

**Oracle® Communications  
EAGLE**

Software Upgrade Procedure

Release 45.X & 46.X

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**ORACLE®**

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**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 F 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: 1-888-367-8552 or 919-460-2150 (international)

FAX: 919-460-2126

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## 1. INTRODUCTION

### 1.1 Purpose and Scope

This document describes methods utilized and procedures executed to perform a software upgrade on any in-service EAGLE®-based STP to EAGLE® Software Release 45.0 or 45.1 as well as any future maintenance releases. The audience for this document includes Tekelec customers as well as these EAGLE® GPS groups: Software Development, Product Verification, Technical Communications, and Customer Service including the Upgrade Center and New Product Engineering. This document provides step-by-step instructions to execute any upgrade to Release 45.0 or 45.1.

See appropriate upgrade kit instructions/references for the software upgrade of peripheral equipment.

### 1.2 References

#### 1.2.1 External

- [1] *EAGLE5 ISS 45.0 and above Health Check Procedure*, 909-2256-001, latest revision, Tekelec
- [2] *EAGLE 5 45.0 Maintenance Manual*, 910-6666-001, latest revision, Tekelec
- [3] *EAGLE 5 45.0 Database Administration – System Management*, 910-6665-001, latest revision, Tekelec

#### 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.

- [4] EAGLE Hardware Field Baseline, 820-2410-01, latest revision, Tekelec.
- [5] *TEKELEC Acronym Guide*, MS005077.doc, current revision
- [6] Tekelec Eagle - Eng Release Mapping web page, [http://devtools.nc.tekelec.com/cgi-bin/eng\\_eag.cgi](http://devtools.nc.tekelec.com/cgi-bin/eng_eag.cgi), Tekelec.
- [7] Tekelec CSR-PR Reports By Build, [http://devtools.nc.tekelec.com/cgi-bin/release\\_desc.cgi](http://devtools.nc.tekelec.com/cgi-bin/release_desc.cgi)
- [8] Tekelec Tekpedia web page, [http://nsdsolaris2.nc.tekelec.com/tekpedia/index.php/Methods\\_to\\_correct\\_distributed\\_network\\_database\\_\(DDB\)\\_inconsistencies](http://nsdsolaris2.nc.tekelec.com/tekpedia/index.php/Methods_to_correct_distributed_network_database_(DDB)_inconsistencies), Tekelec.
- [9] EAGLE 45.0 Product Functional Specification PF005994, latest version Tekelec.

### 1.3 Software Release Numbering

To determine the correct GPL version numbers for the EAGLE® applications, refer to the appropriate internal release-mapping web tool or to the *Release Notice* located on the Customer Support web site. Appendix F describes how to access the Customer Support web site. For FOA releases or Engineering prototype releases, refer to internal references [6] in section 1.2.2.

**Note: verifying the correct GPL versions, ensures that the system is being upgraded to the correct target software release.**

### 1.4 Database Version Number

To determine the correct database version numbers for the EAGLE® release, refer to the appropriate internal release-mapping web tool. Appendix F describes how to access the Customer Support web site. For FOA releases or Engineering prototype releases, refer to internal references [6] in section 1.2.2.

### 1.5 Acronyms

**Table 1. Acronyms**

AWA	Alternate Work Area
DDB	Dynamic Database
DDL	Dynamic Data Load
E5-OAM	Eagle 5 Operation, Admission, & Maintenance.
EOAM	Legacy Enhanced Operation, Admission, & Maintenance.
FAK	Feature Access Key
FOA	First Office Application
GA	General Availability
GLS	Generic Loading Service
GPL	Generic Program Load
GPSM	Legacy General Purpose Service Module
IMT	Interprocessor Message Transport
IS-NR	In Service - Normal
IS-ANR	In Service - Abnormal
KSR	Keyboard Send & Receive
LA	Limited Availability
LIM	Link Interface Module
LNP	Local Number Portability
LSMS	Local Service Management System
MAS	Maintenance and Administration Subsystem
MCPM	Measurement Collection and Polling Module
MDAL	Maintenance Disk and Alarm Card
MO	Legacy Magneto Optical (removable disk cartridge)
MOP	Method Of Procedure
MPS	Multi Purpose Server
MSD	Media Software Delivery
OAM	Operations Administration and Maintenance
OAP	Operations, Administration and Maintenance Applications Processor
OOS-MT	Out Of Service - Maintenance
RMD	Removable Media Drive/Disk
SAK	Software Access Key
SATA	Serial ATA
SEAS	Signaling Engineering and Administration System
SSD	Server Software Delivery
STP	Signal Transfer Point

TDM	Terminal Disk Module
TPS	Transactions Per Second (feature)
TSM	Translation Services Module
UHC	Upgrade Health Check

For additional Acronyms; refer to internal references [5] in section 1.2.2.

## Terminology

**Table 2. Terminology**

<b>Backout (abort)</b>	The process to take a system back to a Source Release prior to completion of upgrade and commitment to Target release. Includes restoration of source databases and system configuration.
<b>DDay</b>	Date of the start of the maintenance window of the upgrade execution.
<b>E5-OAM system</b>	An EAGLE running with E5-MCAP & E5-MDAL cards for front-end hardware.
<b>Fixed disk based upgrade</b>	An upgrade that uses the inactive partitions of the fixed disks as the workspaces to covert the data. With 9Gb and bigger hard drives, this is the expected method.
<b>HHour</b>	Hour at which the system enters upgrade phase 0 during upgrade execution.
<b>Incremental upgrade</b>	<b>EAGLE:</b> Upgrade to a maintenance release (external customers) or upgrade to a new build (internal test labs).
<b>Intra-release upgrade</b>	Any upgrade within a release; this includes incremental as well as full function upgrades where only the minor database version changes. Note: Intra-release upgrades are not covered by this document.
<b>Intrusive Operation</b>	Operation that impacts the redundancy of the system by isolation of the duplicate component.
<b>Legacy system</b>	An EAGLE running with GPSMII, TDM, & MDAL cards for front-end hardware. This hardware is obsolete beginning in Release 45.0.
<b>Non-intrusive Operation</b>	Operation that collects data and does not impact the redundancy of the system.
<b>Non-preserving upgrade</b>	“Upgrade” that does not adhere to the standard goals of software upgrade methodology. The outcome of the execution is that the system is running on the Target Release; however the Source Release database was <b>not</b> preserved.
<b>Rollback</b>	The process to take a system from a Target Release back to a Source Release including preservation of databases and system configuration.
<b>Session 0</b>	This is a new set of tasks required in the Upgrade Health Check #2 timeframe. The work needs to be accomplished successfully prior to the execution of the upgrade.
<b>Source release</b>	Software release from which the system is upgraded.
<b>Target release</b>	Software release to which the system is upgraded.
<b>Upgrade Media</b>	The USB thumb drives for E5-MCAP systems

**Table 3 Generic VS. E5-OAM Terminology**

<b>Generic Term</b>	<b>E5-OAM Term</b>
Drive Slot	Thumb Drive on the E5-MCAP
Fixed Disk	Sata Drive
MASP	E5-MCAP
Removable media	Removable media
RMD	USB Thumb Drive
Upgrade media	USB Thumb Drive

## 1.6 Recommendations

1. It is recommended that command input and command-line/scroll-area output be captured during the execution of an upgrade. The preferred method is the use of two serial terminals; one used to enter commands and to echo to the second, which is set to capture all output except for traffic-related unsolicited messages. These terminals should be configured as KSR type. Another acceptable method is the use of one serial terminal, which has a terminal-emulation application that supports input/output capture. This terminal should be set to the KSR type. It is unacceptable to use a telnet terminal since it does not support the echo capability. Serial terminals are designated ports 1 – 16 and telnet terminal are designated ports 17 and above.
2. It is recommended that measurement collection be retrieved prior to upgrade execution because, if the MCPM or Intergrated Measurements features are not enabled, the data collected will not be persistent across the upgrade. Inhibiting measurements does NOT stop collection that is already in progress. OAM-based measurements are inhibited on the next cycle. It is recommended that time should be given to allow the current cycle to complete. Those procedures that inhibit measurements manually contain steps to ensure that current collection is complete.
3. It is recommended that the OAP terminals be turned down for SEAS-enabled systems and others with high OAP traffic. If OAP terminals are not inhibited, any database updates successfully entered during the period between the last database backup and Upgrade Phase 0 are lost if it becomes necessary to fall back to the source release using the spare E5-MASP.
4. It is recommended that the Measurements Platform NOT be shut down and the Measurement Collection and Polling Module (MCPM) cards NOT be inhibited.
5. It is recommended to issue the command in Procedure 8, Step 1 with the **thres** parameter equal to 75. The threshold parameter is specified at 75 to ensure that 75% of same type of links remains in service during the network conversion of the upgrade execution. The following command is issued in Procedure 8, Step 1:

**ACT-UPGRADE:ACTION=CONVERTSTP:SRC=FIXED:THRES=75**

Based on a system's configuration and customer objectives, the thres parameter may be adjusted or the parameter may be applied to the total number of links configured on the system. If the network conversion phase of the upgrade is pushing the execution of the upgrade outside the maintenance window applying the threshold value on a system basis will help expedite the upgrade execution. Please contact Tekelec Customer Care Center to determine the recommended course of action.

6. Although an IP telnet terminal may be configured, the terminal is not recommended for use in the upgrade process because it does not support echo and capture mode. Any application connected via a Telnet session through an IPSM card, should be configured for interruption during the upgrade. That application's configuration procedure needs to be provided by the application's manufacturer.
7. The following commands obtain the current system status. It is recommended that the following commands be run in order to obtain the current system status in the following situations: 1) prior to executing the upgrade, 2) the upgrade terminates prior to successful completion and 3) before re-starting the upgrade. The commands should be issued in addition to the diagnosis of the any terminating condition. This status is not complete and inclusive, additional commands, which are deemed relevant, can be run at that time.

```

REPT-STAT-SYS
REPT-STAT-GPL:DISPLAY=ALL
REPT-STAT-CARD
REPT-STAT-SLK
REPT-STAT-TRBL
RTRV-TRBL:NUM=25:LOC=<1113|1115>
RTRV-STP
ACT-UPGRADE:ACTION=DBSTATUS

```

## 2. GENERAL DESCRIPTION

This document defines the step-by-step actions performed to execute a software upgrade of an in-service EAGLE® STP from the source release to the target release.

Figure 1 - Upgrade Process shows the general steps for all processes of performing a software upgrade, from hardware inventory to final upgrade health check.

Contact Tekelec Customer Care Center at 1-888-FOR-TKLC (1-888-367-8552); or 1-919-460-2150 (international) for time estimates for each portion of the upgrade process.

**Figure 1 - Upgrade Process**

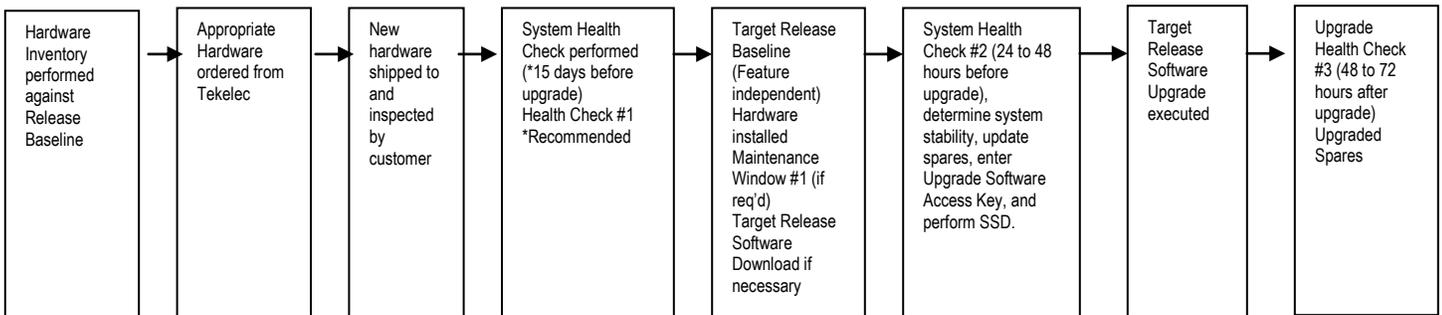


Table 4 contains a checklist of the steps required to successfully complete the upgrade process.

Upgrade Process Task	Date completed
Hardware Inventory	
Hardware Ordered	
New Hardware received	
System Health Check #1 performed	
System Health Check #1 output verified	
Target Release Baseline Hardware installed	
New Software Release downloaded if necessary (E5-MASP) or capability available (Electronic Software Distribution).	
System Health Check #2 performed	
Enter Upgrade Software Access Key	
System Health Check #2 verified	
Software Upgrade Session 1 completed	
Health Check #3 performed	
Software Upgrade Session 2 completed	

**Table 4: Upgrade Tasks to be completed**

During the software upgrade execution, phase flags are displayed in the output messages to indicate upgrade progress. The output messages shown in this document are for example purposes only and do not display upgrade phase values unless a specific request to verify the phase is given, i.e., Procedure 6, step 15. The goal in doing this is to make this document describe the generic upgrade procedure.

Table 5: Phases of Upgrade Execution shows the phase flags displayed during the upgrade process. These flags are used to indicate the progress made by the upgrade function. The internal upgrade processing, which is initiated by the activate-upgrade command, controls these flags.

**Table 5: Phases of Upgrade Execution**

Release Displayed	Phase Indicator <sup>1</sup>	Conversion	Software Running	Database Configuration
Source			Source	Source
Source	Phase 0	Database	Target	Source
Target	Phase 2	Database	Target	Target
Target	Phase 3	Network	Target	Target
Target			Target	Target

---

<sup>1</sup> Over the evolution of the upgrade process, Phase 1 is considered an error state.

### 3. UPGRADE OVERVIEW

This section provides a brief overview of the recommended method for upgrading the source release software that is installed and running on an EAGLE® STP to the Target Release software. The basic upgrade process and approximate time frame is outlined in Table 6: Upgrade Readiness Activities, Table 7: Pre-Upgrade Execution Activities, Table 8: Upgrade Execution Overview and Table 9: Post Upgrade Overview with the backout procedure shown in Table 10: Backout Procedure Overview.

It is assumed that upgrade of peripheral(s) is coordinated with and executed in parallel with the EAGLE upgrade to ensure that all work is performed within the maintenance window. Note that several variables affect the upgrade times shown in the tables – the timing values shown are estimates only.

The EAGLE has no known restriction that would prevent the upgrading of any peripheral in parallel with it.

#### 3.1 Required Materials

1. One (1) source release system removable media.
2. One (1) target-release upgrade media for MSD or FTP server for remote download.
3. A valid EAGLE login ID and password with all user privileges enabled.
4. One (1) spare fixed disk at the source release: required in the event of recovery.
5. Capability to capture data via a printer, PC, or modem to allow remote access for Tekelec Customer Care Center personnel.
6. List of GPLs from section 1.3 should be kept on hand for reference throughout the upgrade or refer to Appendix F to locate the Release Notice on the Customer Support Center web site
7. The Software Access Key (SAK) must be available and entered (this activity should be done during the same maintenance window as the upgrade health check #2.)

#### 3.2 Upgrade Preparation Overview

The activities listed in Table 6 need to be accomplished successfully prior to the maintenance window in which the upgrade is to be executed in. A day is equivalent to the period of time between scheduled maintenance windows.

Session / Phase	Time Frame	Activity	Impact
UHC #1	Dday – 7	Upgrade Health Check # 1	Non-intrusive
Session 0	Dday – 2	Target Release Software Download	Intrusive (format-disk, OAM boot)
UHC #2	Dday – 2	Upgrade Health Check # 2	Intrusive (H/W swap, IMT bus)
Session 0	Dday – 2	Entering Upgrade Software Access Key	Non-intrusive

Table 6: Upgrade Readiness Activities

### 3.3 Pre-Upgrade Overview

The pre-upgrade procedures, shown in Table 7, may be optionally executed prior to entering the maintenance window. All of these activities are completed during Session 1.

Session / Phase	Time Frame	Activity	Impact
Pre-Phase 0	Hhour – 2	Verify Pre-Upgrade Requirements and Capturing Upgrade Data	Non-intrusive
Pre-Phase 0	Hhour – 2	Retrieve System's Node-Level Processing Option Indicators	Non-intrusive
Pre-Phase 0	Hhour – 2	Backing Up the Database	Non-intrusive
Pre-Phase 0	Hhour – 1	Updating the Source Release Spare E5-MASP	Non-intrusive
Pre-Phase 0	Hhour – 1	Verifying All Database	Non-intrusive
Pre-Phase 0	Hhour	Inserting Target Release System Removable Media.	Non-intrusive

Table 7: Pre-Upgrade Execution Activities

### 3.4 Upgrade Execution Overview

The procedures, shown in Table 8, are executed in the maintenance window.

Session / Phase	Time Frame	Activity	Impact
Pre-Phase 0	Hhour	Retrieve measurements data reports	Non-intrusive
Phase 0	Hhour	Initializing Front-End to Run in the Target Release.	Intrusive
Phase 0	Hhour	Verifying all Databases	Non-intrusive
Phase 0 & 2	Hhour	OAM Conversion	Intrusive
Phase 3	Hhour	Network Conversion	Intrusive

Table 8: Upgrade Execution Overview

The procedures, shown in Table 9: Post Upgrade Overview, are executed in the maintenance window.

Session / Phase	Time Frame	Activity	Impact
Phase 3	Hhour + 3	Completing Upgrade/Return to Full Function Mode.	Non-intrusive
Post-upgrade	Hhour + 3	Backing Up Converted Database	Non-intrusive
Session 2	Dday + 2	Upgrading Removable Media	Non-intrusive
Session 2	Dday + 2	Backing Up Fixed Disk	Non-intrusive
Session 2	Dday + 2	Upgrade Spare Fixed Disk.	Intrusive
Session 2	Dday + 2	Verifying All Databases.	Non-intrusive

Table 9: Post Upgrade Overview

### 3.5 Backout Procedure Overview

The procedures, shown in Table 10: Backout Procedure Overview, are executed in the maintenance window.

Session / Phase	Time Frame	Activity	Impact
Phase 0 - 3	Hhour	Load and Run Source OAM	Non-intrusive
Phase 0 - 3	Hhour	Full fallback using Fixed Disk as OAM conversion workspace – Case 1 Or Full fallback using Fixed Disk as OAM conversion workspace – Case 2 Or Full fallback using Fixed Disk as OAM conversion workspace – Case 3	Intrusive
Phase 0 - 3	Hhour	Network Conversion to Source Release	Intrusive

Table 10: Backout Procedure Overview

## 4. UPGRADE PREPARATION

- Perform hardware inventory to identify any hardware not supported by the target release baseline.
- Bring all non-supported hardware up to baseline (to be coordinated with Customer Care Center personnel).
- Perform pre-upgrade system health checks to establish that the system is fit to upgrade.
- Download target release software if necessary (E5-MASP) or capability available.
- Enter upgrade Software Access Key (SAK).

### 4.1 Hardware Upgrade Preparation

Before the upgrade execution, the customer site should have three source-release fixed drives (E5-TDMs \ Sata fixed drives) and at least one source-release removable media (two if using SSD). If MSD, a target-release upgrade media drive (USB drives for E5-MASP systems) is shipped to site before the upgrade. Before the target release installation, the spare equipment inventory should be as shown in Table 11 and Table 12.

**Table 11. Equipment Inventory before Upgrade if media software delivery (MSD)**

Equipment	In-service	Spare	Upgrade	Totals:
Source-release fixed drives	2	1	0	3
Source-release removable media	1	0	0	1
Target-release fixed drives	0	0	0	0
Target-release upgrade media	0	0	1	1

**Table 12. Equipment Inventory before Upgrade if server software delivery (SSD)**

Equipment	In-service	Spare	Upgrade	Totals:
Source-release fixed drives	2	1	0	3
Source-release removable media	2	0	0	2
Target-release fixed drives	0	0	0	0
Target-release upgrade media	0	0	0	0

During the procedure, both the active and standby in-service source-release E5-TDMs are converted to the target release and the spare is reserved in case a fallback to the source release is required. Upon completion of the procedure, the spare equipment should be as shown in Table 13 and Table 14. **NOTE:** the spare E5-TDM and source-release RMDs are upgraded to the target release in the second session. This allows a soak period for the target release and the possibility to fallback to the source release.

**Table 13. Spare Equipment after Upgrade if media software delivery (MSD)**

Equipment	In-service	Spare	Upgrade	Totals:
Source-release fixed drives	0	0	1	1
Source-release removable media	0	0	1	1
Target-release fixed drives	2	0	0	2
Target-release upgrade media	1	0	0	1

**Table 14. Spare Equipment after Upgrade if server software delivery (SSD)**

<b>Equipment</b>	<b>In-service</b>	<b>Spare</b>	<b>Upgrade</b>	<b>Totals:</b>
Source-release fixed drives	0	0	1	1
Source-release removable media	0	0	1	1
Target-release fixed drives	2	0	0	2
Target-release upgrade media	1	0	0	1

## 4.2 Software Upgrade Preparation

It is necessary for the customer to obtain a Software access Key (SAK) from Tekelec to perform the upgrade; the SAK should be entered during System Health Check #2 (see 6.4Appendix C). The SAK is used in the validation of the target release software. Also, the target release software may need to be loaded onto the inactive partition of the E5-TDMs (see 6.4Appendix C).. This is required for the E5-MASP platform. The release can either be downloaded from the E5-MASP upgrade media (USB drive) or via an FTP server. In order to utilize this software download capability via an FTP server, the EAGLE must have an E5-IPSM installed in the system. See General Description section for general steps and timeline associated with the upgrade process.

## 5. SOFTWARE UPGRADE 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.

Before upgrade, users must perform the EAGLE system health check [1]. This check ensures that the system to be upgraded is in an upgrade-ready state. Performing the system health check determines which alarms are present in the system and if upgrade can proceed with these alarms.

### \*\*\*\*\* WARNING \*\*\*\*\*

If there are cards in the system, which are not in IS-NR state, these cards should be brought to the IS-NR before the upgrade process is started. If it is not possible to bring the cards IS-NR contact Tekelec Customer Care Center. If any card cannot be brought in-service or out-of-service, isolated, the card should be inhibited after entering Phase 2 (during procedure 8). If any GLS card is in OOS-MT or IS-ANR state, none of the SCCP or LIM cards will load. If any LIM card is in OOS-MT state, this will prohibit the STPLAN cards from loading. The sequence of upgrade is such that cards providing support services to other cards will be upgraded first.

### \*\*\*\*\* WARNING \*\*\*\*\*

Do not start the upgrade process without the required spare equipment; without spare equipment, recovery procedures cannot be executed!

Please read the following notes on upgrade procedures:

1. Procedure completion times shown here are estimates. Times may vary due to differences in database size, user experience, and user preparation.
2. Command steps that require user entry are indicated with white-on-black step numbers.
3. The shaded area within response steps must be verified in order to successfully complete that step.
4. 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"
5. After completing each step and at each point where data is recorded from the screen, a check box should be provided.
6. Captured data is required for future support reference if Tekelec Customer Care Center is not present during the upgrade.
7. Each procedural step is numbered chronologically within each procedure.

## 5.1 Software Upgrade Execution – Session 1

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

<b>S T E P #</b>	This procedure verifies that all pre-upgrade requirements have been met.  Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.  Should THIS PROCEDURE FAIL, Contact TEKELEC Customer Care Center AND <b>ASK FOR UPGRADE ASSISTANCE.</b>	
<b>1</b> <input type="checkbox"/>	Complete pre-upgrade tasks	All tasks in Table 15 must be completed before continuing.

**Table 15. Pre-Upgrade Requirements**

✓	Tasks to be completed prior to upgrade execution
	Perform hardware inventory.
	Verify that all target-release baseline hardware has been installed. And any obsolete hardware has been replaced.
	Verify that a full complement of EAGLE® spares is available, including a source-release fixed disk. <b>Note:</b> This fixed disk’s database should have been repaired in Upgrade Health Check [1].
	Verify that you have at least one source-release RMD with an up-to-date database. <b>Note:</b> This drive’s database should have been backed up in Upgrade Health Check [1].
	Verify that you have one target-release upgrade media drives provided by Tekelec for upgrade <b>Or</b> Target-Release software has been downloaded to the inactive disk partitions (see section 4.2)
	Verify that you have a copy of the Target Release’s System Release Notes (see section 1.3.)
	Verify that an EAGLE system health check has been performed and the output capture file has been validated by Tekelec Customer Care Center.
	Perform upgrade time calculations to ensure that the upgrade can be completed within the window.
	Collect all measurement reports.
	Verify that all required documentation is included in the upgrade kit. [See section 4.2]

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

<p><b>2</b> <input type="checkbox"/></p>	<p>Issue the command to display terminal status.</p>	<p><b>rtrv-trm</b></p>
<p><b>3</b> <input type="checkbox"/></p> <p>Record the terminals in the TRM column that have TYPE of PRINTER<sup>2</sup>. Also record the terminal being used to enter commands (the user terminal)<sup>3</sup> Or terminals used by external applications that issue commands to the Eagle. In this example, terminal 12 is a printer, terminal 10 is the user terminal, and terminal 2 is KSR.</p> <p><input type="checkbox"/> Capture _____<sup>2</sup></p> <p><input type="checkbox"/> USER _____<sup>3</sup></p> <p><input type="checkbox"/> Ext. Application: _____<sup>4</sup></p> <p><input type="checkbox"/> See recommendation #1 &amp; #6 in section 1.6</p> <p><input type="checkbox"/> If <b>not</b> echoing to the printer or KSR, go to step 8.</p> <p><input type="checkbox"/> Record the initial output group configuration for the user's and capture terminals. Also, record the user's TMOUT value.</p>	<p>Response to retrieve terminal command is displayed.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y rtrv-trm Command entered at terminal #10. ; tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y TRM TYPE COMM FC TMOUT MXINV DURAL 1 OAP 19200 -7-E-1 SW 30 5 00:01:00 2 KSR 9600 -7-E-1 SW 30 5 00:01:00 3 NONE 9600 -7-E-1 SW 30 5 00:01:00 4 NONE 9600 -7-E-1 SW 30 5 00:01:00 5 NONE 9600 -7-E-1 SW 30 5 00:01:00 6 NONE 9600 -7-E-1 SW 30 5 00:01:00 7 NONE 9600 -7-E-1 SW 30 5 00:01:00 8 NONE 9600 -7-E-1 SW 30 5 00:01:00 9 OAP 19200 -7-E-1 SW 30 5 00:01:00 10 KSR 9600 -7-E-1 SW 30 5 00:01:00 11 NONE 9600 -7-E-1 SW 30 5 00:01:00 12 PRINTER 9600 -7-E-1 SW 30 5 00:01:00 13 VT320 9600 -7-E-1 SW 30 5 00:01:00 14 NONE 9600 -7-E-1 SW 30 5 00:01:00 15 NONE 9600 -7-E-1 SW 30 5 00:01:00 16 NONE 9600 -7-E-1 SW 30 5 00:01:00  TRM TRAF LINK SA SYS PU DB 1 YES YES YES YES YES YES 2 NO NO NO NO NO NO 3 NO NO NO NO NO NO 4 NO NO NO NO NO NO 5 NO NO NO NO NO NO 6 NO NO NO NO NO NO 7 NO NO NO NO NO NO 8 NO NO NO NO NO NO 9 YES YES YES YES YES YES 10 YES YES YES YES YES YES 11 NO NO NO NO NO NO 12 YES YES YES YES YES YES 13 YES YES YES YES YES YES 14 NO NO NO NO NO NO 15 NO NO NO NO NO NO 16 NO NO NO NO NO NO  ; USER _____ TMOUT ____ CAP _____</pre>
<p><b>4</b> <input type="checkbox"/></p>	<p>Echo command input to capture terminal.</p> <p>If the capture terminal is the user terminal go to step 8.</p>	<p><b>act-echo:trm=P</b> (Where the value for <i>P</i> is one of the printer/KSR terminal port numbers recorded in Step 3)</p>
<p><b>5</b> <input type="checkbox"/></p>	<p>Response to activate command is displayed.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y act-echo:trm=P Command entered at terminal #10. ;</pre>
<p><b>6</b> <input type="checkbox"/></p>	<p>If capture terminal's output groups are not all set to YES, issue the change terminal command.</p>	<p><b>chg-trm:trm=P:all=yes<sup>5</sup></b> (<i>P</i> is the terminal port that is specified in step 4)</p>

<sup>2</sup> Terminals with type equal to KSR as well as type equal to printer, which are configured, need to be recorded. Terminal being used to capture cannot be a Telnet terminal, see recommendation #6 in section 1.6

<sup>3</sup> The user terminal cannot be a Telnet terminal, see recommendation #6 in section 1.6.

