amp;C exists in the network at the time TVOE is being recovered.</p> <p>Check off (√) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p><b>IF THIS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES (SEE 1.4 Customer Care Center FROM[1])</b></p>	
<p><b>NOTE: In addition to the requirements listed in Section 2, this procedure also requires the following:</b></p> <ul style="list-style-type: none"> <li>• PM&amp;C IP Address</li> <li>• PM&amp;C admusr password</li> </ul>		
1. <input type="checkbox"/>	<p>Determine TVOE ipv6 link local address.</p>	<p>Determine the IPv6 link local address of the TVOE host by executing the following procedure from this document:</p> <p><input type="checkbox"/> “Procedure 8: Determine IPv6 Link Local Address”</p>
2. <input type="checkbox"/>	<p>Log in to the PM&amp;C CLI.</p>	<p>Log in to the PM&amp;C via SSH as the admusr user.</p>
3. <input type="checkbox"/>	<p>PM&amp;C CLI:</p> <p>Delete the remote host key.</p>	<p>Using the IPv6 address found in Step 1, execute the following command to remove the TVOE host’s SSH key from the PM&amp;C.</p> <pre>\$ sudo /usr/TKLC/smac/bin/pmacadm removeHostKeys --ip=&lt;TVOE_IP&gt;</pre> <p>An example of this is shown below:</p> <pre>\$ sudo /usr/TKLC/smac/bin/pmacadm removeHostKeys --ip=fe80::21e:bff:fe76:5e1c</pre> <p>Successful delete of entry for ip (fe80::21e:bff:fe76:5e1c) from PM&amp;C list of known hosts.</p>

**Procedure 8: Determine IPv6 Link Local Address**

S T E P #	<p>This procedure provides instructions on how to find the IPv6 link local address of the TVOE server.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p><b>IF THIS PROCEDURE FAILS, CONTACT TEKELEC TECHNICAL SERVICES (SEE 1.4 Customer Care Center FROM[1])</b></p>	
1. <input type="checkbox"/>	<p>TVOE Server iLO: Log in to iLO</p>	<p>Using the sections listed below from the <i>Platform 6.5 Configuration Procedure Reference</i>[1], log in to the iLO by using a ssh client to connect to the IP address of the TVOE server iLO.</p> <p><input type="checkbox"/> “Accessing the c-Class iLO Virtual Serial Port” [1]</p>
2. <input type="checkbox"/>	<p>TVOE Server iLO: Log into the server</p>	<p>Log in as the admusr user.</p>
3. <input type="checkbox"/>	<p>TVOE Server iLO: Detect IPv6 link local address.</p>	<p>On the command line execute the following command:</p> <pre>\$ ip -6 addr show dev control</pre> <p>An example of the output of this command is shown below:</p> <pre>\$ ip -6 addr show dev control 12: control: &lt;BROADCAST,MULTICAST,UP,LOWER_UP&gt; mtu 1500     inet6 fe80::21e:bff:fe76:5e1c/64 scope link         valid_lft forever preferred_lft forever</pre> <p>In this case the link local address is <code>fe80::21e:bff:fe76:5e1c</code>. Record the link local address in the output for later use.</p>
4. <input type="checkbox"/>	<p>TVOE Server iLO: Log out of TVOE iLO.</p>	<p>Using the sections listed below from the <i>Platform 6.5 Configuration Procedure Reference</i>[1], log out of the iLO.</p> <p><input type="checkbox"/> “Accessing the c-Class iLO Virtual Serial Port” [1]</p>

## Appendix A: Accessing Oracle's Tekelec Customer Support Site

Access to the Oracle's Tekelec Customer Support site is restricted to current Tekelec customers. This section describes how to log into Oracle's Tekelec Customer Support site and how to locate upgrade procedures. Viewing these files requires Adobe Acrobat Reader.

1. Go to Oracle's Tekelec 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**.