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Network Systems Division Software Upgrade Procedure

Eagle Release 31.X & 32.X



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

Before upgrading your system, access Tekelec's Customer Support Site and review any Technical Service Bulletins (TSBs) that may be related to the upgrade.
Refer to Appendix D for instructions on accessing this site.

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

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CHANGE HISTORY

| Date | ENG Version # | ECN Revision # | Author | Description | Approved* (Yes/No) |
|-------------|------------------------------|---------------------------|----------------|---|-------------------------------|
| 7/01/03 | 1.0 | --- | Robert Kress | Initial document created. | No |
| 7/25/03 | 1.1 | | Robert Kress | Updates per peer review | No |
| 8/14/03 | 1.2 | | Robert Kress | Updates per peer review | Yes |
| 9/25/03 | 1.3 | A | L. Plesniarski | Preparing for external publication | Yes |
| 1/26/04 | 1.4 | | Phil Farrell | Updated for PR 52715,55448, & 55452. | No |
| 1/30/04 | 2.0 | | Phil Farrell | Publish after review | Yes |
| 2/7/04 | 2.1 | B | I. Sutcliffe | Prepared for external publication | Yes |
| 6/23/04 | 2.2 | | Phil Farrell | PR 56534: all measure to complete after inhibiting. PR 56630: handling TDM-GTI. | No |
| 7/2/04 | 3.0 | | Phil Farrell | Updates from review | Yes |
| 7/9/04 | 3.1 | C | I. Sutcliffe | Update to Tekelec contact information, prepared for external publication | Yes |
| 1/20/05 | 3.2 | | Robert Kress | Add Eagle release 32.x to the document | No |
| 2/18/05 | 3.3 | | Robert Kress | Updates per peer review and PR60681 | Yes |
| 5/25/05 | 3.4 | | Robert Kress | PR 83517: handle inhibited alarms | No |
| 6/27/05 | 4.0 | | Robert Kress | Changes per peer review | Yes |
| 8/2/05 | 4.1 | D | I. Sutcliffe | Prepared for publication; updated consolidated Tekelec Plano, TX address and System Healthcheck part number | Yes |

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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 an in-service EAGLE® based STP to EAGLE® Software Release 31.X or 32.X (including Release 31.0, 32.0 and any future 31/32 point release). The audience for this document includes Tekelec customers as well as these Eagle® NSD groups: Software Development, Product Verification, Documentation, and Customer Service including Software Operations and First Office Application. This document provides step-by-step instructions to execute any Release 31/32 upgrade.

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

1.2 References

1.2.1 External

None

1.2.2 Internal (Tekelec)

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

- [1] EAGLE Hardware Field Baseline, 820-2410-01, Tekelec.
- [2] EAGLE System Health Check, 909-4022-01 Rev B.
- [3] TEKELEC Acronym Guide, MS005077.doc, current revision
- [4] ENG 46/Engineering Release 46.0.0 Rel XX System Release Description, sys_e46.doc TEKELEC, Published.
- [5] ENG 47/Engineering Release 47.0.0 Rel XX System Release Description, sys_e47.doc TEKELEC, Published.
- [6] ENG 48/Engineering Release 48.0.0 Rel XX System Release Description, sys_e48.doc TEKELEC, Published
- [7] ENG 50/Engineering Release 50.0.0 Rel XX System Release Description, sys_e50.doc TEKELEC, Published
- [8] ENG 51/Engineering Release 51.0.0 Rel XX System Release Description, sys_e51.doc TEKELEC, Published
- [9] ENG 53/Engineering Release 53.0.0 Rel XX System Release Description, sys_e53.doc TEKELEC
- [10] EAGLE STP Release 31.0 Product Functional Specification, PF005145.doc, Rev1.2, TEKELEC
- [11] EAGLE STP Release 31.3 Product Functional Specification, PF005141.doc, Rev1.6, TEKELEC
- [12] EAGLE STP Release 31.4 Product Functional Specification, PF005167.doc, Rev1.1, TEKELEC
- [13] EAGLE STP Release 31.5 Product Functional Specification, PF005166.doc, Rev1.2, TEKELEC
- [14] EAGLE STP Release 31.6 Product Functional Specification, PF005149.doc, Rev1.5, TEKELEC
- [15] EAGLE STP Release 31.7 Product Functional Specification, PF005176.doc, Rev1.4, TEKELEC
- [16] EAGLE STP Release 31.8 Product Functional Specification, PF005180.doc, Rev1.1, TEKELEC
- [17] EAGLE STP Release 31.9 Product Functional Specification, PF005191.doc, Rev1.2, TEKELEC
- [18] EAGLE STP Release 31.10 Product Functional Specification, PF005177.doc, Rev1.8, TEKELEC
- [19] EAGLE STP Release 31.11 Product Functional Specification, PF005201.doc, Rev1.3, TEKELEC
- [20] EAGLE STP Release 31.12 Product Functional Specification, PF005198.doc, Rev1.1, TEKELEC
- [21] EAGLE STP Release 32.0 Product Functional Specification, PF005128.doc, Rev1.6, TEKELEC

1.3 GPL Version Numbers

To determine the correct GPL version numbers for the EAGLE® applications, refer to the appropriate internal release documents or to the *Release Notice* located on the Customer Support web site. Appendix D describes how to access the Customer Support web site. For FOA releases or Engineering prototype releases, refer to internal references [4],[5], [6], [7], [8], [9] in section 1.2.2.

1.4 Database Version Number

To determine the correct database version numbers for the EAGLE® release, refer to the appropriate internal release documents or to the *Release Notice* located on the Customer Support web site. Appendix D describes how to access the Customer Support web site. For FOA releases or Engineering prototype releases, refer to internal references [4],[5], [6], [7], [8], [9] in section 1.2.2.

If the database version is the same for both the source and target release, the upgrade phase indicator is not displayed when the system is booted onto the target release (procedure 8, step9) but is displayed after the upgrade command is executed (procedure 10, step 1). Most examples of this are point release upgrades such as between release 30.0, 30.1, & 30.2 as well as release 31.3, 31.4, & 31.5.

1.5 Acronyms

| | |
|--------|---|
| ASM | Application Services Module |
| AWA | Alternate Work Area |
| EOAM | Enhanced OAM |
| FAK | Feature Access Key |
| FOA | First Office Application |
| GA | General Availability |
| GLS | Generic Loading Service |
| GPL | Generic Program Load |
| GPSM | 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 |
| MDAL | Maintenance Disk and Alarm Card |
| MO | Magneto Optical (removable disk cartridge) |
| MOP | Method Of Procedure |
| MPS | Multi Purpose Server |
| OAM | Operations Administration and Maintenance |
| OAP | Operations, Administration and Maintenance Applications Processor |
| OOS-MT | Out Of Service - Maintenance |
| SEAS | Signaling Engineering and Administration System |
| STP | Signal Transfer Point |
| TDM | Terminal Disk Module |
| TPS | Transactions Per Second (feature) |
| UHC | Upgrade Health Check |

Table 1. Acronyms

1.6 Terminology

Table 2 provides a list of terms and their definitions used in this document.

| | |
|-------------------------------|---|
| Backout (abort) | The process to take a system back to a Source Release prior to completion of upgrade to Target release. Includes preservation of databases and system configuration. |
| Incremental upgrade | EAGLE: Upgrade to a maintenance release (external customers) or upgrade to a new build (Tekelec labs), i.e., 31.0.0 to 31.0.1. Note: there will be no database table changes in this type of upgrade |
| Intra-release upgrade | 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; a MOP is required in order to perform them. |
| Non-preserving upgrade | “Upgrade” that does not adhere to the standard goals of software upgrade methodology. The outcome of the execution is that the system is running on the Target Release, however the Source Release database is not preserved. |
| Rollback | The process to take an upgraded system from a Target Release back to a Source Release including preservation of databases and system configuration. Note: Rollback is not a planned activity and thus requires a MOP. |
| Source release | The software release from which the EAGLE® or IP7® is upgraded. In this document, examples of source releases are EAGLE® 29.x, and 30.x, and IP7® 7.0 and 8.0. Refer to the Upgrade section of References [10], [11] for valid source releases supported by this document |
| Target release | The software release to which the EAGLE® is upgraded. In this document, the target release is release 31.x or 32.x. |

Table 2. Terminology

1.7 Recommendations

1. It is recommended that some method be implemented to capture the command input and command-line and scroll-area output. If a terminal emulation application is being used which supports capturing, the application should be enabled. If no other method is available, input and output from the user terminal can be echoed to a configured printer. Feature 926 allows echoing to any serial terminal type. In EAGLE 29.0/IP7 7.0, the telnet terminal feature was introduced without the echo capability being supported. The preferred method is to echo to a KSR terminal that has capture ability.
2. It is recommended that measurement collection be retrieved prior to upgrade execution because, depending on source release, the data collected may not be persistent across the upgrade. Inhibiting measurements does NOT stop collection that is already in progress. 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 non MPS LNP 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.
4. It is recommended that the MPS NOT be shut down or inhibited.
5. It is recommended to issue the command in Procedure 10, Step 1 with **XX** equal to 75. In some circumstances, such as for a large system, it may be necessary to reduce this value. A system is considered a large system if it has at least 50 LIM cards running applications (SS7ANSI, CCS7ITU, ATMANSI, or SS7GX25). The threshold parameter is specified at 75 to ensure that 75% of links remain in service during the network conversion of the upgrade execution. This value allows for an expedited network upgrade while minimizing any risk to service interruption. If the system being upgraded meets this criteria, then issue the following command in Procedure 10, Step 1:

```
ACT-UPGRADE:ACTION=CONVERTSTP:THRES=75
```

It is not recommended to specify a threshold value other than what is stated above. Contact Tekelec Technical Services for verification, if any other threshold is desired service.