<sup>4</sup> If an external application is connected via a Telnet terminal on an IPSM card, see recommendation #6 in section 1.7.

<sup>5</sup> If the system displays continuous UAMs and the source of the UAMs are known issues, turn off the associated output groups to limit the information sent to printer/KSR terminal port.

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

<input type="checkbox"/>	Response to change terminal command is displayed.	<pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y chg-trm:trm=P:all=yes Command entered at terminal #10. ;</pre>
<input type="checkbox"/>	If the output group and timeout on the user terminal are not set correctly, issue the command to change terminal timeout and display groups.	<pre>chg-trm:trm=USER:all=no:sa=yes:sys=yes:db=yes:tmout=0 (Where the value of USER is the user terminal number shown in Step3)</pre>
<input type="checkbox"/>	Response to change terminal command is displayed.	<pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y chg-trm:trm=USER:sa=yes:sys=yes:db=yes:tmout=0 Command entered at terminal #10. ;</pre>
<input type="checkbox"/>	Issue the command to display the system features	<pre>rtrv-feat</pre>
<input type="checkbox"/>	Response to retrieve features command is displayed.	<pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y EAGLE FEATURE LIST  GTT      = on      GWS      = on      NRT      = off X25G     = off     LAN      = on      CRMD     = off SEAS     = off     LFS      = off     MTPRS    = off FAN      = on      DSTN5000 = off     WNP      = off CNCF     = off     TLNP     = off     SCCPCNV  = off TCAPCNV  = off     IPISUP   = off     X252000  = off PLNP     = off     NCR      = off     ITUMTPRS = on SLSOCB   = off     EGTG     = on      VGTG     = on MPC      = on      ITUDUPPC = on      MEASPLAT = on TSCSYNC  = off     E5IS     = off</pre>
<input type="checkbox"/>	Issue the command to display the FAK features.	<pre>rtrv-ctrl-feat</pre>
<input type="checkbox"/>	Response to retrieve command is displayed.	<pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y The following features have been permanently enabled:  Feature Name          Partnum  Status Quantity ----- The following features have been permanently enabled:  Feature Name          Partnum  Status Quantity FEATURE_A             XXXXXXXX on      ---- FEATURE_B             XXXXXXXX on      nn  The following features have been temporarily enabled:  Feature Name          Partnum  Status Quantity  Trial Period Left Zero entries found.  The following features have expired temporary keys:  Feature Name          Partnum Zero entries found.</pre>
<input type="checkbox"/>	Issue the command to display the system serial number.	<pre>rtrv-serial-num</pre>
<input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>	Response to retrieve command is displayed.  Record the system serial number as shown:  SN: _____ Additionally, record in Appendix E.  Verify the serial number is locked.	<pre>rtrv-serial-num Command entered at terminal #4. ; tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y System serial number = nt00009999  System serial number is <b>locked</b>.</pre>

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

<b>16</b> <input type="checkbox"/>	Issue the command to retrieve records from the event log.	<b>rtrv-log:dir=bkwd:edate=YYMMDD:etime=HHMMSS:num=XXXX:enum=YYYY:num=NNN</b> (Where <i>YYMMDD</i> is today's date and <i>HHMMSS</i> is one hour ago.) (Where <i>XXXX</i> , <i>YYYY</i> , and <i>NNN</i> are the values listed in Table 16.)
<b>17</b> <input type="checkbox"/>  <input type="checkbox"/>	Response to retrieve command is displayed.  Determine if the report termination reason meets the pass/fail criteria in Table 17.	tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y Card 1113; SYS REL= 35.1.0-56.31.0; STP CLLI= tk1c1190601; Timezone= EST  ****06-09-19 10:49:46**** 1426.0311 DPC 012-095-015 DPC is allowed ****06-09-19 10:49:45**** 1424.0314 DPC 012-095-015 Route is allowed ****06-09-19 10:46:33**** 0667.0312 * DPC 012-095-015 DPC is restricted ****06-09-19 10:46:33**** 0665.0312 * DPC 012-095-015 DPC is restricted ****06-09-19 10:32:19**** 3100.0311 DPC 012-079-001 DPC is allowed ****06-09-19 10:32:18**** 3098.0314 DPC 012-079-001 Route is allowed ****06-09-19 10:30:41**** 2828.0312 * DPC 012-079-001 DPC is restricted ****06-09-19 10:30:41**** 2827.0316 DPC 012-079-001 Route is prohibited ****06-09-19 10:30:41**** 2825.0312 * DPC 012-086-004 DPC is restricted UAM Report terminated - max. or num= count reached END OF LOG REPORT. ;
<b>18</b> <input type="checkbox"/>	Repeat steps 16-17 for all sets of UAMs listed in Table 16.	

**Table 16: DDL-Hunt-related UAM ranges.**

	<b>SNUM</b>	<b>ENUM</b>	<b>NUM</b>	<b>UAM Text*</b>
	<i>Start UAM</i>	<i>End UAM</i>	<i>Maximum Events</i>	
<input type="checkbox"/>	200	200	15	RCVRY-LFK: link available
<input type="checkbox"/>	236	236	15	REPT-LFK: not aligned
<input type="checkbox"/>	264	275	50	REPT-LINK-CGST:congestion level X to Y RCVRY-LINK-CGST:congestion has cleared REPT-LINK-CGST:discard level X to Y RVCRY-LINK-CGST:discard has cleared
<input type="checkbox"/>	311	313	50	DPC is prohibited DPC is restricted DPC is allowed
<input type="checkbox"/>	314	316	50	Route is prohibited Route is restricted Route is allowed

\* - For the description of these UAMs, see External Reference [2]

**Table 17: Retrieve Log Termination Pass/Fail Criteria:**

<b>Termination Reason</b>	<b>Pass/Fail</b>	<b>Comment</b>
- no records found within specified range	Pass	
- X records displayed (where X is less than NUM.)	Pass	
- max. or num= count reached	Further Analysis Required	See Appendix, D.2

**Procedure 2: Backing Up the Database**

<p><b>S</b> <b>T</b> <b>E</b> <b>P</b> <b>#</b></p>	<p>This procedure backs up the active current database to the fixed disk and the removable media. This procedure is required to retain changes made by this upgrade process and match the distributed network database.</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 TEKELEC CUSTOMER CARE CENTER AND <b>ASK FOR UPGRADE ASSISTANCE.</b></p>
<p><b>1</b> <input type="checkbox"/></p>	<p>Issue the command to display database status.</p> <p><b>rept-stat-db</b></p>
<p><b>2</b> <input type="checkbox"/>          <input type="checkbox"/>   <input type="checkbox"/></p>	<p>Response from the command is displayed.</p> <p>Look in the columns labeled 'C' and 'LEVEL' output by this command.</p> <p>Verify entries in column 'C' show 'Y' which indicates coherence.</p> <p>Verify both 'FD CRNT' Levels are equal.</p> <pre> tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y DATABASE STATUS: &gt;&gt; OK &lt;&lt; TDM 1114 ( STDBY) C LEVEL TIME LAST BACKUP C LEVEL TIME LAST BACKUP ----- FD BKUP Y XXXX YY-MM-DD HH:MM:SS TTTT Y XXXX YY-MM-DD HH:MM:SS TTTT FD CRNT Y XXXX MCAP 1113 ----- RD BKUP Y XXXX YY-MM-DD HH:MM:SS TTTT Y XXXX YY-MM-DD HH:MM:SS TTTT USB BKP - - - - -     </pre>
<p><b>3</b> <input type="checkbox"/></p>	<p>Issue the command to back up the database.</p> <p><b>chg-db:action=backup</b></p>
<p><b>4</b> <input type="checkbox"/>          <input type="checkbox"/></p>	<p>Response to backup command is displayed.</p> <p>Command execution time: approximately 4 – 20 minutes, longer for large databases.</p> <pre> tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y 5042.1114 CARD 1115 Database BACKUP started Report Date:YY-MM-DD Time:hh:mm:ss ; tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y BACKUP (FIXED): MASP B - Backup starts on active MASP. ; tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y BACKUP (FIXED): MASP B - Backup on active MASP to fixed disk complete. ; tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y BACKUP (FIXED): MASP B - Backup starts on standby MASP. ; tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y 5045.1116 CARD 1115 Database action ended - OK Report Date:YY-MM-DD Time:hh:mm:ss ; tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y BACKUP (FIXED): MASP B - Backup on standby MASP to fixed disk complete. ;     </pre>
<p><b>5</b> <input type="checkbox"/></p>	<p>Visually inspect the RMD to verify that it is labeled with the source release.</p>
<p><b>6</b> <input type="checkbox"/></p>	<p>Insert the source-release RMD into the drive slot.</p> <p>Wait for the RMD to be detected by the system.</p>

**Procedure 2: Backing Up the Database**

7 <input type="checkbox"/>	Issue the Change-Database command to back up the database to RMD.	<b>chg-db:action=backup:dest=remove</b>
8 <input type="checkbox"/>	Response to backup command is displayed.	<pre> tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y chg-db:action=backup:dest=remove Command entered at terminal #10. ; tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y BACKUP (REMOVABLE): MASP A - Backup starts on active MASP ; tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y BACKUP (REMOVABLE): MASP A - Backup to removable device complete ; </pre>
9 <input type="checkbox"/>	Issue the command to copy the GPLs to RMD.	<b>copy-gp1</b>
10 <input type="checkbox"/>	Response to copy command is displayed.	<pre> tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y copy-gp1 Command entered at terminal #10. ; tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y COPY GPL: MASP A - COPY STARTS ON ACTIVE MASP COPY GPL: MASP A - COPY TO REMOVABLE CARTRIDGE COMPLETE ; </pre>
11 <input type="checkbox"/>	Remove the Source-Release RMD.	<b>Store the RMD in a safe location.</b>

**Procedure 3: Updating the Source-Release Spare Fixed Disk**

<b>S T E P #</b>	<p>This procedure backs up the active current database to the spare fixed disk to ensure that a valid recovery spare is available.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p><b>SHOULD THIS PROCEDURE FAIL, CONTACT TEKELEC CUSTOMER CARE CENTER AND ASK FOR UPGRADE ASSISTANCE.</b></p>
<b>1</b> <input type="checkbox"/>	<p>Issue the report card status command.</p> <p><b>rept-stat-card:appl=oam</b></p>
<b>2</b> <input type="checkbox"/>  <input type="checkbox"/>	<p>Response to the card status command is displayed.</p> <pre> CARD   VERSION   TYPE   GPL   PST   SST   AST 1113   XXX-XXX-XXX E5MCAP OAMHC IS-NR Standby  ----- 1115   XXX-XXX-XXX E5MCAP OAMHC IS-NR Active   ----- </pre> <p>Record the card locations of both MASP's as well as the part number of the E5-MASP:</p> <p>Act E5-MASP _____</p> <p>p/n _____</p> <p>Stby E5-MASP _____</p> <p>p/n _____</p> <p>Command Completed.</p>
<b>3</b> <input type="checkbox"/>	<p>Place spare E5-MASP in system.<sup>6</sup></p> <p>Record the part number for the spare E5-TDM:</p> <p>p/n _____</p> <p><input type="checkbox"/> Slide the MASP H/S switch (SW3) on the standby MASP up to the unlocked position (Wait for all drive LEDs to transition to a steady blue).</p> <p><input type="checkbox"/> Remove the standby E5-MASP card determined in step 2.</p> <p><input type="checkbox"/> Insert the spare E5-MASP card.</p> <p><input type="checkbox"/> Slide the MASP H/S switch (SW3) on the new standby MASP down to the locked position (Wait for the MASP H/S LED to transition from blinking blue to off and the MASP to come up in standby mode).</p> <p>Note: UAMs are generated during this step. An audible alarm is generated. Wait for the new standby MASP to come up in standby mode and system returns to duplex mode.</p>
<b>4</b> <input type="checkbox"/>	<p>Issue the report status command for the standby MASP.</p> <p><b>rept-stat-card:loc=xxx:mode=full</b> (Where xxx is the STBY MASP slot from step 2 above)</p>
<b>5</b> <input type="checkbox"/>	<p>Verify that the backup goes to IS-NR</p> <pre> tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y CARD   VERSION   TYPE   GPL   PST   SST   AST xxxx   xxx-xxx-xxx E5MCAP OAMHC IS-NR Standby DB-DIFF ALARM STATUS = No Alarms. BLMCAP GPL version = xxx-xxx-xxx IMT BUS A    = Conn IMT BUS B    = Conn MBD BIP STATUS = Valid MOTHER BOARD ID = E5-MCAP DBD STATUS   = Valid DBD TYPE     = 1G ENET DBD MEMORY SIZE = 4096M HW VERIFICATION CODE = ---- CURRENT TEMPERATURE = 33C ( 92F) PEAK TEMPERATURE:   = 37C ( 99F) TROUBLE TEXT VER.   = ---- IPLNK STATUS IPLNK IPADDR STATUS PST A 192.168.53.89 UP IS-NR </pre> <p>Command Completed.</p>

<sup>6</sup> The spare E5-MASP should be the one verified by upgrade Health Check #2, see section 1.2.1 ref [1].

**Procedure 3: Updating the Source-Release Spare Fixed Disk**

<p><b>6</b> <input type="checkbox"/></p>	<p>Issue the command to retrieve GPL versions.</p>	<p><b>rtrv-gp1</b></p>
<p><b>7</b> <input type="checkbox"/>  <input type="checkbox"/></p>	<p>Response from the retrieve command is displayed.</p> <p>Verify correct source release levels.</p> <p>If any of the standby E5-MASP GPLs indicate ALM, it is possible that the fixed disk has not gone through session 2 of the previous upgrade. <b>Stop</b> the procedure and contact Tekelec Customer Care Center.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y GPL Auditing ON  GPL      CARD  RELEASE      APPROVED      TRIAL      REMOVE TRIAL GGGGGG1  1114  XXX-XXX-XXX  XXX-XXX-XXX  XXX-XXX-XXX  ----- GGGGGG1  1116  XXX-XXX-XXX  XXX-XXX-XXX  ALM  XXX-XXX-XXX  ----- GGGGGG1  1113  ----- GGGGGG2  1114  XXX-XXX-XXX  XXX-XXX-XXX  XXX-XXX-XXX  ----- GGGGGG2  1116  XXX-XXX-XXX  XXX-XXX-XXX  ALM  XXX-XXX-XXX  ----- GGGGGG2  1113  ----- GGGGGG3  1114  XXX-XXX-XXX  XXX-XXX-XXX  XXX-XXX-XXX  ----- GGGGGG3  1116  XXX-XXX-XXX  XXX-XXX-XXX  ALM  XXX-XXX-XXX  ----- GGGGGG3  1113  ----- OAMHC    1114  XXX-XXX-XXX  XXX-XXX-XXX  ----- OAMHC    1116  XXX-XXX-XXX  XXX-XXX-XXX  ----- OAMHC    1113  ----- GGGGGG4  1114  XXX-XXX-XXX  XXX-XXX-XXX  XXX-XXX-XXX  ----- GGGGGG4  1116  XXX-XXX-XXX  XXX-XXX-XXX  XXX-XXX-XXX  ----- GGGGGG4  1113  ----- GGGGGG5  1114  XXX-XXX-XXX  XXX-XXX-XXX  XXX-XXX-XXX  ----- GGGGGG5  1116  XXX-XXX-XXX  XXX-XXX-XXX  XXX-XXX-XXX  ----- GGGGGG5  1113  ----- GGGGGG6  1114  XXX-XXX-XXX  XXX-XXX-XXX  XXX-XXX-XXX  ----- GGGGGG6  1116  XXX-XXX-XXX  XXX-XXX-XXX  XXX-XXX-XXX  ----- GGGGGG6  1113  -----</pre> <p>;</p>
<p><b>8</b> <input type="checkbox"/></p>	<p>Issue the command to repair the standby TDM's database.</p>	<p><b>chg-db:action=repair</b></p> <p><b>NOTE:</b> The system will need approximately 2 minutes after step 5 to acquire duplex mode. As a result, the system will reject the chg-db command until it is back in duplex mode.</p>
<p><b>9</b> <input type="checkbox"/>  <input type="checkbox"/></p>	<p>Response to the repair command is displayed.</p> <p>Wait for the 'repair complete' message to display and the MASP returns to in-service.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y chg-db:action=repair Command entered at terminal #10.  ;  tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y REPAIR: MASP A - Repair starts on standby MASP.  ;  tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y REPAIR: MASP A - Repair from fixed disk complete.</pre> <p>;</p>
<p><b>10</b> <input type="checkbox"/></p>	<p>Place original standby E5-MASP in system.</p>	<p><input type="checkbox"/> Slide the MASP H/S switch (SW3) on the standby MASP up to the unlocked position (Wait for all drive LEDs to transition to a steady blue).</p> <p><input type="checkbox"/> Remove the standby E5-MASP card determined in step 2.</p> <p><input type="checkbox"/> Insert the original standby E5-MASP card.</p> <p><input type="checkbox"/> Slide the MASP H/S switch (SW3) on the original standby MASP down to the locked position (Wait for the MASP H/S LED to transition from blinking blue to off and the MASP to come up in standby mode).</p> <p>Note: UAMs are generated during this step. An audible alarm is generated. Wait for the original standby E5-MASP to come up in standby mode and system returns to duplex mode.</p>

**Procedure 4: Verifying All Databases**

<p><b>S</b> <b>T</b> <b>E</b> <b>P</b> <b>#</b></p>	<p>This procedure verifies that all databases are coherent and at the same level, which includes current and backup partitions on both fixed disks.</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 TEKELEC CUSTOMER CARE CENTER AND <u>ASK FOR UPGRADE ASSISTANCE.</u></p>
<p><b>1</b> <input type="checkbox"/></p>	<p>Issue the command to display database information.</p>
<p><b>2</b> <input type="checkbox"/></p>	<p>Response to the command is displayed.</p>
<p><input type="checkbox"/></p>	<p>Look in the columns labeled 'C,' 'T', and 'LEVEL' output by this command.</p>
<p><input type="checkbox"/></p>	<p>Verify entries in column 'C' show 'Y', which indicates coherence.</p>
<p><input type="checkbox"/></p>	<p>Verify entries in column 'T' show 'N' (backup and RMD may show a dash), which indicates that the database is not in transition.</p>
<p><input type="checkbox"/></p>	<p>Verify all entries in the database LEVEL column are the same. LEVEL is a value, which varies depending on the system.</p>
<p><input type="checkbox"/></p>	<p>If the STDBY databases are not coherent or at the correct level, repeat Procedure 3, step 8.</p>
<p><input type="checkbox"/></p>	<p>Verify that the MPS databases are coherent.</p>
<pre> rept-stat-db:display=all  tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y DATABASE STATUS: &gt;&gt; OK &lt;&lt;           TDM 1114 ( STDBY)           C  LEVEL      TIME LAST BACKUP      C  LEVEL      TIME LAST BACKUP ----- FD BKUP  Y  YY  YY-MM-DD hh:mm:ss TTTT  Y  1  -  - FD CRNT  Y  XXX  -  -  -  -  Y  XXX  -  -           MCAP 1113          MCAP 1115 ----- RD BKUP  -  -  -  -  -  -  Y  1  -  - USB BKP  -  -  -  -  -  -  -  -  -  -  CARD/APPL  LOC  C  T  LEVEL      TIME LAST UPDATE      EXCEPTION ----- SS7HC      1101 Y  N  XXX      YY-MM-DD HH:MM:SS      - IPLHC      1103 Y  N  XXX      YY-MM-DD HH:MM:SS      - VSCCP      1104 Y  N  XXX      YY-MM-DD HH:MM:SS      - ERTHC      1105 Y  N  XXX      YY-MM-DD HH:MM:SS      - MCP        1107 Y  N  XXX      YY-MM-DD HH:MM:SS      - GLS        1108 Y  N  XXX      YY-MM-DD HH:MM:SS      - IPSHC      1111 Y  N  XXX      YY-MM-DD HH:MM:SS      - OAM-RMV    1113 -  -  -  -  -  -  -  -  - TDM-CRNT   1114 Y  N  XXX      YY-MM-DD hh:mm:ss      - TDM-BKUP   1114 Y  -  YYY      YY-MM-DD hh:mm:ss      - OAM-RMV    1115 Y  -  1      00-00-00 00:00:00      DIFF LEVEL OAM-USB    1115 -  -  -  -  -  -  -  -  - TDM-CRNT   1116 Y  N  XXX      YY-MM-DD hh:mm:ss      - TDM-BKUP   1116 Y  -  YYY      YY-MM-DD hh:mm:ss      -            ELAP A ( STDBY )           C  BIRTHDATE      LEVEL      EXCEPTION           -  -  -  -  -  -  -  -  - RTDB      Y  YY-MM-DD hh:mm:ss      ZZZZZZZ      - RTDB-EAGLE  Y  YY-MM-DD hh:mm:ss      ZZZZZZZ      -            ELAP B ( ACTV )           C  BIRTHDATE      LEVEL      EXCEPTION           -  -  -  -  -  -  -  -  - RTDB      Y  YY-MM-DD hh:mm:ss      ZZZZZZZ      - RTDB-EAGLE  Y  YY-MM-DD hh:mm:ss      ZZZZZZZ      -            EAGLE RTDB REPORT           CARD/APPL  LOC  C  BIRTHDATE      LEVEL      EXCEPTION      IN-SRVC           ----- VSCCP      1104 Y  YY-MM-DD hh:mm:ss      ZZZZZZZ      -      Ddd HHh MMm                 </pre>	

**Procedure 5: Verifying the Target Release and Software Access Key**

<b>S T E P #</b>	<p>This procedure verifies that the Upgrade Software Access Key has been entered.</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 TEKELEC CUSTOMER CARE CENTER AND ASK FOR <u>UPGRADE ASSISTANCE</u>.</p>	
<b>1</b> <input type="checkbox"/>	<p>Validate the Software Access Key with the upgrade target release.</p>	<p><b>ACT-UPGRADE:ACTION=CHKREL:SRC=FIXED</b></p>
<b>2</b> <input type="checkbox"/>	<p>Response from the validation.</p> <p>Verify the Upgrade target release is correct and the Software Access Key is valid.</p> <p>If either the upgrade target release is incorrect or the Software Access Key is invalid <b>STOP</b> the upgrade and contact Tekelec Customer Care Center.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y act-upgrade:action=chkrel:src=zzzz Command entered at terminal #10. ; Upgrade target: EAGLE XX.x.x-YY.y.y Software Access Key valid for target release ; Command Complete : Upgrade action completed successfully</pre>

**Procedure 6: Initializing MASPs to Run on Target-Release GPLs**

<b>S T E P #</b>	<p>This procedure loads the target-release GPL to both MASPs. This procedure requires that both MASPs be rebooted (one at a time) and verified as running the target-release GPLs.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p><b>SHOULD THIS PROCEDURE FAIL, CONTACT TEKELEC CUSTOMER CARE CENTER AND ASK FOR UPGRADE ASSISTANCE.</b></p>	
1 <input type="checkbox"/>	Remove the USB flash drives from E5-MASPs.	<p>Note: the target-release is assumed to have been downloaded to the inactive partition prior to the execution of this procedure (see section 4.2.)</p>
2 <input type="checkbox"/>	Inhibit the standby MASP	<p><b>INH-CARD : LOC=XXXX</b></p> <p>(Where XXXX is the location of the standby MASP slot recorded in Procedure 3, Step 2)</p>
3 <input type="checkbox"/> <input type="checkbox"/>	<p>Response to the inhibit command is displayed</p> <p>Verify UAM 514 is displayed.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y Card is inhibited. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Upg Phase x ** 5045.0514 ** CARD XXXX OAMHC Standby MASP is inhibited ;</pre> <p><b>Note:</b> Wait for the card to boot and return to the IMT bus.</p>
4 <input type="checkbox"/>	Download target-release flash to the standby MASP.	<p><b>INIT-FLASH : LOC=XXXX : CODE=TRIAL</b></p> <p>(Where XXXX is the location used in the previous command)</p>
5 <input type="checkbox"/> <input type="checkbox"/>	<p>Response to flash initialization is shown.</p> <p>Verify UAM 0004 is displayed.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y FLASH Memory Download for card xxxx started. ; tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y FLASH Memory Download for card xxxx completed. ; tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y * 8003.0004 * GPL SYSTEM BLMCAP Card is running non-activated GPL ;</pre> <p><b>Note:</b> Wait for card to boot and return to the IMT bus.</p>
6 <input type="checkbox"/>	Retrieve the GPLs running on the card location.	<p><b>REPT-STAT-GPL : LOC=XXXX</b></p> <p>(Where XXXX is the location used in the previous command)</p>
7 <input type="checkbox"/>	<p>Response to the card status command is displayed.</p> <p>The card should be running the trial version of the GPL. If the approved and trial versions are the same no ALM will be present.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y GPL CARD RUNNING APPROVED TRIAL OAMHC 1113 FFFFF YYY-YYY-YYY ALM+ XXX-XXX-XXX YYY-YYY-YYY Command Completed. ;</pre>
8 <input type="checkbox"/>	Run the target-release GPL on the standby MASP	<p><b>ALW-CARD : LOC=XXXX : CODE=INACTIVEPRTN</b> (target release on the inactive partition)</p> <p>(Where XXXX is the location of the standby MASP used in the previous command)</p>
9 <input type="checkbox"/>	Response to allow-card command is shown.	<pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y Card has been allowed. ;</pre>
10 <input type="checkbox"/>	Retrieve status of the MASPs	<p><b>REPT-STAT-GPL : GPL=OAMHC</b></p>

**Procedure 6: Initializing MASP to Run on Target-Release GPLs**

<p><input type="checkbox"/> 11</p>	<p>Verify standby MASP running target release GPL. The standby MASP will display ALM to indicate that the card is not running the approved version GPL.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y GPL Auditing ON  GPL      CARD      RUNNING      APPROVED      TRIAL OAMHC    1113      XXX-XXX-XXX  XXX-XXX-XXX OAMHC    1115      YYY-YYY-YYY ALM  XXX-XXX-XXX  Command Completed.</pre>
<p><input type="checkbox"/> 12</p>	<p>Perform an OAM role change by booting the active MASP.</p>	<p><b>INIT-CARD:LOC=XXXX</b> (Where XXXX is the location of the active MASP recorded in Procedure 3, Step 2)</p>
<p><input type="checkbox"/> 13</p>	<p>Response to card initialization is shown.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y Init Card command issued to card xxxx</pre>
<p><input type="checkbox"/> 14</p>	<p>Issue the command to log back in to the system.</p>	<p><b>LOGIN:UID=XXXXXX</b> (Where XXXXXX is a valid login ID)</p>
<p><input type="checkbox"/> 15</p>	<p>Response to login command is displayed.  Ignore any login failure message.  <input type="checkbox"/> Verify the Upgrade Phase in Banner<sup>7</sup>.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y Upg Phase 0 User logged in on terminal uu.  ? Login failures since last successful LOGIN Last successful LOGIN was on port ? on ??-??-?? @ ??:??:??</pre>
<p><input type="checkbox"/> 16</p>	<p>Echo command input to capture terminal.</p>	<p><b>ACT-ECHO:TRM=P</b> (Where P is the terminal port number specified in Procedure 1, Step 3)</p>
<p><input type="checkbox"/> 17</p>	<p>Response to print capture command is displayed.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y Upg Phase x Scroll Area Output will be echoed to Port P.</pre>
<p><input type="checkbox"/> 18</p>	<p>Issue the card status to verify the location of the active MASP slot</p>	<p><b>REPT-STAT-CARD:APPL=OAM</b></p>
<p><input type="checkbox"/> 19</p>	<p>Response to the card status command is displayed.  <input type="checkbox"/> Circle the status of both E5-MASPs:  <b>1113:</b> Active or Standby  <b>1115:</b> Active or Standby  For this sample output, 1113 is active and 1115 is standby.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y CARD  VERSION  TYPE  GPL  PST  SST  AST 1113  XXX-XXX-XXX E5MCAP OAMHC IS-NR Active  ---- 1115  XXX-XXX-XXX E5MCAP OAMHC IS-NR Standby ----  Command Completed.</pre>
<p><input type="checkbox"/> 20</p>	<p>Inhibit the standby MASP</p>	<p><b>INH-CARD:LOC=XXXX</b> (Where XXXX is the location of the standby MASP identified in the previous command)</p>

<sup>7</sup> Phase number is not displayed at this point for incremental upgrades. See section 0 for a definition of incremental upgrade and section 1.4 for a definition of database versioning. Database versioning between releases is determined in Procedure 7, step 2.

**Procedure 6: Initializing MASPs to Run on Target-Release GPLs**

<p>21</p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p>Response to the inhibit command is displayed</p> <p>Verify UAM 514 is displayed.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y Card is inhibited. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Upg Phase x ** 5045.0514 ** CARD XXXX OAMHC Standby MASP is inhibited ; <b>Note:</b> Wait for the card to boot and return to the IMT bus.</pre>
<p>22</p> <p><input type="checkbox"/></p>	<p>Download target release flash to the standby MASP.</p>	<p><b>INIT-FLASH:LOC=XXXX:CODE=TRIAL</b></p> <p>(Where XXXX is the location of the standby MASP used in the previous command)</p>
<p>23</p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p>Response to flash initialization is shown.</p> <p>Verify UAM 0004 is displayed.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y FLASH Memory Download for card xxxx started. ; tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y FLASH Memory Download for card xxxx completed. ; tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y * 8003.0004 * GPL SYSTEM BLMCAP Card is running non-activated GPL ; <b>Note:</b> Wait for card to boot and return to the IMT bus.</pre>
<p>24</p> <p><input type="checkbox"/></p>	<p>Retrieve the GPLs running on the card location.</p>	<p><b>REPT-STAT-GPL:LOC=XXXX</b></p> <p>(Where XXXX is the location of the standby MASP slot used in the previous command)</p>
<p>25</p> <p><input type="checkbox"/></p>	<p>Response to the card status command is displayed.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y GPL CARD RUNNING APPROVED TRIAL OAMHC 1115 ----- BLMCAP YYY-YYY-YYY ALM+ XXX-XXX-XXX XXX-XXX-XXX ; Command Completed.</pre>
<p>26</p> <p><input type="checkbox"/></p>	<p>Run the target release GPL on the standby MASP</p>	<p><b>ALW-CARD:LOC=XXXX:CODE=INACTIVEPRTN</b> (target release on the inactive partition)</p> <p>(Where XXXX is the location of the standby MASP used in the previous command)</p>
<p>27</p> <p><input type="checkbox"/></p>	<p>Response to allow card command is shown.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y Card has been allowed. ;</pre>
<p>28</p> <p><input type="checkbox"/></p>	<p>Issue the command to display the status of the MASPs' GPL</p>	<p><b>REPT-STAT-GPL:GPL=OAMHC</b></p>
<p>29</p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p>Response from the retrieve command is displayed.</p> <p>Verify that the GPL versions that are displayed in the "RUNNING" column are correct; see section 1.3</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y GPL Auditing ON ; APPL CARD RUNNING APPROVED TRIAL OAMHC 1113 XXX-XXX-XXX ALM YYY-YYY-YYY XXX-XXX-XXX * OAMHC 1115 XXX-XXX-XXX ALM YYY-YYY-YYY XXX-XXX-XXX * Command Completed.</pre>
<p>30</p> <p><input type="checkbox"/></p>	<p>If GPLs are not correct, do the following:</p>	<ol style="list-style-type: none"> <li>Repeat Step 2 - 29.</li> <li>Contact Tekelec Customer Care Center.</li> </ol>

**Procedure 6: Initializing MASP's to Run on Target-Release GPLs**

<p><b>31</b> <input type="checkbox"/></p>	<p>Issue the command to display the version of the Flash GPL running on card 1113.</p>	<p><b>REPT-STAT-CARD:LOC=1113:MODE=FULL</b></p>
<p><b>32</b> <input type="checkbox"/>  <input type="checkbox"/></p>	<p>Response from the retrieve command is displayed.</p> <p>Record version of BLMCAP running on E5-MASP.</p> <p>GPL Version: _____</p> <p>GPL Version: _____</p>	<pre> tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.X.X-YY.Y.Y CARD  VERSION      TYPE      GPL      PST      SST      AST 1113  XXX-XXX-XXX  E5MCAP   OAMHC   IS-NR    Standby  ----- ALARM STATUS      = No Alarms. BLMCAP  GPL version = <b>YYY-YYY-YYY</b> IMT BUS A         = Conn IMT BUS B         = Conn CLOCK A          = Active CLOCK B          = Idle CLOCK I          = Idle MBD BIP STATUS   = Valid MOTHER BOARD ID  = E5-MCAP DBD STATUS       = Valid DBD TYPE         = 1G ENET DBD MEMORY SIZE  = 4096M HW VERIFICATION CODE = ---- TROUBLE TEXT VER. = ---- IPLNK STATUS   IPLNK IPADDR      STATUS    PST   A     192.168.53.89  UP        IS-NR Command Completed.         </pre>
<p><b>33</b> <input type="checkbox"/></p>	<p>Repeat steps 31 – 32, for location 1115.</p>	<p>;</p>

## 5.2 OAM Conversion

### Procedure 7: Verifying all Databases

<b>S T E P #</b>	<p>This procedure verifies that all of the fixed disk's database partitions have not been converted and are still coherent and at the same level.</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 TEKELEC CUSTOMER CARE CENTER AND ASK FOR <u>UPGRADE ASSISTANCE</u>.</p>
<b>1</b> <input type="checkbox"/>	<p>Issue the command to display database status during upgrades.</p> <p style="text-align: center;"><b>ACT-UPGRADE:ACTION=DBSTATUS</b></p>
<b>2</b> <input type="checkbox"/>	<p>Response to the command is displayed.</p> <p>Look in the columns labeled 'C', 'T', and 'LEVEL' output by this command.</p> <p><input type="checkbox"/> Verify entries in column 'C' show 'Y', which indicates coherence or '-'. <input type="checkbox"/> Verify column 'T' shows 'N' for both CRNT databases, which indicates that those databases are not in transition <input type="checkbox"/> Or if target release is on the inactive partition, the database level is "1". <input type="checkbox"/> Verify all entries in the database 'Level' column marked as 'XXX' are the same. <input type="checkbox"/> Verify that the version numbers displayed are correct.<sup>8</sup></p>
<pre> DATABASE STATUS: &gt;&gt; OK &lt;&lt;       TDM 1114 ( STDBY)          TDM 1116 ( ACTV )       C  LEVEL  TIME LAST BACKUP  C  LEVEL  TIME LAST BACKUP ----- FD BKUP Y      XXX YY-MM-DD hh:mm:ss TTTT Y      XXX YY-MM-DD hh:mm:ss TTTT FD CRNT Y      XXX YY-MM-DD hh:mm:ss TTTT Y      XXX YY-MM-DD hh:mm:ss TTTT       MCAP 1113          MCAP 1115 ----- RD BKUP - - - - - USB BKP - - - - -  CARD/APPL  LOC  C  T  LEVEL  TIME LAST UPDATE  VERSION  STATUS ----- OAM-RMV    1113 - - - - - TDM-CRNT   1114 Y  N  XXX    YY-MM-DD hh:mm:ss  XXX-XXX-XXX  NORMAL TDM-BKUP   1114 Y  -  XXX    YY-MM-DD hh:mm:ss  XXX-XXX-XXX  NORMAL OAM-RMV    1115 - - - - - OAM-USB    1115 - - - - - TDM-CRNT   1116 Y  N  XXX    YY-MM-DD hh:mm:ss  XXX-XXX-XXX  NORMAL TDM-BKUP   1116 Y  -  XXX    YY-MM-DD hh:mm:ss  XXX-XXX-XXX  NORMAL  INACTIVE PARTITION GROUP CARD/APPL  LOC  C  T  LEVEL  TIME LAST UPDATE  VERSION  STATUS ----- TDM-CRNT   1114 Y  -  1    YY-MM-DD hh:mm:ss  ZZZ-ZZZ-ZZZ  NORMAL TDM-BKUP   1114 Y  -  1    YY-MM-DD hh:mm:ss  ZZZ-ZZZ-ZZZ  NORMAL TDM-CRNT   1116 - - - - - TDM-BKUP   1116 - - - - -                     </pre>	

<sup>8</sup> See section 1.4 to verify the database versions. If the database versions are the same for the TDMs as well as the RMD, the phase indicator is not displayed until after Procedure 8, step 1.

**Procedure 8: STP Conversion**

<b>S T E P #</b>	<p>This begins the actual STP conversion process. This procedure begins during Upgrade Phase 0 and ends as part of Upgrade Phase 3. <b>See recommendation #5 in section 1.6 before executing this procedure.</b></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 the upgrade execution terminates before successfully completing, see recommendation #7 in 1.6</b></p> <p><b>SHOULD THIS PROCEDURE FAIL, CONTACT TEKELEC CUSTOMER CARE CENTER AND ASK FOR <u>UPGRADE ASSISTANCE</u>.</b></p>	
<b>1</b>	<p>Issue the command to begin database conversion.</p> <p>Note that the duration of this command is dependent on the size of the database and the size of the network configuration.</p> <p>Table 18. Act Upgrade Command Actions lists the actions completed by the command.</p> <p>Appendix D contains messages illustrative of the output of upgrade during this series of operations.</p>	<p><b>ACT-UPGRADE:ACTION=CONVERTSTP:SRC=FIXED:THRES=75</b> (target release is contained on the inactive partition)</p> <p>(If another thres value is to be used see recommendation #5 in section 1.6)</p>

**Table 18. Act Upgrade Command Actions**

<b>Fixed workspace</b>	
<b>A</b>	OAM based measurements are inhibited.
<b>B</b>	N/A
<b>C</b>	The standby disk is formatted based on the target release configuration table.
<b>D</b>	The target release GPLs are copied onto the standby TDM.
<b>E</b>	The existing database is converted onto the standby disk, upgrading the existing EAGLE source-release tables to target-release tables.
<b>F</b>	The standby MASP boots automatically.
<b>G</b>	The active MASP then boots allowing the standby to resume the active role. <sup>9</sup>
<b>H</b>	The standby disk is formatted based on the target release configuration table.
<b>I</b>	The target release GPLs are copied onto the standby TDM.
<b>J</b>	The existing database is converted onto the standby disk, upgrading the existing EAGLE source-release tables to target-release tables.
<b>K</b>	The standby MASP boots automatically.
<b>L</b>	Initialization of Network cards.

<sup>9</sup> Proceed to step 3 to log back into the system and restart output capture.

Procedure 8: STP Conversion

<p>2</p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p>Command is displayed.</p> <p>Note the banners transitions from Phase 0 to Phase 3.</p> <p>For incremental upgrade, see footnote <sup>10</sup></p> <p>Completion notice of successful upgrade. If upgrade does not complete successfully, see recommendation # 7 in section 1.6</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss EST Re1 XX.x.x-XX.x.x Upg Phase 0 act-upgrade:action=convertstp:thres=XX Command entered at terminal #10. ;</pre> <p><b>NOTICE:</b> One of the following messages will be output at the start of the upgrade process to indicate which workspace (fixed or removable) has been selected by the system for OAM conversion:</p> <pre>tekelecstp YY-MM-DD hh:mm:ss EST Re1 XX.x.x-XX.x.x Upg Phase 0 Using inactive standby partitions for OAM conversion (disk=ddd) ;</pre> <p>(Where <i>ddd</i> defines conversion workspace)</p> <p><b>NOTICE:</b> See Appendix D (D.1) for samples of output messages.</p> <pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Upg Phase 3 Command Complete : Upgrade action completed successfully ;</pre> <p><b>NOTE:</b> If upgrade terminates abnormally in phase 3 due to cards being in IS-ANR DDL Hunt, contact Tekelec Customer Care Center for assistance in executing Appendix D (D.2).</p>
<p>3</p> <p><input type="checkbox"/></p>	<p>After item G in step 1, issue the command to log back in to the system.</p>	<p><b>LOGIN:UID=XXXXXX</b></p> <p>(Where <i>XXXXXX</i> is a valid login ID)</p>
<p>4</p> <p><input type="checkbox"/></p>	<p>Response to login command is displayed.</p> <p>Ignore any login failure message.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Upg Phase x User logged in on terminal 10. ;</pre> <p>? Login failures since last successful LOGIN Last successful LOGIN was on port ? on ??-??-?? @ ??:?:??</p>
<p>5</p> <p><input type="checkbox"/></p>	<p>Issue the command to reactivate printer capture of upgrade process.</p>	<p><b>ACT-ECHO:TRM=P</b></p> <p>(Where <i>P</i> is the terminal port number specified in Procedure 1, Step 3)</p>
<p>6</p> <p><input type="checkbox"/></p>	<p>Response to print capture command is displayed.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Upg Phase x Scroll Area Output will be echoed to Port P. ;</pre>

<sup>10</sup> Software troubles from the DMS\_LOCK.C module may be generated, for incremental upgrade only, while GPLs are being copied. These software troubles are not expected but, if they occur in this circumstance, they are not service affecting.

Procedure 8: STP Conversion

<p>7</p> <p><input type="checkbox"/></p>	<p>Issue the command to display database status during upgrades.</p>	<p><b>ACT-UPGRADE:ACTION=DBSTATUS</b></p>
<p>8</p> <p><input type="checkbox"/></p> <p>Look in the columns labeled 'C', 'LEVEL' and 'VERSION STATUS' output by this command.</p> <p><input type="checkbox"/></p> <p>Verify entries in column 'C' show 'Y' which indicates coherence or '-'.  Verify both 'FD CRNT' Levels are equal.  <input type="checkbox"/></p> <p>Verify 'VERSION STATUS' shows NORMAL in the active partition group. NOTE: this will not occur until step 2 above is completed.</p>	<p>Response from the command is displayed.</p>	<pre> tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Upg Phase x DATABASE STATUS: &gt;&gt; OK &lt;&lt; TDM 1114 ( STDBY)          TDM 1116 ( ACTV )   C  LEVEL      TIME LAST BACKUP      C  LEVEL      TIME LAST BACKUP ----- FD BKUP Y      XXX  YY-MM-DD hh:mm:ss TTTT  Y      XXX  YY-MM-DD hh:mm:ss TTTT FD CRNT Y      XXX  YY-MM-DD hh:mm:ss TTTT  Y      XXX  YY-MM-DD hh:mm:ss TTTT MCAPI 1113                MCAPI 1115  RD BKUP -      -      -      -      -      - USB BKP -      -      -      -      -      -  CARD/APPL  LOC  C  T  LEVEL      TIME LAST UPDATE  VERSION      STATUS ----- OAM-RMV    1113  -  -  -      -      -      - TDM-CRNT   1114  Y  N  XXX    YY-MM-DD hh:mm:ss XXX-XXX-XXX  NORMAL TDM-BKUP   1114  Y  -  XXX    YY-MM-DD hh:mm:ss XXX-XXX-XXX  NORMAL OAM-RMV    1115  -  -  -      -      - OAM-USB    1115  -  -  -      -      - TDM-CRNT   1116  Y  N  XXX    YY-MM-DD hh:mm:ss XXX-XXX-XXX  NORMAL TDM-BKUP   1116  Y  -  XXX    YY-MM-DD hh:mm:ss XXX-XXX-XXX  NORMAL  INACTIVE PARTITION GROUP CARD/APPL  LOC  C  T  LEVEL      TIME LAST UPDATE  VERSION      STATUS ----- TDM-CRNT   1114  Y  -  ZZZ    YY-MM-DD hh:mm:ss ZZZ-ZZZ-ZZZ  UPG 3 TDM-BKUP   1114  Y  -  ZZZ    YY-MM-DD hh:mm:ss ZZZ-ZZZ-ZZZ  UPG 3 TDM-CRNT   1116  Y  -  ZZZ    YY-MM-DD hh:mm:ss ZZZ-ZZZ-ZZZ  UPG 3 TDM-BKUP   1116  Y  -  ZZZ    YY-MM-DD hh:mm:ss ZZZ-ZZZ-ZZZ  UPG 3                     ; </pre>
<p>9</p> <p><input type="checkbox"/></p>	<p>Issue the report card status command to verify network cards.</p>	<p><b>REPT-STAT-CARD</b></p>
<p>10</p> <p><input type="checkbox"/></p> <p>Verify that the cards are IS-NR, OOS-MT   Isolated or OOS-MT-DSBLD.  <input type="checkbox"/></p> <p>Verify that the GPL versions that are displayed in the "VERSION" column are correct; see Section 1.3.</p>	<p>Response to the card status command is displayed.</p>	<pre> tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Upg Phase x CARD  VERSION  TYPE  APPL  PST  SST  AST 1101  XXX-XXX-XXX  DSM   SCCPHC  IS-NR  Active  ----- 1102  XXX-XXX-XXX  DSM   SCCPHC  IS-NR  Active  ----- 1103  XXX-XXX-XXX  TSM   GLSHC  IS-NR  Active  ----- 1104  XXX-XXX-XXX  TSM   GLSHC  IS-NR  Active  ----- 1105  XXX-XXX-XXX  LIMDS0  SS7ML  IS-NR  Active  ----- 1111  XXX-XXX-XXX  IPSM   IPSHC  OOS-MT  Isolated  ----- 1113  XXX-XXX-XXX  E5MCAPI  OAMHC  IS-NR  Active  ----- 1114  -----      E5TDM  -----  IS-NR  Active  ----- 1115  XXX-XXX-XXX  E5MCAPI  OAMHC  IS-NR  Standby  ----- 1116  -----      E5TDM  -----  IS-NR  Active  ----- 1117  -----      E5MDAL  -----  IS-NR  Active  ----- 1201  XXX-XXX-XXX  LIMDS0  SS7ML  IS-NR  Active  ----- 1202  XXX-XXX-XXX  LIMDS0  SS7ML  IS-NR  Active  ----- 1203  XXX-XXX-XXX  LIMT1  SS7ML  IS-NR  Active  ----- 1204  XXX-XXX-XXX  LIMT1  SS7HC  IS-NR  Active  ----- 1205  XXX-XXX-XXX  DCM    SS7IPGW  IS-NR  Active  ----- 1207  XXX-XXX-XXX  DCM    IPGWI  IS-NR  Active  ----- 1211  XXX-XXX-XXX  LIMDS0  MPLGA  IS-NR  Active  ----- 1215  xxx-xxx-xxx  DSM   SCCPHC  IS-NR  Active  ----- 1217  xxx-xxx-xxx  DSM   SCCPHC  IS-NR  Active  ----- 3101  xxx-xxx-xxx  LIMATM  ATMANSI  IS-NR  Active  ----- 3102  xxx-xxx-xxx  LIMATM  ATMANSI  IS-NR  Active  ----- Command Completed.                     ; </pre>

Procedure 8: STP Conversion

<b>11</b> <input type="checkbox"/>	Issue the command to display GPL status.	<b>RTRV-GPL</b>
<b>12</b> <input type="checkbox"/>  <input type="checkbox"/>	Response from the retrieve command is displayed.  Verify that the GPL versions that are displayed in the "RELEASE" column are correct; see Section 1.3	<pre> tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y GPL Auditing ON  GPL      CARD  RELEASE      APPROVED      TRIAL      REMOVE TRIAL GGGGGG1  1114  XXX-XXX-XXX  XXX-XXX-XXX  XXX-XXX-XXX  ----- GGGGGG1  1116  XXX-XXX-XXX  XXX-XXX-XXX  XXX-XXX-XXX  ----- GGGGGG1  1113  ----- GGGGGG2  1114  XXX-XXX-XXX  XXX-XXX-XXX  XXX-XXX-XXX  ----- GGGGGG2  1116  XXX-XXX-XXX  XXX-XXX-XXX  XXX-XXX-XXX  ----- GGGGGG2  1113  ----- GGGGGG3  1114  XXX-XXX-XXX  XXX-XXX-XXX  XXX-XXX-XXX  ----- GGGGGG3  1116  XXX-XXX-XXX  XXX-XXX-XXX  XXX-XXX-XXX  ----- GGGGGG3  1113  ----- OAMHC    1114  XXX-XXX-XXX  XXX-XXX-XXX  ----- OAMHC    1116  XXX-XXX-XXX  XXX-XXX-XXX  ----- OAMHC    1113  ----- GGGGGG4  1114  XXX-XXX-XXX  XXX-XXX-XXX  XXX-XXX-XXX  ----- GGGGGG4  1116  XXX-XXX-XXX  XXX-XXX-XXX  XXX-XXX-XXX  ----- GGGGGG4  1113  ----- GGGGGG5  1114  XXX-XXX-XXX  XXX-XXX-XXX  XXX-XXX-XXX  ----- GGGGGG5  1116  XXX-XXX-XXX  XXX-XXX-XXX  XXX-XXX-XXX  ----- GGGGGG5  1113  ----- GGGGGG6  1114  XXX-XXX-XXX  XXX-XXX-XXX  XXX-XXX-XXX  ----- GGGGGG6  1116  XXX-XXX-XXX  XXX-XXX-XXX  XXX-XXX-XXX  ----- GGGGGG6  1113  -----                     ;                 </pre>

### 5.3 Completion of Session 1

#### Procedure 9: Completing Upgrade/Return to Full-Function Mode

<b>S T E P #</b>	<p>This procedure completes the upgrade and returns the system to full-function mode. Verification of the GPL distribution is also performed.</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 TEKELEC CUSTOMER CARE CENTER AND ASK FOR UPGRADE ASSISTANCE.</p>																																																																																																																														
<b>1</b> <input type="checkbox"/>	<p>Issue the command to initialize both MASPs.</p> <p><b>INIT-CARD:APPL=OAM</b></p>																																																																																																																														
<b>2</b> <input type="checkbox"/>	<p>Response to the init command is displayed.</p> <pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Upgrade Phase x init-card:appl=oam Command entered at terminal #10. ;</pre> <p>Verify the banner display full-function mode after the MASPs boot.</p> <pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y 0002.0009 CARD 1113 OAMHC MASP became active ;</pre>																																																																																																																														
<b>3</b> <input type="checkbox"/>	<p>Issue the command to log back in to the system.</p> <p><b>LOGIN:UID=XXXXXX</b></p> <p>(Where XXXXXX is a valid login ID)</p>																																																																																																																														
<b>4</b> <input type="checkbox"/>	<p>Response to login command is displayed.</p> <pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y User logged in on terminal 10. ;</pre>																																																																																																																														
<b>5</b> <input type="checkbox"/>	<p>Issue the command to reactivate printer capture.</p> <p><b>ACT-ECHO:TRM=P</b></p> <p>(Where P is the terminal port number specified in Procedure 1, Step 4)</p>																																																																																																																														
<b>6</b> <input type="checkbox"/>	<p>Response to printer capture command is displayed.</p> <pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y act-echo:trm=X Command entered at terminal #10. ;</pre>																																																																																																																														
<b>7</b> <input type="checkbox"/>	<p>Issue the command to display card status.</p> <p><b>REPT-STAT-GPL:DISPLAY=ALL</b></p>																																																																																																																														
<b>8</b> <input type="checkbox"/>	<p>Response to GPL status command is displayed.</p> <pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y GPL Auditing ON</pre> <table border="0" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">GPL</th> <th style="text-align: left;">CARD</th> <th style="text-align: left;">RUNNING</th> <th style="text-align: left;">APPROVED</th> <th style="text-align: left;">TRIAL</th> <th style="text-align: left;"></th> </tr> </thead> <tbody> <tr> <td>OAMHC</td> <td>1113</td> <td>XXX-XXX-XXX ALM</td> <td>XXX-XXX-XXX</td> <td>XXX-XXX-XXX</td> <td>*</td> </tr> <tr> <td></td> <td>BLMCAP</td> <td>XXX-XXX-XXX</td> <td>XXX-XXX-XXX</td> <td>XXX-XXX-XXX</td> <td></td> </tr> <tr> <td>OAMHC</td> <td>1115</td> <td>XXX-XXX-XXX</td> <td>XXX-XXX-XXX</td> <td>XXX-XXX-XXX</td> <td>*</td> </tr> <tr> <td></td> <td>BLMCAP</td> <td>XXX-XXX-XXX</td> <td>XXX-XXX-XXX</td> <td>XXX-XXX-XXX</td> <td></td> </tr> <tr> <td>SS7ANSI</td> <td>1201</td> <td>XXX-XXX-XXX</td> <td>XXX-XXX-XXX</td> <td>XXX-XXX-XXX</td> <td></td> </tr> <tr> <td></td> <td>IMT</td> <td>XXX-XXX-XXX</td> <td>XXX-XXX-XXX</td> <td>XXX-XXX-XXX</td> <td></td> </tr> <tr> <td>SS7ANSI</td> <td>1202</td> <td>XXX-XXX-XXX</td> <td>XXX-XXX-XXX</td> <td>XXX-XXX-XXX</td> <td></td> </tr> <tr> <td></td> <td>IMT</td> <td>XXX-XXX-XXX</td> <td>XXX-XXX-XXX</td> <td>XXX-XXX-XXX</td> <td></td> </tr> <tr> <td>SCCP</td> <td>1111</td> <td>XXX-XXX-XXX</td> <td>XXX-XXX-XXX</td> <td>XXX-XXX-XXX</td> <td></td> </tr> <tr> <td></td> <td>IMT</td> <td>XXX-XXX-XXX</td> <td>XXX-XXX-XXX</td> <td>XXX-XXX-XXX</td> <td></td> </tr> <tr> <td>GLSHC</td> <td>1213</td> <td>XXX-XXX-XXX</td> <td>XXX-XXX-XXX</td> <td>XXX-XXX-XXX</td> <td></td> </tr> <tr> <td></td> <td>BLIXP</td> <td>XXX-XXX-XXX</td> <td>XXX-XXX-XXX</td> <td>XXX-XXX-XXX</td> <td></td> </tr> <tr> <td>GLSHC</td> <td>1214</td> <td>XXX-XXX-XXX</td> <td>XXX-XXX-XXX</td> <td>XXX-XXX-XXX</td> <td></td> </tr> <tr> <td></td> <td>BLIXP</td> <td>XXX-XXX-XXX</td> <td>XXX-XXX-XXX</td> <td>XXX-XXX-XXX</td> <td></td> </tr> <tr> <td>CCS7ITU</td> <td>1302</td> <td>XXX-XXX-XXX</td> <td>XXX-XXX-XXX</td> <td>XXX-XXX-XXX</td> <td></td> </tr> <tr> <td></td> <td>IMT</td> <td>XXX-XXX-XXX</td> <td>XXX-XXX-XXX</td> <td>XXX-XXX-XXX</td> <td></td> </tr> <tr> <td>VSCCP</td> <td>1107</td> <td>XXX-XXX-XXX</td> <td>XXX-XXX-XXX</td> <td>XXX-XXX-XXX</td> <td></td> </tr> <tr> <td></td> <td>BPDCM</td> <td>XXX-XXX-XXX ALM</td> <td>XXX-XXX-XXX</td> <td>XXX-XXX-XXX</td> <td></td> </tr> <tr> <td>HIPR</td> <td>1109</td> <td>XXX-XXX-XXX</td> <td>XXX-XXX-XXX</td> <td>XXX-XXX-XXX</td> <td></td> </tr> <tr> <td>HIPR</td> <td>1110</td> <td>XXX-XXX-XXX</td> <td>XXX-XXX-XXX</td> <td>XXX-XXX-XXX</td> <td></td> </tr> </tbody> </table> <p>Command Completed.</p>	GPL	CARD	RUNNING	APPROVED	TRIAL		OAMHC	1113	XXX-XXX-XXX ALM	XXX-XXX-XXX	XXX-XXX-XXX	*		BLMCAP	XXX-XXX-XXX	XXX-XXX-XXX	XXX-XXX-XXX		OAMHC	1115	XXX-XXX-XXX	XXX-XXX-XXX	XXX-XXX-XXX	*		BLMCAP	XXX-XXX-XXX	XXX-XXX-XXX	XXX-XXX-XXX		SS7ANSI	1201	XXX-XXX-XXX	XXX-XXX-XXX	XXX-XXX-XXX			IMT	XXX-XXX-XXX	XXX-XXX-XXX	XXX-XXX-XXX		SS7ANSI	1202	XXX-XXX-XXX	XXX-XXX-XXX	XXX-XXX-XXX			IMT	XXX-XXX-XXX	XXX-XXX-XXX	XXX-XXX-XXX		SCCP	1111	XXX-XXX-XXX	XXX-XXX-XXX	XXX-XXX-XXX			IMT	XXX-XXX-XXX	XXX-XXX-XXX	XXX-XXX-XXX		GLSHC	1213	XXX-XXX-XXX	XXX-XXX-XXX	XXX-XXX-XXX			BLIXP	XXX-XXX-XXX	XXX-XXX-XXX	XXX-XXX-XXX		GLSHC	1214	XXX-XXX-XXX	XXX-XXX-XXX	XXX-XXX-XXX			BLIXP	XXX-XXX-XXX	XXX-XXX-XXX	XXX-XXX-XXX		CCS7ITU	1302	XXX-XXX-XXX	XXX-XXX-XXX	XXX-XXX-XXX			IMT	XXX-XXX-XXX	XXX-XXX-XXX	XXX-XXX-XXX		VSCCP	1107	XXX-XXX-XXX	XXX-XXX-XXX	XXX-XXX-XXX			BPDCM	XXX-XXX-XXX ALM	XXX-XXX-XXX	XXX-XXX-XXX		HIPR	1109	XXX-XXX-XXX	XXX-XXX-XXX	XXX-XXX-XXX		HIPR	1110	XXX-XXX-XXX	XXX-XXX-XXX	XXX-XXX-XXX	
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<b>13</b> <input type="checkbox"/>	<p>Establish system status</p> <p>See recommendation # 7 in Section 1.6</p>																																																																																																																														

**Procedure 10: Backing up Converted Database**

<p><b>S T E P #</b></p>	<p>This procedure backs up the converted Target-Release database to the fixed disk and to either the removable media or the DB FTP server if provisioned. Verification of the converted database is also done.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p><b>SHOULD THIS PROCEDURE FAIL, CONTACT TEKELEC CUSTOMER CARE CENTER AND ASK FOR <u>UPGRADE ASSISTANCE</u>.</b></p>	
<p><b>1</b></p> <p><input type="checkbox"/></p>	<p>If the target release was on the RMD, insert the target-release RMD. Then go to step 10</p> <p>If a source-release RMD is available and the target release was on the inactive partition, insert the RMD<sup>11</sup>, and continue</p> <p>Otherwise go to step 21.</p>	<p>Once inserted, allow time for the RMD to be detected by the system.</p> <p>RMD is inserted in the latched USB port on the active E5-MASP.</p>
<p><b>2</b></p> <p><input type="checkbox"/></p>	<p>Issue the command to retrieve measurement status.</p>	<p><b>rtrv-meas-sched</b></p>
<p><b>3</b></p> <p><input type="checkbox"/></p>	<p>Response to retrieve command is displayed.</p> <p>Record if collection is on or off: _____</p> <p>Record if system configuration requires measurements to be on or off: _____</p> <p>If COLLECT=ON, continue to next step. Otherwise, go to Step 6.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y COLLECT = off SYSTOT-STP = (off) SYSTOT-TT = (off) SYSTOT-STPLAN = (off) COMP-LNKSET = (off) COMP-LINK = (off) MTCO-STP = (on) MTCO-LINK = (on) MTCO-STPLAN = (on) MTCO-LNKSET = (on) ;</pre>
<p><b>4</b></p> <p><input type="checkbox"/></p>	<p>Issue the command to turn off measurement collection.</p>	<p><b>chg-meas:collect=off</b></p>
<p><b>5</b></p> <p><input type="checkbox"/></p>	<p>Response to the change command is displayed.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss zzzz PPP XX.x.x-YY.y.y chg-meas:collect=off Command entered at terminal #XX. ;  tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y CHG-MEAS: MASP A - COMPLTD ;</pre>
<p><b>6</b></p> <p><input type="checkbox"/></p>	<p>Issue the command to format the RMD.</p>	<p><b>FORMAT-DISK:TYPE=SYSTEM:FORCE=YES</b></p>
<p><b>7</b></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p>Response to format command is displayed.</p> <p><b>If the format fails, first repeat the previous step, and then contact Tekelec Customer Care Center.</b></p>	<pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Format-disk of system removable cartridge started. Extended processing required, please wait. ;  tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Format-disk of system removable cartridge completed. ;</pre>

<sup>11</sup> DO NOT use the source release RMD created in Procedure 2.