6. The upgrade procedure automatically determines whether to convert the OAM using the removable disk as the work space for table conversion, or whether to use the inactive partitions of the standby TDM fixed disk as this workspace. This decision is based on disk capacity and source release version. In general, fixed-disk conversion occurs for upgrades to release 30.0 or greater when both TDMs have capacity greater than 8GB. The user can force the use of the removable disk by specifying the parameter "disk=remove" in the act-upgrade command.
7. Release 29 supports an IP user interface telnet terminal. However, this terminal does not support echo and capture mode. Without this support the IP telnet terminal should not be used in the execution of this upgrade procedure.
8. The following commands obtain the current system status. If the upgrade terminates prior to successful completion, before re-starting the upgrade the following commands should be issued in addition to the diagnosis of the terminating condition. It is also recommended that the following commands be run in order to obtain the current system status prior to executing the upgrade. This status is not complete and inclusive, additional commands, which are deemed relevant, can be run at this time.

```
REPT-STAT-SYS
REPT-STAT-GPL:DISPLAY=ALL
REPT-STAT-CARD
REPT-STAT-SLK
REPT-STAT-TRBL
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® or IP7® STP from the source release to the target release.

Refer to the specific target release’s PFS for the description of its upgrade paths (section 1.2.2)

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

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

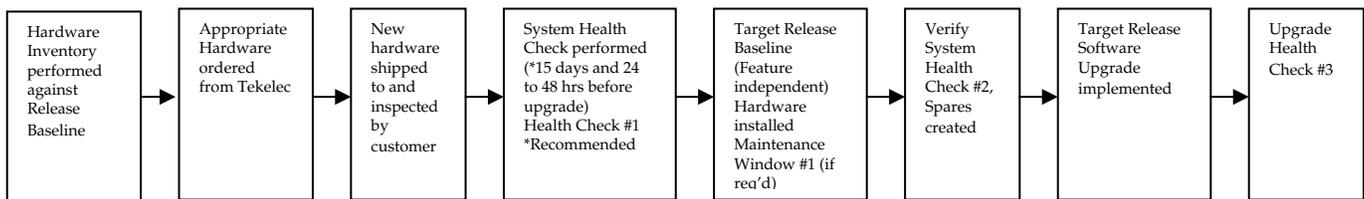


Figure 1. Upgrade Process

During the upgrade process, phase flags will be 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 8 step 9. The goal in doing this is to make this document describe the generic upgrade procedure.

Table 3 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.

| Release Displayed | Phase Indicator ¹ | 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 |

Table 3. Phases of Upgrade Execution

¹ 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® /IP7® STP to the Target Release software. The basic upgrade process and approximate time required is outlined in Table 4, Table 5, and Table 6 with the backout procedure shown Table 7.

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 four-hour 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 restriction that would prevent the upgrading of any peripheral in parallel with it.

3.1 Required Materials

- One (1) source release system removable cartridge.
- Two (2) target-release system removable cartridges at database level 1.
- A valid EAGLE login ID and password with all user privileges enabled.
- One (1) spare TDM at the source release: required in the event of recovery.
- Capability to capture data via a printer, PC, or modem to allow remote access for Tekelec TAC personnel.
- List of GPLs from section 1.3 to keep on hand for reference throughout the upgrade. If accessing the *Release Notice*, you will need the web site token card. Refer to Appendix D.

3.2 Pre-Upgrade Overview

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

| Phase | Elapsed Time (Hours: Minutes) | | Downtime (Hours: Minutes) | | Activity | Impact |
|-------|-------------------------------|-------|---------------------------|------|---|--------|
| | This Step | Cum. | This Step | Cum. | | |
| X | | | | | Software Upgrade Execution | |
| NA | 00:02 | 00:02 | NA | NA | Verifying Pre-Upgrade Requirements and Capturing Upgrade Data | None |
| NA | 00:03 | 00:05 | NA | NA | Determining OAP Status | None |
| NA | 00:02 | 00:07 | | | Retrieve System's Node-Level Processing Option Indicators | |
| NA | 00:49 | 00:56 | NA | NA | Backing Up the Database | None |
| NA | 00:30 | 01:26 | NA | NA | Updating the Source-Release Spare TDM | None |
| NA | 00:03 | 01:29 | NA | NA | Verifying All Databases | None |
| NA | 00:01 | 01:30 | NA | NA | Inserting Target-Release Upgrade System Cartridge | None |

Table 4. Pre-Upgrade Overview

3.3 Upgrade Execution Overview

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

| Phase | Elapsed Time (Hours : Minutes) | | Downtime (Hours : Minutes) | | Activity | Impact |
|------------------|--------------------------------------|-------|----------------------------------|------|---|--------------------------------------|
| | This Step | Cum. | This Step | Cum. | | |
| X | | | | | Software Upgrade Execution | |
| NA | 00:03 | 00:03 | NA | NA | Retrieve measurements data reports | None |
| 0 | 00:03 | 00:06 | NA | NA | Initializing MASP's to Run on Target-Release GPLs | Provisioning/maintenance prohibited. |
| 0 | | | | | OAM Conversion | |
| 0 | 00:01 | 00:07 | NA | NA | Verifying all Databases | None |
| 0-2 ² | 01:30 | 01:37 | NA | NA | OAM Conversion | None |
| 3 ³ | — | — | NA | NA | Network Conversion | None |

Table 5. Upgrade Execution Overview

3.4 Post Upgrade Overview

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

| Phase | Elapsed Time (Hours or Minutes) | | Downtime (Minutes) | | Activity | Impact |
|-------|---------------------------------------|-------|-----------------------|------|---|--------|
| | This Step | Cum. | This Step | Cum. | | |
| X | | | | | Completion of Session 1 | |
| 0-3 | 00:01 | 00:01 | NA | NA | Force the Download of the TDMs | . |
| 0-3 | 00:02 | 00:03 | NA | NA | Completing Upgrade/Return to Full-Function Mode | |
| NA | 00:15 | 00:18 | NA | NA | Reprovisioning OAP Links | |
| NA | 00:15 | 00:33 | NA | NA | Backing up Converted Database | |
| NA | 00:05 | 00:38 | NA | NA | Restoring OAP Links | |
| NA | 00:04 | 00:42 | NA | NA | Upgrading Removable Cartridges | |
| NA | 00:07 | 00:49 | NA | NA | Backing Up Fixed Disk | |
| NA | 00:07 | 01:56 | NA | NA | Upgrading Spare Fixed Disks | |
| NA | 00:05 | 01:01 | NA | NA | Verifying All Databases | |

Table 6. Post Upgrade Overview

² Time shown is average time for database conversion

³ See EAGLE System Health Check Appendix-A [2] to calculate time estimate for Network Conversion phase

3.5 Backout Procedure Overview

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

| Phase | Elapsed Time (Hours or Minutes) | | Downtime (Minutes) | | Activity | Impact |
|-------|------------------------------------|-------|-----------------------|------|---|--------|
| | This Step | Cum. | This Step | Cum. | | |
| x | This Step | Cum. | This Step | Cum. | Backout Setup Procedures | |
| NA | 00:01 | 00:01 | NA | NA | Load and Run Source OAM | |
| NA | 00:35 | 00:36 | NA | NA | Full Fallback using Removable Disk as OAM conversion workspace. Or 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 | |
| NA | 00:50 | 01:26 | NA | NA | Fall Back Procedure for Network Cards | |
| NA | 00:15 | 01:41 | NA | NA | Restoring Prom-Based Service Cards | |
| NA | 00:15 | 01:56 | NA | NA | Restoring Flash-Based Service Cards. | |
| NA | 00:15 | 02:11 | NA | NA | Restoring Prom-Based Link Cards | |
| NA | 00:15 | 02:26 | NA | NA | Restoring Flash-Based Link Cards | |
| NA | 00:10 | 02:36 | NA | NA | Restoring HMUX Cards | |
| NA | 00:15 | 03:16 | NA | NA | Flashing Inhibited Cards | |

Table 7. 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 TAC personnel).
- Perform pre-upgrade system health checks to establish that the system is fit to upgrade.

4.1 Hardware Upgrade Preparation

Before the upgrade execution, the customer site should have three source-release TDMs (fixed disks) and at least one source release removable cartridge. Two target-release system removable cartridges are shipped to site before the upgrade. Before the target release installation, the spare equipment inventory should be as shown in Table 8.

Equipment Inventory before Upgrade

| Equipment | In-service | Spare | Upgrade | Totals: |
|--------------------------|------------|-------|---------|---------|
| Source-release TDM | 2 | 1 | 0 | 3 |
| Source-release cartridge | 1 | 0 | 0 | 1 |
| Target-release TDM | 0 | 0 | 0 | 0 |
| Target-release cartridge | 0 | 0 | 2 | 2 |

Table 8. Equipment Inventory before Upgrade

During the procedure, both the active and standby in-service source-release 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 9. Note, the spare TDM and source-release cartridges 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.

| Equipment | In-service | Spare | Upgrade | Totals: |
|--------------------------|------------|-------|---------|---------|
| Source-release TDM | 0 | 0 | 1 | 1 |
| Source-release cartridge | 0 | 0 | 1 | 1 |
| Target-release TDM | 2 | 0 | 0 | 2 |
| Target-release cartridge | 1 | 1 | 0 | 2 |

Table 9. Spare Equipment after Upgrade

4.2 Software Upgrade Preparation

Release 31.x provides an upgrade methodology that utilizes an alternate work area (AWA) on the TDM hard drives. The AWA provides the work area for the database conversion process when both TDM disks have a storage capacity of 8GB or greater. The primary benefits of using the AWA during an upgrade are enhanced reliability with reduced upgrade time.

Along with the AWA upgrade methodology some procedures/steps have been included that differ from previous documents. These procedures deal mainly with how recovery operations are completed when the AWA is used during the upgrade. If a more detailed explanation on EAGLE upgrade methodology is needed contact Tekelec Technical Services.

If upgrading from an IP7 release (7.0 or 8.0) to EAGLE release 31.X, it is necessary that the part number and feature access key (FAK) for the EAGLE product feature control key be contained in the MOP. If the target release is EAGLE 31.0, after the upgrade is complete the product information in the system banner will be undefined until the key provided in the MOP is activated. Refer to the site specific MOP for part number, serial number, and feature access key information.

Although this document has been created to ensure simple, concise instructions, it is important that the person executing the procedures is familiar with the document and has a clear understanding of each operation being performed. There are several methods available for individuals to gain the needed experience with the document prior to execution on a live site.

5. SOFTWARE UPGRADE PROCEDURE

Call TAC 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 [2]. 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 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 state before the upgrade process is started. If unable to bring the cards IS-NR contact Tekelec Technical Services. If any card cannot be brought in-service or out-of-service, isolated, the card should be inhibited in Phase 2 (procedure 10). 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 GX25 and 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 shaded.
3. Relevant information is shaded within response steps.
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, *the technician performing the upgrade must initial each step*. A check box should be provided.
6. Captured data is required for future support reference if Tekelec Technical Services is not present during the upgrade.

5.1 Software Upgrade Execution – Session 1

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

| | | |
|----------------------------------|---|--|
| S T E P # | This procedure verifies that all pre-upgrade requirements have been met. | |
| | Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. | |
| | SHOULD THIS PROCEDURE FAIL, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR <u>UPGRADE ASSISTANCE</u> . | |
| 1 <input type="checkbox"/> | Complete pre-upgrade tasks | All tasks in Table 10 must be completed before continuing. |

| ✓ Tasks to be completed prior to upgrade execution | | |
|---|--|--|
| | | Perform hardware inventory. |
| | | Verify that all target-release baseline hardware has been installed. Note: Release 31.X baseline hardware includes GPSMII, HMUX and TDM-10. If these modules are not equipped the act-upgrade command will be rejected. Release 31.6 and above obsoletes the ASM card and the MCP application will only run on an EDSM card. |
| | | Verify that a full complement of EAGLE®/IP7® spares is available, including a source-release TDM. Note: This TDM's database should have been repaired in Upgrade Health Check [2]. |
| | | Verify that you have at least one source-release system removable cartridge with an up-to-date database. Note: This cartridge's database should have been backed up in Upgrade Health Check [2]. |
| | | Verify that you have two target-release system cartridges provided by Tekelec for upgrade. |
| | | 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 Technical Services. |
| | | 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. This should include the MOP with the necessary FAK and part number. [see section 4.2] |

Table 10. Pre-Upgrade Requirements

| | | |
|----------------------------|---|---|
| <input type="checkbox"/> 2 | Issue the command to display terminal status. | <pre>rtrv-trm</pre> |
| <input type="checkbox"/> 3 | Response to retrieve terminal command is displayed. | <pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y rtrv-trm Command entered at terminal #10. ;</pre> |
| <input type="checkbox"/> | Record the terminals in the TRM column that have TYPE of PRINTER ⁴ or OAP. Also record the terminal being used to enter commands (the user terminal). ⁵ | <pre>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 VT320 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</pre> |
| <input type="checkbox"/> | In this example, terminal 12 is a printer, terminal 10 is the user terminal, terminals 1 and 9 are the OAP terminal, and terminal 2 is KSR. | |
| <input type="checkbox"/> | PRINTER _____ ⁴ _____ | |
| <input type="checkbox"/> | OAP _____ _____ | |
| <input type="checkbox"/> | USER _____ ⁵ _____ | <pre>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</pre> |
| <input type="checkbox"/> | See recommendation #1 & #7 in section 1.7 | |
| <input type="checkbox"/> | If not echoing to the printer or KSR, go to step 8. | |
| <input type="checkbox"/> | Record the initial output group configuration for the user's and capture terminals. Also, record the user's TMOUT value. | <pre>USER _____ TMOUT _____ CAP _____</pre> |
| <input type="checkbox"/> 4 | Echo command input to capture terminal. | <pre>act-echo:trm=<i>P</i> (Where the value for <i>P</i> is one of the printer/KSR terminal port numbers recorded in Step 3)</pre> |
| <input type="checkbox"/> | If the capture terminal is the user terminal go to step 8. | |
| <input type="checkbox"/> 5 | Response to activate command is displayed. | <pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y act-echo:trm=<i>P</i> Command entered at terminal #10. ;</pre> |
| <input type="checkbox"/> 6 | If capture terminal's output group are not all set to YES, issue the change terminal command. | <pre>chg-trm:trm=<i>P</i>:all=yes (<i>P</i> is the terminal port that is specified in step 4)</pre> |

⁴ Record terminal that has type of KSR if no printers are configured. Terminal being used to capture cannot be a Telnet terminal, see recommendation #7 in section 1.7

⁵ The user terminal cannot be a Telnet terminal, see recommendation #7 in section 1.7

| <input type="checkbox"/> 7 | 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"/> 8 | 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: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"/> 9 | 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"/> 10 | Issue the command to display the system features | <pre>rtrv-feat</pre> | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> 11 | <p>Response to retrieve features command is displayed.</p> <p>Record the value of the SEAS feature for use in Procedure 15.</p> <p>SEAS _____</p> | <pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y EAGLE FEATURE LIST GTT = on GWS = off X25G = off LAN = off CRMD = off SEAS = off LFS = off MTPRS = off FAN = off DSTN4000 = off WNP = off CNCF = off TLNP = off SCCPCNV = off TCAPCNV = off X252000 = off ;</pre> | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> 12 | Issue the command to display the feature key controlled features. | <pre>rtrv-ctrl-feat</pre> | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> 13 | <p>Response to retrieve command is displayed.</p> <p>Record the TPS and LNP quantities shown in the response.</p> <p>TPS _____</p> <p>OAM based LNP _____</p> <p>If LNP ELAP Configuration key is displayed and status is ON, MPS based LNP is in use.⁶</p> <p>If SEAS and MPS based LNP are off, go to Procedure 3.</p> | <pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y rtrv-ctrl-feat Command entered at terminal #10. ;</pre> <p>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y The following features have been permanently enabled:</p> <table border="1"> <thead> <tr> <th>Feature Name</th> <th>Partnum</th> <th>Status</th> <th>Quantity</th> </tr> </thead> <tbody> <tr> <td>TPS</td> <td>XXXXXXXXXX</td> <td>on</td> <td>100</td> </tr> <tr> <td>LNP ported TNS⁶</td> <td>XXXXXXXXXX</td> <td>on</td> <td>nnnnnnnn</td> </tr> <tr> <td>LNP ELAP Configuration</td> <td>XXXXXXXXXX</td> <td>on</td> <td>----</td> </tr> </tbody> </table> | Feature Name | Partnum | Status | Quantity | TPS | XXXXXXXXXX | on | 100 | LNP ported TNS ⁶ | XXXXXXXXXX | on | nnnnnnnn | LNP ELAP Configuration | XXXXXXXXXX | on | ---- |
| Feature Name | Partnum | Status | Quantity | | | | | | | | | | | | | | | |
| TPS | XXXXXXXXXX | on | 100 | | | | | | | | | | | | | | | |
| LNP ported TNS ⁶ | XXXXXXXXXX | on | nnnnnnnn | | | | | | | | | | | | | | | |
| LNP ELAP Configuration | XXXXXXXXXX | on | ---- | | | | | | | | | | | | | | | |

⁶ If the source release is 29.X, use LNP48MIL feature bit displayed by rtrv-feat in step 12 to determine if MPS based LNP in use.

| | | |
|--|---|---|
| <p>14 <input type="checkbox"/></p> | <p>If the upgrade source release is 31.4 or below issue the command to display inhibited alarms.</p> <p>Else goto the next Procedure.</p> | <pre>rept-stat-alm:display=inhb</pre> |
| <p>15 <input type="checkbox"/></p> | <p>Response to report alarm status command.</p> | <pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y rept-stat-alm:display=inhb tekelecstp 05-05-24 13:20:22 EST 33.1.0-55.33.0 rept-stat-alm:display=inhb Command entered at terminal #4. ALARM TRANSFER= RMC ALARM MODE CRIT= AUDIBLE MAJR= AUDIBLE MINR= SILENT ALARM FRAME 1 CRIT= 2 MAJR= 4 MINR= 0 ALARM FRAME 2 CRIT= 0 MAJR= 0 MINR= 0 ALARM FRAME 3 CRIT= 0 MAJR= 0 MINR= 0 ALARM FRAME 4 CRIT= 0 MAJR= 0 MINR= 0 ALARM FRAME 5 CRIT= 0 MAJR= 0 MINR= 0 ALARM FRAME 6 CRIT= 0 MAJR= 0 MINR= 0 ALARM FRAME OAP CRIT= 0 MAJR= 0 MINR= 0 PERM. INH. ALARMS CRIT= 0 MAJR= 0 MINR= 0 TEMP. INH. ALARMS CRIT= 0 MAJR= 0 MINR= 0 ACTIVE ALARMS CRIT= 2 MAJR= 4 MINR= 0 TOTAL ALARMS CRIT= 2 MAJR= 4 MINR= 0 ALARM INHIBIT REPORT ----- DEVICE ELEMENT DURATION ALM INH LVL CUR ALM LVL ----- CARD 1101 PERM MINR MAJR+ Command Completed.</pre> |
| <p>16 <input type="checkbox"/></p> | <p>Record the inhibited alarms in Table 11 below.</p> | |
| <p>17 <input type="checkbox"/></p> | <p>Clear the alarm inhibits.</p> <p>Note: For full explanation of the unhb-alm command see the commands manual.</p> | <pre>unhb-alm:dev=<device>;optional_parmeters=<data></pre> <p>Below are a few examples of the unhb-alm for various device types (refer to command manual if device example not present):</p> <pre>unhb-alm:dev=card:loc=XXXX unhb-alm:dev=slk:loc=XXXX:port=Y</pre> |
| <p>18 <input type="checkbox"/></p> | <p>Response to uninhibit alarm command.</p> | <pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y unhb-alm:device=card:loc=1101 tekelecstp 05-05-25 10:25:27 EST 33.1.0-55.33.0 unhb-alm:dev=card:loc=1101 Command entered at terminal #4. Alarms are enabled Command Completed.</pre> |

| Device Type: | Element: | Alarm Inhibit Level: |
|--------------|----------|----------------------|
| | | |
| | | |
| | | |
| | | |
| | | |

Table 11. Alarm Inhibits

Procedure 2: Determining OAP Status

| | | |
|---|---|---|
| <p>S T E P #</p> | <p>This procedure determines the status of OAP terminals in order to restore them after the upgrade. Prior to inhibiting OAP ports the status of SEAS and LSMS is displayed and recorded for use after re-allowing of OAP ports. See recommendation 3 in section 1.7 for systems with high OAP traffic.</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 TECHNICAL SERVICES AND ASK FOR <u>UPGRADE ASSISTANCE</u>.</p> | |
| <p>1 <input type="checkbox"/></p> | <p>If SEAS was on in Procedure 1 Step 11, issue the command to display SEAS status.</p> | <pre>rept-stat-seas</pre> |
| <p>2 <input type="checkbox"/></p> <p><input type="checkbox"/></p> | <p>Response to command is displayed.</p> <p>Record all non-IS-NR SEAS status</p> <p>Ex. X25 Link A2 OOS-MT Fault</p> <p>_____</p> <p>_____</p> <p>_____</p> | <pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y GPL PST SST AST ----- SEAS SYSTEM OOS-MT Fault ----- TDM TRM 1 OOS-MT Fault ----- TDM TRM 2 IS-NR Active ----- OAP A ----- OOS-MT Isolated ----- X25 Link A1 ----- OOS-MT Fault ----- X25 Link A2 ----- OOS-MT Fault ----- SEAS SYSTEM ALARM STATUS = *C 0349 SEAS unavailable OAP A ALARM STATUS = ** 0341 OAP unavailable X25 Link A1 ALARM STATUS = ** 0343 SEAS X.25 Link unavailable X25 Link A2 ALARM STATUS = ** 0343 SEAS X.25 Link unavailable X25 A1 PVCs IS-NR = --- X25 A1 PVCs OOS-MT = --- X25 A2 PVCs IS-NR = --- X25 A2 PVCs OOS-MT = --- Command Completed. ;</pre> |
| <p>3 <input type="checkbox"/></p> | <p>If OAM based LNP system in use Procedure 1 Step 12, issue the command to record LSMS status.</p> | <pre>rept-stat-lsms</pre> |
| <p>4 <input type="checkbox"/></p> <p><input type="checkbox"/></p> | <p>Response to command is displayed.</p> <p>Record LSMS status.</p> <p>_____</p> <p>_____</p> <p>_____</p> | <pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y GPL PST SST AST ----- LSMS SYSTEM OOS-MT Fault ----- TDM TRM 1 OOS-MT Fault ----- TDM TRM 2 IS-NR Active ----- OAP A 026-001-000 IS-NR Active ----- OAP B ----- OOS-MT Isolated ----- Q.3 Assoc A1 ----- OOS-MT Fault ----- Q.3 Assoc B1 ----- OOS-MT Fault ----- LSMS SYSTEM ALARM STATUS = *C 0356 LSMS unavailable OAP A ALARM STATUS = No Alarms. OAP B ALARM STATUS = ** 0341 OAP unavailable Q.3 Assoc A1 ALARM STATUS = ** 0358 LSMS Q.3 association unavailable Q.3 Assoc B1 ALARM STATUS = ** 0358 LSMS Q.3 association unavailable Command Completed. ;</pre> |

| | | |
|---|--|---|
| <input type="checkbox"/> 5 | Inhibit OAP terminal. (See recommendation 3 in section 1.6.) | <pre>inh-trm:trm=XX:force=yes (where XX is the one of the OAP terminal ports recorded in Procedure 1, Step 3)</pre> |
| <input type="checkbox"/> 6 | Response to inhibit command is displayed. | <pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y inh-trm:trm=XX Command entered at terminal #10. ; tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y Inhibit message sent to terminal ; tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y Command Completed.</pre> |
| <input type="checkbox"/> 7 | Change terminal port to type=NONE. | <pre>chg-trm:type=none:trm=XX (where XX is the terminal port used in Step 5)</pre> |
| <input type="checkbox"/> 8 | Response to change command is displayed. | <pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y chg-trm:trm=XX:type=none Command entered at terminal #10. ; tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y CHG-TRM: MASP A - COMPLTD ;</pre> |
| <input type="checkbox"/> 9 | Issue the command to retrieve terminal status. | <pre>rtrv-trm:trm=XX (where XX is the terminal port used in Step 7)</pre> |
| <input type="checkbox"/> 10 <input type="checkbox"/> | Response to retrieve command is displayed. Verify ports that were type=OAP are now type=NONE. | <pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y rtrv-trm:trm=XX 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 2 NONE 19200-7-E-1 SW 30 5 00:01:00 LNP LNP TRM TRAF LINK SA SYS PU DB UIMRD DB SUB 2 YES YES YES YES YES YES YES NO NO ;</pre> |
| <input type="checkbox"/> 11 | Repeat steps 5-10 for second OAP terminal. | The second OAP terminal was recorded in Procedure 1, Step 3. |

Procedure 3: Retrieve System's Node-Level Processing Option Indicators

| | | |
|-------------------------------|---|--|
| S T E P # | <p>This procedure determines the status of HMUX Processing Option Indicators</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 TECHNICAL SERVICES AND ASK FOR <u>UPGRADE ASSISTANCE</u>.</p> | |
| 1 <input type="checkbox"/> | <p>If source release is 31.0 or previous, retrieve STP Options. Otherwise, skip to next procedure</p> | <p>rtrv-stpopts</p> |
| 2 <input type="checkbox"/> | <p>Response to the command is displayed.</p> <p>Record the HMUX option indicators, if displayed.</p> <p>HMUXABUS: _____</p> <p>HMUXBBUS: _____</p> <p>HMUXTVG: _____</p> <p>If either of the HMUX bus options are "no" or HMUXTVG is "off", stop the upgrade contact Tekelec Technical Services.</p> | <pre> tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y STP OPTIONS ----- MTPT31CTL 1 MTPLTI yes MTPLTCTDPCQ 3 MTPLTST 10000 MTPXLQ 500 MTPXLET 0100 MTPXLOT 90% MTPDPCQ 5000 TFATFRPR 1000 MTPRSI yes MTPRSIT 5000 MTPLPRST yes MTPT10ALT 30000 UIMRD no SLSCNV off CRITALMINH no DISPACTALMS no NPCFMTI 14-00-00-00 GSMDFLT pass GSMDECERR pass RPTLNPRESS yes HMUXABUS yes HMUXBBUS yes HMUXTVG on </pre> <p style="text-align: center;">;</p> |

Procedure 4: Backing Up the Database

| | | |
|--|--|---|
| <p>S T E P</p> | <p>This procedure backs up the database to the fixed disk and the removable cartridge. 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 TECHNICAL SERVICES AND ASK FOR <u>UPGRADE ASSISTANCE</u>.</p> | |
| <p>#</p> <p>1</p> <p><input type="checkbox"/></p> | <p>Issue the command to display database status.</p> | <pre>rept-stat-db</pre> |
| <p>2</p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><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 rept-stat-db Command entered at terminal #10. ; tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y DATABASE STATUS: >> OK << TDM 1114 (ACTV) TDM 1116 (STDBY) 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 MDAL 1117 - ----- RD BKUP Y ----- ----- -:--:-- ----- ; </pre> |
| <p>3</p> <p><input type="checkbox"/></p> | <p>Issue the command to back up the database.</p> | <pre>chg-db:action=backup</pre> |
| <p>4</p> <p><input type="checkbox"/></p> <p><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 chg-db:action=backup Command entered at terminal #10. ; 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> |

| <input type="checkbox"/> 5 | Visually inspect the removable cartridge to verify that it is labeled with the source release. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------|--|--|-------------|-------------|--------------|----------|-------|--------------|-----|------|-------------|-------------|-------------|-------|------------------|------|-------------|-------------|-------------|-------------|---------|------|-------------|-------------|-------------|-------|---------|------|-------------|-------------|-------------|-------------|------|------|-------------|-------------|-------------|-------|------|------|-------------|-------------|-------------|-------------|-----|------|-------------|-------------|-------------|-------|-----|------|-------------|-------------|-------------|-------------|-----|------|-------------|-------------|-------------|-------|-----|------|-------------|-------------|-------------|-------------|---------|------|-------------|-------------|-------------|-------|---------|------|-------------|-------------|-------------|-------------|---------|------|-------------|-------------|-------------|-------|---------|------|-------------|-------------|-------------|-------------|--------|------|-------------|-------------|-------------|-------|--------|------|-------------|-------------|-------------|-------------|-----|------|-------------|-------------|-------------|-------|-----|------|-------------|-------------|-------------|-------------|---------|------|-------------|-------------|-------------|-------|---------|------|-------------|-------------|-------------|-------------|--------|------|-------------|-------------|-------------|-------|--------|------|-------------|-------------|-------------|-------------|-------|------|-------------|-------------|-------------|-------|-------|------|-------------|-------------|-------------|-------------|------|------|-------------|-------------|-------------|-------|------|------|-------------|-------------|-------------|-------------|---------|------|-------------|-------------|-------------|-------|---------|------|-------------|-------------|-------------|-------------|--------|------|-------------|-------------|-------------|-------|--------|------|-------------|-------------|-------------|-------------|------|------|-------------|-------------|-------------|-------|------|------|-------------|-------------|-------------|-------------|
| <input type="checkbox"/> 6 | Insert the source-release cartridge into the MDAL. | Wait for the cartridge to spin up. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> 7 | Issue the command to retrieve GPL versions. | <pre>rtrv-gpl</pre> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> 8 | <p>Response from the retrieve command is displayed.</p> <p>Verify correct source release levels.</p> | <pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y GPL Auditing ON</pre> <table border="1"> <thead> <tr> <th>APPL</th> <th>CARD</th> <th>RELEASE</th> <th>APPROVED</th> <th>TRIAL</th> <th>REMOVE TRIAL</th> </tr> </thead> <tbody> <tr><td>OAM</td><td>1114</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>-----</td></tr> <tr><td>OAM ⁷</td><td>1116</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td></tr> <tr><td>SS7ANSI</td><td>1114</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>-----</td></tr> <tr><td>SS7ANSI</td><td>1116</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td></tr> <tr><td>SCCP</td><td>1114</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>-----</td></tr> <tr><td>SCCP</td><td>1116</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td></tr> <tr><td>GLS</td><td>1114</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>-----</td></tr> <tr><td>GLS</td><td>1116</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td></tr> <tr><td>CDU</td><td>1114</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>-----</td></tr> <tr><td>CDU</td><td>1116</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td></tr> <tr><td>CCS7ITU</td><td>1114</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>-----</td></tr> <tr><td>CCS7ITU</td><td>1116</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td></tr> <tr><td>SS7GX25</td><td>1114</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>-----</td></tr> <tr><td>SS7GX25</td><td>1116</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td></tr> <tr><td>STPLAN</td><td>1114</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>-----</td></tr> <tr><td>STPLAN</td><td>1116</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td></tr> <tr><td>IMT</td><td>1114</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>-----</td></tr> <tr><td>IMT</td><td>1116</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td></tr> <tr><td>ATMANSI</td><td>1114</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>-----</td></tr> <tr><td>ATMANSI</td><td>1116</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td></tr> <tr><td>BPHCAP</td><td>1114</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>-----</td></tr> <tr><td>BPHCAP</td><td>1116</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td></tr> <tr><td>BPDCM</td><td>1114</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>-----</td></tr> <tr><td>BPDCM</td><td>1116</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td></tr> <tr><td>EMDC</td><td>1114</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>-----</td></tr> <tr><td>EMDC</td><td>1116</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td></tr> <tr><td>EBDABLM</td><td>1114</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>-----</td></tr> <tr><td>EBDABLM</td><td>1116</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td></tr> <tr><td>VXWLAN</td><td>1114</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>-----</td></tr> <tr><td>VXWLAN</td><td>1116</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td></tr> <tr><td>EOAM</td><td>1114</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>-----</td></tr> <tr><td>EOAM</td><td>1116</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td><td>xxx-xxx-xxx</td></tr> </tbody> </table> | APPL | CARD | RELEASE | APPROVED | TRIAL | REMOVE TRIAL | OAM | 1114 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | ----- | OAM ⁷ | 1116 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | SS7ANSI | 1114 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | ----- | SS7ANSI | 1116 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | SCCP | 1114 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | ----- | SCCP | 1116 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | GLS | 1114 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | ----- | GLS | 1116 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | CDU | 1114 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | ----- | CDU | 1116 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | CCS7ITU | 1114 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | ----- | CCS7ITU | 1116 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | SS7GX25 | 1114 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | ----- | SS7GX25 | 1116 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | STPLAN | 1114 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | ----- | STPLAN | 1116 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | IMT | 1114 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | ----- | IMT | 1116 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | ATMANSI | 1114 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | ----- | ATMANSI | 1116 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | BPHCAP | 1114 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | ----- | BPHCAP | 1116 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | BPDCM | 1114 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | ----- | BPDCM | 1116 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | EMDC | 1114 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | ----- | EMDC | 1116 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | EBDABLM | 1114 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | ----- | EBDABLM | 1116 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | VXWLAN | 1114 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | ----- | VXWLAN | 1116 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | EOAM | 1114 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | ----- | EOAM | 1116 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx |
| APPL | CARD | RELEASE | APPROVED | TRIAL | REMOVE TRIAL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| OAM ⁷ | 1116 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| SS7ANSI | 1116 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SCCP | 1114 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | ----- | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SCCP | 1116 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GLS | 1114 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | ----- | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GLS | 1116 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CDU | 1114 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | ----- | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CDU | 1116 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCS7ITU | 1114 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | ----- | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCS7ITU | 1116 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SS7GX25 | 1114 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | ----- | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SS7GX25 | 1116 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| STPLAN | 1114 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | ----- | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| STPLAN | 1116 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| IMT | 1114 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | ----- | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| IMT | 1116 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ATMANSI | 1114 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | ----- | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ATMANSI | 1116 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BPHCAP | 1114 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | ----- | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BPHCAP | 1116 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BPDCM | 1114 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | ----- | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BPDCM | 1116 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EMDC | 1114 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | ----- | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EMDC | 1116 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EBDABLM | 1114 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | ----- | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EBDABLM | 1116 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| VXWLAN | 1114 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | ----- | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| VXWLAN | 1116 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EOAM | 1114 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | ----- | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EOAM | 1116 | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | xxx-xxx-xxx | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> 9 | Issue the command to back up the database to removable cartridge. | <pre>chg-db:action=backup:dest=remove</pre> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> 10 | <p>Response to backup command is displayed.</p> <p>Note that this command requires about 4 - 20 minutes, longer for large databases.</p> | <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 cartridge complete ;</pre> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