**Procedure 10: Backing up Converted Database**

<p><b>8</b> <input type="checkbox"/></p>	<p>Issue the command to copy the GPLs to the RMD.</p>	<p><b>COPY-GPL</b></p>
<p><b>9</b> <input type="checkbox"/></p>	<p>Response to copy command is displayed.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.X.X-YY.Y.Y COPY-GPL Command entered at terminal #10. ;  tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.X.X-YY.Y.Y COPY-GPL: MASP A - COPY STARTS ON ACTIVE MASP ;  tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.X.X-YY.Y.Y COPY-GPL: MASP A - COPY COMPLETED ON ACTIVE MASP ;</pre>
<p><b>10</b> <input type="checkbox"/></p>	<p>Issue the command to report database status.</p>	<p><b>REPT-STAT-DB</b></p>
<p><b>11</b> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p>	<p>Response to database status command is displayed.</p> <p>Check entries in 'C' should be coherent, which is indicated by a 'Y'.</p> <p>If all FD BKUP &amp; FD CRNT entries in column 'LEVEL' are the same, go to step 16.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.X.X-YY.Y.Y DATABASE STATUS: &gt;&gt; OK &lt;&lt;       TDM 1114 ( STDBY)          TDM 1116 ( ACTV )       C  LEVEL      TIME LAST BACKUP  C  LEVEL      TIME LAST BACKUP ----- FD BKUP Y      XXX  YY-MM-DD hh:mm:ss TTTT Y      XXX  YY-MM-DD hh:mm:ss TTTT FD CRNT Y      XXX  YY-MM-DD hh:mm:ss TTTT Y      XXX  YY-MM-DD hh:mm:ss TTTT       MCAP 1113          MCAP 1115 ----- RD BKUP -      -      -      -      N      1      -      - USB BKP -      -      -      -      -      -      -      -</pre>
<p><b>12</b> <input type="checkbox"/></p>	<p>Issue the database command to backup the fixed disks.</p>	<p><b>CHG-DB:ACTION=BACKUP</b></p>
<p><b>13</b> <input type="checkbox"/></p>	<p>Response and progress of back up command are displayed.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.X.X-YY.Y.Y 5028.1114  CARD 1115  Database BACKUP started           Report Date:YY-MM-DD  Time:hh:mm:ss ;  tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.X.X-YY.Y.Y BACKUP (FIXED): MASP A - Backup starts on active MASP. ;  tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.X.X-YY.Y.Y BACKUP (FIXED): MASP A - Backup on active MASP to fixed disk complete. ;  tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.X.X-YY.Y.Y BACKUP (FIXED): MASP A - Backup starts on standby MASP. ;  tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.X.X-YY.Y.Y 5031.1116  CARD 1115  Database action ended - OK           Report Date:YY-MM-DD  Time:hh:mm:ss ;  tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.X.X-YY.Y.Y BACKUP (FIXED): MASP A - Backup on standby MASP to fixed disk complete ;</pre>

**Procedure 10: Backing up Converted Database**

<p><b>14</b> <input type="checkbox"/></p>	<p>Issue the command to report database status.</p>	<p><b>rept-stat-db</b></p>
<p><b>15</b> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p>	<p>Response to database status command is displayed.</p> <p>Check: entries in 'C' should be coherent, which is indicated by a 'Y'.</p> <p>Verify both 'FD CRNT' and 'FD BKUP' Levels are equal.</p>	<pre> tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y DATABASE STATUS: &gt;&gt; OK &lt;&lt;       TDM 1114 ( STDBY)                TDM 1116 ( ACTV )       C  LEVEL      TIME LAST BACKUP  C  LEVEL      TIME LAST BACKUP ----- FD BKUP Y      XXX  YY-MM-DD hh:mm:ss TTTT Y      XXX  -          - FD CRNT Y      XXX  YY-MM-DD hh:mm:ss TTTT Y      XXX  -          -       MCAP 1113                MCAP 1115 ----- RD BKUP -      -          -          -          Y      1          -          - USB BKP -      -          -          -          -      -          -          -                     </pre>
<p><b>16</b> <input type="checkbox"/></p>	<p>Issue the database command to back up to the target-release RMD.</p>	<p><b>chg-db:action=backup:dest=remove</b></p>
<p><b>17</b> <input type="checkbox"/></p>	<p>Response to backup command is displayed.</p>	<pre> tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y 5035.1114   CARD 1115   Database BACKUP started Report Date:YY-MM-DD Time:hh:mm:ss  tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y BACKUP (REMOVABLE): MASP B - Backup starts on active MASP.  ;  tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y BACKUP (REMOVABLE): MASP B - Backup to removable cartridge complete.  ;                     </pre>
<p><b>18</b> <input type="checkbox"/></p>	<p>Issue the command to report database status.</p>	<p><b>rept-stat-db</b></p>
<p><b>19</b> <input type="checkbox"/> <input type="checkbox"/></p>	<p>Response to database status command is displayed.</p> <p>Check entries in 'C' should be coherent, which is indicated by a 'Y'.</p>	<pre> tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y DATABASE STATUS: &gt;&gt; OK &lt;&lt;       TDM 1114 ( STDBY)                TDM 1116 ( ACTV )       C  LEVEL      TIME LAST BACKUP  C  LEVEL      TIME LAST BACKUP ----- FD BKUP Y      XXX  YY-MM-DD hh:mm:ss TTTT Y      XXX  YY-MM-DD hh:mm:ss TTTT FD CRNT Y      XXX  YY-MM-DD hh:mm:ss TTTT Y      XXX  YY-MM-DD hh:mm:ss TTTT       MCAP 1113                MCAP 1115 ----- RD BKUP -      -          -          -          Y      XXX  -          - USB BKP -      -          -          -          -      -          -          -                     </pre>
<p><b>20</b> <input type="checkbox"/></p>	<p>Remove the target-release RMD from the drive slot.</p>	<p><b>Store the RMD in a safe location.</b></p>
<p><b>21</b> <input type="checkbox"/></p>	<p>If the system is configured for remote backups, issue the database command to backup to remote FTP server. Otherwise, go to step 23.</p>	<p><b>chg-db:action=backup:dest=server</b></p>
<p><b>22</b> <input type="checkbox"/></p>	<p>Response to backup command is displayed.</p> <p>If backup fails, contact Tekelec Customer Care Center.</p>	<pre> tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y 5035.1114   CARD 1115   Database BACKUP started Report Date:YY-MM-DD Time:hh:mm:ss  tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y BACKUP (SERVER): MASP B - Backup starts on active MASP.  ;  tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y BACKUP (SERVER): MASP B - Backup to server complete.  ;                     </pre>

**Procedure 10: Backing up Converted Database**

<b>23</b> <input type="checkbox"/>	If steps 4 & 5 were executed, issue the command to turn the measurements collection on.	<b>chg-meas:collect=on</b>
<b>24</b> <input type="checkbox"/>	Response to change measurement command is displayed.	<pre> tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y chg-meas:collect=on Command entered at terminal #10. ;  tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y CHG-MEAS: MASP A - COMPLTD ;                     </pre>

→ This concludes SESSION ONE ←

## 5.4 Upgrade Session 2

### Procedure 11. Verifying Upgrade Session 2 Requirements

<p><b>S</b> <b>T</b> <b>E</b> <b>P</b> <b>#</b></p>	<p>This procedure verifies that all upgrade session 2 requirements have been met. This procedure assumes an acceptable amount of soak time has occurred since the end of session #1. The expected norm for soak time is 48 hours.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p><b>SHOULD THIS PROCEDURE FAIL, CONTACT TEKELEC CUSTOMER CARE CENTER AND <u>ASK FOR UPGRADE ASSISTANCE.</u></b></p>	
<p><b>1</b> <input type="checkbox"/></p>	<p>Complete pre-upgrade session 2 tasks</p>	<p>All tasks in Table 19 must be completed before continuing.</p>

**Table 19. Upgrade Session 2 Requirements**

✓	<b>Tasks to be completed prior to upgrade session 2 execution</b>
	Verify that an EAGLE system health check 3 has been performed.

**Procedure 12: Upgrading Removable medias**

<b>S T E P #</b>	<p>This procedure describes how to update source-release removable media to the target release. See recommendation #2 in section 1.6.</p> <p>Check off ( ✓ ) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p><b>SHOULD THIS PROCEDURE FAIL, CONTACT TEKELEC CUSTOMER CARE CENTER AND ASK FOR <u>UPGRADE ASSISTANCE</u>.</b></p>	
<b>1</b> <input type="checkbox"/>	<p>Echo command input to capture terminal.</p> <p>See recommendation #1 &amp; #6 in section 1.6</p>	<p><b>act-echo:trm=<i>P</i></b> (Where the value for <i>P</i> is one of the printer/KSR terminal port numbers recorded in Procedure 1, Step 3)</p>
<b>2</b> <input type="checkbox"/>	<p>Response to activate command is displayed.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y act-echo:trm=P Command entered at terminal #XX. ;</pre>
<b>3</b> <input type="checkbox"/>	<p>If capture terminal's output groups are not all set to YES, issue the change terminal command.</p>	<p><b>chg-trm:trm=<i>P</i>:all=yes</b> (<i>P</i> is the terminal port that is specified in step 1)</p>
<b>4</b> <input type="checkbox"/>	<p>Response to change terminal command is displayed.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y chg-trm:trm=P:all=yes Command entered at terminal #XX. ;</pre>
<b>5</b> <input type="checkbox"/>	<p>If the measurements platform is enabled<sup>12</sup> go to step 9. Otherwise, issue the command to retrieve measurement status.</p>	<p><b>rtrv-meas-sched</b></p>
<b>6</b> <input type="checkbox"/>	<p>Response to retrieve command is displayed.</p> <p>Record if collection is on or off: _____</p> <p>Record if system configuration requires measurements to be on or off: _____</p> <p>If COLLECT=ON, continue to next step. Otherwise, go to Step 9.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y COLLECT = off SYSTOT-STP = (off) SYSTOT-TT = (off) SYSTOT-STPLAN = (off) COMP-LNKSET = (off) COMP-LINK = (off) MTC-D-STP = (on) MTC-D-LINK = (on) MTC-D-STPLAN = (on) MTC-D-LNKSET = (on) ;</pre>
<b>7</b> <input type="checkbox"/>	<p>Issue the command to turn off measurement collection.</p>	<p><b>chg-meas:collect=off</b></p>
<b>8</b> <input type="checkbox"/>	<p>Response to the change command is displayed.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss ZZZZ PPP XX.x.x-YY.y.y chg-meas:collect=off Command entered at terminal #XX. ;  tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y CHG-MEAS: MASP A - COMPLTD ;</pre>

<sup>12</sup> If enabled, the measurements platform feature is displayed in Procedure 1, Step 11.

**Procedure 12: Upgrading Removable medias**

<b>9</b> <input type="checkbox"/>	Issue measurement report command.	<b>rept-meas:type=systot:enttype=stp</b>
<b>10</b> <input type="checkbox"/>  <input type="checkbox"/>	Response to the command is displayed.  If command fails, reattempt in five minutes until it completes, See Table 20.	E2278 Cmd Rej: 30-minute measurement collection in progress  tekelecstp YY-MM-DD hh:mm:ss zzzz PPP XX.x.x-YY.y.y rept-meas:type=systot:enttype=stp Command entered at terminal #XX. ;
<b>11</b> <input type="checkbox"/>	If LNP feature on, issue measurement report command.	<b>rept-meas:type=mtcd:enttype=lnp</b>
<b>12</b> <input type="checkbox"/>  <input type="checkbox"/>	Response to the command is displayed.  If command fails, reattempt in five minutes until it completes, See Table 20.	E2277 Cmd Rej: Daily measurement collection in progress  tekelecstp YY-MM-DD hh:mm:ss zzzz PPP XX.x.x-YY.y.y rept-meas:type=mtcd:enttype=lnp Command entered at terminal #XX. ;
<b>13</b> <input type="checkbox"/>	Issue measurement report command.	<b>rept-meas:type=mtcdth:enttype=stp</b>
<b>14</b> <input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>	Response to the command is displayed.  If command fails, reattempt in five minutes until it completes, See Table 20.  If no source cartridges need upgrading, go to next procedure.	E2276 Cmd Rej: Day-to-hour measurement collection in progress  tekelecstp YY-MM-DD hh:mm:ss zzzz PPP XX.x.x-YY.y.y rept-meas:type=mtcdth:enttype=stp Command entered at terminal #XX. ;
<b>15</b> <input type="checkbox"/>	Insert the source-release RMD to be upgraded into the drive slot on the active MASP.	Once inserted, allow time for the RMD to be detected by the system.  For E5-OAM systems, RMD is inserted in the latched USB port on the active E5-MASP.
<b>16</b> <input type="checkbox"/>	Issue the command to format the RMD.	<b>format-disk:type=system:force=yes</b>
<b>17</b> <input type="checkbox"/>	Response to format command is displayed.  If the format should fail, first repeat Step 16, then contact Tekelec Customer Care Center.	tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Format-disk of system removable cartridge started. Extended processing required, please wait. ;  tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Format-disk of system removable cartridge completed. ;

**Table 20. MTT errors generated when measurement collection is in progress.**

Response ID Code:	Command Reject Text for MTT error:
E2276	Day-to-hour measurement collection in progress
E2277	Daily measurement collection in progress
E2278	30-minute measurement collection in progress
E2279	5-minute measurement collection in progress
E2290	Hourly measurement collection in progress
E3688	15-minute measurement collection in progress

**Procedure 12: Upgrading Removable medias**

18 <input type="checkbox"/>	Issue the command to copy the GPLs to the target-release RMD.	<b>copy-gpl</b>
19 <input type="checkbox"/>	Response to copy command is displayed.	<pre> tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y copy-gpl Command entered at terminal #10. ;  tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y COPY-GPL: MASP A - COPY STARTS ON ACTIVE MASP ;  tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y COPY-GPL: MASP A - COPY COMPLETED ON ACTIVE MASP ; </pre>
20 <input type="checkbox"/>	Issue the command to backup the target-release database to the RMD.	<b>chg-db:action=backup:dest=remove</b>
21 <input type="checkbox"/>	Response to backup command is displayed.	<pre> tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y 5035.1114 CARD 1115 Database BACKUP started Report Date:YY-MM-DD Time:hh:mm:ss ;  tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y BACKUP (REMOVABLE): MASP B - Backup starts on active MASP. ;  tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y BACKUP (REMOVABLE): MASP B - Backup to removable cartridge complete. ; </pre>
22 <input type="checkbox"/>	Remove the target-release RMD from the drive slot and store it in a safe place.	
23 <input type="checkbox"/>	If upgrading more RMDs, repeat step 15-22.	

**Procedure 13: Backing Up Fixed Disk**

<b>S T E P #</b>	<p>This procedure backs up the converted target-release database to the fixed disk. This is done to ensure a recent database backup has been performed. Verification of the converted database is also done.</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 TEKELEC CUSTOMER CARE CENTER AND <b>ASK FOR <u>UPGRADE ASSISTANCE</u></b>.</p>	
<b>1</b> <input type="checkbox"/>	Issue the command to backup the database to the fixed disks.	<b>chg-db:action=backup</b>
<b>2</b> <input type="checkbox"/>	Response and progress of the backup command are displayed.	<pre> tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y 5028.1114   CARD 1115   Database BACKUP started            Report Date:YY-MM-DD   Time:hh:mm:ss ;  tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y BACKUP (FIXED): MASP A - Backup starts on active MASP. ;  tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y BACKUP (FIXED): MASP A - Backup on active MASP to fixed disk complete. ;  tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y BACKUP (FIXED): MASP A - Backup starts on standby MASP. ;  tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y 5031.1116   CARD 1115   Database action ended - OK            Report Date:YY-MM-DD   Time:hh:mm:ss ;  tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y BACKUP (FIXED): MASP A - Backup on standby MASP to fixed disk complete. ; </pre>

**Procedure 14: Upgrading Spare Fixed Disks**

<b>S T E P #</b>	<p>This procedure describes how to upgrade your spare fixed disks to the target release.</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 TEKELEC CUSTOMER CARE CENTER AND <b>ASK FOR UPGRADE ASSISTANCE.</b></p>	
<b>1</b> <input type="checkbox"/>	Issue the command to display card status.	<b>rept-stat-card:appl=oam</b>
<b>2</b> <input type="checkbox"/>	Response to the card status command is displayed.	<pre> CARD   VERSION   TYPE   GPL   PST   SST   AST 1113   XXX-XXX-XXX E5MCAP OAMHC IS-NR Standby  ----- 1115   XXX-XXX-XXX E5MCAP OAMHC IS-NR Active   ----- </pre> <p>Command Completed.</p>
<input type="checkbox"/>	Determine MASP activity.	;
	Act MASP _____	
	Stby MASP _____	
<b>3</b> <input type="checkbox"/>	Insert target-release RMD into the drive slot on the Active E5MASP.	Once inserted, allow time for the RMD to be detected by the system.
<b>4</b> <input type="checkbox"/>	Issue the command to inhibit standby MASP.	<b>inh-card:loc=XXXX</b>  Where XXXX is the location for the Standby MASP in Step 2.
<b>5</b> <input type="checkbox"/>	Response to the command is displayed.	<pre> tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Card has been inhibited. </pre> <p>;</p> <pre> tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Command Completed. </pre> <p>;</p>
<b>6</b> <input type="checkbox"/>	Place spare E5-MASP in system.	<input type="checkbox"/> Slide the MASP H/S switch (SW3) on the standby MASP up to the unlocked position (Wait for all drive LEDs to transition to a steady blue). <input type="checkbox"/> Remove the standby E5-MASP card determined in step 2. <input type="checkbox"/> Insert the spare E5-MASP card. <input type="checkbox"/> Slide the MASP H/S switch (SW3) on the new standby MASP down to the locked position (Wait for the MASP H/S LED to transition from blinking blue to off and the MASP to come up in standby mode).  Note: UAMs are generated during this step. An audible alarm is generated. Wait for the new standby MASP to come up in standby mode and system returns to duplex mode.
<b>7</b> <input type="checkbox"/>	Retrieve the GPLs running on the card location.	<b>REPT-STAT-GPL:LOC=XXXX</b>  Where XXXX is the location for the Standby MASP specified Step 4.
<b>8</b> <input type="checkbox"/>	Response to the card status command is displayed. If <b>ALM</b> is displayed after the running version of the flash GPL, continue to next step.  Otherwise, continue to step 11	<pre> tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y GPL        CARD   RUNNING  APPROVED  TRIAL GGGGG     XXXX   -----  -----  -----           BLMCAP  YYY-YYY-YYY ALM   XXX-XXX-XXX  YYY-YYY-YYY </pre> <p>Command Completed.</p> <p>;</p>
<b>9</b> <input type="checkbox"/>	Issue the command to initialize the flash memory.	<b>FLASH-CARD:CODE=APPR:LOC=XXXX</b>  Where XXXX is the location for the Standby MASP in Step 2.  NOTE: this command causes the card to boot.



## Procedure 14: Upgrading Spare Fixed Disks

<p><input type="checkbox"/> 21</p> <p><input type="checkbox"/></p>	<p>Response to display directory command is displayed.</p> <p>If there are any files that need to be saved, they need to be removed via a file transfer. If this is necessary, contact TEKELEC Customer Care Center for further information.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y File Transfer Area Directory of fixed disk 111Y  FILENAME                LENGTH  LAST MODIFIED    LBA YYMMDDS.log             2560256 99-01-03 10:18:44 388769 YYMMDDa.log             2560256 99-01-03 10:19:20 393770 m60_lnp.csv              0        99-01-03 13:10:38 398771 3 File(s) 21093376 bytes free</pre>
<p><input checked="" type="checkbox"/> 22</p>	<p>Issue the command to delete ALL files in the transfer area.</p>	<p><b>DLT-FTA:ALL=YES</b></p>
<p><input type="checkbox"/> 23</p>	<p>Response to the delete command is displayed.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y dlt-fta:all=yes Command entered at terminal #nn.</pre>
<p><input type="checkbox"/> 24</p>	<p>Repeat Steps 18 – 19.</p>	
<p><input checked="" type="checkbox"/> 25</p>	<p>Issue the command to copy the active MASP image to the standby disk.</p>	<p><b>COPY-DISK : DLOC=<del>XXXX</del> : FORCE=YES : FORMAT=YES</b></p> <p>(Where XXXX is the location of the STANDBY E5-TDM recorded in Step 2)</p>
<p><input type="checkbox"/> 26</p>	<p>Response to the copy-disk command is displayed.</p> <p>Note: user terminal port may be automatically logged out.</p> <p>Wait for the card reload to complete.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Copy-disk (fixed): from active (YYYY) to standby (XXXX) started. Extended processing required, please wait.  tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Copy-disk (fixed): from active (XXXX) to standby (XXXX) complete. Measurements may be allowed now if desired.  tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y 0485.0014    CARD 1115 OAMHC      Card is present</pre>
<p><input type="checkbox"/> 27</p>	<p>If the disk copy fails repeat steps 25 - 26.</p>	<ol style="list-style-type: none"> <li>Repeat Steps 25-26.</li> <li>If second attempt fails, contact Tekelec Customer Care Center.</li> </ol>

**Procedure 15: Upgrading Spare MUX cards**

<b>S T E P #</b>	<p>This procedure describes how to upgrade your spare MUX cards.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p><b>SHOULD THIS PROCEDURE FAIL, CONTACT TEKELEC CUSTOMER CARE CENTER AND ASK FOR <u>UPGRADE ASSISTANCE</u>.</b></p> <p>Spare HMUX cards need to be downloaded with latest flash gpl. Due to changes incorporated in the new flash gpl if an HMUX card running a down level flash version is inserted into the system the card will steam errors to the screen.</p>
<b>1</b> <input type="checkbox"/>	<p>Issue the command to display imt bus status.</p> <p style="text-align: right;"><b>rept-stat-mux</b></p>
<b>2</b> <input type="checkbox"/>  <input type="checkbox"/>	<p>Response to the MUX status command is displayed.</p> <p>Record the types of MUX cards present:</p> <p><u>HMUX / HIPR / HIPR2</u></p> <pre> tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y CARD  TYPE      PST          SST          AST 1109  HIPR        IS-NR       Active       ----- 1110  HIPR        IS-NR       Active       ----- 1209  HIPR2       IS-NR       Active       ----- 1210  HIPR2       IS-NR       Active       ----- 1309  HMUX        IS-NR       Active       ----- 1310  HMUX        IS-NR       Active       ----- Command Completed.                     ;                     </pre>
<b>3</b> <input type="checkbox"/>	<p>Issue the command to display imt bus status.</p> <p style="text-align: right;"><b>rept-stat-imt</b></p>
<b>4</b> <input type="checkbox"/>  <input type="checkbox"/>	<p>Response to the card status command is displayed.</p> <p>Verify that both imt buses are IS-NR.</p> <p>If either bus is not IS-NR Stop this procedure and call Tekelec Customer Care Center.</p> <pre> tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y rept-stat-imt Command entered at terminal #10.                     ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y IMT  PST          SST          AST A    IS-NR       Active       ----- ALARM STATUS      = No Alarms.  IMT  PST          SST          AST B    IS-NR       Active       ----- ALARM STATUS      = No Alarms. Command Completed.                     ;                     </pre>
<b>5</b> <input type="checkbox"/>	<p>Issue the command to inhibit IMT bus-A.</p> <p style="text-align: right;"><b>inh-imt:bus=a</b></p>
<b>6</b> <input type="checkbox"/>	<p>Response to the command is displayed.</p> <pre> tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Inhibit IMT Bus A command issued                     ;  tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y 8687.0098   IMT BUS A           IMT inhibited                     ;                     </pre>
<b>7</b> <input type="checkbox"/>	<p>Swap spare MUX cards with those on the IMT A-bus. (i.e. location 1109, 1209)</p> <p>Note: swap cards of like types (using the output from step 2, a HMUX can be placed in 1109, while a HIPR can be placed in 1309.)</p>
<b>8</b> <input type="checkbox"/>	<p>Issue the command to allow IMT bus-A.</p> <p style="text-align: right;"><b>alw-imt:bus=a</b></p>
<b>9</b> <input type="checkbox"/>	<p>Response to the command is displayed.</p> <pre> tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Allow IMT Bus A command issued                     ;  tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y 8712.0097   IMT BUS A           IMT allowed                     ;                     </pre>