⁷ The OAM gpl will not be displayed if the upgrade source release is 30.x or higher.

| | | |
|-----------------------------|--|--|
| <input type="checkbox"/> 11 | Issue the command to copy the GPLs to removable cartridge. | <pre>copy-gpl</pre> |
| <input type="checkbox"/> 12 | Response to copy command is displayed. | <pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y copy-gpl 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> |
| <input type="checkbox"/> 13 | Eject the Source-Release removable cartridge. | <p>The cartridge should be stored in a safe location.</p> |

Procedure 5: Updating the Source-Release Spare TDM

| | | |
|----------------------------------|--|--|
| S T E P # | <p>This procedure backs up the database to the spare TDM 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>SHOULD THIS PROCEDURE FAIL, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR <u>UPGRADE ASSISTANCE</u>.</p> | |
| 1 | <p>Issue the report card status command.</p> <p><input type="checkbox"/></p> | <pre>rept-stat-card</pre> |
| 2 | <p>Response to the card status command is displayed.</p> <p>Determine MASP activity. Record which GPSM is Active and Standby.</p> <p>Record the card locations of both sets of GPSMs and TDMs as well as the part number of the TDMs:</p> <p>Act GPSM _____</p> <p>Active TDM _____</p> <p>p/n _____</p> <p>Stby GPSM _____</p> <p>Standby TDM _____</p> <p>p/n _____</p> <p>For this sample output, 1113/1114 are active and 1115/1116 are standby.</p> | <pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y CARD VERSION TYPE APPL PST SST AST 1101 XXX-XXX-XXX ASM SCCP IS-NR Active ----- 1102 XXX-XXX-XXX ASM SCCP IS-NR Active ----- 1103 XXX-XXX-XXX ASM GLS XXXXX Fault ----- 1104 XXX-XXX-XXX ASM GLS XXXXX Fault ----- 1105 XXX-XXX-XXX LIMDS0 SS7GX25 IS-NR Active ----- 1111 XXX-XXX-XXX ACMENET STPLAN IS-ANR Active ----- 1113 XXX-XXX-XXX GPSM EOAM IS-NR Active ----- 1114 ----- TDM ----- IS-NR Active ----- 1115 XXX-XXX-XXX GPSM EOAM IS-NR Standby ----- 1116 ----- TDM ----- IS-NR Active ----- 1117 ----- MDAL ----- IS-NR Active ----- 1201 XXX-XXX-XXX LIMDS0 SS7ANSI IS-NR Active ----- 1202 XXX-XXX-XXX LIMDS0 SS7ANSI IS-NR Active ----- 1203 XXX-XXX-XXX LIMDS0 SS7ANSI IS-NR Active ----- 1204 XXX-XXX-XXX LIMDS0 SS7ANSI IS-NR Active ----- 1205 XXX-XXX-XXX LIMDS0 CCS7ITU IS-NR Active ----- 1206 XXX-XXX-XXX DCM SS7IPGW IS-NR Active ----- 1207 XXX-XXX-XXX DCM IPGWI IS-NR Active ----- 1218 XXX-XXX-XXX ASM GLS IS-NR Active ----- Command Completed.</pre> |
| 3 | <p>Place spare TDM in system.⁸</p> <p><input type="checkbox"/></p> <p>Record the part number for the spare TDM:</p> <p>p/n _____</p> | <p><input type="checkbox"/> Unseat the standby GPSM card determined in step 2.</p> <p><input type="checkbox"/> Remove the standby TDM card determined in step 2.</p> <p><input type="checkbox"/> Insert the spare TDM card.</p> <p><input type="checkbox"/> Re-seat the standby GPSM card.</p> <p>Note: UAMs are generated during this step. An audible alarm is generated. Wait for the standby GPSM/spare TDM to come up in standby mode and system returns to duplex mode.</p> |
| 4 | <p>Issue the report status command for the standby GPSM.</p> <p><input type="checkbox"/></p> | <pre>rept-stat-card:loc=xxxx (Where xxxx is the STBY GPSM slot from step 2 above)</pre> |
| 5 | <p>Verify that the backup goes to IS-NR</p> <p><input type="checkbox"/></p> | <pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y rept-stat-card:loc=xxxx Command entered at terminal #10. ; tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y CARD VERSION TYPE APPL PST SST AST xxxx xxx-xxx-xxx GPSM EOAM IS-NR Standby DB-DIFF ALARM STATUS = No Alarms. BPDCM GPL version = XXX-XXX-XXX IMT BUS A = Conn IMT BUS B = Conn Command Completed. ;</pre> |

⁸ The spare TDM should be the one verified by upgrade Health Check #2, see section 1.2.2 ref [2].

Procedure 6: Verifying All Databases

| | | |
|---|--|---|
| <p>S T E P #</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 TECHNICAL SERVICES AND ASK FOR <u>UPGRADE ASSISTANCE</u>.</p> | |
| <p>1 <input type="checkbox"/></p> | <p>Issue the command to display database information.</p> | <pre>rept-stat-db:display=all</pre> |
| <p>2 <input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> | <p>Response to the command is displayed.</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 5, step 8.</p> | <pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y rept-stat-db:display=all Command entered at terminal #10. ; tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y DATABASE STATUS: >> OK << TDM 1114 (ACTV) TDM 1116 (STDBY) 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 MDAL 1117 RD BKUP Y -----:----- CARD/APPL LOC C T LEVEL TIME LAST UPDATE EXCEPTION ----- SCCP 1101 Y N XXX 99-01-01 14:15:17 - SCCP 1102 Y N XXX 99-01-01 14:15:17 - GLS 1103 Y N XXX 99-01-01 14:15:17 - GLS 1104 Y N XXX 99-01-01 14:15:17 - SS7GX25 1105 Y N XXX 99-01-01 14:15:17 - STPLAN 1111 Y N XXX 99-01-01 14:15:17 - TDM-CRNT 1114 Y N XXX 99-01-01 14:15:17 - TDM-BKUP 1114 Y - XXX 99-01-01 14:15:17 - TDM-CRNT 1116 Y N XXX 99-01-01 14:15:17 - TDM-BKUP 1116 Y - XXX 99-01-01 14:15:17 - MDAL 1117 - - - - - SS7ANSI 1201 Y N XXX 99-01-01 14:15:17 - SS7ANSI 1202 Y N XXX 99-01-01 14:15:17 - CCS7ITU 1211 Y N XXX 99-01-01 14:15:17 - SS7ANSI 1213 Y N xxx 99-01-01 14:15:17 - SS7ANSI 1214 Y N xxx 99-01-01 14:15:17 - VS CCP 1215 Y N xxx 99-01-01 14:15:17 - VS CCP 1217 Y N xxx 99-01-01 14:15:17 -</pre> |

Procedure 7: Inserting Target-Release Upgrade System Cartridge

| | | |
|---|--|---|
| S T E P # | <p>This procedure ensures that the target-release removable cartridge is inserted into the MDAL.</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 TECHNICAL SERVICES AND ASK FOR <u>UPGRADE ASSISTANCE</u>.</p> | |
| 1 <input type="checkbox"/> | <p>Visually inspect the target-release removable cartridge.</p> | <p>The label on the removable cartridge should have the target release printed on it.</p> |
| 2 <input type="checkbox"/> | <p>Insert the cartridge into the MDAL.</p> | <p>Allow 2-4 minutes for the cartridge to spin up.</p> |
| 3 <input type="checkbox"/> | <p>Issue the command to retrieve GPL versions.</p> | <p>rtrrv-gpl</p> |
| 4 <input type="checkbox"/> <input type="checkbox"/> | <p>Response from the retrieve command is displayed. (If no data is displayed, allow more time for step 2, then repeat step 3.)</p> <p>Verify that the GPL versions that are displayed in the "REMOVE TRIAL" 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 RELEASE APPROVED TRIAL REMOVE TRIAL EOAM 1114 xxx-xxx-xxx xxx-xxx-xxx xxx-xxx-xxx ----- EOAM¹⁰ 1116 xxx-xxx-xxx xxx-xxx-xxx xxx-xxx-xxx ----- SS7ANSI 1114 xxx-xxx-xxx xxx-xxx-xxx xxx-xxx-xxx ----- SS7ANSI 1116 xxx-xxx-xxx xxx-xxx-xxx xxx-xxx-xxx xxx-xxx-xxx SCCP 1114 xxx-xxx-xxx xxx-xxx-xxx xxx-xxx-xxx ----- SCCP 1116 xxx-xxx-xxx xxx-xxx-xxx xxx-xxx-xxx xxx-xxx-xxx GLS 1114 xxx-xxx-xxx xxx-xxx-xxx xxx-xxx-xxx ----- GLS 1116 xxx-xxx-xxx xxx-xxx-xxx xxx-xxx-xxx xxx-xxx-xxx CDU 1114 xxx-xxx-xxx xxx-xxx-xxx xxx-xxx-xxx ----- CDU 1116 xxx-xxx-xxx xxx-xxx-xxx xxx-xxx-xxx xxx-xxx-xxx CCS7ITU 1114 xxx-xxx-xxx xxx-xxx-xxx xxx-xxx-xxx ----- CCS7ITU 1116 xxx-xxx-xxx xxx-xxx-xxx xxx-xxx-xxx xxx-xxx-xxx SS7GX25 1114 xxx-xxx-xxx xxx-xxx-xxx xxx-xxx-xxx ----- SS7GX25 1116 xxx-xxx-xxx xxx-xxx-xxx xxx-xxx-xxx xxx-xxx-xxx STPLAN 1114 xxx-xxx-xxx xxx-xxx-xxx xxx-xxx-xxx ----- STPLAN 1116 xxx-xxx-xxx xxx-xxx-xxx xxx-xxx-xxx xxx-xxx-xxx IMT 1114 xxx-xxx-xxx xxx-xxx-xxx xxx-xxx-xxx ----- IMT 1116 xxx-xxx-xxx xxx-xxx-xxx xxx-xxx-xxx xxx-xxx-xxx ATMANSI 1114 xxx-xxx-xxx xxx-xxx-xxx xxx-xxx-xxx ----- ATMANSI 1116 xxx-xxx-xxx xxx-xxx-xxx xxx-xxx-xxx xxx-xxx-xxx BPHCAP 1114 xxx-xxx-xxx xxx-xxx-xxx xxx-xxx-xxx ----- BPHCAP 1116 xxx-xxx-xxx xxx-xxx-xxx xxx-xxx-xxx xxx-xxx-xxx BPDCM 1114 xxx-xxx-xxx xxx-xxx-xxx xxx-xxx-xxx ----- BPDCM 1116 xxx-xxx-xxx xxx-xxx-xxx xxx-xxx-xxx xxx-xxx-xxx EMDC 1114 xxx-xxx-xxx xxx-xxx-xxx xxx-xxx-xxx ----- EMDC 1116 xxx-xxx-xxx xxx-xxx-xxx xxx-xxx-xxx xxx-xxx-xxx EBDABLM 1114 xxx-xxx-xxx xxx-xxx-xxx xxx-xxx-xxx ----- EBDABLM 1116 xxx-xxx-xxx xxx-xxx-xxx xxx-xxx-xxx xxx-xxx-xxx VXWSLAN 1114 xxx-xxx-xxx xxx-xxx-xxx xxx-xxx-xxx ----- VXWSLAN 1116 xxx-xxx-xxx xxx-xxx-xxx xxx-xxx-xxx xxx-xxx-xxx</pre> |
| 5 <input type="checkbox"/> | <p>If GPLs are not correct, do the following until successful:</p> | <ol style="list-style-type: none"> Eject the cartridge and repeat Steps 1-4. Eject the first target-release cartridge and repeat Steps 1-4 with the second target-release cartridge. Contact technical services. |
| 6 <input type="checkbox"/> | <p>Establish system status</p> | <p>See recommendation # 8 in Section 1.6</p> |

¹⁰ The OAM gpl will be displayed first instead of EOAM if the upgrade source release is 29.x.

Procedure 8: Initializing MASPs to Run on Target-Release GPLs

| | | | | | | | | | | | | | | | | | | | |
|----------------------------------|---|-----------------|-------------|---------|----------|-------|--|------|------|-------------|-------------|-------|----|------|------|-----------------|-------------|-------|--|
| S T E P # | <p>This procedure loads the target-release GPL from the removable cartridge to both GPSMs. This procedure requires that both GPSMs 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>SHOULD THIS PROCEDURE FAIL, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR UPGRADE ASSISTANCE.</p> | | | | | | | | | | | | | | | | | | |
| 1 <input type="checkbox"/> | <p>Issue the initialize card command for the standby GPSM.</p> <pre>init-card:loc=XXXX (Where XXXX is the location of the standby GPSM slot recorded in Procedure 5, Step 3)</pre> | | | | | | | | | | | | | | | | | | |
| 2 <input type="checkbox"/> | <p>Response to initialize command is displayed.</p> <pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y init-card:loc=XXXX Command entered at terminal #10. ; 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> | | | | | | | | | | | | | | | | | | |
| 3 <input type="checkbox"/> | <p>After the standby GPSM is available, issue the card status command to verify the standby GPSM.</p> <pre>rept-stat-gpl:appl=eoam</pre> | | | | | | | | | | | | | | | | | | |
| 4 <input type="checkbox"/> | <p>Response from the status command is displayed.</p> <pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y rept-stat-gpl:appl=eoam Command entered at terminal #10. ; tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y GPL Auditing ON</pre> <table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">APPL</td> <td style="width: 15%;">CARD</td> <td style="width: 20%;">RUNNING</td> <td style="width: 20%;">APPROVED</td> <td style="width: 20%;">TRIAL</td> <td style="width: 10%;"></td> </tr> <tr> <td>EOAM</td> <td>1113</td> <td>YYY-YYY-YYY</td> <td>YYY-YYY-YYY</td> <td>-----</td> <td style="text-align: right;">11</td> </tr> <tr> <td>EOAM</td> <td>1115</td> <td>XXX-XXX-XXX ALM</td> <td>YYY-YYY-YYY</td> <td>-----</td> <td></td> </tr> </table> <p>Command Completed.</p> | APPL | CARD | RUNNING | APPROVED | TRIAL | | EOAM | 1113 | YYY-YYY-YYY | YYY-YYY-YYY | ----- | 11 | EOAM | 1115 | XXX-XXX-XXX ALM | YYY-YYY-YYY | ----- | |
| APPL | CARD | RUNNING | APPROVED | TRIAL | | | | | | | | | | | | | | | |
| EOAM | 1113 | YYY-YYY-YYY | YYY-YYY-YYY | ----- | 11 | | | | | | | | | | | | | | |
| EOAM | 1115 | XXX-XXX-XXX ALM | YYY-YYY-YYY | ----- | | | | | | | | | | | | | | | |
| 5 <input type="checkbox"/> | <p>If the GPLs are not correct, do the following until successful:</p> <ol style="list-style-type: none"> 1. Eject cartridge, re-insert cartridge, and repeat Steps 1-4. 2. Eject first target-release cartridge, insert the second target-release cartridge, and repeat Steps 1-4. 3. Contact Tekelec Technical Services. | | | | | | | | | | | | | | | | | | |
| 6 <input type="checkbox"/> | <p>Issue the initialize card command for the active GPSM.</p> <pre>init-card:loc=XXXX (Where XXXX is the location of the active GPSM slot recorded in Procedure 5, Step 3)</pre> | | | | | | | | | | | | | | | | | | |
| 7 <input type="checkbox"/> | <p>Response to the 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 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> | | | | | | | | | | | | | | | | | | |

¹¹ Dashes are displayed until GPL auditing has initialized after the activity has been switched, which may take up to two minutes.

| | | |
|-----------------------------|--|---|
| <input type="checkbox"/> 8 | Issue the command to log back in to the system. | <pre>login:uid=XXXXXX (Where XXXXXX is a valid login ID)</pre> |
| <input type="checkbox"/> 9 | Response to login command is displayed. Ignore any login failure message. <input type="checkbox"/> Verify the Upgrade Phase in Banner ¹² . | <pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y Upg Phase 0 User logged in on terminal 10. ; ? Login failures since last successful LOGIN Last successful LOGIN was on port ? on ??-??-?? @ ??:??:??</pre> |
| <input type="checkbox"/> 10 | Echo command input to capture terminal. If the capture terminal is the user terminal go to step 12. | <pre>act-echo:trm=P (Where P is the terminal port number specified in Procedure 1, Step 3)</pre> |
| <input type="checkbox"/> 11 | Response to print capture command is displayed. | <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> |
| <input type="checkbox"/> 12 | Issue the command to display GPLs from the target-release cartridge. | <pre>rept-stat-gpl:appl=eoam</pre> |
| <input type="checkbox"/> 13 | Response from the status command is displayed. <input type="checkbox"/> Verify that the GPL versions that are displayed in the "RUNNING" column are correct; see section 1.3. | <pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y Upg Phase x rept-stat-gpl:appl=eoam Command entered at terminal #10. ; tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y GPL Auditing ON APPL CARD RUNNING APPROVED TRIAL EOAM 1113 XXX-XXX-XXX ALM YYY-YYY-YYY XXX-XXX-XXX * EOAM 1115 XXX-XXX-XXX ALM YYY-YYY-YYY XXX-XXX-XXX * Command Completed.</pre> |
| <input type="checkbox"/> 14 | Issue the command to display GPLs from the target-release cartridge. | <pre>rept-stat-gpl:appl=bpdcn</pre> |
| <input type="checkbox"/> 15 | Response from the status command is displayed. <input type="checkbox"/> Record version of BPDCM running on cards 1113 and 1115. BPDCM: _____ | <pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y Upg Phase x rept-stat-gpl:appl=bpdcn Command entered at terminal #10. ; tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y GPL Auditing ON APPL CARD RUNNING APPROVED TRIAL BPDCM 1101 XXX-XXX-XXX YYY-YYY-YYY XXX-XXX-XXX BPDCM 1113 XXX-XXX-XXX YYY-YYY-YYY XXX-XXX-XXX BPDCM 1115 XXX-XXX-XXX YYY-YYY-YYY XXX-XXX-XXX Command Completed.</pre> |
| <input type="checkbox"/> 16 | If GPLs are not correct, do the following until successful: | <ol style="list-style-type: none"> 1. Eject cartridge, re-insert cartridge, and repeat Steps 6-13 of this procedure. 2. If #1 fails, eject first target-release cartridge, insert the second target-release cartridge, and repeat Steps 6-13 of this procedure. 3. If # 2 fails, contact Tekelec Technical Services. |

¹² Phase number is not displayed at this point for incremental upgrades and certain upgrades between point releases. See section 1.6 for a definition of incremental upgrade and section 1.4 for a definition of database versioning. Database versioning between releases is determined in procedure 9, step 2.

5.2 OAM Conversion

Procedure 9: Verifying all Databases

| | | |
|---|---|--|
| <p>S T E P #</p> | <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 TECHNICAL SERVICES AND ASK FOR <u>UPGRADE ASSISTANCE</u>.</p> | |
| <p><input type="checkbox"/></p> | <p>1 Issue the command to display database status during upgrades.</p> | <pre>act-upgrade:action=dbstatus</pre> |
| <p><input type="checkbox"/></p> | <p>2 Response to the command is displayed.</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 column 'T' shows 'N' for both CRNT databases, which indicates that those databases are not in transition</p> <p>Verify the MDAL database level is "1."</p> <p>Verify all entries in the database 'Level' column are the same. LEVEL varies depending on the system.</p> <p>Verify that the version numbers displayed are correct.¹³</p> | <pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y Upg Phase 0 DATABASE STATUS: >> OK << TDM 1114 (ACTV) TDM 1116 (STDBY) 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 MDAL 1117 - ----- RD BKUP Y 1 - - CARD/APPL LOC C T LEVEL TIME LAST UPDATE VERSION STATUS ----- 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 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 MDAL 1117 Y - 1 - - YYY-YYY-YYY NORMAL NOTE: If target release is 31.3 or higher the following additional output may be displayed. 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 NORMAL TDM-BKUP 1114 Y - ZZZ YY-MM-DD hh:mm:ss ZZZ-ZZZ-ZZZ NORMAL TDM-CRNT 1116 Y - ZZZ YY-MM-DD hh:mm:ss ZZZ-ZZZ-ZZZ NORMAL TDM-BKUP 1116 Y - ZZZ YY-MM-DD hh:mm:ss ZZZ-ZZZ-ZZZ NORMAL ;</pre> |

¹³ See section 1.4 to verify the database versions. If the database versions are the same for the TDMs as well as the MDAL, the phase indicator is not displayed until after procedure 10, step 1.

Procedure 10: STP Conversion

| | | |
|----------------------------------|--|--|
| S T E P # | <p>This begins the actual STP conversion process. This procedure begins during Upgrade Phase 0 and ends as part of Upgrade Phase 3. For large systems, see recommendation 5 in section 1.7 before executing this procedure.</p> <p>Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number.</p> <p>If the upgrade execute terminates before successfully completing, see recommendation #8 in Section 1.6.</p> <p>SHOULD THIS PROCEDURE FAIL, CONTACT TEKELEC TECHNICAL SERVICES AND ASK FOR UPGRADE ASSISTANCE.</p> | |
| 1 <input type="checkbox"/> | <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.¹⁴</p> <p>Table 12 lists the actions completed by the command, based on which workspace was selected by the upgrade process. Refer to recommendation 6 in section 1.6 for more details on this workspace selection.</p> <p>Appendix B contains messages illustrative of the output of upgrade during this series of operations.</p> | <p>Act-upgrade:action=convertstp:thres=XX (Where XX is determined by recommendation 5 in section 1.7.)</p> |

| | Removable workspace | Fixed workspace |
|---|--|--|
| A | Measurements are inhibited. | Measurements are inhibited. |
| B | The existing database is converted onto the removable cartridge, upgrading the existing EAGLE@/IP7@ source-releases tables to target-release tables. | NA |
| C | The standby disk is formatted based on the cartridge configuration table. | The standby disk is formatted based on the cartridge configuration table. |
| D | The GPLs are copied from the removable cartridge onto the standby TDM. | The GPLs are copied from the removable cartridge onto the standby TDM. |
| E | The standby database partitions are restored from the removable cartridge. | The existing database is converted onto the standby disk, upgrading the existing EAGLE/IP7 source-release tables to target-release tables. |
| F | The standby GPSM boots automatically. | The standby GPSM boots automatically. |
| G | The active GPSM then boots allowing the standby to resume the active role. | The active GPSM then boots allowing the standby to resume the active role. |
| H | The standby disk is formatted based on the cartridge configuration table. | The standby disk is formatted based on the cartridge configuration table. |
| I | The standby database partitions are restored from the removable cartridge. | The existing database is converted onto the standby disk, upgrading the existing EAGLE/IP7 source-release tables to target-release tables. |
| J | The GPLs are copied from the removable cartridge onto the standby TDM. | The GPLs are copied from the removable cartridge onto the standby TDM. |
| K | The standby GPSM boots automatically. | The standby GPSM boots automatically. |
| L | Initialization of Network cards. | Initialization of Network cards. |

Table 12: Act-upgrade Command Actions

¹⁴ Typical full conversion time may range from 30 to 60 minutes. Time for incremental upgrades is reduced since only items D, J & L are performed.

| | | |
|--|--|---|
| <p>7</p> <p><input type="checkbox"/></p> | <p>Issue the command to display database status during upgrades.</p> | <p>act-upgrade:action=dbstatus</p> |
| <p>8</p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> | <p>Response from the command is displayed.</p> <p>Look in the columns labeled 'C', 'LEVEL' and 'VERSION STATUS' 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> <p>Verify 'VERSION STATUS' shows NORMAL. NOTE: this will not occur until step 2 above is completed.</p> | <pre> tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Upg Phase x DATABASE STATUS: >> OK << TDM 1114 (STDBY) C LEVEL TIME LAST BACKUP ----- FD BKUP Y XXX - - FD CRNT Y XXX MDAL 1117 RD BKUP Y XXX¹⁶ - - CARD/APPL LOC C T LEVEL TIME LAST UPDATE VERSION STATUS ----- 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 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 MDAL 1117 Y - 1 YY-MM-DD hh:mm:ss XXX-XXX-XXX NORMAL NOTE: If target release is 31.3 or higher the following additional output may be displayed. 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 NORMAL TDM-BKUP 1114 Y - ZZZ YY-MM-DD hh:mm:ss ZZZ-ZZZ-ZZZ NORMAL TDM-CRNT 1116 Y - ZZZ YY-MM-DD hh:mm:ss ZZZ-ZZZ-ZZZ NORMAL TDM-BKUP 1116 Y - ZZZ YY-MM-DD hh:mm:ss ZZZ-ZZZ-ZZZ NORMAL ; </pre> |
| <p>9</p> <p><input type="checkbox"/></p> | <p>Issue the report card status command to verify network cards.</p> | <p>rept-stat-card</p> |
| <p>10</p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> | <p>Response to the card status command is displayed.</p> <p>Verify that the cards are IS-NR, OOS-MT Isolated or OOS-MT-DSBLD.</p> <p>Verify that the GPL versions that are displayed in the "VERSION" column are correct; see Section 1.3.</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 ASM SCCP IS-NR Active ----- 1102 XXX-XXX-XXX ASM SCCP IS-NR Active ----- 1103 XXX-XXX-XXX ASM GLS IS-NR Active ----- 1104 XXX-XXX-XXX ASM GLS IS-NR Active ----- 1105 XXX-XXX-XXX LIMDS0 SS7GX25 IS-NR Active ----- 1111 XXX-XXX-XXX ACMENET STPLAN OOS-MT Isolated ----- 1113 XXX-XXX-XXX GPSM EOAM IS-NR Active ----- 1114 ----- TDM ----- IS-NR Active ----- 1115 XXX-XXX-XXX GPSM EOAM IS-NR Standby ----- 1116 ----- TDM ----- IS-NR Active ----- 1117 ----- MDAL ----- IS-NR Active ----- 1201 XXX-XXX-XXX LIMDS0 SS7ANSI IS-NR Active ----- 1202 XXX-XXX-XXX LIMDS0 SS7ANSI IS-NR Active ----- 1203 XXX-XXX-XXX LIMDS0 SS7ANSI IS-NR Active ----- 1204 XXX-XXX-XXX LIMDS0 SS7ANSI 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 CCS7ITU IS-NR Active ----- 1215 xxx-xxx-xxx DSM VS CCP IS-NR Active ----- 1217 xxx-xxx-xxx DSM VS CCP IS-NR Active ----- 3101 xxx-xxx-xxx LIMATM ATMANSI IS-NR Active ----- 3102 xxx-xxx-xxx LIMATM ATMANSI IS-NR Active ----- Command Completed. ; </pre> |
| <p>11</p> <p><input type="checkbox"/></p> | <p>Issue the command to display GPL status.</p> | <p>rtrv-gpl</p> |

¹⁶ After use of removable disk conversion area, the level of the database on the removable drive will be the same as the hard drives, xxx.

| 12 | Response to GPL status command is displayed. | <pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y GPL Auditing ON</pre> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|---|-------------|-------------|--------------|-------|--------------|------|------|-------------|-------------|-------|-------------|------|------|-------------|-------------|-------|-------|---------|------|-------------|-------------|-------------|-------------|---------|------|-------------|-------------|-------------|-------|------|------|-------------|-------------|-------------|-------------|------|------|-------------|-------------|-------------|-------|-----|------|-------------|-------------|-------------|-------------|-----|------|-------------|-------------|-------------|-------|-----|------|-------------|-------------|-------|-------------|-----|------|-------------|-------------|-------|-------|---------|------|-------------|-------------|-------------|-------------|---------|------|-------------|-------------|-------------|-------|---------|------|-------------|-------------|-------------|-------------|---------|------|-------------|-------------|-------------|-------|--------|------|-------------|-------------|-------------|-------------|--------|------|-------------|-------------|-------------|-------|-----|------|-------------|-------------|-------------|-------------|-----|------|-------------|-------------|-------------|-------|---------|------|-------------|-------------|-------------|-------------|---------|------|-------------|-------------|-------------|-------|--------|------|-------------|-------------|-------------|-------------|--------|------|-------------|-------------|-------------|-------|-------|------|-------------|-------------|-------------|-------------|-------|------|-------------|-------------|-------------|-------|------|------|-------------|-------------|-------------|-------------|------|------|-------------|-------------|-------------|-------|---------|------|-------------|-------------|-------------|-------------|---------|------|-------------|-------------|-------------|-------|---------|------|-------------|-------------|-------------|-------------|---------|------|-------------|-------------|-------------|-------|---------|------|-------------|-------------|-------------|-------------|---------|------|-------------|-------------|-------------|-------|-------|------|-------------|-------------|-------------|-------------|-------|------|-------------|-------------|-------------|-------|--------|------|-------------|-------------|-------------|-------------|--------|------|-------------|-------------|-------------|-------|---------|------|-------------|-------------|-------------|-------------|---------|------|-------------|-------------|-------------|-------|-------|------|-------------|-------------|-------------|-------------|-------|------|-------------|-------------|-------------|-------|--------|------|-------------|-------------|-------------|-------------|--------|------|-------------|-------------|-------------|-------|
| Verify that the GPL versions that are displayed in the "RELEASE" column are correct; see Section 1.3. | <table border="1"> <thead> <tr> <th>APPL</th> <th>CARD</th> <th>RELEASE</th> <th>APPROVED</th> <th>TRIAL</th> <th>REMOVE TRIAL</th> </tr> </thead> <tbody> <tr><td>EOAM</td><td>1114</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td><td>-----</td><td>XXX-XXX-XXX</td></tr> <tr><td>EOAM</td><td>1116</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td><td>-----</td><td>-----</td></tr> <tr><td>SS7ANSI</td><td>1114</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td></tr> <tr><td>SS7ANSI</td><td>1116</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td><td>-----</td></tr> <tr><td>SCCP</td><td>1114</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td></tr> <tr><td>SCCP</td><td>1116</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td><td>-----</td></tr> <tr><td>GLS</td><td>1114</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td></tr> <tr><td>GLS</td><td>1116</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td><td>-----</td></tr> <tr><td>CDU</td><td>1114</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td><td>-----</td><td>XXX-XXX-XXX</td></tr> <tr><td>CDU</td><td>1116</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td><td>-----</td><td>-----</td></tr> <tr><td>CCS7ITU</td><td>1114</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td></tr> <tr><td>CCS7ITU</td><td>1116</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td><td>-----</td></tr> <tr><td>SS7GX25</td><td>1114</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td></tr> <tr><td>SS7GX25</td><td>1116</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td><td>-----</td></tr> <tr><td>STPLAN</td><td>1114</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td></tr> <tr><td>STPLAN</td><td>1116</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td><td>-----</td></tr> <tr><td>IMT</td><td>1114</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td></tr> <tr><td>IMT</td><td>1116</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td><td>-----</td></tr> <tr><td>ATMANSI</td><td>1114</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td></tr> <tr><td>ATMANSI</td><td>1116</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td><td>-----</td></tr> <tr><td>BPHCAP</td><td>1114</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td></tr> <tr><td>BPHCAP</td><td>1116</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td><td>-----</td></tr> 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<tr><td>VSCCP</td><td>1114</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td></tr> <tr><td>VSCCP</td><td>1116</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td><td>-----</td></tr> <tr><td>VXUTIL</td><td>1114</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td></tr> <tr><td>VXUTIL</td><td>1116</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td><td>XXX-XXX-XXX</td><td>-----</td></tr> </tbody> </table> | APPL | CARD | RELEASE | APPROVED | TRIAL | REMOVE TRIAL | EOAM | 1114 | XXX-XXX-XXX | XXX-XXX-XXX | ----- | XXX-XXX-XXX | EOAM | 1116 | XXX-XXX-XXX | XXX-XXX-XXX | ----- | ----- | SS7ANSI | 1114 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | SS7ANSI | 1116 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | ----- | SCCP | 1114 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | SCCP | 1116 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | ----- | GLS | 1114 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | GLS | 1116 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | ----- | CDU | 1114 | XXX-XXX-XXX | XXX-XXX-XXX | ----- | XXX-XXX-XXX | CDU | 1116 | XXX-XXX-XXX | XXX-XXX-XXX | ----- | ----- | CCS7ITU | 1114 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | CCS7ITU | 1116 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | ----- | SS7GX25 | 1114 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | SS7GX25 | 1116 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | ----- | STPLAN | 1114 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | STPLAN | 1116 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | ----- | IMT | 1114 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | IMT | 1116 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | ----- | ATMANSI | 1114 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | ATMANSI | 1116 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | ----- | BPHCAP | 1114 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | BPHCAP | 1116 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | ----- | BPDCM | 1114 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | BPDCM | 1116 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | ----- | EMDC | 1114 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | EMDC | 1116 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | ----- | EBDABLM | 1114 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | EBDABLM | 1116 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | ----- | EBDADCM | 1114 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | EBDADCM | 1116 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | ----- | VXWSLAN | 1114 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | VXWSLAN | 1116 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | ----- | IPLIM | 1114 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | IPLIM | 1116 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | ----- | IPLIMI | 1114 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | IPLIMI | 1116 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | ----- | SS7IPGW | 1114 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | SS7IPGW | 1116 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | ----- | VSCCP | 1114 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | VSCCP | 1116 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | ----- | VXUTIL | 1114 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | VXUTIL | 1116 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | ----- |
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| SS7GX25 | 1114 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SS7GX25 | 1116 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | ----- | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| STPLAN | 1114 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| STPLAN | 1116 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | ----- | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| IMT | 1114 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| IMT | 1116 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | ----- | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ATMANSI | 1114 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ATMANSI | 1116 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | ----- | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BPHCAP | 1114 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BPHCAP | 1116 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | ----- | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BPDCM | 1114 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BPDCM | 1116 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | ----- | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EMDC | 1114 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EMDC | 1116 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | ----- | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EBDABLM | 1114 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EBDABLM | 1116 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | ----- | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EBDADCM | 1114 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EBDADCM | 1116 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | ----- | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| VXWSLAN | 1114 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| VXWSLAN | 1116 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | ----- | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| IPLIM | 1114 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| IPLIM | 1116 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | ----- | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| IPLIMI | 1114 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| IPLIMI | 1116 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | ----- | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SS7IPGW | 1114 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SS7IPGW | 1116 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | ----- | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| VSCCP | 1114 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| VSCCP | 1116 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | ----- | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| VXUTIL | 1114 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| VXUTIL | 1116 | XXX-XXX-XXX | XXX-XXX-XXX | XXX-XXX-XXX | ----- | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

5.3 Completion of Session 1

Procedure 11: Force Download of TDMs

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| S T E P # | <p>This procedure reseats the TDMs. Only execute this procedure if the GPSMs in slots 1113 and 1115 were flashed in Procedure 10, step 2.</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 TECHNICAL SERVICES AND ASK FOR <u>UPGRADE ASSISTANCE</u>.</p> | |
| 1 | <p><input type="checkbox"/> If the source release is 31.5 or previous, continue to the step 2.</p> <p><input type="checkbox"/> If the part number on any of the TDMs are a revision less then 870-0774-15 as recorded in procedure 5, steps 2 & 3, continue to the step 2.</p> <p><input type="checkbox"/> Otherwise, go to next procedure</p> | <p>If the upgrade source release is 31.6 or higher and the system is running TDM-GTI (p/n 870-0774-15 or higher) this procedure is not applicable.</p> |
| 2 | <p><input type="checkbox"/> Issue the command to display version of BPDCM GPL running on cards.</p> | <pre>rept-stat-gpl:appl=bpdcn</pre> |
| 3 | <p><input type="checkbox"/> Response from the retrieve command is displayed.</p> <p>If either slot 1113 or 1115 is alarmed then stop upgrade and contact Tekelec Technical Services.</p> <p><input type="checkbox"/> Compare version of BPDCM running on 1113 and 1115 with version recorded in Procedure 8 Step 15, if version numbers match then go to next procedure, else continue next step.</p> | <pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y Upg Phase x rept-stat-gpl:appl=bpdcn Command entered at terminal #10. ; tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y GPL Auditing ON APPL CARD RUNNING APPROVED TRIAL BPDCM 1101 XXX-XXX-XXX YYY-YYY-YYY XXX-XXX-XXX BPDCM 1113 XXX-XXX-XXX YYY-YYY-YYY XXX-XXX-XXX BPDCM 1115 XXX-XXX-XXX YYY-YYY-YYY XXX-XXX-XXX Command Completed. ;</pre> |
| 4 | <p><input type="checkbox"/> Issue command to inhibit standby MASP</p> | <pre>inh-card:loc=XXXX (Where XXXX is the location of the STANDBY GPSM)</pre> |
| 5 | <p><input type="checkbox"/> Response to inhibit card command is displayed</p> | <pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Upg Phase x ** 5045.0514 ** CARD XXXX EOAM Standby MASP is inhibited ;</pre> |
| 6 | <p><input type="checkbox"/> Unplugged and re-insert the standby MASP.</p> | <p><input type="checkbox"/> Unseat the standby GPSM</p> <p><input type="checkbox"/> Unseat the card in the standby TDM slot.</p> <p><input type="checkbox"/> Re-seat the card in the TDM slot.</p> <p><input type="checkbox"/> Re-seat the standby GPSM.</p> <p>Note: UAMs are generated during this step. An audible alarm is generated. Wait for the standby GPSM / TDM to come up in standby mode.</p> |