**Procedure 15: Upgrading Spare MUX cards**

<p><b>10</b> <input type="checkbox"/></p>	<p>Issue the card status command to identify the MUX cards in the system.</p>	<p><b>rept-stat-gpl:gp1=XXXX</b> (Where XXXX = is bphmux for HMUX, hipr for HIPR, or hipr2 for HIPR2 cards.)</p>
<p><b>11</b> <input type="checkbox"/></p>	<p>Response to the command is displayed.  Record the CARD locations for all MUX cards in the system not running the APPROVED version of the GPL.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y GPL Auditing ON  APPL      CARD      RUNNING      APPROVED      TRIAL HIPR2     XX09     XXX-XXX-XXX ALM     XXX-XXX-XXX  XXX-XXX-XXX HIPR2     XX10     XXX-XXX-XXX     XXX-XXX-XXX  XXX-XXX-XXX HIPR2     XX09     XXX-XXX-XXX     XXX-XXX-XXX  XXX-XXX-XXX HIPR2     XX10     XXX-XXX-XXX     XXX-XXX-XXX  XXX-XXX-XXX BPHMUX    XX09     XXX-XXX-XXX ALM     XXX-XXX-XXX  XXX-XXX-XXX BPHMUX    XX10     XXX-XXX-XXX     XXX-XXX-XXX  XXX-XXX-XXX HIPR      XX09     XXX-XXX-XXX ALM     XXX-XXX-XXX  XXX-XXX-XXX HIPR      XX10     XXX-XXX-XXX     XXX-XXX-XXX  XXX-XXX-XXX Command Completed.</pre>
<p><b>12</b> <input type="checkbox"/></p>	<p>Enter the command to initialize the FLASH on a MUX card on the A-bus that is not running the APPROVED version of the GPL.</p>	<p><b>init-flash:loc=XX09:code=appr</b> (Where XX = is a shelf number.)</p>
<p><b>13</b> <input type="checkbox"/></p>	<p>Response to the flash initialization is shown.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y init-flash:loc=XX09:code=appr Command entered at terminal #10. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y FLASH Memory Download for card XX09 Started. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y FLASH Memory Download for card XX09 Completed. ;</pre>
<p><b>14</b> <input type="checkbox"/></p>	<p>Repeat steps 12-13 for each card recorded in step 11.</p>	
<p><b>15</b> <input type="checkbox"/></p>	<p>Enter the command to initialize the current bus.</p>	<p><b>init-mux:bus=a</b></p>
<p><b>16</b> <input type="checkbox"/></p>	<p>Response to the initialization command is displayed.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y 5080.0014   CARD XX09 BPHMUX      Card is present ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y 5081.0014   CARD YY09 BPHMUX      Card is present ; * tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y * 5082.0004 * GPL SYSTEM BPHMUX      Card is running non-activated GPL</pre>
<p><b>17</b> <input type="checkbox"/></p>	<p>Issue the command to activate the flash on a MUX card flashed in step 12.</p>	<p><b>act-flash:loc=XX09</b> (Where XX = is a shelf number.)</p>
<p><b>18</b> <input type="checkbox"/></p>	<p>Response to the activate command is displayed.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y FLASH Memory Activation for card 1209 Started. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y FLASH Activation for card 1209 Completed. ;</pre>
<p><b>19</b> <input type="checkbox"/></p>	<p>Repeat steps 17-18 for each MUX card recorded in step 11.</p>	
<p><b>20</b> <input type="checkbox"/></p>	<p>Issue the command to display the MUX card GPL status.</p>	<p><b>rept-stat-gpl:gp1==XXXX</b> (Where XXXX = is bphmux for HMUX cards, hipr for HIPR cards, or hipr2 for HIPR2 cards.)</p>

**Procedure 15: Upgrading Spare MUX cards**

<p>21 <input type="checkbox"/></p>	<p>Verify that all MUX cards are running the approved GPL.</p>	<pre> tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y GPL Auditing ON  APPL      CARD      RUNNING      APPROVED      TRIAL HIPR2     XX09     XXX-XXX-XXX  XXX-XXX-XXX  XXX-XXX-XXX HIPR2     XX10     XXX-XXX-XXX  XXX-XXX-XXX  XXX-XXX-XXX HIPR2     XX09     XXX-XXX-XXX  XXX-XXX-XXX  XXX-XXX-XXX HIPR2     XX10     XXX-XXX-XXX  XXX-XXX-XXX  XXX-XXX-XXX HIPR2     XX09     XXX-XXX-XXX  XXX-XXX-XXX  XXX-XXX-XXX HIPR2     XX10     XXX-XXX-XXX  XXX-XXX-XXX  XXX-XXX-XXX HIPR2     XX09     XXX-XXX-XXX  XXX-XXX-XXX  XXX-XXX-XXX HIPR2     XX10     XXX-XXX-XXX  XXX-XXX-XXX  XXX-XXX-XXX Command Completed.                     ;                 </pre>
<p>22 <input type="checkbox"/></p>	<p>Repeat steps 10-21 for all MUX card types.</p>	
<p>23 <input type="checkbox"/></p>	<p>Repeat steps 3-22 until all spare MUX cards have been flashed.</p>	

**Procedure 16: Verifying All Databases**

<p><b>S</b> <b>T</b> <b>E</b> <b>P</b> <b>#</b></p>	<p>This procedure verifies the databases on the fixed disk and the removable media.</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 TEKELEC Customer Care Center for assistance AND <b>ASK FOR UPGRADE ASSISTANCE.</b></p>	
<p><b>1</b> <input type="checkbox"/></p>	<p>Issue the command to display database information.</p>	<pre>rept-stat-db:display=all</pre>
<p><b>2</b> <input type="checkbox"/></p> <p>Look in the columns labeled 'C,' 'T', and 'LEVEL' output by this command.</p> <p>Verify entries in column 'C' show 'Y', which indicates coherence.</p> <p>Verify entries in column 'T' show 'N' (except the MDAL), which indicates that the database is not in transition.</p> <p>Verify all entries in the database LEVEL column are the same. LEVEL is a value, which varies depending on the system.</p> <p>If the STDBY databases are not coherent or at the correct level, repeat Procedure 3, step 8.</p> <p>Verify that the MPS databases are coherent.</p>	<p>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y</p> <p>DATABASE STATUS: &gt;&gt; OK &lt;&lt;</p> <pre> TDM 1114 ( ACTV )   C   LEVEL      TIME LAST BACKUP      C   LEVEL      TIME LAST BACKUP ----- FD BKUP Y       YYY YY-MM-DD hh:mm:ss TTTT Y       YYY YY-MM-DD hh:mm:ss TTTT FD CRNT Y       XXX                Y       XXX MDAL 1117  RD BKUP Y       YYY YY-MM-DD hh:mm:ss TTTT  CARD/APPL  LOC  C  T  LEVEL      TIME LAST UPDATE  EXCEPTION ----- SS7ANSI    1101 Y  N  XXX      06-04-19 12:13:02  - SS7ANSI    1103 Y  N  XXX      06-04-19 12:13:02  - GLS        1104 Y  N  XXX      06-04-19 12:13:02  - SS7ANSI    1105 Y  N  XXX      06-04-19 12:13:02  - SS7ANSI    1106 Y  N  XXX      06-04-19 12:13:02  - VSCCP      1107 Y  N  XXX      06-04-19 12:13:02  - VSCCP      1111 Y  N  XXX      06-04-19 12:13:02  - TDM-CRNT   1114 Y  N  XXX      06-04-19 12:13:02  - TDM-BKUP   1114 Y  -  YYY      06-04-18 16:11:18  DIFF LEVEL TDM-CRNT   1116 Y  N  XXX      06-04-19 12:13:02  - TDM-BKUP   1116 Y  -  YYY      06-04-18 16:11:18  DIFF LEVEL E5MDAL     1117 Y  -  YYY      06-04-18 16:11:18  DIFF LEVEL  EPAP A ( ACTV )   C  BIRTHDATE      LEVEL      EXCEPTION ----- PDB      03-09-04 15:09:38  418231879  - RTDB     Y  03-09-04 15:09:38  418231879  - RTDB-EAGLE 06-02-06 22:13:06  418231879  -  EPAP B ( STDBY )   C  BIRTHDATE      LEVEL      EXCEPTION ----- PDB      03-09-04 15:09:38  418231879  - RTDB     Y  03-09-04 15:09:38  418231879  - RTDB-EAGLE 06-02-06 22:13:06  418231879  -  EAGLE RTDB REPORT CARD/APPL  LOC  C  BIRTHDATE      LEVEL      EXCEPTION  IN-SRVC ----- VSCCP      1107 Y  06-02-06 22:13:06  418231879  -          0d 4h 33m VSCCP      1111 Y  06-02-06 22:13:06  418231879  -          0d 4h 33m     </pre>	
<p><b>3</b> <input type="checkbox"/></p>	<p>When the command completes, remove the target-release RMD from the drive slot.</p>	<p><b>Store the RMD in a safe location.</b></p>

**Procedure 17: Session 2 Completion**

<b>S T E P #</b>	<p>This procedure resumes measurement collection.</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 TEKELEC CUSTOMER CARE CENTER AND <b>ASK FOR UPGRADE ASSISTANCE.</b></p>	
<b>1</b> <input type="checkbox"/>	<p>If the measurements platform is enabled then go to step 3. Otherwise, if Procedure 12 Steps 7 &amp; 8 were executed, issue the command to turn the measurements collection on.</p>	<p><b>CHG-MEAS:COLLECT=ON</b></p>
<b>2</b> <input type="checkbox"/>	<p>Response to change measurement command is displayed.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y chg-meas:collect=on Command entered at terminal #10. ;  tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y CHG-MEAS: MASP A - COMPLTD ;</pre>
<b>3</b> <input type="checkbox"/>	<p>Issue status command for troubles.</p>	<p><b>REPT-STAT-TRBL</b></p>
<b>4</b> <input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>	<p>Response to command is displayed.</p> <p>If UAM 0002 is present where XXXX is a flash GPL (i.e. BLMCAP or BLIXP), record it below:</p> <p>_____</p> <p>_____</p> <p>If any GPL is recorded contact Tekelec Customer Care Center and report the GPL alarm.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y SEQN UAM AL DEVICE ELEMENT TROUBLE TEXT 0329.0048 * TERMINAL 15 Terminal failed 0330.0048 * TERMINAL 16 Terminal failed 0006.0002 * GPL SYSTEM XXXX Card is not running approved GPL 0331.0176 * SECULOG 1116 Stdby security log-upload required 0332.0308 *C SYSTEM Node isolated due to SLK failures Command Completed. ;</pre>

→ This concludes SESSION TWO ←

## 6. RECOVERY PROCEDURES

Upgrade procedure recovery issues should be directed to the Tekelec Customer Care Center. Before executing any of these procedures, contact the Tekelec Customer Care Center at 1-888-FOR-TKLC (1-888-367-8552); or 1-919-460-2150 (international). In the event that other platforms are being upgraded in parallel, a determination whether recovery action is required on those platforms is required. Persons performing the upgrade should be familiar with these upgrade documents.

### 6.1 Backout Setup Procedures

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

## Warning

**Do not attempt to perform these backout procedures without first contacting the Tekelec Customer Care Center at 1-888-FOR-TKLC (1-888-367-8552); or 1-919-460-2150 (international)**

### 6.2 Recovery Procedure A

#### Procedure 18: Load and Run Source OAM

<b>S T E P #</b>		<p>Perform this Recovery Procedure if upgrading with removable media and a failure occurs in Procedure 6 through Procedure 8, Step 1.</p> <p>Note: This procedure also needs to be executed in order to copy the BLMCAP GPLs from the source after performing procedures 19, 20, 21, or 22 when upgrading with the fixed workspace.</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 TEKELEC CUSTOMER CARE CENTER AND ASK FOR <u>UPGRADE ASSISTANCE</u>.</p>
		<p>When directed to by Tekelec Customer Care Center, execute this procedure:                  If failure occurred between Procedure 6 and Procedure 8, Step 1, Table 18, Item B.                  Or if after the completion of Procedure 19, 20, 21, and 22 (but not 23).</p>
<b>1</b>	<input type="checkbox"/>	<p>If a USB drive is present in the system, remove it.</p>
<b>2</b>	<input type="checkbox"/>	<p>Insert source release media. Once inserted, allow time for the source-release RMD to be detected by the system.</p>
<b>3</b>	<input type="checkbox"/>	<p>Issue the command to retrieve BLMCAP application data.</p> <p><b>rtrv-gpl:gp1=blmcap</b></p>
<b>4</b>	<input type="checkbox"/>	<p>Response to rtrv-gpl command is displayed.</p> <p>Record the "REMOVE TRIAL" version:</p> <pre> tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y GPL Auditing ON  GPL      CARD  RELEASE      APPROVED      TRIAL      REMOVE TRIAL BLMCAP   1114  XXX-XXX-XXX  XXX-XXX-XXX  yyy-yyy-yyy  ----- BLMCAP   1116  XXX-XXX-XXX  XXX-XXX-XXX  yyy-yyy-yyy  XXX-XXX-XXX                 </pre>
<b>5</b>	<input type="checkbox"/>	<p>Issue the command to change the gpl.</p> <p><b>chg-gp1:gp1=blmcap:ver=xxx-xxx-xxx</b>  <i>(where xxx-xxx-xxx is the GPL version recorded in the previous step)</i></p>

Procedure 18: Load and Run Source OAM

<p>6 <input type="checkbox"/></p>	<p>Response to chg-gpl command is displayed.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y BLMCAP upload to 1116 completed BLMCAP upload to 1114 completed System Release ID table upload to 1116 completed System Release ID table upload to 1114 completed</pre> <p>;</p>
<p>7 <input type="checkbox"/></p>	<p>Issue the report card status command.</p>	<p><b>rept-stat-card:appl=oam</b></p>
<p>8 <input type="checkbox"/>  <input type="checkbox"/></p>	<p>Response to the card status command is displayed.</p> <p>Record which MASP is Active and Standby.</p> <p>Record the card locations of the MASPs:</p> <p>Act MASP _____</p> <p>Stby MASP _____<sup>13</sup></p>	<pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y CARD  VERSION  TYPE  GPL  PST  SST  AST 1113  XXX-XXX-XXX E5MCAP OAMHC IS-NR Active  ----- 1115  XXX-XXX-XXX E5MCAP OAMHC IS-NR Standby -----</pre> <p>Command Completed.</p> <p>;</p>
<p>9 <input type="checkbox"/></p>	<p>Issue the command to inhibit standby MASP.</p>	<p><b>inh-card:loc=XXXX</b></p> <p>Where XXXX is the location for the Standby MASP.</p>
<p>10 <input type="checkbox"/></p>	<p>Response to the command is displayed.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Card has been inhibited.</pre> <p>;</p> <pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Command Completed.</pre> <p>;</p>
<p>11 <input type="checkbox"/></p>	<p>Unplug and re-insert the standby E5-MASP.</p>	<p><input type="checkbox"/> Slide the MASP H/S switch (SW3) on the standby MASP up to the unlocked position (Wait for all drive LEDs to transition to a steady blue).</p> <p><input type="checkbox"/> Unseat the standby E5-MASP card determined in step 8.</p> <p><input type="checkbox"/> Re-seat the standby E5-MASP card.</p> <p><input type="checkbox"/> Slide the MASP H/S switch (SW3) on the standby MASP down to the locked position (Wait for the MASP H/S LED to transition from blinking blue to off and the MASP to come up in standby mode).</p> <p>Note: UAMs are generated during this step. An audible alarm is generated.</p>
<p>12 <input type="checkbox"/></p>	<p>Issue the command to allow card.</p>	<p><b>alw-card:loc=XXXX</b></p> <p>Where XXXX is the location for the Standby MASP.</p>
<p>13 <input type="checkbox"/></p>	<p>Response to the command is displayed.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Card has been allowed.</pre> <p>;</p> <pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Command Completed.</pre> <p>;</p>
<p>14 <input type="checkbox"/></p>	<p>Issue the report card status command.</p>	<p><b>rept-stat-card:appl=oam</b></p>

<sup>13</sup> The Standby MASP may report IS-ANR (and the Standby TDM may report 00S-MT[Isolated.]) If so, check LEDs on the card. If LEDs are green, it is OK to proceed. This condition will clear after step 19.

## Procedure 18: Load and Run Source OAM

15 <input type="checkbox"/>	Response to the card status command is displayed. <sup>14</sup>	<pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y CARD VERSION TYPE GPL PST SST AST 1113 XXX-XXX-XXX E5MCAP OAMHC IS-NR Active ----- 1115 XXX-XXX-XXX E5MCAP OAMHC IS-NR Standby ----- Command Completed.</pre>
16 <input type="checkbox"/>	Repeat step 14 until the standby location is IS-NR in step 15	
17 <input type="checkbox"/>	Force a switchover by issuing initialize-card command.	<pre>init-card:loc=YYYY</pre> <p>Where YYYY is the active MASP location recorded in step 16.</p>
18 <input type="checkbox"/>	Issue the command to log in to the system.	<pre>login:uid=XXXXXX</pre> <p>(Where XXXXXX is a valid login ID)</p>
19 <input type="checkbox"/>	Response to login command is displayed.	<pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y User logged in on terminal X</pre>
20 <input type="checkbox"/>	Repeat steps 9 through 16 for the standby – card location YYYY as reported in step 8. Then proceed with step 21.	
21 <input type="checkbox"/>	Issue the command to initialize both MASP cards.	<pre>init-card:apl=oam</pre>
22 <input type="checkbox"/>  <input type="checkbox"/>	<p>Response to initialize command is displayed.</p> <p>Ensure that the release shown in the banner is the source release after the MASP becomes active again.</p>	<pre>* tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y 0261.0013 * CARD 111X OAMHC Card is isolated from the system ASSY SN: xxxxxxxx ; tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y 5001.0009 CARD 111X OAMHC MASP became active ; tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y 5038.0014 CARD XXXX OAMHC Card is present ASSY SN: xxxxxxxx ;</pre>
23 <input type="checkbox"/>	Continue to procedure C if directed by the Tekelec Customer Care Center. Otherwise verify the system with the EAGLE health check [1]. <sup>15</sup>	

<sup>14</sup> The Standby MASP may report IS-ANR. If so, check LEDs on the card. If LEDs are green, it is OK to proceed. This condition will clear after step 27.

<sup>15</sup> Command REPT-STAT-GPL:DISPLAY=ALL can be used to verify this step.

### 6.3 Recovery Procedure B

#### Procedure 19: Full Fallback using Spare E5-MASP

<b>S T E P #</b>	<p>Perform the recovery procedure if directed to do so by TEKELEC CUSTOMER CARE CENTER when failure occurs in Procedure 8, Step 1, Item C through Procedure 10.</p> <p>This procedure is a full fallback to the source-release on the spare E5-MASP.</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 TEKELEC CUSTOMER CARE CENTER AND <b>ASK FOR UPGRADE ASSISTANCE.</b></p>
	When directed to by Tekelec Customer Care Center, execute this procedure.
<b>1</b> <input type="checkbox"/>	<p>If upgrade using the fixed disk method, use Procedure 20.</p> <p>Only perform this procedure if directed by Tekelec Customer Care Center.</p>
<b>2</b> <input type="checkbox"/>	<p>Issue the report card status command.</p> <p><b>rept-stat-card:appl=oam</b></p>
<b>3</b> <input type="checkbox"/>	<p>Response to the card status command is displayed.</p> <pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y CARD VERSION TYPE GPL PST SST AST 1113 XXX-XXX-XXX E5MCAP OAMHC IS-NR Active ----- 1115 XXX-XXX-XXX E5MCAP OAMHC IS-NR Standby -----</pre> <p>Determine MASP activity. Record which MASP is Active and Standby.</p> <p>Record the card locations of both sets of MASPs:</p> <p>Act MASP _____</p> <p>Stby MASP _____</p> <p>For this sample output, 1113 is active and 1115 is standby.</p>
<b>4</b> <input type="checkbox"/>	<p>Remove USB drive from system if present.</p>
<b>5</b> <input type="checkbox"/>	<p>Place spare E5-MASP in system.</p> <p><input type="checkbox"/> Slide the MASP H/S switch (SW3) on the standby MASP up to the unlocked position (Wait for all drive LEDs to transition to a steady blue).</p> <p><input type="checkbox"/> Remove the standby E5-MASP card determined in step 2.</p> <p><input type="checkbox"/> Insert the spare E5-MASP card.</p> <p><input type="checkbox"/> Slide the MASP H/S switch (SW3) on the new standby MASP down to the locked position (Wait for the MASP H/S LED to transition from blinking blue to off and the MASP to come up in standby mode).</p> <p>Note: UAMs are generated during this step. An audible alarm is generated. Wait for the new standby E5-MASP to come up in standby mode and system returns to duplex mode.</p>
<b>6</b> <input type="checkbox"/>	<p>Insert the source-release media into the system.</p> <p>An source-release USB drive in the active E5-MASP.</p> <p>Once inserted, allow time for the source-release RMD to be detected by the system</p>
<b>7</b> <input type="checkbox"/>	<p>After the standby MASP is available, issue the command to initialize the active MASP.</p> <p><b>init-card:loc=XXXX</b></p> <p>(Where XXXX is the location of the ACTIVE MASP slot)</p>

**Procedure 19: Full Fallback using Spare E5-MASP**

<p>8</p> <p><input type="checkbox"/></p>	<p>Response to command is displayed.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y init-card:loc=XXXX Command entered at terminal #10. ; tekelecstp 99-01-02 08:28:34 EST Re1 XX.x.x-XX.x.x * 0261.0013 * CARD XXXX OAMHC Card is isolated from the system   ASSY SN: xxxxxxxx ; 5038.0014 CARD XXXX OAMHC Card is present   ASSY SN: xxxxxxxx ;</pre>
<p>9</p> <p><input type="checkbox"/></p>	<p>Issue the command to log in to the system.</p>	<p><b>login:uid=XXXXXX</b> (Where XXXXXX is a valid login ID)</p>
<p>10</p> <p><input type="checkbox"/></p>	<p>Response to login command is displayed.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y User logged in on terminal X</pre>
<p>11</p> <p><input type="checkbox"/></p>	<p>Inhibit the standby MASP.</p>	<p><b>INH-CARD:LOC=XXXX</b> (Where XXXX is location of standby MASP)</p>
<p>12</p> <p><input type="checkbox"/></p>	<p>Response to the command is displayed.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Card has been inhibited. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Command Completed. ;</pre>
<p>13</p> <p><input type="checkbox"/></p>	<p>Put the E5-MASP system in simplex mode.</p>	<p><input type="checkbox"/> Slide the MASP H/S switch (SW3) on the standby MASP up to the unlocked position (Wait for all drive LEDs to transition to a steady blue).</p> <p><input type="checkbox"/> Init-card:loc=XXXX (Where XXXX is the location of the ACTIVE MASP slot)</p> <p><input type="checkbox"/> Wait for the active OAM to return to service and enter simplex mode.</p>
<p>14</p> <p><input type="checkbox"/></p>	<p>Issue the retrieve GPL command to verify source-release GPLs.</p>	<p><b>rtrv-gpl</b></p>
<p>15</p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p>Response to the retrieve command is displayed.</p> <p>Verify that the GPL versions in REMOVE TRIAL column and RELEASE column match those in Section 1.3 for "Source- Release GPLs."</p> <p>Example here has location 1114 as the Active MASP slot.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y GPL Auditing OFF  APPL    CARD  RELEASE      APPROVED      TRIAL      REMOVE TRIAL SS7ANSI 1114  XXX-XXX-XXX  XXX-XXX-XXX  XXX-XXX-XXX  XXX-XXX-XXX SS7ANSI 1116  ----- ATMANSI 1114  XXX-XXX-XXX  XXX-XXX-XXX  XXX-XXX-XXX  XXX-XXX-XXX ATMANSI 1116  ----- CCS7ITU 1114  XXX-XXX-XXX  XXX-XXX-XXX  XXX-XXX-XXX  XXX-XXX-XXX CCS7ITU 1116  ----- SS7GX25 1114  XXX-XXX-XXX  XXX-XXX-XXX  XXX-XXX-XXX  XXX-XXX-XXX SS7GX25 1116  ----- STPLAN  1114  XXX-XXX-XXX  XXX-XXX-XXX  XXX-XXX-XXX  XXX-XXX-XXX STPLAN  1116  ----- IMT     1114  XXX-XXX-XXX  XXX-XXX-XXX  XXX-XXX-XXX  XXX-XXX-XXX IMT     1116  ----- BPHCAP  1114  XXX-XXX-XXX  XXX-XXX-XXX  XXX-XXX-XXX  XXX-XXX-XXX BPHCAP  1116  ----- ;</pre>
<p>16</p> <p><input type="checkbox"/></p>	<p>Issue the command to retrieve measurement setup.</p>	<p><b>rtrv-meas-sched</b></p>

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<p>17 <input type="checkbox"/></p>	<p>Response to retrieve command is displayed.</p> <p>Record if collection is on or off: _____</p> <p>If COLLECT=ON, continue to next step. Otherwise, go to Step 20.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y COLLECT = off SYSTOT-STP = (off) SYSTOT-TT = (off) SYSTOT-STPLAN = (off) COMP-LNKSET = (off) COMP-LINK = (off) MTCd-STP = (on) MTCd-LINK = (on) MTCd-STPLAN = (on) MTCd-LNKSET = (on) ;</pre>
<p>18 <input type="checkbox"/></p>	<p>Issue the command to turn off measurement collection.<sup>16</sup></p>	<p><b>chg-meas:collect=off</b></p>
<p>19 <input type="checkbox"/></p>	<p>Response to the change command is displayed.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y chg-meas:collect=off Command entered at terminal #10. ; tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y CHG-MEAS: MASP A - COMPLTD ;</pre>
<p>20 <input type="checkbox"/></p>	<p>Inhibit the standby MASP.</p>	<p><b>inh-card:loc=XXXX</b></p> <p>(Where XXXX is location of standby MASP)</p>
<p>21 <input type="checkbox"/></p>	<p>Response to the command is displayed.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Card has been inhibited. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Command Completed. ;</pre>
<p>22 <input type="checkbox"/></p>	<p>Bring the standby E5-MASP system back on the bus.</p>	<p><input type="checkbox"/></p> <p>Slide the E5-MASP H/S switch (SW3) on the standby MASP down to the locked position (Wait for E5MASP H/S LED to transition from blinking blue to a steady blue and the card to return to the IMT bus.)</p>
<p>23 <input type="checkbox"/></p>	<p>Issue the command to initialize the flash memory.</p>	<p><b>init-flash:code=appr:loc=XXXX</b></p> <p>Where XXXX is the location for the Standby MASP.</p>
<p>24 <input type="checkbox"/></p>	<p>Response to the init flash command is displayed.</p> <p>Wait for the downloading to complete.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y FLASH Memory Download for card xxxx started. ; tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y FLASH Memory Download for card xxxx completed. ;</pre>
<p>25 <input type="checkbox"/></p>	<p>Issue the command to allow card.</p>	<p><b>alw-card:loc=XXXX</b></p> <p>where XXXX is the location for the Standby MASP.</p>
<p>26 <input type="checkbox"/></p>	<p>Response to the command is displayed.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Card has been allowed. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Command Completed. ;</pre>
<p>27 <input type="checkbox"/></p>	<p>Issue the report card status command.</p>	<p><b>rept-stat-card:appl=oam</b></p>

<sup>16</sup> If executed, this step causes the database level to increment.

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<p><input type="checkbox"/> 28</p> <p><input type="checkbox"/></p>	<p>Response from the retrieve command is displayed.</p> <p>Verify that the standby MASP is running the upgrade source release GPL.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y CARD  VERSION  TYPE  APPL  PST  SST  AST 1113  XXX-XXX-XXX E5MCAP OAMHC IS-NR Active ----- 1115  XXX-XXX-XXX E5MCAP OAMHC IS-NR Standby ----- Command Completed.</pre>
<p><input type="checkbox"/> 29</p>	<p>Issue the command to activate the flash on the standby MASP.</p>	<p><b>act-flash:loc=XXXX</b></p> <p>(Where XXXX is the location for the Standby MASP.)</p>
<p><input type="checkbox"/> 30</p>	<p>Response to the activate command is displayed.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y act-flash:loc=XXXX Command entered at terminal #10.  tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y FLASH Memory Activation for card XXXX Started.  tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y FLASH Activation for card XXXX Completed.</pre>
<p><input type="checkbox"/> 31</p>	<p>Issue the command to display security log status.</p>	<p><b>rept-stat-seclog</b></p>
<p><input type="checkbox"/> 32</p> <p><input type="checkbox"/></p>	<p>Response to the command is displayed.</p> <p>If the ENTRIES column displays any value other than 0 for the Standby ROLE, proceed to the next step.</p> <p>Otherwise, go to step 40</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y rept-stat-seclog Command entered at terminal #10.  tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y -- SINCE LAST UPLOAD -- OLDEST NEWEST LAST LOC  ROLE  ENTRIES %FULL OFLO FAIL RECORD RECORD UPLOAD 1114 Active 19      1    No  No  99-01-01 99-01-01 00:00-00 13:43:37 14:08:12 00:00:00 1116 Standby 0      0    No  No  99-01-01 99-01-01 99-01-01 13:39:39 13:43:10 14:07:59</pre>
<p><input type="checkbox"/> 33</p>	<p>Issue the command to copy the security log from the standby disk.</p>	<p><b>copy-seclog:slog=stb:dfile=upg.procc</b></p>
<p><input type="checkbox"/> 34</p> <p><input type="checkbox"/></p>	<p>Response to the copy security log command is displayed.</p> <p>If this command fails, proceed to next step. Otherwise, go to Step 40.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y Security log on TDM 111X copied to file upg28.procc on TDM 111Y  tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y 0468,0177 SECULOG 111X Security log exception cleared</pre>
<p><input type="checkbox"/> 35</p>	<p>Issue the command to display the FTA directory.</p>	<p><b>disp-fta-dir</b></p>
<p><input type="checkbox"/> 36</p> <p><input type="checkbox"/></p>	<p>Response to the command is displayed.</p> <p>If there are any files that need to be saved, they need to be removed via a file transfer. If this is necessary, contact Tekelec Customer Care Center for further information.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y File Transfer Area Directory of fixed disk 1114  FILENAME                LENGTH  LAST MODIFIED  LBA YYMMDDs.log             2560256 99-01-03 10:18:44 388769 YYMMDDa.log             2560256 99-01-03 10:19:20 393770 m60_inp.csv              0        99-01-03 13:10:38 398771 3 File(s) 21093376 bytes free</pre>
<p><input type="checkbox"/> 37</p>	<p>Issue the command to delete ALL files in the transfer area.</p>	<p><b>dlt-fta:all=yes</b></p>
<p><input type="checkbox"/> 38</p>	<p>Response to the delete command is displayed.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y dlt-fta:all=yes:loc=XXXX Command entered at terminal #nn.</pre>
<p><input type="checkbox"/> 39</p>	<p>Repeat Steps 31-34</p>	

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<p>40 <input type="checkbox"/></p>	<p>Issue the command to copy to the standby disk.</p>	<p><b>copy-disk:dloc=XXXX:force=yes:format=yes</b> (Where XXXX is the location of the STANDBY TDM)</p>
<p>41 <input type="checkbox"/>  <input type="checkbox"/></p>	<p>Response to the copy-disk command is displayed.  Wait for the card reload to complete.  If this is the second time performing this step, go to Step 49. Otherwise continue.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y Copy-disk (fixed): from active (YYYY) to standby (XXXX) started. Extended processing required, please wait. ; tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y Copy-disk (fixed): from active (XXXX) to standby (XXXX) complete. Measurements may be allowed now if desired. ; tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y 0485.0014 CARD 1115 OAMHC Card is present ;</pre>
<p>42 <input type="checkbox"/></p>	<p>Issue the command to display card status.</p>	<p><b>rept-stat-card</b></p>
<p>43 <input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/></p>	<p>Response to the card status command is displayed.  Verify that the GPL versions that are displayed in the "VERSION" column are correct; see Section 1.3.  Record the location of the Standby MASP:  MASP _____</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y rept-stat-card Command entered at terminal #10. ; tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y CARD VERSION TYPE APPL EST SST AST 1101 XXX-XXX-XXX DSM SCCPHC IS-NR Active ----- 1102 XXX-XXX-XXX DSM SCCPHC IS-NR Active ----- 1103 XXX-XXX-XXX TSM GLSHC IS-NR Active ----- 1104 XXX-XXX-XXX TSM GLSHC IS-NR Active ----- 1105 XXX-XXX-XXX LIMDS0 SS7ML IS-NR Active ----- 1111 XXX-XXX-XXX IPSM IPSHC IS-NR Active ----- 1113 XXX-XXX-XXX E5MCAP OAMHC IS-NR Active ----- 1114 ----- E5TDM ----- IS-NR Active ----- 1115 XXX-XXX-XXX E5MCAP OAMHC IS-NR Standby ----- 1116 ----- E5TDM ----- IS-NR Active ----- 1117 ----- E5MDAL ----- IS-NR Active ----- 1201 XXX-XXX-XXX LIMDS0 SS7ML IS-NR Active ----- 1202 XXX-XXX-XXX LIMDS0 SS7ML IS-NR Active ----- 1203 XXX-XXX-XXX DCM IPLHC IS-NR Active ----- 1204 XXX-XXX-XXX DCM IPLHC IS-NR Active ----- 1211 XXX-XXX-XXX DCM IPGHC IS-NR Active ----- 1218 XXX-XXX-XXX TSM GLSHC IS-NR Active ----- Command Completed. ;</pre>
<p>44 <input type="checkbox"/></p>	<p>Inhibit the standby MASP.</p>	<p><b>inh-card:lloc=XXXX</b> (Where XXXX is location of standby MASP)</p>
<p>45 <input type="checkbox"/></p>	<p>Response to the command is displayed.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Card has been inhibited. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Command Completed. ;</pre>
<p>46 <input type="checkbox"/></p>	<p>Replace the standby E5-MASP with the E5-MASP removed in step 5.</p>	<p><input type="checkbox"/> Slide the MASP H/S switch (SW3) on the standby MASP up to the unlocked position (Wait for all drive LEDs to transition to a steady blue).</p> <p><input type="checkbox"/> Remove the standby E5-MASP card.</p> <p><input type="checkbox"/> Insert the spare E5-MASP card.</p> <p><input type="checkbox"/> Slide the MASP H/S switch (SW3) on the new standby MASP down to the locked position (Wait for the MASP H/S LED to transition from blinking blue to off and the MASP to come up in standby mode).</p> <p>Note: UAMs are generated during this step. An audible alarm is generated. Wait for the new standby E5-MASP to come up in standby mode and system returns to duplex mode.</p>

**Procedure 19: Full Fallback using Spare E5-MASP**

47 <input type="checkbox"/>	Insert the source-release media into the system.	Insert an USB drive in the standby E5-MCAPs.  Once inserted, allow time for the source-release RMD to be detected by the system
48 <input type="checkbox"/>	Repeat steps 23 - 41.	After completing Step 41 the second time, continue to Step 49.
49 <input type="checkbox"/>	If steps 18 & 19 were executed, issue the command to turn the measurements collection on.	<b>chg-meas:collect=on</b>
50 <input type="checkbox"/>	Response to change measurement command is displayed.	<pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y chg-meas:collect=on Command entered at terminal #10. ; tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y CHG-MEAS: MASP A - COMPLTD ;</pre>
51 <input type="checkbox"/>	Execute Procedure 18.	
52 <input type="checkbox"/>	If this completes the recovery as directed by the Tekelec Customer Care Center, verify the system with the EAGLE health check [1]. Otherwise continue with Recovery Procedure C	<b>If failure occurred prior to entering Phase 3, recovery is complete.</b>

**Procedure 20: Full Fallback using Fixed Disk as OAM conversion workspace – Case 1**

<b>S T E P #</b>	Perform the recovery procedure if directed to do so by TEKELEC CUSTOMER CARE CENTER when failure occurs in Procedure 6 through Procedure 8, Step 1. Note, this procedure is done in lieu of Procedure 18 for the case where a removable disk was NOT used as the workspace for the OAM conversion.	
	Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.  <b>SHOULD THIS PROCEDURE FAIL, CONTACT TEKELEC CUSTOMER CARE CENTER AND ASK FOR <u>UPGRADE ASSISTANCE</u>.</b>	
	When directed to by Tekelec Customer Care Center, execute this procedure: If failure occurred between Procedure 6 and Procedure 8, Step 1, Table 18, Item E.	
<b>1</b> <input type="checkbox"/>	Only perform this procedure if directed by Tekelec Customer Care Center.	
<b>2</b> <input type="checkbox"/>	If present, remove the target-release media from the system.	
<b>3</b> <input checked="" type="checkbox"/>	Issue the command to initialize both MASP cards.	<b>init-card:appl=oam</b>
<b>4</b> <input type="checkbox"/>  <input type="checkbox"/>	Response to initialize command is displayed.  Ensure that the release shown in the banner is the source release after the MASP becomes active again.	<pre> tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y * 0261.0013 * CARD 111X EOAM Card is isolated from the system       ASSY SN: xxxxxxxx ;  tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y 5001.0009 CARD 111X EOAM MASP became active ;  tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y 5038.0014 CARD XXXX EOAM Card is present       ASSY SN: xxxxxxxx ; </pre>
<b>5</b> <input type="checkbox"/>	Execute Procedure 18.	<b>Proceed to Recovery Procedure A to complete the recovery.</b>

**Procedure 21: Full Fallback using Fixed Disk as OAM conversion workspace – Case 2**

<p><b>S</b> <b>T</b> <b>E</b> <b>P</b> <b>#</b></p>	<p>Perform the recovery procedure if directed to do so by TEKELEC CUSTOMER CARE CENTER when failure occurs in Procedure 8, Step 1, Item F through Item I. This procedure makes the partition with the source GPLs active on the Standby TDM. Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. SHOULD THIS PROCEDURE FAIL, CONTACT TEKELEC CUSTOMER CARE CENTER AND <b>ASK FOR UPGRADE ASSISTANCE.</b></p>
	<p>When directed to by Tekelec Customer Care Center, execute this procedure: If failure occurred between Procedure 8, Step 1, Table 18, Item F and Procedure 8, Step 1, Table 18, Item I.</p>
<p><b>1</b> <input type="checkbox"/></p>	<p>Remove USB drive from system if present.</p>
<p><b>2</b> <input type="checkbox"/></p>	<p>Issue the command to display database status during upgrades.</p> <p><b>act-upgrade:action=dbstatus</b></p>
<p><b>3</b> <input type="checkbox"/></p>	<p>Response to the command is displayed.</p> <p>Look at the status field and determine the loc of the TDM marked "UPG 2".</p> <pre> tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y Upg Phase X ; DATABASE STATUS: &gt;&gt; NOT OK (DMS) &lt;&lt;       TDM 1114 ( STDBY)          TDM 1116 ( ACTV )         C  LEVEL  TIME LAST BACKUP  C  LEVEL  TIME LAST BACKUP ----- FD BKUP Y  nnnnnn  -      -      Y  nnnnnn  YY-MM-DD hh:mm:ss zzz FD CRNT Y  nnnnnn  -      -      Y  nnnnnn       MCAP 1113          MCAP 1115 ----- RD BKUP -  -      -      -      -  -      -      - USB BKP -  -      -      -      -  -      -      -  CARD/APPL  LOC  C  T  LEVEL      TIME LAST UPDATE  VERSION  STATUS ----- OAM-RMV    1113  -  -  -      -      -      - TDM-CRNT   1114  Y  N  nnnnnn  YY-MM-DD hh:mm:ss  ZZZ-ZZZ-ZZZ  UPG 2 TDM-BKUP   1114  Y  -  nnnnnn  YY-MM-DD hh:mm:ss  ZZZ-ZZZ-ZZZ  UPG 2 OAM-RMV    1115  -  -  -      -      -      - OAM-USB    1115  -  -  -      -      -      - TDM-CRNT   1116  Y  N  nnnnnn  YY-MM-DD hh:mm:ss  XXX-XXX-XXX  NORMAL TDM-BKUP   1116  Y  -  nnnnnn  YY-MM-DD hh:mm:ss  XXX-XXX-XXX  NORMAL  INACTIVE PARTITION GROUP CARD/APPL  LOC  C  T  LEVEL      TIME LAST UPDATE  VERSION  STATUS ----- TDM-CRNT   1114  Y  -  nnnnnn  YY-MM-DD hh:mm:ss  XXX-XXX-XXX  NORMAL TDM-BKUP   1114  Y  -  nnnnnn  YY-MM-DD hh:mm:ss  XXX-XXX-XXX  NORMAL TDM-CRNT   1116  N  -  1      00-00-00 00:00:00  ZZZ-ZZZ-ZZZ  NORMAL TDM-BKUP   1116  N  -  1      00-00-00 00:00:00  ZZZ-ZZZ-ZZZ  NORMAL                     </pre>
<p><b>4</b> <input type="checkbox"/></p>	<p>If the TDM marked in "UPG 2" is the active MASP continue. Otherwise go to step 9.</p>
<p><b>5</b> <input type="checkbox"/></p>	<p>Issue the command to init active location.</p> <p><b>init-card:loc=YYYY</b></p> <p>(Where YYYY is location of active MASP)</p>
<p><b>6</b> <input type="checkbox"/></p>	<p>Response to initialize command is displayed.</p> <pre> tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y * 0261.0013 * CARD XXXX OAMHC Card is isolated from the system       ASSY SN: xxxxxxxx ; tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y 5038.0014 CARD XXXX OAMHC Card is present       ASSY SN: xxxxxxxx ;                     </pre>

**Procedure 21: Full Fallback using Fixed Disk as OAM conversion workspace – Case 2**

<p><b>7</b> <input type="checkbox"/></p>	<p>Issue the command to log back in to the system.</p>	<p><b>login:uid=XXXXXX</b>  (Where XXXXXX is a valid login ID)</p>
<p><b>8</b> <input type="checkbox"/></p>	<p>Response to login command is displayed.  Ignore any login failure message.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y   User logged in on terminal 10. ; ? Login failures since last successful LOGIN Last successful LOGIN was on port ? on ??-??-?? @ ??:?:??</pre>
<p><b>9</b> <input type="checkbox"/></p>	<p>Issue the command to display active/inactive disk partitions.</p>	<p><b>send-msg:ds=1:da=h'5d:f=h'47:loc=YYYY</b>  (Where YYYY is location of active MASP)</p>
<p><b>10</b> <input type="checkbox"/></p>	<p>Response to command. Note: Look for the command response on a terminal with all output display groups set to yes (printer/ksr terminal port specified in, Procedure 1, Step 6)</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Upgrade Phase x System Buffer sent has following attributes :   Msg Length = H'0010   Dest Card = H'00fb   Orig Subsys = H'0001           Dest Subsys = H'0001   Orig Appl ID = H'0030         Dest Appl ID = H'005d   Func ID = H'0047             Bus/Ret/Sut = H'0002   Violation Ind = H'0000   User Message sent to location YYYY. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Upgrade Phase x ACTIVE OAM Partition Grp Info: num_group = 2 num_partitions_per_group = 2 active_partitions[] = 0 1 inactive_partitions[] = 2 3 ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Upgrade Phase x STANDBY OAM Partition Grp Info: num_group = 2 num_partitions_per_group = 2 active_partitions[] = 2 3 inactive_partitions[] = 0 1 ;</pre>
<p><b>11</b> <input type="checkbox"/></p>	<p>Issue the command to swap active/inactive disk partitions.</p>	<p><b>send-msg:ds=1:da=h'5d:f=h'48:loc=YYYY</b>  (Where YYYY is location of active MASP)</p>
<p><b>12</b> <input type="checkbox"/></p>	<p>Response to command. Note: Look for the command response on a terminal with all output display groups set to yes (printer/ksr terminal port specified in Procedure 1, Step 6)</p> <p><input type="checkbox"/></p> <p>Compare the values for the active_partitions and inactive_partitions with those in <b>step 10</b>. For the STANDBY OAM, the values for the active_partitions shown should equal those for the inactive_partitions shown in <b>step 10</b>, and vice-versa. For the ACTIVE OAM, both sets of values should be identical.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y System Buffer sent has following attributes :   Msg Length = H'0010   Dest Card = H'00fb   Orig Subsys = H'0001           Dest Subsys = H'0001   Orig Appl ID = H'0030         Dest Appl ID = H'005d   Func ID = H'0048             Bus/Ret/Sut = H'0002   Violation Ind = H'0000   User Message sent to location YYYY. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Partition switch PASSED ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y ACTIVE OAM Partition Grp Info: num_group = 2 num_partitions_per_group = 2 active_partitions[] = 0 1 inactive_partitions[] = 2 3 ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y STANDBY OAM Partition Grp Info: num_group = 2 num_partitions_per_group = 2 active_partitions[] = 0 1 inactive_partitions[] = 2 3 ;</pre>
<p><b>13</b> <input type="checkbox"/></p>	<p>Inhibit the standby MASP.</p>	<p><b>inh-card:loc=XXXX</b>  (Where XXXX is the location for the Standby MASP.)</p>

## Procedure 21: Full Fallback using Fixed Disk as OAM conversion workspace – Case 2

<input type="checkbox"/>   <input type="checkbox"/>	<p>Response to the inhibit command is displayed</p> <p>Verify UAM 514 is displayed.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y Card is inhibited. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Upg Phase X ** 5045.0514 ** CARD XXXX OAMHC Standby MASP is inhibited ; <b>Note:</b> Wait for the card to boot and return to the IMT bus.</pre>
<input checked="" type="checkbox"/>	<p>Issue the command to initialize the flash memory on the standby MASP.<sup>17</sup></p>	<pre><b>init-flash:code=appr:loc=XXXX</b> (Where XXXX is the location for the Standby MASP.)</pre>
<input type="checkbox"/>  <input type="checkbox"/>	<p>Response to flash initialization is shown.</p> <p>Verify UAM 0004 is displayed.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y FLASH Memory Download for card xxxx started. ; tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y FLASH Memory Download for card xxxx completed. ; tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y * 8003.0004 * GPL SYSTEM BLMCAP Card is running non-activated GPL ; <b>Note:</b> Wait for card to boot and return to the IMT bus.</pre>
<input checked="" type="checkbox"/>	<p>Issue the command to allow card.</p>	<pre><b>alw-card:loc=XXXX</b> (Where XXXX is the location for the Standby MASP.)</pre>
<input type="checkbox"/>	<p>Response to the command is displayed.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Card has been allowed. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Command Completed. ;</pre>
<input checked="" type="checkbox"/>	<p>Determine the status of the GPLs running on the card location.</p>	<pre><b>rept-stat-gpl:loc=XXXX</b> (Where XXXX is the location for the Standby MASP.)</pre>
<input type="checkbox"/>  <input type="checkbox"/>	<p>Response from the status command is displayed.</p> <p>Verify the standby MASP is running the upgrade source release GPLs. Verify that no “ALM” indicator is displayed.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y GPL Auditing ON ; GPL          CARD          RUNNING          APPROVED          TRIAL OAMHC        1115          134-074-000      ----- BLMCAP       BLMCAP          134-070-000      + 134-070-000      134-070-000 ; Command Completed. ;</pre>
<input checked="" type="checkbox"/>	<p>Issue the command to activate the flash on the standby MASP.</p>	<pre><b>act-flash:loc=XXXX</b> (Where XXXX is the location for the Standby MASP.)</pre>
<input type="checkbox"/>	<p>Response to the activate command is displayed.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y act-flash:loc=XXXX Command entered at terminal #10. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y FLASH Memory Activation for card XXXX Started. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y FLASH Activation for card XXXX Completed. ;</pre>

<sup>17</sup> The approved flash GPL is the source version.

## Procedure 21: Full Fallback using Fixed Disk as OAM conversion workspace – Case 2

23 <input type="checkbox"/>	If the active MASP is not running the upgrade source release GPL continue. Otherwise go to step 37.	<b>init-card:loc=XXXX</b>  (Where XXXX is location of active MASP)
24 <input type="checkbox"/>	Response to initialize command is displayed.	<pre> tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y * 0261.0013 * CARD XXXX EOAM Card is isolated from the system   ASSY SN: xxxxxxxx ; tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y 5038.0014 CARD XXXX EOAM Card is present   ASSY SN: xxxxxxxx ; </pre>
25 <input type="checkbox"/>	Issue the command to log back in to the system.	<b>login:uid=XXXXXX</b>  (Where XXXXXX is a valid login ID)
26 <input type="checkbox"/>	Response to login command is displayed.  Ignore any login failure message.	<pre> tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y   User logged in on terminal 10. ; ? Login failures since last successful LOGIN Last successful LOGIN was on port ? on ??-??-?? @ ??:?:?? </pre>
27 <input type="checkbox"/>	Inhibit the standby MASP.	<b>inh-card:loc=XXXX</b>  (Where XXXX is the location for the Standby MASP.)
28 <input type="checkbox"/> <input type="checkbox"/>	Response to the inhibit command is displayed  Verify UAM 514 is displayed.	<pre> tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y   card is inhibited. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Upg Phase x ** 5045.0514 ** CARD XXXX OAMHC Standby MASP is inhibited ; </pre> <p><b>Note:</b> Wait for the card to boot and return to the IMT bus.</p>
29 <input type="checkbox"/>	Issue the command to initialize the flash memory on the standby MASP.	<b>init-flash:code=appr:loc=XXXX</b>  (Where XXXX is the location for the Standby MASP.)
30 <input type="checkbox"/> <input type="checkbox"/>	Response to flash initialization is shown.  Verify UAM 0004 is displayed.	<pre> tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y   FLASH Memory Download for card xxxx started. ; tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y   FLASH Memory Download for card xxxx completed. ; tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y * 8003.0004 * GPL SYSTEM BLMCAP Card is running non-activated GPL ; </pre> <p><b>Note:</b> Wait for card to boot and return to the IMT bus.</p>
31 <input type="checkbox"/>	Issue the command to allow card.	<b>alw-card:loc=XXXX</b>  (Where XXXX is the location for the Standby MASP.)
32 <input type="checkbox"/>	Response to the command is displayed.	<pre> tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y   Card has been allowed. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y   Command Completed. ; </pre>
33 <input type="checkbox"/>	Determine the status of the GPLs running on the card location.	<b>rept-stat-gpl:loc=XXXX</b>  (Where XXXX is the location for the Standby MASP.)

**Procedure 21: Full Fallback using Fixed Disk as OAM conversion workspace – Case 2**

<p>34 <input type="checkbox"/> <input type="checkbox"/></p>	<p>Response from the status command is displayed.  Verify that the standby MASP is running the upgrade source release GPLs. Verify that no "ALM" indicator is displayed.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y GPL Auditing ON  GPL          CARD          RUNNING          APPROVED          TRIAL OAMHC        1115          134-074-000    +-----+         -----+               BLMCAP          134-070-000    +-----+         -----+               +-----+         -----+ Command Completed. ;</pre>
<p>35 <input type="checkbox"/></p>	<p>Issue the command to activate the flash on the standby MASP.</p>	<p><b>act-flash:loc=XXXX</b>  (Where XXXX is the location for the Standby MASP.)</p>
<p>36 <input type="checkbox"/></p>	<p>Response to the activate command is displayed.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y act-flash:loc=XXXX Command entered at terminal #10. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y FLASH Memory Activation for card XXXX Started. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y FLASH Activation for card XXXX Completed. ;</pre>
<p>37 <input type="checkbox"/></p>	<p>Execute Procedure 18.</p>	<p><b>Proceed to Recovery Procedure A to complete the recovery.</b></p>

**Procedure 22: Full Fallback using Fixed Disk as OAM conversion workspace – Case 3**

<p><b>S T E P #</b></p>	<p>Perform this recovery procedure if directed to do so by TEKELEC CUSTOMER CARE CENTER when failure occurs at Procedure 8, Step 1 or completion of the session.                  This procedure makes the partition with the source GPLs active on both TDMs.                   NOTE: If the database level in the target release is different from the last database level of the source release, this procedure CANNOT BE USED; contact TEKELEC CUSTOMER CARE CENTER.                   Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.                   SHOULD THIS PROCEDURE FAIL, CONTACT TEKELEC CUSTOMER CARE CENTER AND <b>ASK FOR UPGRADE ASSISTANCE.</b></p>
<p>When directed to by Tekelec Customer Care Center, execute this procedure:                  If failure occurred between Procedure 8, Step 1, Table 18, Item J and Procedure 10 [End of Session 1].</p>	
<p><b>1</b> <input type="checkbox"/></p>	<p><b>*** ATTENTION ***</b>                   Complete all steps from Procedure 4 to the end of Session 1 (Procedure 10).                   Note: When executing Procedure 4 through Procedure 10 in the recovery scenario, the terminology of source and target are reversed. Target release becomes the software load that is being recovered to (45.0.0) and the source release becomes the software load that was upgraded to (45.0.1).                   *****</p>
<p><b>2</b> <input type="checkbox"/></p>	<p>Remove USB drive from system if present.</p>
<p><b>3</b> <input type="checkbox"/></p>	<p>Issue the command to display active/inactive disk partitions.   <b>send-msg: ds=1:da=h'5d:f=h'47:l=loc=YYYY</b>                  (Where YYYY is location of active MASP)</p>
<p><b>4</b> <input type="checkbox"/></p>	<p>Response to command.                   Note: Look for the command response on a terminal with all output display groups set to yes (printer\ksr terminal port specified in Procedure 1, Step 6)</p> <pre> tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Upgrade Phase x System Buffer sent has following attributes :   Msg Length = H'0010   Dest Card = H'00fb   Orig Subsys = H'0001           Dest Subsys = H'0001   Orig Appl ID = H'0030         Dest Appl ID = H'005d   Func ID = H'0047             Bus/Ret/Sut = H'0002   Violation Ind = H'0000 User Message sent to location xxxx. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Upgrade Phase x ACTIVE OAM Partition Grp Info: num_group = 2 num_partitions_per_group = 2 active_partitions[] = 2 3 inactive_partitions[] = 0 1 ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Upgrade Phase x STANDBY OAM Partition Grp Info: num_group = 2 num_partitions_per_group = 2 active_partitions[] = 2 3 inactive_partitions[] = 0 1 ;                 </pre>
<p><b>5</b> <input type="checkbox"/></p>	<p>Issue the command to swap active/inactive disk partitions.   <b>send-msg: ds=1:da=h'5d:f=h'48:l=loc=YYYY</b>                  (Where YYYY is location of active MASP)</p>

## Procedure 22: Full Fallback using Fixed Disk as OAM conversion workspace – Case 3

<p>6</p> <p><input type="checkbox"/></p> <p>Response to command.</p> <p>Note: Look for the command response on a terminal with all output display groups set to yes (printer/ksr terminal port specified in Procedure 1, Step 6)</p> <p><input type="checkbox"/></p> <p>Compare the values for the active_partitions and inactive_partitions with those in step 4. For the STANDBY OAM, the values for the active_partitions shown should equal those for the inactive_partitions shown in step 4, and vice-versa. For the ACTIVE OAM, both sets of values should be identical.</p>		<pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y System Buffer sent has following attributes :   Msg Length = H'0010   Dest Card = H'00fb   Orig Subsys = H'0001           Dest Subsys = H'0001   Orig Appl ID = H'0030         Dest Appl ID = H'005d   Func ID = H'0048             Bus/Ret/Sut = H'0002   Violation Ind = H'0000 User Message sent to location XXXX. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Partition switch PASSED ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y ACTIVE OAM Partition Grp Info: num_group = 2 num_partitions_per_group = 2 active_partitions[] = 2 3 inactive_partitions[] = 0 1 ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y STANDBY OAM Partition Grp Info: num_group = 2 num_partitions_per_group = 2 active_partitions[] = 0 1 inactive_partitions[] = 2 3 ;</pre>
<p>7</p> <p><input type="checkbox"/></p>	<p>Inhibit the standby MASP.</p>	<p><b>inh-card:loc=XXXX</b></p> <p>(Where XXXX is the location for the Standby MASP.)</p>
<p>8</p> <p><input type="checkbox"/></p> <p>Response to the inhibit command is displayed</p> <p><input type="checkbox"/></p> <p>Verify UAM 514 is displayed.</p>		<pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y Card is inhibited. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Upg Phase x ** 5045.0514 ** CARD XXXX OAMHC           Standby MASP is inhibited ; <b>Note:</b> Wait for the card to boot and return to the IMT bus.</pre>
<p>9</p> <p><input type="checkbox"/></p>	<p>Issue the command to initialize the flash memory on the standby MASP.</p>	<p><b>init-flash:code=trial:loc=XXXX</b></p> <p>(Where XXXX is the location for the Standby MASP.)</p>
<p>10</p> <p><input type="checkbox"/></p> <p>Response to flash initialization is shown.</p> <p><input type="checkbox"/></p> <p>Verify UAM 0004 is displayed.</p>		<pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y FLASH Memory Download for card XXXX started. ; tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y FLASH Memory Download for card XXXX completed. ; tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y * 8003.0004 * GPL SYSTEM BLMCAP           Card is running non-activated GPL ; <b>Note:</b> Wait for card to boot and return to the IMT bus.</pre>
<p>11</p> <p><input type="checkbox"/></p>	<p>Issue the command to allow card.</p>	<p><b>alw-card:loc=XXXX</b></p> <p>(Where XXXX is the location for the Standby MASP.)</p>
<p>12</p> <p><input type="checkbox"/></p>	<p>Response to the command is displayed.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Card has been allowed. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Command Completed. ;</pre>
<p>13</p> <p><input type="checkbox"/></p>	<p>Determine the status of the GPLs running on the card location.</p>	<p><b>rept-stat-gpl:loc=XXXX</b></p> <p>(Where XXXX is the location for the Standby MASP.)</p>