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| 7 <input type="checkbox"/> | Issue the command to allow the standby OAM. | alw-card:loc=XXXX (Where XXXX is the location of the STANDBY GPSM) |
| 8 <input type="checkbox"/> | Response to allow card command is displayed. If this is the second time performing this step, goto next procedure. Otherwise continue. | tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Upg Phase x Card has been allowed. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Upg Phase x Command Completed. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Upg Phase x 5046.0515 CARD XXXX EOAM Standby MASP is allowed ; |
| 9 <input type="checkbox"/> | Issue the command to initialize the active OAM. | init-card:loc=YYYY (Where YYYY is the location of the ACTIVE GPSM) |
| 10 <input type="checkbox"/> | Response to initialize card command is displayed. | tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Upg Phase x ** 5001.0008 ** CARD YYYY EOAM Active MASP has become isolated ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y 5003.0009 CARD XXXX EOAM MASP became active |
| 11 <input type="checkbox"/> | Issue the command to log back in to the system. | login:uid=XXXXXX (Where XXXXXX is a valid login ID) |
| 12 <input type="checkbox"/> | Response to login command is displayed. | tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y User logged in on terminal 10. ; |
| 13 <input type="checkbox"/> | Issue the command to reactivate printer capture. | act-echo:trm=P (Where P is the terminal port number specified in Procedure 1, Step 4) |
| 14 <input type="checkbox"/> | Response to printer capture command is displayed. | tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y act-echo:trm=X Command entered at terminal #10. ; |
| 15 <input type="checkbox"/> | Repeat steps 2 through 6. | Perform Step 2 through Step 6 on TDM of the other MASP. Note: If executing this Procedure as part of Recovery Procedure C, upon completion return to Procedure 28 step 14. |

Procedure 12: Completing Upgrade/Return to Full-Function Mode

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| S T E P # | <p>This procedure completes the upgrade and returns the system to full-function mode. Verification of the GPL distribution is also performed. If Procedure 11 has been executed, go to step 8.</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 TECHNICAL SERVICES AND ASK FOR <u>UPGRADE ASSISTANCE</u>.</p> | |
| <input type="checkbox"/> 1 | Eject the removable cartridge. | |
| <input type="checkbox"/> 2 | Issue the command to initialize both MASPs. | <code>init-card:appl=eoam</code> |
| <input type="checkbox"/> 3 | <p>Response to the init command is displayed.</p> <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 Upgrade Phase x init-card:appl=eoam Command entered at terminal #10. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y 0002.0009 CARD 1113 EOAM MASP became active ;</pre> |
| <input type="checkbox"/> 4 | Issue the command to log back in to the system. | <code>login:uid=XXXXXX</code> <i>(Where XXXXXX is a valid login ID)</i> |
| <input type="checkbox"/> 5 | Response to login command is displayed. | <pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y User logged in on terminal 10. ;</pre> |
| <input type="checkbox"/> 6 | Issue the command to reactivate printer capture. | <code>act-echo:trm=P</code> <i>(Where P is the terminal port number specified in Procedure 1, Step 4)</i> |
| <input type="checkbox"/> 7 | Response to printer capture command is displayed. | <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> |
| <input type="checkbox"/> 8 | Issue the command to display card status. | <code>rept-stat-card</code> |
| <input type="checkbox"/> 9 | <p>Response to card status command is displayed.</p> <p>Verify that the GPL versions that are displayed in the "VERSION" column are correct; see Section 1.3.</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 PST SST AST 1101 XXX-XXX-XXX ASM SCCP IS-NR Active ----- 1102 XXX-XXX-XXX ASM SCCP IS-NR Active ----- 1103 XXX-XXX-XXX ASM GLS IS-NR Active ----- 1104 XXX-XXX-XXX ASM GLS IS-NR Active ----- 1105 XXX-XXX-XXX LIMDS0 SS7GX25 IS-NR Active ----- 1111 XXX-XXX-XXX ACMENET STPLAN IS-NR Active ----- 1113 XXX-XXX-XXX GPSM EOAM IS-NR Active ----- 1114 ----- TDM ----- IS-NR Active ----- 1115 XXX-XXX-XXX GPSM EOAM IS-NR Standby ----- 1116 ----- TDM ----- IS-NR Active ----- 1117 ----- MDAL ----- IS-NR Active ----- 1201 XXX-XXX-XXX LIMDS0 SS7ANSI IS-NR Active ----- 1202 XXX-XXX-XXX LIMDS0 SS7ANSI IS-NR Active ----- 1203 XXX-XXX-XXX LIMDS0 SS7ANSI IS-NR Active ----- 1204 XXX-XXX-XXX LIMDS0 SS7ANSI IS-NR Active ----- 1211 XXX-XXX-XXX LIMDS0 CCS7ITU IS-NR Active ----- 1218 XXX-XXX-XXX ASM GLS IS-NR Active ----- Command Completed. ;</pre> |

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| <p>10 <input type="checkbox"/></p> | <p>If any inhibited alarms were enter in table 11 then re-inhibit them now.</p> <p>Note: For full explanation of the inhibit alarm command refer to the commands manual.</p> | <pre>inh-alm:dev=<device>:optional_parmeters=<data>:lvl=<alm_level></pre> <p>Below are a few example of the inh-alm for various device types (refer to command manual if device example not present):</p> <pre>inh-alm:dev=card:loc=XXXX:lvl=LLLL</pre> <pre>inh-alm:dev=slk:loc=XXXX:port=Y:lvl=LLLL</pre> <p><i>(Where XXXX, Y, and LLLL are the values recorded in Table 11)</i></p> |
| <p>11 <input type="checkbox"/></p> | <p>Inh-alm command response.</p> | <pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y</pre> <pre>inh-alm:device=card:loc=1101</pre> <p>Command entered at terminal #10. Alarms are permanently inhibited Command Completed.</p> <p>:</p> |

Procedure 13: Reprovisioning OAP Links

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| S T E P # | <p>This procedure verifies the status of the OAP terminal(s).</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 TECHNICAL SERVICES AND ASK FOR UPGRADE ASSISTANCE.</p> | |
| 1 <input type="checkbox"/> | <p>If Procedure 2 was executed, issue command to change terminal port type.</p> <p>Otherwise, go to next procedure.</p> | <pre>chg-trm:type=oap:trm=XX (where XX is the one of the OAP terminal ports recorded in Procedure 1, Step 3)</pre> |
| 2 <input type="checkbox"/> | <p>Response to change command is displayed.</p> | <pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y chg-trm:trm=XX:type=OAP Command entered at terminal #10. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y CHG-TRM: MASP A - COMPLTD ;</pre> |
| 3 <input type="checkbox"/> | <p>Issue the command to retrieve terminal status.</p> | <pre>rtrv-trm:trm=XX (where XX is the terminal port specified in Step 1)</pre> |
| 4 <input type="checkbox"/> <input type="checkbox"/> | <p>Response to retrieve command is displayed.</p> <p>Verify the terminal type is now OAP.</p> | <pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y rtrv-trm:trm=XX Command entered at terminal #10. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y TRM TYPE COMM FC TMOUT MXINV DURAL XX OAP 19200-7-E-1 SW 30 5 00:01:00 LNP LNP TRM TRAF LINK SA SYS PU DB UIMRD DB SUB XX YES YES YES YES YES YES YES NO NO ;</pre> |
| 5 <input type="checkbox"/> | <p>Repeat Steps 1-4 for second OAP terminal port</p> | <p>The second OAP terminal port was recorded in Procedure 1, Step 3.</p> |

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| <input type="checkbox"/> 6 | Issue the command to report database status. | <pre>rept-stat-db</pre> |
| <input type="checkbox"/> 7 | Response to database status command is displayed. <input type="checkbox"/> Check: entries in 'C' should be coherent, which is indicated by a 'Y'. <input type="checkbox"/> Verify both 'FD CRNT' and 'FD BKUP' Levels are equal. | <pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y rept-stat-db Command entered at terminal #10. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y DATABASE STATUS: >> OK << TDM 1114 (STDBY) TDM 1116 (ACTV) C LEVEL TIME LAST BACKUP C LEVEL TIME LAST BACKUP ----- FD BKUP Y XXX - Y XXX - FD CRNT Y XXX - Y XXX - MDAL 1117 RD BKUP Y XXX - -</pre> |
| <input type="checkbox"/> 8 | Issue the database command to back up to the removable cartridge. | <pre>chg-db:action=backup:dest=remove</pre> |
| <input type="checkbox"/> 9 | Response to backup command is displayed. <input type="checkbox"/> Command Execution Time: Approximately 4 – 20 minutes, longer for large databases. | <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> |
| <input type="checkbox"/> 10 | Issue the command to report database status. | <pre>rept-stat-db</pre> |
| <input type="checkbox"/> 11 | Response to database status command is displayed. <input type="checkbox"/> Verify all entries in 'C' should be coherent, which is indicated by a 'Y'. <input type="checkbox"/> Verify all entries in column 'LEVEL' are the same value. | <pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y rept-stat-db Command entered at terminal #10. ; tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y DATABASE STATUS: >> OK << TDM 1114 (ACTV) TDM 1116 (STDBY) 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 - Y XXX - MDAL 1117 RD BKUP Y XXX YY-MM-DD hh:mm:ss TTTT</pre> |
| <input type="checkbox"/> 12 | Eject the removable cartridge from the MDAL. | <p>The cartridge should be stored in a safe location.</p> |
| <input type="checkbox"/> 13 | Insert the second target-release cartridge and repeat the steps 6 to 12. | <p>If both cartridges fail, contact Tekelec Technical Services.</p> |

Procedure 15: Restoring OAP Links

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| S T E P # | <p>This procedure restarts OAP terminal(s).</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 TECHNICAL SERVICES FOR ASSISTANCE AND ASK FOR UPGRADE ASSISTANCE.</p> | |
| 1 <input type="checkbox"/> | Issue command to allow the OAP terminal port. | <pre>alw-ترم:ترم=XX (where XX is the first terminal port recorded in Procedure 1, Step 3)</pre> |
| 2 <input type="checkbox"/> | Response to allow command is displayed. | <pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Allow message sent to terminal ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Command Completed.</pre> |
| 3 <input type="checkbox"/> | Repeat Steps 1-2 for second OAP terminal port | The second OAP terminal port was recorded in Procedure 1, Step 3. |
| 4 <input type="checkbox"/> | IF SEAS = on then issue this command. (SEAS was recorded in Procedure 1, Step 11.) | <pre>rept-stat-seas</pre> |
| 5 <input type="checkbox"/> | <p>Response to command is displayed.</p> <p><input type="checkbox"/> Verify the TDM TRMs return to the same status recorded in Procedure 2, Step2.</p> <p>Note: OAP A and B may be out-of-service unless the OAP upgrade has been performed.</p> | <pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y GPL PST SST AST ----- SEAS SYSTEM OOS-MT Fault ----- TDM TRM 1 IS-NR Active ----- TDM TRM 2 IS-NR Active ----- OAP A 026-001-000 IS-NR Active ----- OAP B ----- OOS-MT Isolated ----- X25 Link A1 OOS-MT Fault ----- X25 Link A2 OOS-MT Fault ----- SEAS SYSTEM ALARM STATUS = *C 0349 SEAS unavailable OAP A ALARM STATUS = ** 0341 OAP unavailable X25 Link A1 ALARM STATUS = ** 0343 SEAS X.25 Link unavailable X25 Link A2 ALARM STATUS = ** 0343 SEAS X.25 Link unavailable X25 A1 PVCs IS-NR = --- X25 A1 PVCs OOS-MT = --- X25 A2 PVCs IS-NR = --- X25 A2 PVCs OOS-MT = --- Command Completed. ;</pre> |

5.4 Upgrade Session 2

Procedure 16: Upgrading Removable Cartridges

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| S T E P # | <p>This procedure describes how to update source-release removable cartridges to the target release. See recommendation #2 in section 1.7. 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. Once this procedure is executed, rolling back the system is no longer possible.</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 TECHNICAL SERVICES FOR ASSISTANCE AND ASK FOR UPGRADE ASSISTANCE.</p> | |
| 1 <input type="checkbox"/> | <p>Echo command input to capture terminal.</p> <p>See recommendation #1 & #7 in section 1.7</p> | <pre>act-echo:trm=P (Where the value for P is one of the printer/KSR terminal port numbers recorded in Procedure 1, Step 3)</pre> |
| 2 <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> |
| 3 <input type="checkbox"/> | <p>If capture terminal's output groups are not all set to YES, issue the change terminal command.</p> | <pre>chg-trm:trm=P:all=yes (P is the terminal port that is specified in step 1)</pre> |
| 4 <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> |
| 5 <input type="checkbox"/> | <p>If the measurements platform is enabled go to step 9. Else, issue the command to retrieve measurement status.</p> | <pre>rtrv-meas-sched</pre> |
| 6 <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 this procedure. 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> |
| 7 <input type="checkbox"/> | <p>Issue the command to turn off measurement collection.</p> | <pre>chg-meas:collect=off</pre> |
| 8 <input type="checkbox"/> | <p>Response to the change command is displayed.</p> <p>If no source cartridges need upgrading, go to next procedure.</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> |

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| 9 <input type="checkbox"/> | Issue measurement report command.. | <code>rept-meas:type=systot:enttype=stp</code> |
| 10 <input type="checkbox"/> <input type="checkbox"/> | Response to the command is displayed. If command fails, reattempt in five minutes until it completes, See table #12. | <code>E2278 Cmd Rej: 30-minute measurement collection in progress</code> <code>tekelecstp YY-MM-DD hh:mm:ss zzzz PPP XX.x.x-YY.y.y</code> <code>rept-meas:type=systot:enttype=stp</code> <code>Command entered at terminal #XX.</code> ; |
| 11 <input type="checkbox"/> | Issue measurement report command.. | <code>rept-meas:type=mtcd:enttype=lnp</code> |
| 12 <input type="checkbox"/> <input type="checkbox"/> | Response to the command is displayed. If command fails, reattempt in five minutes until it completes, See table #12. | <code>E2277 Cmd Rej: Daily measurement collection in progress</code> <code>tekelecstp YY-MM-DD hh:mm:ss zzzz PPP XX.x.x-YY.y.y</code> <code>rept-meas:type=mtcd:enttype=lnp</code> <code>Command entered at terminal #XX.</code> ; |
| 13 <input type="checkbox"/> | Issue measurement report command. | <code>rept-meas:type=mtcdth:enttype=stp</code> |
| 14 <input type="checkbox"/> <input type="checkbox"/> | Response to the command is displayed. If command fails, reattempt in five minutes until it completes, See table #12. | <code>E2276 Cmd Rej: Day-to-hour measurement collection in progress</code> <code>tekelecstp YY-MM-DD hh:mm:ss zzzz PPP XX.x.x-YY.y.y</code> <code>rept-meas:type= mtcdth:enttype=stp</code> <code>Command entered at terminal #XX.</code> ; |
| 15 <input type="checkbox"/> | Insert the source removable cartridge to be upgraded into the MDAL. | Wait for the cartridge to spin up. |
| 16 <input type="checkbox"/> | Issue the command to format the cartridge. | <code>format-disk:type=system:force=yes</code> |
| 17 <input type="checkbox"/> <input type="checkbox"/> | Response to format command is displayed. If the format should fail, first repeat Step 16, then contact Tekelec Technical Services. | <code>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y</code> <code>format-disk:type=system:force=yes</code> <code>Command entered at terminal #10.</code> ; <code>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y</code> <code>Format-disk of system removable cartridge started.</code> <code>Extended processing required, please wait.</code> ; <code>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y</code> <code>Format-disk of system removable cartridge completed.</code> ; |

| 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 |

Table 13. MTT errors generated when measurement collection is in progress.

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| 18 <input type="checkbox"/> | Issue the command to copy the GPLs to the cartridge. | copy-gpl |
| 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 cartridge. | chg-db:action=backup:dest=remove |
| 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"/> | Eject the removable cartridge from the MDAL and store it in a safe place. | |
| 23 <input type="checkbox"/> | If upgrading more cartridges, repeat steps 15-22 | |

Procedure 17: Backing Up Fixed Disk

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| <p>S T E P #</p> | <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 TECHNICAL SERVICES FOR ASSISTANCE.</p> | |
| <p>1 <input type="checkbox"/></p> | <p>Issue the command to backup the database to the fixed disks.</p> | <p>chg-db:action=backup</p> |
| <p>2 <input type="checkbox"/> <input type="checkbox"/></p> | <p>Response and progress of the back up command are displayed.</p> <p>Command Execution Time: Approximately 4 – 20 minutes, longer for large databases.</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> |
| <p>3 <input type="checkbox"/></p> | <p>See Recommendation #3 in section 1.7. If turning down the OAPs is necessary, execute Procedure 2</p> | <p>Upon completion of Procedure 2 continue with</p> <p>Upgrade Session 2</p> <p>Procedure 18</p> |

Procedure 18: Upgrading Spare Fixed Disks

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| S T E P # | <p>This procedure describes how to upgrade your spare TDMs 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 TECHNICAL SERVICES FOR ASSISTANCE AND ASK FOR <u>UPGRADE ASSISTANCE</u>.</p> | |
| 1 | Issue the command to display card status. | rept-stat-card |
| 2 | <p>Response to the card status command is displayed.</p> <p>Determine MASP activity. Note which GPSM is active and standby.</p> <p>Record the card locations of both sets of GPSMs and TDMs:</p> <p>Act GPSM _____</p> <p>Active TDM _____</p> <p>Stby GPSM _____</p> <p>Standby TDM _____</p> <p>For this sample output, 1113/1114 are active and 1115/1116 are standby.</p> | <pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y CARD VERSION TYPE APPL PST SST AST 1101 XXX-XXX-XXX ASM SCCP IS-NR Active ----- 1102 XXX-XXX-XXX ASM SCCP IS-NR Active ----- 1103 XXX-XXX-XXX ASM GLS XXXXX Fault ----- 1104 XXX-XXX-XXX ASM GLS XXXXX Fault ----- 1105 XXX-XXX-XXX LIMDS0 SS7GX25 IS-NR Active ----- 1111 XXX-XXX-XXX ACMENET STPLAN IS-ANR Active ----- 1113 XXX-XXX-XXX GPSM EOAM IS-NR Active ----- 1114 ----- TDM ----- IS-NR Active ----- 1115 XXX-XXX-XXX GPSM EOAM IS-NR Standby ----- 1116 ----- TDM ----- IS-NR Active ----- 1117 ----- MDAL ----- IS-NR Active ----- 1201 XXX-XXX-XXX LIMDS0 SS7ANSI IS-NR Active ----- 1202 XXX-XXX-XXX LIMDS0 SS7ANSI IS-NR Active ----- 1203 XXX-XXX-XXX LIMDS0 SS7ANSI IS-NR Active ----- 1204 XXX-XXX-XXX LIMDS0 SS7ANSI IS-NR Active ----- 1211 XXX-XXX-XXX LIMDS0 CCS7ITU IS-NR Active ----- 1218 XXX-XXX-XXX ASM GLS IS-NR Active ----- Command Completed.</pre> |
| 3 | Insert target-release cartridge into the MDAL. | Wait for the cartridge to spin up |