**Procedure 22: Full Fallback using Fixed Disk as OAM conversion workspace – Case 3**

<p>14</p> <p><input type="checkbox"/></p>	<p>Response from the status command is displayed.</p> <p>Verify that the standby MASP is running the upgrade source release GPLs. Verify that no “ALM” indicator is displayed.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y GPL Auditing ON  GPL          CARD          RUNNING          APPROVED          TRIAL OAMHC        1115          134-074-000     +-----+               BLMCAP          134-070-000     + 134-070-000     134-070-000  Command Completed.</pre>
<p>15</p> <p><input type="checkbox"/></p>	<p>Issue the command to activate the flash on the standby MASP.</p>	<p><b>act-flash:loc=XXXX</b></p> <p>(Where XXXX is the location for the Standby MASP.)</p>
<p>16</p> <p><input type="checkbox"/></p>	<p>Response to the activate command is displayed.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y act-flash:loc=XXXX Command entered at terminal #10.  ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y FLASH Memory Activation for card XXXX Started.  ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y FLASH Activation for card XXXX Completed.</pre>
<p>17</p> <p><input type="checkbox"/></p>	<p>Issue the command to init active location.</p>	<p><b>init-card:loc=YYYY</b></p> <p>(Where YYYY is location of active MASP)</p>
<p>18</p> <p><input type="checkbox"/></p>	<p>Response to initialize command is displayed.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y * 0261.0013 * CARD XXXX OAMHC Card is isolated from the system           ASSY SN: xxxxxxxx  ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y 5038.0014 CARD XXXX OAMHC Card is present           ASSY SN: xxxxxxxx</pre>
<p>19</p> <p><input type="checkbox"/></p>	<p>Issue the command to log back in to the system.</p>	<p><b>login:uid=XXXXXX</b></p> <p>(Where XXXXXX is a valid login ID)</p>
<p>20</p> <p><input type="checkbox"/></p>	<p>Response to login command is displayed.</p> <p>Ignore any login failure message.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y User logged in on terminal nn.  ; ? Login failures since last successful LOGIN Last successful LOGIN was on port ? on ??-??-?? @ ??:??:??</pre>
<p>21</p> <p><input type="checkbox"/></p>	<p>Issue the command to display active/inactive disk partitions.</p>	<p><b>send-msg:ds=1:da=h'5d:f=h'47:loc=XXXX</b></p> <p>(Where XXXX is location of newly active MASP)</p>
<p>22</p> <p><input type="checkbox"/></p>	<p>Response to command.</p> <p>Note: Look for the command response on a terminal with all output display groups set to yes (printer/ksr terminal port specified in Procedure 1, Step 6)</p>	<pre>Command Accepted - Processing tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Upgrade Phase x System Buffer sent has following attributes : Msg Length = H'0010 Dest Card = H'00fb Orig Subsys = H'0001           Dest Subsys = H'0001 Orig Appl ID = H'0030         Dest Appl ID = H'005d Func ID = H'0047             Bus/Ret/Sut = H'0002 Violation Ind = H'0000 User Message sent to location YYYY.  ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Upgrade Phase x ACTIVE OAM Partition Grp Info: num_group = 2 num_partitions_per_group = 2 active_partitions[] = 0 1 inactive_partitions[] = 2 3  ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Upgrade Phase x STANDBY OAM Partition Grp Info: num_group = 2 num_partitions_per_group = 2 active_partitions[] = 2 3 inactive_partitions[] = 0 1</pre>



**Procedure 22: Full Fallback using Fixed Disk as OAM conversion workspace – Case 3**

<p><b>31</b> <input type="checkbox"/></p>	<p>Determine the status of the GPLs running on the card location.</p>	<p><b>rept-stat-gpl:loc=XXXX</b>  (Where XXXX is the location for the Standby MASP.)</p>
<p><b>32</b> <input type="checkbox"/>  <input type="checkbox"/></p>	<p>Response from the retrieve command is displayed.  Verify that the both MASP are running the upgrade source release GPLs. Verify that no “ALM” indicator is displayed.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y GPL Auditing ON  GPL          CARD          RUNNING          APPROVED          TRIAL OAMHC        1115          134-074-000      -----          -----               BLMCAP          134-070-000      + 134-070-000     134-070-000  Command Completed.</pre>
<p><b>33</b> <input type="checkbox"/></p>	<p>Issue the command to activate the flash on the standby MASP.</p>	<p><b>act-flash:loc=YYYY</b>  (Where YYYY is the location for the Standby MASP.)</p>
<p><b>34</b> <input type="checkbox"/></p>	<p>Response to the activate command is displayed.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y FLASH Memory Activation for card XXXX Started. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y FLASH Activation for card XXXX Completed. ;</pre>
<p><b>35</b> <input type="checkbox"/></p>	<p>Execute Procedure 18.</p>	<p><b>Proceed to Recovery Procedure A to complete the recovery.</b></p>

## 6.4 Recovery Procedure C

### Procedure 23: Fall Back Procedure for Network Cards

<b>S T E P #</b>	This procedure captures the card and link status data required when performing a manual fallback of the network cards back to the source-release GPLs.	
<b>1</b> <input type="checkbox"/>	Issue the command to report card status.	<b>rept-stat-card</b>
<b>2</b> <input type="checkbox"/>	Response to the card status command is displayed.  <input type="checkbox"/> Record all network card applications present for future reference within the procedure.	<pre> tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y CARD  VERSION  TYPE      GPL      PST      SST      AST 1101  XXX-XXX-XXX DSM       SCCPHC   IS-NR    Active   ----- 1102  XXX-XXX-XXX DCM       IPLHC    IS-NR    Active   ----- 1103  XXX-XXX-XXX TSM       GLSHC    IS-NR    Fault    ----- 1105  XXX-XXX-XXX DCM       IPGHC    IS-NR    Active   ----- 1109  XXX-XXX-XXX HIPR      HIPR     IS-NR    Active   ----- 1110  XXX-XXX-XXX HIPR      HIPR     IS-NR    Active   ----- 1111  XXX-XXX-XXX MCPM     MCPHC    IS-ANR   Active   ----- 1113  XXX-XXX-XXX E5MCAP   OAMHC    IS-NR    Active   ----- 1114  ----- E5TDM    ----- IS-NR    Active   ----- 1115  XXX-XXX-XXX E5MCAP   OAMHC    IS-NR    Standby  ----- 1116  ----- E5TDM    ----- IS-NR    Active   ----- 1117  ----- E5MDAL   ----- IS-NR    Active   ----- 1201  XXX-XXX-XXX LIMT1    SS7HC    IS-NR    Active   ----- 1202  XXX-XXX-XXX LIMT1    SS7HC    IS-NR    Active   ----- 1209  XXX-XXX-XXX HIPR2    HIPR2    IS-NR    Active   ----- 1210  XXX-XXX-XXX HIPR2    HIPR2    IS-NR    Active   ----- 1211  XXX-XXX-XXX DCM       IPGHC    IS-NR    Active   ----- 1217  XXX-XXX-XXX TSM       GLSHC    IS-NR    Active   ----- 1218  XXX-XXX-XXX IPSM     IPSHC    IS-NR    Active   ----- Command Completed. ; </pre>
<b>3</b> <input type="checkbox"/>	Issue the card status command.	<b>rept-stat-card:appl=mcp</b>
<b>4</b> <input type="checkbox"/>	Response to the card status command is displayed.  If any MCPM cards are displayed, continue to next step. Otherwise, go to Step 7.	<pre> tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y CARD  VERSION  TYPE      GPL      PST      SST      AST 1111  134-064-000 MCPM     MCPHC    IS-NR    Active   ----- 1112  134-064-000 MCPM     MCPHC    IS-NR    Active   ----- Command Completed. ; </pre>
<b>5</b> <input type="checkbox"/>	Issue the send message command.  Repeat for each MCPM card.	<p><b>NOTE: This command causes the MCPM card to boot with an OBIT indicating a "USER INITIATED COLD RESTART". All Measurements data not sent to an FTP server is lost. Waiting for the next scheduled Measurement FTP transfer and use of the rept-ftp-meas command to save desired measurements can minimize these losses before proceeding with this step.</b></p> <p><b>send-msg:ds=8:da=h'17:f=22:loc=XXXX</b> (Where XXXX is location of the MCPM cards display in previous step.)</p>
<b>6</b> <input type="checkbox"/>	Response to the send message command is displayed.	<pre> tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y System Buffer sent has following attributes : Msg Length = H'0010 Dest Card = H'00f7 Orig Subsys = H'0001           Dest Subsys = H'0001 Orig Appl ID = H'004d         Dest Appl ID = H'001d Func ID = H'0016             Bus/Ret/Sut = H'0002 Violation Ind = H'0000 User Message sent to location XXXX. Command Completed. ; </pre>

**Procedure 23: Fall Back Procedure for Network Cards**

<p><b>7</b> <input type="checkbox"/></p>	<p>Issue the upgrade activation command.</p>	<p><b>ACT-UPGRADE:ACTION=CONVERTSTP:SRC=FIXED:THRES=75</b> (target release is contained on the inactive partition)</p> <p>(If another thres value is to be used see recommendation #5 in section 1.6)</p>
<p><b>8</b> <input type="checkbox"/>  <input type="checkbox"/></p>	<p>Response to the upgrade command is displayed.</p> <p>Completion notice of successful upgrade. If upgrade does not complete successfully, see recommendation # 7 in section 1.6</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.X.X-YY.Y.Y Upg Phase 3 Hardware Validation Test Started [ASM Obsolescence Test for all applications.] [DSM Obsolescence Test for MCP application.]  Hardware Validation Test Completed Successfully. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.X.X-YY.Y.Y Upg Phase 3 Starting network conversion... ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.X.X-YY.Y.Y Upg Phase 3 Upgrading MUX card 1109 ; Output continues until the following is displayed:  tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.X.X-YY.Y.Y Upg Phase 3 <b>Command Complete : Upgrade action completed successfully</b> ;</pre>
<p><b>9</b> <input type="checkbox"/></p>	<p>Go to Procedure 8, Step 7.</p>	<p>Complete all steps from Procedure 8, Step 7 to the end of Procedure 9.</p>

**Procedure 24: Restoring Flash-Based Service Cards**

<b>S T E P #</b>	This procedure restores Service Cards that are flash based. This group includes IPS, MCP, EROUTE, VSCCP, SCCPHC, IPSHC ERTHC, and SIPHC cards.	
	This procedure updates each card with the source release GPLs.	
<b>1</b> <input type="checkbox"/>	Issue the command to display the GPL status.	<b>rept-stat-gpl:gpl=YYYY</b> (Where YYYY is one of the Flash-Based service card types listed above.)
<b>2</b> <input type="checkbox"/>	Response to the command is displayed.  Record the CARD locations for all cards that have alarms:	tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.X.X-YY.Y.Y rept-stat-gpl:gpl=YYYY Command entered at terminal #10. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.X.X-YY.Y.Y GPL Auditing ON  APPL        CARD        RUNNING        APPROVED        TRIAL YYYYY      1101        XXX-XXX-XXX ALM    XXX-XXX-XXX    XXX-XXX-XXX YYYYY      1103        XXX-XXX-XXX ALM    XXX-XXX-XXX    XXX-XXX-XXX Command Completed. ;
<b>3</b> <input type="checkbox"/>	Issue the command to inhibit the card if the card is provisioned.	<b>inh-card:loc=XXXX</b> (Where XXXX is the card location of the cards determined in Step 2)
<b>4</b> <input type="checkbox"/>	Response to the inhibit command is displayed.  Wait for the "Command completed" response before proceeding.	tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.X.X-YY.Y.Y Card has been inhibited. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.X.X-YY.Y.Y Command Completed.
<b>5</b> <input type="checkbox"/>	Issue the command to initialize the flash memory.	<b>flash-card:code=appr:force=yes:loc=XXXX</b>  NOTE: this command causes the card to boot.
<b>6</b> <input type="checkbox"/>	Response to the flash card command is displayed.  Wait for command complete to indicate that the card is finished loading before proceeding.	tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.X.X-YY.Y.Y flash-card:code=appr:force=yes:loc=XXXX Command entered at terminal #10. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.X.X-YY.Y.Y Command Completed.
<b>7</b> <input type="checkbox"/>	Issue the command to allow the card <sup>18</sup> if the card is provisioned.	<b>alw-card:loc=XXXX</b> (Where XXXX is the card location of the cards determined in Step2)  OR  <b>alw-card:loc=XXXX:data=persist</b> (Where XXXX is the location of an SCCP card determined in Step2)
<b>8</b> <input type="checkbox"/>	Response to the allow command is displayed. <sup>19</sup>  Wait for the card to finish loading before proceeding (approximately 30 seconds).	tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.X.X-YY.Y.Y alw-card:loc=1201 Command entered at terminal #10. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.X.X-YY.Y.Y Card has been allowed. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.X.X-YY.Y.Y Command Completed. ;

<sup>18</sup> Specifying the DATA=PERSIST parameter for SCCP application cards allows for warm restart if possible.

**Procedure 24: Restoring Flash-Based Service Cards**

<b>9</b> <input type="checkbox"/>	Repeat Steps 3 – 8 for each card in the current group that has an alarm.	
<b>10</b> <input type="checkbox"/>	Repeat steps 1-9 for each group of cards (VSCCP, ISP, MCP, EROUTE, SCCPHC, IPSHC, ERTHC, and SIPHC)	
<b>11</b> <input type="checkbox"/>	Issue the command to display the card status.	<b>rept-stat-card</b>
<b>12</b> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Response to the command is displayed.  Verify that all Flash-Based Service cards are IS-NR and are running the Source-Release GPL versions, as per your reference list of GPLs  For any such card that is not IS-NR or running the correct GPL, repeat Steps 3-4.	<pre> tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y rept-stat-card Command entered at terminal #10. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y CARD  VERSION      TYPE      GPL      PST      SST      AST 1101  XXX-XXX-XXX    DSM      VSCCP    IS-NR    Active   ----- 1102  XXX-XXX-XXX    DSM      VSCCP    IS-NR    Active   ----- 1103  XXX-XXX-XXX    TSM      GLSHC    IS-NR    Active   ----- 1104  XXX-XXX-XXX    TSM      GLSHC    IS-NR    Active   ----- 1105  XXX-XXX-XXX    LIMDS0   SS7ML    IS-NR    Active   ----- 1109  XXX-XXX-XXX    HIPR     HIPR     IS-NR    Active   ----- 1110  XXX-XXX-XXX    HIPR     HIPR     IS-NR    Active   ----- 1111  XXX-XXX-XXX    LIMT1    SS7HC    IS-NR    Active   ----- 1113  XXX-XXX-XXX    E5MCAP   OAMHC    IS-NR    Active   ----- 1114  -----        E5TDM    -----  IS-NR    Active   ----- 1115  XXX-XXX-XXX    E5MCAP   OAMHC    IS-NR    Standby  ----- 1116  -----        E5TDM    -----  IS-NR    Active   ----- 1117  -----        E5MDAL   -----  IS-NR    Active   ----- 1201  XXX-XXX-XXX    LIMDS0   SS7ML    IS-NR    Active   ----- 1202  XXX-XXX-XXX    LIMDS0   SS7ML    IS-NR    Active   ----- 1203  XXX-XXX-XXX    LIMDS0   SS7ML    IS-NR    Active   ----- 1204  XXX-XXX-XXX    LIMDS0   SS7ML    IS-NR    Active   ----- Command Completed. ; </pre>

<sup>19</sup> If card is MCPM, it may boot with an Obit for Module EMM\_MCP.C Class 0001. This is expected behavior and is not service affecting.

**Procedure 25: Restoring Flash-Based Link Cards**

<p><b>S</b> <b>T</b> <b>E</b> <b>P</b> <b>#</b></p>	<p>Link cards include ATMANSI, IPLIM, IPLIMI, SS7IPGW, SS7ML (MPL/MIM/MPLT), IPGWI, ATMITU, VXWSLAN, SS7HC, SS7EPM, IPLHC, IPGHC, ATMHC and SLANHC cards. This procedure updates each card with the source release GPLs. <b>Note: Steps 3 through 8 are to be repeated for EACH Link card in the system.</b></p>
<p><b>1</b> <input type="checkbox"/></p>	<p>Issue the command to display the GPL status.</p> <pre>rept-stat-gp1:gp1=YYYY</pre> <p>(Where YYYY is one of the Flash-Based Link card types listed above.)</p>
<p><b>2</b> <input type="checkbox"/></p> <p>Response to the command is displayed.</p> <p>Record the CARD locations for all cards which have alarms:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.X.X-YY.Y.Y rept-stat-gp1:gp1=YYYY Command entered at terminal #10. ;  tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.X.X-YY.Y.Y GPL Auditing ON  APPL      CARD      RUNNING      APPROVED      TRIAL XXXXXXXX  1201      XXX-XXX-XXX ALM  XXX-XXX-XXX  XXX-XXX-XXX XXXXXXXX  1202      XXX-XXX-XXX ALM  XXX-XXX-XXX  XXX-XXX-XXX XXXXXXXX  1205      XXX-XXX-XXX ALM  XXX-XXX-XXX  XXX-XXX-XXX XXXXXXXX  1207      XXX-XXX-XXX ALM  XXX-XXX-XXX  XXX-XXX-XXX XXXXXXXX  1209      XXX-XXX-XXX      XXX-XXX-XXX  XXX-XXX-XXX XXXXXXXX  1211      XXX-XXX-XXX      XXX-XXX-XXX  XXX-XXX-XXX  Command Completed. ;</pre>
<p><b>3</b> <input type="checkbox"/></p>	<p>Issue command to display provisioned links.</p> <pre>rept-stat-card:loc=XXXX</pre> <p>(Where XXXX is a card in alarm from Step 2.)</p>
<p><b>4</b> <input type="checkbox"/></p> <p>Response displayed.</p> <p><input type="checkbox"/></p> <p>Note which links are IS-NR for this card.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.X.X-YY.Y.Y rept-stat-card:loc=XXXX Command entered at terminal #10. ;  tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.X.X-YY.Y.Y CARD  VERSION  TYPE  APPL  PST  SST  AST XXXX  XXX-XXX-XXX  XXXXXX  XXXXXX  IS-NR  Active  ----- ALARM STATUS = * 0021 Clock A for card failed, Clock B normal XXXXXXXX GPL version = XXX-XXX-XXX IMT BUS A = Conn IMT BUS B = Conn SLK A PST = IS-NR LS=XXXX CLLI=----- SLK B PST = IS-NR LS=XXXX CLLI=----- SLK A1 PST = OOS-MT LS=XXXX CLLI=----- SLK B1 PST = IS-NR LS=XXXX CLLI=----- SLK A2 PST = IS-NR LS=XXXX CLLI=----- SLK B2 PST = IS-NR LS=XXXX CLLI=----- SLK A3 PST = IS-NR LS=XXXX CLLI=----- SLK B3 PST = IS-NR LS=XXXX CLLI=-----  Command Completed. ;</pre>
<p><b>5</b> <input type="checkbox"/></p>	<p>Issue the command to initialize the flash memory.</p> <pre>flash-card:code=appr:force=yes:loc=XXXX</pre> <p>NOTE: this command causes the card to boot.</p>

**Procedure 25: Restoring Flash-Based Link Cards**

<p>6 <input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p>Response to the flash card command is displayed.</p> <p>Wait for command complete to indicate that the card is finished loading before proceeding.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.X.X-YY.Y.Y flash-card:code=appr:force=yes:loc=XXXX Command entered at terminal #10. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.X.X-YY.Y.Y Command Completed.</pre>
<p>7 <input type="checkbox"/></p>	<p>Issue command to display provisioned links.</p>	<pre>rept-stat-card:loc=XXXX</pre>
<p>8 <input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p>Response displayed.</p> <p>Verify that the links that were IS-NR in Step 4 are IS-NR now.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.X.X-YY.Y.Y rept-stat-card:loc=XXXX Command entered at terminal #10. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.X.X-YY.Y.Y CARD   VERSION   TYPE     APPL     PST       SST       AST XXXX   XXX-XXX-XXX   XXXXXX   XXXXXX   IS-NR     Active    XXXXX ALARM STATUS = ** 0228 REPT-EIF:FAC-E1 Port 1 LOS failure IMT   VERSION   = XXX-XXX-XXX PROM  VERSION   = XXX-XXX-XXX IMT BUS A = Conn IMT BUS B = Conn SLK A  PST      = IS-NR           LS=XXXX       CLLI=----- SLK B  PST      = OOS-MT         LS=XXXX       CLLI=----- Command Completed.</pre>
<p>9 <input type="checkbox"/></p>	<p>Repeat Steps 3 - 8 for each card in the group from Step 2 that has an alarm.</p>	
<p>10 <input type="checkbox"/></p>	<p>Repeat Steps 1-9 for each Flash-Based Link card group (Refer to 1.3 Software Release Numbering to see list of GPLs.)</p>	
<p>11 <input type="checkbox"/></p>	<p>Issue the command to display the GPL status.</p>	<pre>rept-stat-card</pre>
<p>12 <input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p>Response to the command is displayed.</p> <p>Verify that all Flash-Based Link cards are IS-NR and are running the Source-Release GPL versions, as per your reference list of GPLs</p> <p>For any card that is not IS-NR or running the correct GPL, repeat Steps 3-8.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.X.X-YY.Y.Y rept-stat-card Command entered at terminal #10. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.X.X-YY.Y.Y CARD   VERSION   TYPE     APPL     EST       SST       AST 1101   XXX-XXX-XXX   DSM      SCCPHC   IS-NR     Active    ----- 1102   XXX-XXX-XXX   DSM      SCCPHC   IS-NR     Active    ----- 1103   XXX-XXX-XXX   TSM      GLSHC   IS-NR     Active    ----- 1104   XXX-XXX-XXX   TSM      GLSHC   IS-NR     Active    ----- 1105   XXX-XXX-XXX   DCM      IPGHC   IS-NR     Active    ----- 1111   XXX-XXX-XXX   IPSM     IPSHC   IS-NR     Active    ----- 1113   XXX-XXX-XXX   E5MCAP   OAMHC   IS-NR     Active    ----- 1114   -----      E5TDM    -----   IS-NR     Active    ----- 1115   XXX-XXX-XXX   E5MCAP   OAMHC   IS-NR     Standby   ----- 1116   -----      E5TDM    -----   IS-NR     Active    ----- 1117   -----      E5MDAL   -----   IS-NR     Active    ----- 1201   XXX-XXX-XXX   LIMDS0   SS7ML   IS-NR     Active    ----- 1202   XXX-XXX-XXX   LIMDS0   SS7ML   IS-NR     Active    ----- 1203   XXX-XXX-XXX   LIMATM   ATMANSI IS-NR     Active    ----- 1204   XXX-XXX-XXX   IPSM     IPSHC   IS-NR     Active    ----- Command Completed.</pre>

Procedure 26: Restoring Mux Cards

<p><b>S</b> <b>T</b> <b>E</b> <b>P</b> <b>#</b></p>	<p>This procedure updates each card with the source release GPLs. Mux cards include HMUX, HIPR, and HIPR2 cards, which run BPHMUX, HIPR, and HIPR2 GPLs respectively.</p>
<p><b>1</b> <input type="checkbox"/></p>	<p>Issue the card status command to identify the MUX cards in the system.</p> <pre>rept-stat-gpl:gpl=YYYY (Where YYYY is one of the Flash-Based Mux card types listed above.)</pre>
<p><b>2</b> <input type="checkbox"/></p>	<p>Response to the command is displayed.</p> <p>Record the CARD locations for all Mux cards in the system:</p> <pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y rept-stat-gpl:gpl=YYYY Command entered at terminal #10. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y GPL Auditing ON APPL      CARD      RUNNING      APPROVED      TRIAL YYYY      XX09      XXX-XXX-XXX ALM      XXX-XXX-XXX  XXX-XXX-XXX YYYY      XX10      XXX-XXX-XXX      XXX-XXX-XXX  XXX-XXX-XXX YYYY      XX09      XXX-XXX-XXX ALM      XXX-XXX-XXX  XXX-XXX-XXX YYYY      XX10      XXX-XXX-XXX      XXX-XXX-XXX  XXX-XXX-XXX YYYY      XX09      XXX-XXX-XXX      XXX-XXX-XXX  XXX-XXX-XXX YYYY      XX10      XXX-XXX-XXX ALM      XXX-XXX-XXX  XXX-XXX-XXX YYYY      XX09      XXX-XXX-XXX      XXX-XXX-XXX  XXX-XXX-XXX YYYY      XX10      XXX-XXX-XXX      XXX-XXX-XXX  XXX-XXX-XXX Command Completed. ;</pre>
<p><b>3</b> <input type="checkbox"/></p>	<p>Enter the command to initialize the FLASH on the next Mux card on the current bus.</p> <pre>init-flash:loc=XXZZ:code=appr (Where XX = is a shelf number and, ZZ depends on which bus is being flashed. 09 is bus A; 10 is bus B.)</pre>
<p><b>4</b> <input type="checkbox"/></p>	<p>Response to the flash initialization is shown.</p> <pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y init-flash:loc=XX09:code=appr Command entered at terminal #10. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y FLASH Memory Download for card XXZZ Started. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y FLASH Memory Download for card XXZZ Completed. ;</pre>
<p><b>5</b> <input type="checkbox"/></p>	<p>Repeat steps 1-4 for each Mux card type on the current bus.</p> <p><b>NOTE:</b> Steps 1-4 must be performed for all MUX card types on one bus before performing these steps for any MUX card types on the other bus.</p>
<p><b>6</b> <input type="checkbox"/></p>	<p>Enter the command to initialize the current bus.</p> <pre>init-mux:bus=x<sup>20</sup> (Where x = A or B, depending on current bus: xx09 is bus A; xx10 is bus B.)</pre>
<p><b>7</b> <input type="checkbox"/></p>	<p>Response to the initialization command is displayed.</p> <pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y init-mux:bus=a Command entered at terminal #10. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y 5080.0014      CARD XXZZ YYYY      Card is present ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y 5081.0014      CARD XXZZ YYYY      Card is present ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y * 5082.0004 * GPL SYSTEM YYYY      Card is running non-activated GPL</pre>

<sup>20</sup> Warning: Do not use the FORCE= parameter. Use of this parameter may result in network outage. Analysis of the alternate bus is required.