| 4 | Place spare TDM in system. | <input type="checkbox"/> Unseat the card in the standby GPSM slot determined in step 2. <input type="checkbox"/> Remove the standby TDM card determined in step 2. <input type="checkbox"/> Insert the spare TDM card. <input type="checkbox"/> Re-seat the card in the GPSM slot. <p>Note: UAMs are generated during this step. An audible alarm is generated. Wait for the standby GPSM/spare TDM to come up in standby mode.</p> |
| 5 | Issue the command to display security log status. | rept-stat-seculog |
| 6 | <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. Otherwise, go ahead to step 14.</p> | <pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y rept-stat-seculog Command entered at terminal #10. ; tekelecstp YY-MM-DD hh:mm:ss EST 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> |

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| 7 <input type="checkbox"/> | Issue the command to copy the security log from the standby disk. | copy-seculog:slog=stb:dfile=upgXX.spr |
| 8 <input type="checkbox"/> <input type="checkbox"/> | Response to copy seculog command is displayed. If this command fails, proceed to next step. Otherwise, go to step 14. | <pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Security log on TDM 111X copied to file upg25.spare on TDM 111Y ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y 0468.0177 SECULOG 111X Security log exception cleared ;</pre> |
| 9 <input type="checkbox"/> | Issue the command to display the FTA directory. | disp-fta-dir |
| 10 <input type="checkbox"/> <input type="checkbox"/> | Response to display directory 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 Technical Services for further information. | <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 YMMDDs.log 2560256 99-01-03 10:18:44 388769 YMMDDa.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> |
| 11 <input type="checkbox"/> | Issue the command to delete ALL files in the transfer area. | dlt-fta:all=yes |
| 12 <input type="checkbox"/> | Response to the delete command is displayed. | <pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y dlt-fta:all=yes Command entered at terminal #10. ;</pre> |
| 13 <input type="checkbox"/> | Repeat Steps 7 – 8 if step 8 failed. | |
| 14 <input type="checkbox"/> | Issue the command to copy to the standby disk. | copy-disk:dloc=XXXX:force=yes:format=yes (Where XXXX is the location of the STANDBY TDM recorded in Step 2) |
| 15 <input type="checkbox"/> <input type="checkbox"/> | Response to the copy-disk command is displayed. Command Execution Time: Between 35 and 120 minutes Note: user terminal port may be automatically logged out. Wait for the card reload to complete. | <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 EOAM Card is present ;</pre> |
| 16 <input type="checkbox"/> | If the disk copy fails, do the following: | <ol style="list-style-type: none"> Repeat Steps 14-15. If second attempt fails, contact Tekelec Technical Services. |

Procedure 19: Verifying All Databases

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| <p>S T E P #</p> | <p>This procedure verifies the databases on the fixed disk and the removable cartridge. 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 TECHNICAL SERVICES FOR ASSISTANCE AND <u>ASK FOR UPGRADE ASSISTANCE.</u></p> | |
| <p>1 <input type="checkbox"/></p> | <p>Issue the command to display database information.</p> | <pre>rept-stat-db:display=all</pre> |
| <p>2 <input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> | <p>Response to the command is displayed.</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 'LEVEL' column are the same. LEVEL is a value, which varies depending on the system.</p> | <pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y rept-stat-db:display=all Command entered at terminal #10. ; tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y DATABASE STATUS: >> OK << TDM 1114 (ACTV) TDM 1116 (STDBY) 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 XXX MDAL 1117 - RD BKUP Y XXX YY-MM-DD hh:mm:ss TTTT CARD/APPL LOC C T LEVEL TIME LAST UPDATE EXCEPTION ----- SCCP 1101 Y N XXX 99-01-02 14:15:17 - SCCP 1102 Y N XXX 99-01-02 14:15:17 - GLS 1103 Y N XXX 99-01-02 14:15:17 - GLS 1104 Y N XXX 99-01-02 14:15:17 - SS7GX25 1105 Y N XXX 99-01-02 14:15:17 - STPLAN 1111 Y N XXX 99-01-02 14:15:17 - TDM-CRNT 1114 Y N XXX 99-01-02 14:15:17 - TDM-BKUP 1114 Y - XXX 99-01-02 14:15:17 - TDM-CRNT 1116 Y N XXX 99-01-02 14:15:17 - TDM-BKUP 1116 Y - XXX 99-01-02 14:15:17 - MDAL 1117 - - XXX 99-01-02 14:15:17 - SS7ANSI 1201 Y N XXX 99-01-02 14:15:17 - SS7ANSI 1202 Y N XXX 99-01-02 14:15:17 - SS7ANSI 1203 Y N XXX 99-01-02 14:15:17 - SS7ANSI 1204 Y N XXX 99-01-02 14:15:17 - CCS7ITU 1211 Y N XXX 99-01-02 14:15:17 - GLS 1218 Y N XXX 99-01-02 14:15:17 - ; </pre> |
| <p>3 <input type="checkbox"/></p> | <p>When the command completes, remove the system cartridge from the MDAL.</p> | <p>The cartridge should be stored in a safe location.</p> |
| <p>4 <input type="checkbox"/></p> | <p>If Procedure 17, Step 3 (turning down the OAPs) was executed, execute Procedure 13 and Procedure 15.</p> | <p>Upon completion of Procedure 13 and Procedure 15, continue with Procedure 20.</p> |

Procedure 20: Session 2 Completion

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| S T E P # | <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 TECHNICAL SERVICES FOR ASSISTANCE AND ASK FOR UPGRADE ASSISTANCE.</p> | |
| 1 <input type="checkbox"/> | <p>If the measurements platform is enabled then go to step 3. Else, if Procedure 16 Steps 3 & 4 were executed, issue the command to turn the measurements collection on.</p> | <pre>chg-meas:collect=on</pre> |
| 2 <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> |
| 3 <input type="checkbox"/> | <p>Issue status command for troubles.</p> | <pre>rept-stat-trbl</pre> |
| 4 <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 boot-prom GPL (i.e. BPHCAP or BPDCM), record it below:</p> <p>_____</p> <p>_____</p> <p>If any GPL is recorded above go to appendix A and report the GPL(s) to Tekelec Technical Services.</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 Technical Service. Before executing any of these procedures, contact Tekelec's Customer Care Center at 1-888-FOR-TKLC or 919-460-2150 (international). In the event that a full installation is needed, the OAP Site Installation Procedure also needs to be performed. Persons performing the upgrade should be familiar with these 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 Tekelec Technical Services at 1-888-FOR-TKLC or 1-888-367-8552; or for international callers 1-919-460-2150.

6.2 Recovery Procedure A

Procedure 21: Load and Run Source OAM

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| S | Perform this Recovery Procedure if upgrading with removable cartridge and a failure occurs in Procedure 8 through Procedure 10, Step 1. This procedure ensures that the source EOAM GPL is loaded from the fixed disk by removing the target-release cartridge from the MDAL and rebooting the GPSMs. | |
| T | | |
| E | | |
| P | Note: This procedure also needs to be executed in order to copy the IMT and BPDCM GPLs from the source after performing procedures 25 or 26 when upgrading with the fixed workspace. | |
| # | | |
| | 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 TECHNICAL SERVICES FOR ASSISTANCE AND ASK FOR <u>UPGRADE ASSISTANCE</u> . | |
| 1 | Remove the target-release cartridge from the MDAL. | |
| 2 | Insert source release MO. | Wait for the cartridge to spin up |
| 3 | Issue the command to retrieve IMT application data. | rtrv-gpl:appl=imt |
| 4 | Response to rtrv-gpl command is displayed. Note: The IMT version shown here is only for example purposes. | <pre> Command Accepted - Processing tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y rtrv-gpl:appl=imt 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 RELEASE APPROVED TRIAL REMOVE TRIAL IMT 1114 116-010-000 116-010-000 ALM 116-010-000 ----- IMT 1116 116-010-000 116-010-000 ALM 116-010-000 xxx-xxx-xxx </pre> |

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| 5 <input type="checkbox"/> | Issue the command to change the gpl. | chg-gpl:appl=imt:ver=xxx-xxx-xxx |
| 6 <input type="checkbox"/> | Response to act-gpl command is displayed. | <pre> Command Accepted - Processing tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y chg-gpl:appl=imt:ver=xxx-xxx-xxx Command entered at terminal #10. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y IMT upload to 1116 completed IMT upload to 1114 completed System Release ID table uploaded to 1116 completed System Release ID table uploaded to 1114 completed ; </pre> |
| <input type="checkbox"/> | Issue the command to activate the gpl. Note: The IMT version shown here is only for example purposes. | act-gpl:appl=imt:ver= xxx-xxx-xxx |
| 8 <input type="checkbox"/> | Response to act-gpl command is displayed. | <pre> Command Accepted - Processing tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y act-gpl:appl=imt:ver=xxx-xxx-xxx Command entered at terminal #10. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y IMT activate on 1116 completed IMT activate on 1114 completed ; </pre> |
| 9 <input type="checkbox"/> | Issue the command to change the gpl. Note: The IMT version shown here is only for example purposes. | chg-gpl:appl=imt:ver=xxx-xxx-xxx |
| 10 <input type="checkbox"/> | Response to chg-gpl command is displayed. | <pre> Command Accepted - Processing tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y chg-gpl:appl=imt:ver=xxx-xxx-xxx Command entered at terminal #10. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y IMT upload to 1116 completed IMT upload to 1114 completed System Release ID table upload to 1116 completed¹² System Release ID table upload to 1114 completed¹² ; </pre> |

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| 11 <input type="checkbox"/> | Issue the command to retrieve BPDCM application data. | rtrv-gpl:appl=bpdcn |
| 12 <input type="checkbox"/> | Response to rtrv-gpl command is displayed. Note: The BPDCM version shown here is only for example purposes. | <pre> Command Accepted - Processing tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y rtrv-gpl:appl=bpdcn 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 RELEASE APPROVED TRIAL REMOVE TRIAL BPDCM 1114 116-010-000 116-010-000 ALM 116-010-000 ----- BPDCM 1116 116-010-000 116-010-000 ALM 116-010-000 xxx-xxx-xxx </pre> |
| 13 <input type="checkbox"/> | Issue the command to change the gpl. | chg-gpl:appl=bpdcn:ver=xxx-xxx-xxx |
| 14 <input type="checkbox"/> | Response to chg-gpl command is displayed. | <pre> Command Accepted - Processing tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y chg-gpl:appl=bpdcn:ver=xxx-xxx-xxx Command entered at terminal #10. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y BPDCM upload to 1116 completed BPDCM upload to 1114 completed System Release ID table upload to 1116 completed System Release ID table upload to 1114 completed ; </pre> |
| 15 <input type="checkbox"/> | Issue the command to activate the gpl Note: The BPDCM version shown here is only for example purposes. | act-gpl:appl=bpdcn:ver=xxx-xxx-xxx |
| 16 <input type="checkbox"/> | Response to act-gpl command is displayed. | <pre> Command Accepted - Processing tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y act-gpl:appl=bpdcn:ver=xxx-xxx-xxx Command entered at terminal #10. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y BPDCM activate on 1116 completed BPDCM activate on 1114 completed ; </pre> |
| 17 <input type="checkbox"/> | Issue the command to change the gpl | chg-gpl:appl=bpdcn:ver=xxx-xxx-xxx |
| 18 <input type="checkbox"/> | Response to chg-gpl command is displayed. | <pre> Command Accepted - Processing tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y chg-gpl:appl=bpdcn:ver=xxx-xxx-xxx Command entered at terminal #10. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y BPDCM upload to 1116 completed BPDCM upload to 1114 completed System Release ID table upload to 1116 completed System Release ID table upload to 1114 completed ; </pre> |

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| 19 <input type="checkbox"/> | Issue the report card status command. | rept-stat-card |
| 20 <input type="checkbox"/> | <p>Response to the card status command is displayed.</p> <p>Record which GPSM is Active and Standby.</p> <p>Record the card locations of both sets of GPSMs and TDMs:</p> <p>Act GPSM _____</p> <p>Stby GPSM _____</p> <p>For this sample output, 1113 is active 1115 is standby.</p> | <pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y CARD VERSION TYPE APPL PST SST AST 1101 XXX-XXX-XXX ASM SCCP IS-NR Active ----- 1102 XXX-XXX-XXX ASM SCCP IS-NR Active ----- 1103 XXX-XXX-XXX ASM GLS XXXXX Fault ----- 1104 XXX-XXX-XXX ASM GLS XXXXX Fault ----- 1105 XXX-XXX-XXX LIMDS0 SS7GX25 IS-NR Active ----- 1111 XXX-XXX-XXX ACMENET STPLAN IS-ANR Active ----- 1113 XXX-XXX-XXX GPSM EOAM IS-NR Active ----- 1114 ----- TDM ----- IS-NR Active ----- 1115 XXX-XXX-XXX GPSM EOAM IS-NR Standby ----- 1116 ----- TDM ----- IS-NR Active ----- 1117 ----- MDAL ----- IS-NR Active ----- 1201 XXX-XXX-XXX LIMDS0 SS7ANSI IS-NR Active ----- 1202 XXX-XXX-XXX LIMDS0 SS7ANSI IS-NR Active ----- 1203 XXX-XXX-XXX LIMDS0 SS7ANSI IS-NR Active ----- 1204 XXX-XXX-XXX LIMDS0 SS7ANSI IS-NR Active ----- 1205 XXX-XXX-XXX LIMDS0 CCS7ITU IS-NR Active ----- 1206 XXX-XXX-XXX DCM SS7IPGW IS-NR Active ----- 1207 XXX-XXX-XXX DCM IPGWI IS-NR Active ----- 1218 XXX-XXX-XXX ASM GLS IS-NR Active ----- Command Completed. ;</pre> |
| 21 <input type="checkbox"/> | Issue the command to inhibit standby GPSM. | <pre>inh-card:loc=XXXX</pre> <p>Where XXXX is the location for the Standby GPSM.</p> |
| 22 <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> <pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Command Completed. ;</pre> |
| 23 <input type="checkbox"/> | Issue the command to initialize the flash memory. | <pre>init-flash:code=appr:loc=XXXX</pre> <p>Where XXXX is the location for the Standby GPSM. NOTE: this command causes the card to boot.</p> |
| 24 <input type="checkbox"/> | <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 EST PPP XX.x.x-YY.y.y FLASH Memory Download for card XXXX Started. ;</pre> <pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y FLASH Memory Download for card XXXX Completed. ;</pre> |
| 25 <input type="checkbox"/> | Issue the command to activate the flash memory. | <pre>act-flash:loc=XXXX</pre> <p>Where XXXX is the location for the Standby GPSM.</p> |
| 26 <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 FLASH Memory Activation for card XXXX Started. ;</pre> <pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y FLASH Activation for card XXXX Completed. ;</pre> |
| 27 <input type="checkbox"/> | Unplugged and re-insert the standby MASP. | <p><input type="checkbox"/> Unseat the standby GPSM recorded in step 20.</p> <p><input type="checkbox"/> Unseat the card in the standby TDM slot.</p> <p><input type="checkbox"/> Re-seat the card in the TDM slot.</p> <p><input type="checkbox"/> Re-seat the standby GPSM.</p> <p>Note: UAMs are generated during this step. An audible alarm is generated,</p> |

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| <input type="checkbox"/> 28 | Issue the command to allow card. | <pre>alw-card:loc=XXXX</pre> <p>Where XXXX is the location for the Standby GPSM.</p> |
| <input type="checkbox"/> 29 | 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> |
| <input type="checkbox"/> 30 | Issue the report card status command. | <pre>rept-stat-card</pre> |
| <input type="checkbox"/> 31 | Response to the card status command is displayed. Record which GPSM is Active and Standby. Record the card locations of both sets of GPSMs and TDMs: Act GPSM ____ Stby GPSM ____ For this sample output, 1113 is active 1115 is standby. | <pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y CARD VERSION TYPE APPL PST SST AST 1101 XXX-XXX-XXX ASM SCCP IS-NR Active ----- 1102 XXX-XXX-XXX ASM SCCP IS-NR Active ----- 1103 XXX-XXX-XXX ASM GLS XXXXX Fault ----- 1104 XXX-XXX-XXX ASM GLS XXXXX Fault ----- 1105 XXX-XXX-XXX LIMDS0 SS7GX25 IS-NR Active ----- 1111 XXX-XXX-XXX ACMENET STPLAN IS-ANR Active ----- 1113 XXX-XXX-XXX GPSM EOAM IS-NR Active ----- 1114 ----- TDM ----- IS-NR Active ----- 1115 XXX-XXX-XXX GPSM EOAM IS-NR Standby ----- 1116 ----- TDM ----- IS-NR Active ----- 1117 ----- MDAL ----- IS-NR Active ----- 1201 XXX-XXX-XXX LIMDS0 SS7ANSI IS-NR Active ----- 1202 XXX-XXX-XXX LIMDS0 SS7ANSI IS-NR Active ----- 1203 XXX-XXX-XXX LIMDS0 SS7ANSI IS-NR Active ----- 1204 XXX-XXX-XXX LIMDS0 SS7ANSI IS-NR Active ----- 1205 XXX-XXX-XXX LIMDS0 CCS7ITU IS-NR Active ----- 1206 XXX-XXX-XXX DCM SS7IPGW IS-NR Active ----- 1207 XXX-XXX-XXX DCM IPGWI IS-NR Active ----- 1218 XXX-XXX-XXX ASM GLS IS-NR Active ----- Command Completed. ;</pre> |
| <input type="checkbox"/> 32 | Repeat step 30 until the standby location is IS-NR | |
| <input type="checkbox"/> 33 | Force a switchover by issuing initialize-card command. | <pre>init-card:loc=YYYY</pre> <p>Where YYYY is the active location recorded in step 20.</p> |
| <input type="checkbox"/> 34 | Repeat steps 19 through 32 for the new standby – card location YYYY as seen in step 20. Then proceed with step 35. | |

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| <p>35 <input type="checkbox"/></p> | <p>Issue the command to initialize both GPSM cards.</p> | <pre>init-card:appl=eoam</pre> |
| <p>36 <input type="checkbox"/></p> | <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 init-card:appl=eoam Command entered at terminal #10. ; 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> |
| <p>37 <input type="checkbox"/></p> | | <p>Tekelec Technical Service will verify system health using the EAGLE system health check, Ref. [2].</p> |

6.3 Recovery Procedure B

Procedure 22: Full Fallback using Removable Disk as OAM conversion workspace.

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| S T E P # | <p>Perform the recovery procedure if directed to do so by TEKELEC TECHNICAL SERVICES when failure occurs in Procedure 10, Step 1, Item C through Procedure 15.</p> <p>This procedure is a full fallback to the source-release on the spare TDM.</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 TECHNICAL SERVICES FOR ASSISTANCE AND ASK FOR UPGRADE ASSISTANCE.</p> | |
| 1 | <input type="checkbox"/> If upgrade not from removable go to Procedure 24. | |
| 2 | <input type="checkbox"/> Issue the report card status command. | rept-stat-card |
| 3 | <input type="checkbox"/> Response to the card status command is displayed. <input type="checkbox"/> Determine MASP activity. Record which GPSM is Active and Standby. <input type="checkbox"/> Record the card locations of both sets of GPSMs and TDMs: <input type="checkbox"/> Act GPSM _____ <input type="checkbox"/> Active TDM _____ <input type="checkbox"/> Stby GPSM _____ <input type="checkbox"/> Standby TDM _____ <input type="checkbox"/> For this sample output, 1113/1114 are active and 1115/1116 are standby. | <pre> tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y CARD VERSION TYPE APPL PST SST AST 1101 XXX-XXX-XXX ASM SCCP IS-NR Active ----- 1102 XXX-XXX-XXX ASM SCCP IS-NR Active ----- 1103 XXX-XXX-XXX ASM GLS XXXXX Fault ----- 1104 XXX-XXX-XXX ASM GLS XXXXX Fault ----- 1105 XXX-XXX-XXX LIMDS0 SS7GX25 IS-NR Active ----- 1111 XXX-XXX-XXX ACMENET STPLAN IS-ANR Active ----- 1113 XXX-XXX-XXX GPSM EOAM IS-NR Active ----- 1114 ----- TDM ----- IS-NR Active ----- 1115 XXX-XXX-XXX GPSM EOAM IS-NR Standby ----- 1116 ----- TDM ----- IS-NR Active ----- 1117 ----- MDAL ----- IS-NR Active ----- 1201 XXX-XXX-XXX LIMDS0 SS7ANSI IS-NR Active ----- 1202 XXX-XXX-XXX LIMDS0 SS7ANSI IS-NR Active ----- 1203 XXX-XXX-XXX LIMDS0 SS7ANSI IS-NR Active ----- 1204 XXX-XXX-XXX LIMDS0 SS7ANSI IS-NR Active ----- 1205 XXX-XXX-XXX LIMDS0 CCS7ITU IS-NR Active ----- 1206 XXX-XXX-XXX DCM SS7IPGW IS-NR Active ----- 1207 XXX-XXX-XXX DCM IPGWI IS-NR Active ----- 1218 XXX-XXX-XXX ASM GLS IS-NR Active ----- Command Completed. </pre> |