**Procedure 26: Restoring Mux Cards**

<p><b>8</b> <input type="checkbox"/></p>	<p>Issue the command to activate the flash on the next MUX card on the current bus.</p>	<p><b>act-flash:loc=XXZZ</b> (Where XX = is a shelf number and, ZZ depends on which bus is being flashed. 09 is bus A; 10 is bus B.)</p>
<p><b>9</b> <input type="checkbox"/></p>	<p>Response to the activate command is displayed.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y act-flash:loc=XXZZ Command entered at terminal #10. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y FLASH Memory Activation for card XXZZ Started. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y FLASH Activation for card XXZZ Completed. ;</pre>
<p><b>10</b> <input type="checkbox"/></p>	<p>Repeat steps 8-9 for each MUX card on the current bus (A or B.)</p>	
<p><b>11</b> <input type="checkbox"/></p>	<p>Repeat steps 3-10 for the second bus (A or B.)</p>	
<p><b>12</b> <input type="checkbox"/></p>	<p>Issue the command to display the MUX card GPL status.</p>	<p><b>rept-stat-gpl:gpl=YYYY</b> (Where YYYY is bphmux for HMUX cards, hipr for HIPR cards, or hipr2 for HIPR2 cards.)</p>
<p><b>13</b> <input type="checkbox"/></p>	<p>Verify that all MUX card types are running the approved GPL.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y rept-stat-gpl:gpl=YYYY Command entered at terminal #10. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y GPL Auditing ON  APPL      CARD      RUNNING      APPROVED      TRIAL YYYY      XX09      XXX-XXX-XXX  XXX-XXX-XXX  XXX-XXX-XXX YYYY      XX10      XXX-XXX-XXX  XXX-XXX-XXX  XXX-XXX-XXX YYYY      XX09      XXX-XXX-XXX  XXX-XXX-XXX  XXX-XXX-XXX YYYY      XX10      XXX-XXX-XXX  XXX-XXX-XXX  XXX-XXX-XXX YYYY      XX09      XXX-XXX-XXX  XXX-XXX-XXX  XXX-XXX-XXX YYYY      XX10      XXX-XXX-XXX  XXX-XXX-XXX  XXX-XXX-XXX YYYY      XX09      XXX-XXX-XXX  XXX-XXX-XXX  XXX-XXX-XXX YYYY      XX10      XXX-XXX-XXX  XXX-XXX-XXX  XXX-XXX-XXX Command Completed. ;</pre>
<p><b>14</b> <input type="checkbox"/></p>	<p>Repeat steps 12-13 for all MUX card types.</p>	

## Appendix A. Upgrading flash-based GPL on non-in-service and unprovisioned network cards.

### Procedure 27: Flashing Inactive Cards

<b>S T E P #</b>	This procedure determines any BPHCAP, BPHCAPT, BPDCM, BPMPL, BPMPLT, BLIXP, or BLMCAP cards that are inhibited, and updates each card with its target release GPLs. (See section 1.3 for complete list of flash GPLs.)	
<b>1</b> <input type="checkbox"/>	Issue the command to display the GPL status.	<b>rept-stat-gpl:gpl=XXXX</b> (Where XXXX is the GPL listed in the header of the procedure.)
<b>2</b> <input type="checkbox"/>  <input type="checkbox"/>	Response to the command is displayed.  Record any card which shows an alarm:  _____  _____  _____	tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.X.X-YY.Y.Y rept-stat-gpl:gpl=XXXX Command entered at terminal #10. ;  tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.X.X-YY.Y.Y GPL Auditing ON  APPL        CARD        RUNNING        APPROVED        TRIAL XXXXXX    1101        xxx-xxx-xxx    xxx-xxx-xxx    xxx-xxx-xxx XXXXXX    1103        xxx-xxx-xxx    xxx-xxx-xxx    xxx-xxx-xxx XXXXXX    1111        xxx-xxx-xxx    ALM            xxx-xxx-xxx    xxx-xxx-xxx Command Completed. ;
<b>3</b> <input type="checkbox"/>	Issue the status command for specific card	<b>rept-stat-card:loc=XXXX</b> (Where XXXX is the card location recorded in the previous step.)
<b>4</b> <input type="checkbox"/>	Response to the command is displayed.  If the PST for the card is OOS-MT-DSBLD or the command is rejected with MTT error E2144 <sup>21</sup> , go to step 7.	tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.X.X-YY.Y.Y CARD    VERSION    TYPE        APPL        PST        SST        AST 1111    -----    DSM        VS CCP     OOS-MT-DSBLD    Manual    --- ALARM STATUS        = No Alarms. BPDCM GPL version    = 002-115-000 IMT BUS A            = ----- IMT BUS B            = ----- SCCP % OCCUP         = 0% Command Completed.
<b>5</b> <input type="checkbox"/>	Issue the command to inhibit card.	<b>inh-card:loc=XXXX</b>
<b>6</b> <input type="checkbox"/>	Response to the command is displayed.	tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.X.X-YY.Y.Y Card has been inhibited. ;  tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.X.X-YY.Y.Y Command Completed. ;
<b>7</b> <input type="checkbox"/>	Issue the command to flash all GPLs on the card.	<b>flash-card:code=appr:loc=XXXX</b>  <b>NOTE:</b> this command causes the card to boot.
<b>8</b> <input type="checkbox"/>	Response to the flash command is displayed.  Wait for the card to finish loading before proceeding.	tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.X.X-YY.Y.Y flash-card:code=appr:loc=XXXX Command entered at terminal #10. ;  tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.X.X-YY.Y.Y Command Completed. ;

<sup>21</sup> E2144 Cmd Rej: Location invalid for hardware configuration

**Procedure 27: Flashing Inactive Cards**

<p><b>9</b> <input type="checkbox"/></p>	<p>If steps 5 &amp; 6 were executed, issue the command to allow card.</p>	<p><b>a1w-card:loc=XXXX</b></p>
<p><b>10</b> <input type="checkbox"/></p>	<p>Response to the command is displayed.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.X.X-YY.y.y Card has been allowed. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.X.X-YY.y.y Command Completed. ;</pre>
<p><b>11</b> <input type="checkbox"/></p>	<p>Repeat Steps 3 – 10 for all cards recorded in step 2.</p>	
<p><b>12</b> <input type="checkbox"/></p>	<p>Repeat Steps 1 – 11 for each group of Flash-Based cards (see section 1.3.)</p>	

### Appendix B. Target Release Software Download

The following procedure is a reference for the commands that will download an Eagle software release to the inactive partition group of the TDM from either a remote FTP server or from the thumb drive containing the upgrade target release for the E5-MASP. This procedure assumes that Tekelec has completed the rollout of the Server Software Delivery (SSD) solution for the Eagle product.

The following items are required before the release can be downloaded to the Eagle from a FTP server:

- E5-IPSM card defined, configured, and IS-NR
- DIST application FTP server provisioned
- DIST application FTP server downloaded with target release software

#### Procedure 28: Download Target Release to Inactive Partition

<b>S T E P #</b>	<p>This procedure downloads the target release to inactive partition of the TDMs.</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 TEKELEC CUSTOMER CARE CENTER AND ASK FOR <u>UPGRADE ASSISTANCE</u>.</p>	
<b>1</b> <input type="checkbox"/>	<p>If system is running the E5-OAM platform, remove the thumb drives from the E5-MASPs.</p>	
<b>2</b> <input type="checkbox"/>	<p>If downloading the upgrade target release from an FTP server, continue, otherwise go to step 5.</p>	
<b>3</b> <input type="checkbox"/>	<p>Issue the command to display the status of the IPSM cards.</p>	<p><b>rept-stat-card:appl=ips</b></p>
<b>4</b> <input type="checkbox"/>  <input type="checkbox"/>	<p>Response from the command is displayed.</p>  <p>Verify there is an IPSM card running the IPSHC gpl and that the card is IS-NR. If no such card present in the system this procedure cannot be executed.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y CARD  VERSION  TYPE    GPL    PST      SST      AST 1101   XXX-XXX-XXX IPSM    IPSHC  IS-NR     Active   -----</pre>
<b>5</b> <input type="checkbox"/>	<p>Issue the command to display database status of both TDM partitions.</p>	<p><b>act-upgrade:action=dbstatus</b></p>

**Procedure 28: Download Target Release to Inactive Partition**

<p><b>6</b></p> <p><input type="checkbox"/></p> <p>Record the card locations of the MASPs:</p> <p>Act MASP _____</p> <p>Stby MASP _____</p> <p><input type="checkbox"/></p> <p>Verify if either of the inactive partitions has not been formatted. Mark below. Example shows that inactive partition of 1116 not formatted.</p> <p>If a database LEVEL, VERSION or STATUS is displayed the inactive partition has been formatted.</p> <p><input type="checkbox"/></p> <p>Disk formatted.</p> <p>1114 _____</p> <p>1116 _____</p>	<p>Response to the command is displayed.</p> <p>Record the card locations of the MASPs:</p> <p>Act MASP _____</p> <p>Stby MASP _____</p> <p>Verify if either of the inactive partitions has not been formatted. Mark below. Example shows that inactive partition of 1116 not formatted.</p> <p>If a database LEVEL, VERSION or STATUS is displayed the inactive partition has been formatted.</p> <p>Disk formatted.</p> <p>1114 _____</p> <p>1116 _____</p>	<pre> tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Upg Phase x DATABASE STATUS: &gt;&gt; OK &lt;&lt;       TDM 1114 ( STDBY)          TDM 1116 ( ACTV )       C  LEVEL          TIME LAST BACKUP      C  LEVEL          TIME LAST BACKUP ----- FD BKUP Y          XXX YY-MM-DD hh:mm:ss TTTT Y          XXX YY-MM-DD hh:mm:ss TTTT FD CRNT Y          XXX YY-MM-DD hh:mm:ss TTTT Y          XXX YY-MM-DD hh:mm:ss TTTT       MCAP 1113          MCAP 1115 ----- RD BKUP -          -          -          -          -          -          -          - USB BKP -          -          -          -          -          -          -          -  CARD/APPL  LOC  C  T  LEVEL          TIME LAST UPDATE          VERSION          STATUS ----- OAM-RMV    1113  -  -  -          -          -          - TDM-CRNT   1114  Y  N  XXX          YY-MM-DD hh:mm:ss          XXX-XXX-XXX     NORMAL TDM-BKUP   1114  Y  -  XXX          YY-MM-DD hh:mm:ss          XXX-XXX-XXX     NORMAL OAM-RMV    1115  -  -  -          -          -          - OAM-USB    1115  -  -  -          -          -          - TDM-CRNT   1116  Y  N  XXX          YY-MM-DD hh:mm:ss          XXX-XXX-XXX     NORMAL TDM-BKUP   1116  Y  -  XXX          YY-MM-DD hh:mm:ss          XXX-XXX-XXX     NORMAL  INACTIVE PARTITION GROUP CARD/APPL  LOC  C  T  LEVEL          TIME LAST UPDATE          VERSION          STATUS ----- TDM-CRNT   1114  Y  -  ZZZ          YY-MM-DD hh:mm:ss          ZZZ-ZZZ-ZZZ     UPG 3 TDM-BKUP   1114  Y  -  ZZZ          YY-MM-DD hh:mm:ss          ZZZ-ZZZ-ZZZ     UPG 3 TDM-CRNT   1116  -  -  -          -          -          - TDM-BKUP   1116  -  -  -          -          -          -                     </pre>
<p><b>7</b></p> <p><input type="checkbox"/></p>	<p>If either of the inactive partitions has not been formatted continue, otherwise go to Step 31.</p>	
<p><b>8</b></p> <p><input type="checkbox"/></p>	<p>Issue the command to retrieve measurement setup.</p>	<p><b>rtrv-meas-sched</b></p>
<p><b>9</b></p> <p><input type="checkbox"/></p> <p>Record if collection is on or off:</p> <p>_____</p> <p>If COLLECT=ON, continue to next step. Otherwise, go to Step 12.</p>	<p>Response to retrieve command is displayed.</p> <p>Record if collection is on or off:</p> <p>_____</p> <p>If COLLECT=ON, continue to next step. Otherwise, go to Step 12.</p>	<pre> tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y COLLECT          = off SYSTOT-STP      = (off) SYSTOT-TT       = (off) SYSTOT-STPLAN   = (off) COMP-LNKSET     = (off) COMP-LINK       = (off) MTCN-STP        = (on) MTCN-LINK       = (on) MTCN-STPLAN     = (on) MTCN-LNKSET     = (on)                     </pre>
<p><b>10</b></p> <p><input type="checkbox"/></p>	<p>Issue the command to turn off measurement collection.<sup>22</sup></p>	<p><b>chg-meas:collect=off</b></p>
<p><b>11</b></p> <p><input type="checkbox"/></p>	<p>Response to the change command is displayed.</p>	<pre> tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y CHG-MEAS: MASP A - COMPLTD                     </pre>
<p><b>12</b></p> <p><input type="checkbox"/></p>	<p>If the inactive partition of the standby MASP has not been formatted continue, otherwise go to Step 26.</p>	

<sup>22</sup> If executed, this step causes the database level to increment.

## Procedure 28: Download Target Release to Inactive Partition

13 <input type="checkbox"/>	Issue the command to display security log status.	<b>rept-stat-secu log</b>
14 <input type="checkbox"/> <input type="checkbox"/>	Response to the command is displayed.  If the ENTRIES column displays any value other than 0 for the Standby ROLE, proceed to the next step.  Otherwise, go to step 21	<pre> tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y rept-stat-secu log Command entered at terminal #10. ; tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y -- SINCE LAST UPLOAD -- OLDEST NEWEST LAST LOC ROLE ENTRIES %FULL OFLO FAIL RECORD RECORD UPLOAD 1114 Active 19 1 No No 99-01-01 99-01-01 00-00-00 13:43:37 14:08:12 00:00:00 1116 Standby 0 0 No No 99-01-01 99-01-01 99-01-01 13:39:39 13:43:10 14:07:59 ; </pre>
15 <input type="checkbox"/>	Issue the command to copy the security log from the standby disk.	<b>copy-secu log:slog=stb:dfile=upg.appB</b>
16 <input type="checkbox"/> <input type="checkbox"/>	Response to the copy security log command is displayed.  If this command fails, proceed to next step. Otherwise, go to Step 21.	<pre> tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y Security log on TDM 111X copied to file upg.appB on TDM 111Y ; tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y 0468.0177 SECULOG 111X Security log exception cleared ; </pre>
17 <input type="checkbox"/>	Issue the command to display the FTA directory.	<b>disp-fta-dir</b>
18 <input type="checkbox"/> <input type="checkbox"/>	Response to the command is displayed.  If there are any files that need to be saved, they need to be removed via a file transfer. If this is necessary, contact Tekelec Customer Care Center for further information.	<pre> tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y File Transfer Area Directory of fixed disk 1114 ; FILENAME LENGTH LAST MODIFIED LBA YYMMDDs.log 2560256 99-01-03 10:18:44 388769 YYMMDDa.log 2560256 99-01-03 10:19:20 393770 m60_lnp.csv 0 99-01-03 13:10:38 398771 3 File(s) 21093376 bytes free ; </pre>
19 <input type="checkbox"/>	Issue the command to delete ALL files in the transfer area.	<b>dlt-fta:all=yes</b>
20 <input type="checkbox"/>	Response to the delete command is displayed.	<pre> tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y dlt-fta:all=yes:loc=XXXX Command entered at terminal #10. ; </pre>
21 <input type="checkbox"/>	Issue the command to format the inactive partition of the standby MASP.	<b>format-disk:prtnggrp=inactive:type=fixed:force=yes:low=no</b>
22 <input type="checkbox"/>	Response from the format disk command is displayed.	<pre> tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y Format-disk of system fixed disk started. Extended processing required, please wait. ; tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y Format-disk of system fixed disk complete. ; </pre>
23 <input type="checkbox"/>	Issue the command to display database status of both TDM partitions.	<b>act-upgrade:action=dbstatus</b>

**Procedure 28: Download Target Release to Inactive Partition**

<p>24</p> <p><input type="checkbox"/></p> <p>Verify the inactive partition of the standby has been formatted. And the active partition is valid.</p> <p><input type="checkbox"/></p> <p>If a database LEVEL, VERSION or STATUS is displayed the inactive partition has been formatted.</p> <p><input type="checkbox"/></p> <p>If the database LEVEL of the active partition of the active and standby are not the same stop the procedure and contact Tekelec Customer Care Center.</p>	<p>Response to the command is displayed.</p>	<pre> tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y DATABASE STATUS: &gt;&gt; OK &lt;&lt;       TDM 1114 ( STDBY )                TDM 1116 ( ACTV )       C  LEVEL      TIME LAST BACKUP    C  LEVEL      TIME LAST BACKUP ----- FD BKUP Y      XXX  YY-MM-DD hh:mm:ss TTTT Y      XXX  YY-MM-DD hh:mm:ss TTTT FD CRNT Y      XXX  YY-MM-DD hh:mm:ss TTTT Y      XXX  YY-MM-DD hh:mm:ss TTTT       MCAP 1113                          MCAP 1115 ----- RD BKUP -      -      -      -      -      -      -      - USB BKP -      -      -      -      -      -      -      -  CARD/APPL  LOC  C  T  LEVEL      TIME LAST UPDATE  VERSION      STATUS ----- OAM-RMV    1113 -  -  -      -      -      -      - TDM-CRNT   1114 Y  N  XXX      YY-MM-DD hh:mm:ss XXX-XXX-XXX  NORMAL TDM-BKUP   1114 Y  -  XXX      YY-MM-DD hh:mm:ss XXX-XXX-XXX  NORMAL OAM-RMV    1115 -  -  -      -      -      -      - OAM-USB    1115 -  -  -      -      -      -      - TDM-CRNT   1116 Y  N  XXX      YY-MM-DD hh:mm:ss XXX-XXX-XXX  NORMAL TDM-BKUP   1116 Y  -  XXX      YY-MM-DD hh:mm:ss XXX-XXX-XXX  NORMAL  INACTIVE PARTITION GROUP CARD/APPL  LOC  C  T  LEVEL      TIME LAST UPDATE  VERSION      STATUS ----- TDM-CRNT   1114 N  -  1      YY-MM-DD hh:mm:ss ZZZ-ZZZ-ZZZ  NORMAL TDM-BKUP   1114 N  -  1      YY-MM-DD hh:mm:ss ZZZ-ZZZ-ZZZ  NORMAL TDM-CRNT   1116 -  -  -      -      -      -      - TDM-BKUP   1116 -  -  -      -      -      -                     </pre>
<p>25</p> <p><input type="checkbox"/></p>	<p>If the inactive partition of the active MASP has not been formatted continue, otherwise go to Step 31.</p>	<p>;</p>
<p>26</p> <p><input type="checkbox"/></p>	<p>Issue the command to boot the Active MASP recorded in Step 6.</p>	<p><b>init-card:loc=XXXX</b> (Where the XXXX is the location of the active MASP record in a previous)</p>
<p>27</p> <p><input type="checkbox"/></p>	<p>Response to init card command is displayed.</p>	<pre> tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y * 0261.0013 * CARD 111X EOAM      Card is isolated from the system       ASSY SN: xxxxxxxx ;  tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y 5001.0009  CARD 111X EOAM      MASP became active ;  tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y 5038.0014  CARD XXXX EOAM      Card is present       ASSY SN: xxxxxxxx ;                     </pre>
<p>28</p> <p><input type="checkbox"/></p>	<p>Issue the command to log back in to the system.</p>	<p><b>login:uid=XXXXXX</b> (Where XXXXXX is a valid login ID)</p>
<p>29</p> <p><input type="checkbox"/></p>	<p>Response to login command is displayed.</p> <p>Ignore any login failure message.</p>	<pre> tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y       User logged in on terminal 10. ;  ? Login failures since last successful LOGIN Last successful LOGIN was on port ? on ??-??-?? @ ??:?:??                     </pre>
<p>30</p> <p><input type="checkbox"/></p>	<p>Repeat step 13 – 25.</p>	
<p>31</p> <p><input type="checkbox"/></p>	<p>If downloading the upgrade target release from an FTP server, continue,</p> <p>Otherwise, insert upgrade media into drive slot and go to step 34.</p>	<p><b>Once inserted, allow time for the upgrade media to be detected by the system.</b></p> <p><b>For E5-MASP systems, the USB drive is inserted in the flush mounted USB port on the active E5-MASP.</b></p>

**Procedure 28: Download Target Release to Inactive Partition**

<p><b>32</b> <input type="checkbox"/></p>	<p>Issue command to retrieve the FTP servers provisioned on the system.</p>	<p><b>rtrv-ftp-serv</b></p>
<p><b>33</b> <input type="checkbox"/></p>	<p>Response to the command is displayed.</p> <p>Verify that a software distribution, DIST, application server has been provisioned.</p> <p>If the DIST has not been provisioned, contact Tekelec Customer Care Center for assistance.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y APP          IPADDR          LOGIN          PRIO  PATH ----- DIST        XXX.XX.X.XX      aaaaaa        Z      aaaaaaaaaaaaaaaaaa No entries found ; ;</pre>
<p><b>34</b> <input type="checkbox"/></p>	<p>Issue command to retrieve the EAGLE target release software.</p>	<p><b>act-upgrade:action=getrel:release="xxx-xxxx-4xx_REVxx.tar.gz" :src=server</b> (downloading from the FTP server)</p> <p>(Where xxx-xxxx-4xx_REVxx.tar.gz is the name of the tar file that contains the upgrade target release software)</p> <p>or</p> <p><b>act-upgrade:action=getrel:release="xx.xx.xx-yy.yy.yy.tar.gz" :src=usb</b> (downloading from upgrade media)</p> <p>(Where the xx.xx.xx-yy.yy.yy is the release-build number of the upgrade target load (ex. 42.0.0-63.11.0.tar.gz).</p>
<p><b>35</b> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p>	<p>Response to the command is displayed.</p> <p>Command execution time: approximately 20 – 30 minutes.</p> <p>If the software release has been downloaded from the USB drive, disconnect the drive from the E5-MASP.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y Download release from zzzzzzz ; tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y Validate database release xx.xx.xx-yy.yy.yy.tar ; tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y Copy database release to inactive partition ; tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y Eagle Release successfully downloaded ; tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y Command Complete : Upgrade action completed successfully ;</pre>
<p><b>36</b> <input type="checkbox"/></p>	<p>If step 10 was executed, issue the command to turn the measurements collection on. Otherwise go to the end of the procedure.</p>	<p><b>chg-meas:collect=on</b></p>
<p><b>37</b> <input type="checkbox"/></p>	<p>Response to the change command is displayed.</p>	<pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y CHG-MEAS: MASP A - COMPLTD ;</pre>

### Appendix C. Entering upgrade software access key

**Procedure 29: Validate Upgrade Software Access Key**

<b>S T E P #</b>	<p>This procedure will validate the Upgrade Software Access Key against the upgrade target release.</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 TEKELEC CUSTOMER CARE CENTER AND ASK FOR <u>UPGRADE ASSISTANCE</u>.</p>	
1 <input type="checkbox"/>	<p>If a USB drive is present, remove it.</p>	<p><b>If server software delivery (SSD): no RMD should be inserted in drive slot.</b></p>
2 <input type="checkbox"/>	<p>Issue the command to validate the Upgrade Software Access Key.<sup>23</sup></p>	<p><b>chg-upgrade-config:sak=XXXXXXXXXXXXX:src=fixed</b></p> <p>(Where XXXXXXXXXXXXXXXX is the Software Access Key.)</p>
3 <input type="checkbox"/>  <input type="checkbox"/>	<p>Response to command is displayed.</p> <p>Verify the correct Upgrade target release is in the output.</p>	<pre> tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y chg-upgrade-config:key=XXXXXXXXXXXXX:src=zzzzz Command entered at terminal #6. ; tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y Upgrade target: EAGLE XX.x.x-YY.y.y ; tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y Command Completed. ;                     </pre>

<sup>23</sup> If SAK unavailable, contact Tekelec Customer Care Center.

## Appendix D. Supplemental information for Procedure 8, Step 2

### D.1 Samples of message from convertstp action for act-upgrade command

The following are illustrative of the messages displayed on the user terminal during the semantic check of the upgrade command in Procedure 8, step 2. Headers have been removed for brevity.

```

IMT Bus Check Started
;
IMT Bus Check Completed Successfully.
;
Hardware Validation Test Started
;
Hardware Validation Test Completed Successfully.
;
IP Route Conflict Validation Report
No conflicts with Eagle PVN and FCN found
End IP Route Conflict Validation Report.
;
Using inactive standby partitions for OAM conversion (disk=xxxxx)

```

The following are illustrative of the messages to be seen on the console during Procedure 8, step 2 of the upgrade procedure if the **fixed disk** is used for OAM conversion workspace. Headers and messages not directly output by upgrade have been omitted.

```

Using inactive standby partitions for OAM conversion (dest=fixed)
;
ACT-UPGRADE: MASP A - BLIXP GPL processing.
;
ACT-UPGRADE: MASP A - GPL uploaded.
;
Starting to format the Standby TDM...
;
Format-disk of standby fixed disk complete.
;
Starting to copy GPLs to Standby TDM from removable...
;
GPLs copy completed.
;
Tables conversion started...
;
NOTICE: Converting XXXX.TBL
;
Starting to copy system tables to Standby TDM from Active TDM...
;
Converting Standby OAM system partition.
Preserving the source-release DB version.
Conversion of Standby TDM has completed
;
Marking Standby TDM Upgrade Phase = 2...
;
Swapping Active and Inactive partition on Standby...
;
Standby MASP has not finished initializing - please wait...
;
SYSTEM TREE REBALANCING STARTED
;
Table xxxxxxx.tb1: REBALANCING COMPLETED
;
Table yyyyyyy.tb1: REBALANCING COMPLETED
;
12576 OF 12576 TREES REBALANCED
13 OF 13 TABLES REBALANCED
SYSTEM TREE REBALANCING COMPLETED
;
Standby MASP has not finished initializing - please wait...
;

```

```
; Starting to backup Standby TDM...
; ACT-UPGRADE: MASP B - Active MASP will reboot and be converted for upgrade.
; Starting to format the Standby TDM...
; Format disk in progress
; Format-disk of standby fixed disk complete.
; Starting to copy GPLs to Standby TDM from removable...
; NOTICE: Converting XXXX.TBL
; Starting to copy system tables to Standby TDM from Active TDM...
; Converting Standby OAM System partition.
Preserving the source-release DB version.
Conversion of Standby TDM has completed
; Marking Standby TDM Upgrade Phase = 2...
; Swapping Active and Inactive partition on Standby...
; Standby MASP has not finished initializing - please wait...
; Starting to backup Standby TDM...
; ACT-UPGRADE: OAM upgrade complete
ACT-UPGRADE: prepare to initialize network cards
; Starting network conversion...
; Upgrading n of m <APPL> cards [XXXX]
; Command in Progress : Network conversion in progress
; ACT-UPGRADE: Network conversion complete
; ACT-UPGRADE: Network upgrade complete
; Command Complete : Upgrade action completed successfully
; INFO: Provisioning subsystem is in duplex mode.
;
```

## D.2 Determination and Recovery of DDL Hunt during Upgrade

**NOTE: The following section should be completed with the assistance of Tekelec Customer Care Center.**

After loading its GPL and database tables, the last step required by an MTP card is to crossload its dynamic database (DDB) from adjacent cards. The DDB contains the status of all routes, linksets, and links provisioned in the system. The Dynamic Data Load (DDL) is the process where a loading MTP card obtains the current view of the network via downloading it from an already IS-NR network card. In order for a network card to download a proper view of the network status, the network must remain quiescent during the download. If an update to the DDB occurs, then the download aborts and restarts. Depending on the size of the network, it may take as long as 4 seconds to complete this process. Please note that the network must remain stable (no changes) during this phase for the download to complete successfully.

The card reports its PST as IS-ANR and its SST as DDL Hunt:

```
Card Failure: Card 1101 did not return to IS-NR.
Status of card 1101:  PST:  IS-ANR          SST:  DDL Hunt  AST:  -----
```

Please note this appendix addresses DDL during Upgrade. Refer to external reference [8] in section 1.2.1 for recovery in full function mode.

A system is considered unstable when provisioned and configured devices are cycling from an alarmed state to a clear state. Bouncing links, link congestion and discard, and DPC|Route transition have the most impact on the DDL Hunt state. Table 21 lists these conditions by UAM number and describes the recovery steps.

The guideline to determine if DDL Hunt is possible when a card boots and tries to reload is based on the number of DDB events, which causes network management messages to be generated. An event is one cycle of alarming and clearing:

```
1237.0236 ** SLK 1201,A1  tk|clset    REPT-LKF: not aligned
1240.0200    SLK 1201,A1                    RCVRY-LKF: link available
```

One event consists of two transactions, which generates two network management messages. Eight events in one minute causes sixteen messages which averages to a stability period of less than four seconds. This can range from eight events per one device to one event per eight devices.

**Table 21. Recovery from DDL Hunt by UAM.**

UAM	Device	Condition	Recovery
0236 0200	SLK	Bouncing Link	A) Issue DDB checksum SEND-MSG per internal Ref. [8] B) Issue CANC-SLK to deactivate the affected link
0264 – 0269	SLK	Link Congestion	A) Issue DDB checksum SEND-MSG per internal Ref. [8] B) Investigate the far-end and fix the far-end C) Issue CANC-SLK to deactivate the affected link
0270 – 0275	SLK	Link Discard	A) Issue DDB checksum SEND-MSG per internal Ref. [8] B) Investigate the far-end and fix the far-end C) Issue CANC-SLK to deactivate the affected link
0311 – 0313	Route	DPC Transition	A) Issue DDB checksum SEND-MSG per internal Ref. [8] B) Investigate the far-end and fix the far-end C) Issue CANC-SLK to deactivate the affected link
0314 – 0316	Route	Route Transition	A) Issue DDB checksum SEND-MSG per internal Ref. [8] B) Investigate the far-end and fix the far-end C) Issue CANC-SLK to deactivate the affected link

**Note: If the front-end switches activity, device may return to previous state.**



### Appendix E. Customer Sign OFF

#### Sign-Off Record

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

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

Sign your name, showing approval of this procedure, and fax this page and the above completed matrix to Tekelec, FAX # 919-460-3669.

**Customer: Company Name:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Site: Location:** \_\_\_\_\_

*[Include serial number, which was recorded in Procedure 1, Step15.]*

**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 will 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 F. Accessing Tekelec's Customer Support Site

Access to Tekelec's Customer Support site is restricted to current Tekelec customers. This section describes how to log into the Tekelec Customer Support site and locate a document. Viewing the document requires Adobe Acrobat Reader, which can be downloaded at [www.adobe.com](http://www.adobe.com).

1. Log into the Tekelec new Customer Support site at [support.tekelec.com](http://support.tekelec.com).  
**Note:** If you have not registered for this new site, click the **Register Here** link. Have your customer number available. The response time for registration requests is 24 to 48 hours.
2. Click the **Product Support** tab.
3. Use the Search field to locate a document by its part number, release number, document name, or document type. The Search field accepts both full and partial entries.
4. Click a subject folder to browse through a list of related files.
5. To download a file to your location, right-click the file name and select **Save Target As**.