| 4 | <input type="checkbox"/> Remove the target-release cartridge from the MDAL. | |
| 5 | <input type="checkbox"/> Place spare TDM in system. | <input type="checkbox"/> Unseat the card in the standby GPSM slot determined in step 2. <input type="checkbox"/> Remove the standby TDM card determined in step 2. <input type="checkbox"/> Insert the spare TDM card. <input type="checkbox"/> Re-seat the card in the GPSM slot. Note: UAMs are generated during this step. An audible alarm is generated. Wait for the standby GPSM/spare TDM to come up in standby mode. |
| 6 | <input type="checkbox"/> Insert the source-release cartridge into the MDAL. | <input type="checkbox"/> Wait for the cartridge to spin up |

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| 7 | After the standby GPSM is available, issue the command to initialize the active GPSM. | <pre>init-card:loc=XXXX (Where XXXX is the location of the ACTIVE GPSM slot)</pre> |
| 8 | Response to command is displayed. | <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 Rel XX.x.x-XX.x.x * 0261.0013 * CARD XXXX EOAM Card is isolated from the system ASSY SN: xxxxxxxxx ; 5038.0014 CARD XXXX EOAM Card is present ASSY SN: xxxxxxxxx ;</pre> |
| 9 | Issue the command to log in to the system. | <pre>login:uid=XXXXXX (Where XXXXXX is a valid login ID)</pre> |
| 10 | 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> |
| 11 | Issue the retrieve GPL command to verify source-release GPLs. | <pre>rtrv-gpl</pre> |
| 12 | <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 GPSM 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 EOAM 1114 XXX-XXX-XXX XXX-XXX-XXX XXX-XXX-XXX XXX-XXX-XXX EOAM 1116 XXX-XXX-XXX XXX-XXX-XXX ALM XXX-XXX-XXX ----- CDU 1114 XXX-XXX-XXX XXX-XXX-XXX XXX-XXX-XXX XXX-XXX-XXX CDU 1116 XXX-XXX-XXX XXX-XXX-XXX ALM XXX-XXX-XXX ----- GLS 1114 XXX-XXX-XXX XXX-XXX-XXX XXX-XXX-XXX XXX-XXX-XXX GLS 1116 XXX-XXX-XXX XXX-XXX-XXX ALM XXX-XXX-XXX ----- SCCP 1114 XXX-XXX-XXX XXX-XXX-XXX XXX-XXX-XXX XXX-XXX-XXX SCCP 1116 XXX-XXX-XXX XXX-XXX-XXX ALM XXX-XXX-XXX ----- SS7ANSI 1114 XXX-XXX-XXX XXX-XXX-XXX XXX-XXX-XXX XXX-XXX-XXX SS7ANSI 1116 XXX-XXX-XXX XXX-XXX-XXX ALM XXX-XXX-XXX ----- ATMANSI 1114 XXX-XXX-XXX ----- ----- XXX-XXX-XXX ATMANSI 1116 XXX-XXX-XXX ----- ALM ----- ----- CCS7ITU 1114 XXX-XXX-XXX XXX-XXX-XXX XXX-XXX-XXX XXX-XXX-XXX CCS7ITU 1116 XXX-XXX-XXX XXX-XXX-XXX ALM XXX-XXX-XXX ----- SS7GX25 1114 XXX-XXX-XXX XXX-XXX-XXX XXX-XXX-XXX XXX-XXX-XXX SS7GX25 1116 XXX-XXX-XXX XXX-XXX-XXX ALM XXX-XXX-XXX ----- STPLAN 1114 XXX-XXX-XXX XXX-XXX-XXX XXX-XXX-XXX XXX-XXX-XXX STPLAN 1116 XXX-XXX-XXX XXX-XXX-XXX ALM XXX-XXX-XXX ----- IMT 1114 XXX-XXX-XXX XXX-XXX-XXX XXX-XXX-XXX XXX-XXX-XXX IMT 1116 XXX-XXX-XXX XXX-XXX-XXX ALM XXX-XXX-XXX ----- BPHCAP 1114 XXX-XXX-XXX ----- ----- XXX-XXX-XXX BPHCAP 1116 XXX-XXX-XXX ----- ALM ----- ----- ;</pre> |

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| 13 <input type="checkbox"/> | Issue the command to retrieve measurement setup. | rtrv-meas-sched |
| 14 <input type="checkbox"/> | Response to retrieve command is displayed. Record if collection is on or off: _____ If COLLECT=ON, continue this procedure. Otherwise, go to Step 17. | <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> |
| 15 <input type="checkbox"/> | Issue the command to turn off measurement collection. | chg-meas:collect=off |
| 16 <input type="checkbox"/> | Response to the change command is displayed. | <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> |
| 17 <input type="checkbox"/> | Issue the command to display security log status. | rept-stat-seculog |
| 18 <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 26. | <pre>tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y rept-stat-seculog 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> |
| 19 <input type="checkbox"/> | Issue the command to copy the security log from the standby disk. | copy-seculog:slog=stb:dfile=upg.procC |
| 20 <input type="checkbox"/> | Response to the copy security log command is displayed. If this command fails, proceed to next step. Otherwise, go to Step 26. | <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> |
| 21 <input type="checkbox"/> | Issue the command to display the FTA directory. | disp-fta-dir |
| 22 <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 technical services 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> |

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| <p>31 <input type="checkbox"/></p> | <p>Replace the standby TDM with the TDM removed in Step 5.</p> | <p><input type="checkbox"/> Unseat the card in the standby GPSM slot.</p> <p><input type="checkbox"/> Remove the standby TDM card.</p> <p><input type="checkbox"/> Insert the spare TDM card.</p> <p><input type="checkbox"/> Re-seat the card in the GPSM slot.</p> <p><input type="checkbox"/> Note: UAMs are generated during this step. An audible alarm is generated. Wait for the standby GPSM/spare TDM to come up in standby mode.</p> |
| <p>32 <input type="checkbox"/></p> | <p>Repeat steps 11 – 27.</p> | <p>After completing Step 27 the second time, continue to Step 33.</p> |
| <p>33 <input type="checkbox"/></p> | <p>If steps 15 & 16 were executed, issue the command to turn the measurements collection on.</p> | <p>chg-meas:collect=on</p> |
| <p>34 <input type="checkbox"/></p> | <p>Response to change measurement command is displayed.</p> | <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> |
| <p>35 <input type="checkbox"/></p> | <p>If this completes the recovery, verify the system with the EAGLE health check [2]. Otherwise continue with Recovery Procedure C</p> | <p>If failure occurred prior to entering Phase 3, recovery is complete.</p> |

Procedure 24: Full Fallback using Fixed Disk as OAM conversion workspace – Case 2

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| <p>S T E P #</p> | <p>Perform the recovery procedure if directed to do so by TEKELEC TECHNICAL SERVICES when failure occurs in Procedure 10, step F through step 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 TECHNICAL SERVICES FOR ASSISTANCE AND ASK FOR UPGRADE ASSISTANCE.</p> | |
| <p>1 <input type="checkbox"/></p> | <p>Issue the command to display active/inactive disk partitions.</p> | <pre>send-msg:ds=1:da=h'5d:f=h'47:loc=YYYY (YYYY is location of active GPSM)</pre> |
| <p>2 <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 specific 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> |

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| 3 <input type="checkbox"/> | Issue the command to swap active/inactive disk partitions. | send-msg:ds=1:da=h'5d:f=h'48:loc=YYYY (YYYY is location of active GPSM) |
| 4 <input type="checkbox"/> | <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 specific in Procedure 1, Step 6)</p> <p>Compare the values for the active_partitions and inactive_partitions with those in step 2. For the STANDBY OAM, the values for the active_partitions shown should equal those for the inactive_partitions shown in step 2, and vice-versa. For the ACTIVE OAM, both sets of values should be identical.</p> | <pre> Command Accepted - Processing 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> |
| 5 <input type="checkbox"/> | Eject target release MO from MDAL. | |
| 6 <input type="checkbox"/> | Issue the command to init standby location. | init-card:loc=XXXX (XXXX)is location of standby GPSM) |
| 7 <input type="checkbox"/> | <p>Response to initialize command is displayed.</p> <p>Execute Procedure 21.</p> | <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> |

Procedure 25: Full Fallback using Fixed Disk as OAM conversion workspace – Case 3

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| S | Perform the recovery procedure if directed to do so by TEKELEC TECHNICAL SERVICES when failure occurs in Procedure 10, step J through Step L. | |
| T | This procedure makes the partition with the source GPLs active on both TDMs. | |
| E | Check off (✓) each step as it is completed. Boxes have been provided for this purpose under each step number. | |
| P | | |
| # | SHOULD THIS PROCEDURE FAIL, CONTACT TEKELEC TECHNICAL SERVICES FOR ASSISTANCE AND ASK FOR UPGRADE ASSISTANCE. | |
| <input type="checkbox"/> | 1 | Remove the target-release cartridge from the MDAL. |
| <input type="checkbox"/> | 2 | Insert source release MO. Wait for the cartridge to spin up |
| <input type="checkbox"/> | 3 | Issue copy-tbl command. copy-tbl:stbl=147:dtbl=146:sloc=1117:dloc=1114:dprtnggrp=inactive |
| <input type="checkbox"/> | 4 | Response to copy-tbl command. Command Accepted - Processing tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y copy-tbl:stbl=147:dtbl=146:sloc=1117:dloc=1114 Command entered at terminal #10. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y OAM/TCM: Table copy command complete. ; |
| <input type="checkbox"/> | 5 | Issue copy-tbl command. copy-tbl:stbl=147:dtbl=146:sloc=1117:dloc=1116:dprtnggrp=inactive |
| <input type="checkbox"/> | 6 | Response to copy-tbl command. Command Accepted - Processing tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y copy-tbl:stbl=147:dtbl=146:sloc=1117:dloc=1116 Command entered at terminal #10. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y OAM/TCM: Table copy command complete. ; |
| <input type="checkbox"/> | 7 | Issue copy-tbl command. copy-tbl:stbl=147:dtbl=146:sloc=1117:dloc=1114:dprtnggrp=active |
| <input type="checkbox"/> | 8 | Response to copy-tbl command. Command Accepted - Processing tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y copy-tbl:stbl=147:dtbl=146:sloc=1117:dloc=1114 Command entered at terminal #10. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y OAM/TCM: Table copy command complete. ; |
| <input type="checkbox"/> | 9 | Issue copy-tbl command. copy-tbl:stbl=147:dtbl=146:sloc=1117:dloc=1116:dprtnggrp=active |
| <input type="checkbox"/> | 10 | Response to copy-tbl command. Command Accepted - Processing tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y copy-tbl:stbl=147:dtbl=146:sloc=1117:dloc=1116 Command entered at terminal #10. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y OAM/TCM: Table copy command complete. ; |

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| 11 | Issue the command to display active/inactive disk partitions. | <pre>send-msg:ds=1:da=h'5d:f=h'47:loc=XXXX (XXXX is location of active GPSM)</pre> |
| 12 | <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 specific 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> |

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| <p>13 <input type="checkbox"/></p> | <p>Issue the command to swap active/inactive disk partitions.</p> | <pre>send-msg:ds=1:da=h'5d:f=h'48:loc=XXXX (XXXX is location of active GPSM)</pre> |
| <p>14 <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 specific 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 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><input type="checkbox"/></p> | <p>Compare the values for the active_partitions and inactive_partitions with those in step 12. For the STANDBY OAM, the values for the active_partitions shown should equal those for the inactive_partitions shown in step 12, and vice-versa. For the ACTIVE OAM, both sets of values should be identical.</p> | |

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| 15 | Remove the source-release cartridge from the MDAL. | |
| 16 | Re-insert target release MO. | Wait for the cartridge to spin up |
| 17 | Issue the command to init standby location. | init-card:loc=YYYY (YYYY is location of standby GPSM) |
| 18 | Response to initialize command is displayed. | <pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y init-card:loc=YYYY Command entered at terminal #10. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y * 0261.0013 * CARD YYYY EOAM 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 YYYY EOAM Card is present ASSY SN: xxxxxxxx ; ;</pre> |
| 19 | Issue the command to init active location. | init-card:loc=XXXX (XXXX is location of active GPSM) |
| 20 | Response to initialize command is displayed. | <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 YY-MM-DD hh:mm:ss EST 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 EST PPP XX.x.x-YY.y.y 5038.0014 CARD XXXX EOAM Card is present ASSY SN: xxxxxxxx ; ;</pre> |
| 21 | Issue the command to display active/inactive disk partitions. | send-msg:ds=1:da=h'5d:f=h'47:loc=YYYY (YYYY is location of active GPSM) |
| 22 | <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 specific 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> |

6.4 Recovery Procedure C

Procedure 26: Fall Back Procedure for Network Cards

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| S T E P # | 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. | |
| 1 <input type="checkbox"/> | Issue the command to report card status. | rept-stat-card |
| 2 <input type="checkbox"/> | Response to the card status command is displayed. 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 APPL EST SST AST 1101 XXX-XXX-XXX ASM SCCP IS-NR Active ----- 1103 XXX-XXX-XXX ASM GLS IS-NR Fault ----- 1105 XXX-XXX-XXX LIMDS0 SS7GX25 IS-NR Active ----- 1109 XXX-XXX-XXX HMUX BPHMUX IS-NR Active ----- 1111 XXX-XXX-XXX ACMENET STPLAN IS-ANR Active ----- 1113 XXX-XXX-XXX GPSM EOAM IS-NR Active ----- 1114 ----- TDM ----- IS-NR Active ----- 1115 XXX-XXX-XXX GPSM EOAM IS-NR Standby ----- 1116 ----- TDM ----- IS-NR Active ----- 1117 ----- MDAL ----- IS-NR Active ----- 1201 XXX-XXX-XXX LIMDS0 SS7ANSI IS-NR Active ----- 1202 XXX-XXX-XXX LIMDS0 SS7ANSI IS-NR Active ----- 1209 XXX-XXX-XXX HMUX BPHMUX IS-NR Active ----- 1211 XXX-XXX-XXX LIMDS0 CCS7ITU IS-NR Active ----- 1218 XXX-XXX-XXX ASM GLS IS-NR Active ----- Command Completed. ; </pre> |
| 3 <input type="checkbox"/> | Perform Procedure 27 through Procedure 31, as needed. | |

Procedure 27: Restoring Prom-Based Service Cards

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| <p>S T E P #</p> | <p>This procedure restores Service Cards that are prom based. This group includes GLS, EBDABLM and SCCP cards. This procedure updates each card with the source release GPLs.</p> <p>Note that Steps 3 - 6 are to be repeated for EACH service card in the system.</p> |
| <p>1 <input type="checkbox"/></p> | <p>Issue the command to display the GPL status.</p> <pre>rept-stat-gpl:appl=YYYY (where YYYY is one of the service card types listed above.)</pre> |
| <p>2 <input type="checkbox"/></p> <p>Record the CARD locations for all cards that 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-gpl:appl=YYYY Command entered at terminal #10. ; 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. ;</pre> |
| <p>3 <input type="checkbox"/></p> | <p>Issue the command to initialize the service cards.</p> <pre>init-card:appl=YYYY:serial=yes (where YYYY is one of the service card types listed above.)</pre> |
| <p>4 <input type="checkbox"/></p> | <p>Command response.</p> <pre>Command Accepted - Processing tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y init-card:appl=YYYY:serial=yes Command entered at terminal #10. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Initializing 1 of 3 YYYY cards [1201] ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y ** 0092.0013 ** CARD 1201 YYYY Card is isolated from the system ASSY SN: 6050434 ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y 0093.0014 CARD 1201 YYYY Card is present ASSY SN: 6050434 ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y 0094.1083 SYSTEM REPT COND: system alive Report Date:YY-MM-DD Time:hh:mm:ss ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y 0095.0096 CARD 1201 YYYY Card has been reloaded ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Initializing 2 of 3 YYYY cards [1202]</pre> |

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| | | <pre> ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y ** 0096.0013 ** CARD 1202 YYYY Card is isolated from the system ASSY SN: 10200011236 ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y 0100.0014 CARD 1202 YYYY Card is present ASSY SN: 10200011236 ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y 0104.0096 CARD 1202 YYYY Card has been reloaded ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Initializing 3 of 3 YYYY cards [1203] ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y ** 0105.0013 ** CARD 1203 YYYY Card is isolated from the system ASSY SN: 97012662 ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y 0106.0014 CARD 1203 YYYY Card is present ASSY SN: 97012662 ; </pre> |
| <input type="checkbox"/> 5 | Repeat steps 1-7 for each of the application types in this group. | |
| <input type="checkbox"/> 6 | Issue the command to display card status. | <pre>rept-stat-card</pre> |
| <input type="checkbox"/> 7 | Response to the card status command is displayed. <input type="checkbox"/> Verify all Prom-Based service cards are in IS-NR state and running the Source-Release service GPLs; see Section 1.3. | <pre> 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 ASM SCCP IS-NR Active ----- 1102 XXX-XXX-XXX ASM SCCP IS-NR Active ----- 1103 XXX-XXX-XXX ASM GLS IS-NR Active ----- 1104 XXX-XXX-XXX ASM EBDABLM IS-NR Active ----- 1105 XXX-XXX-XXX LIMDS0 SS7GX25 IS-NR Active ----- 1111 XXX-XXX-XXX ACMENET STPLAN IS-NR Active ----- 1113 XXX-XXX-XXX GPSM EOAM IS-NR Active ----- 1114 ----- TDM ----- IS-NR Active ----- 1115 XXX-XXX-XXX GPSM EOAM IS-NR Standby ----- 1116 ----- TDM ----- IS-NR Active ----- 1117 ----- MDAL ----- IS-NR Active ----- 1201 XXX-XXX-XXX LIMDS0 YYYY IS-NR Active ----- 1202 XXX-XXX-XXX LIMDS0 YYYY IS-NR Active ----- 1203 XXX-XXX-XXX LIMDS0 YYYY IS-NR Active ----- 1204 XXX-XXX-XXX LIMDS0 SS7ANSI IS-NR Active ----- Command Completed. ; </pre> |

Procedure 28: Restoring Flash-Based Service Cards.

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| S T E P # | <p>This procedure restores Service Cards that are flash based. This group includes EMDC, EBDADCM, IPS, MCP, EROUTE, and VSCCP cards.</p> <p>This procedure updates each card with the source release GPLs.</p> <p>Execution time: up to 8 min per card</p> <p>Note: Steps 3 through 16 are to be repeated for EACH card in the system.</p> |
| 1 <input type="checkbox"/> | <p>Issue the command to display the GPL status.</p> <pre>rept-stat-gpl:appl=YYYY (Where YYYY is one of the Flash-Based service card types listed above.)</pre> |
| 2 <input type="checkbox"/> | <p>Response to the command is displayed.</p> <p>Record the CARD locations for all cards that have alarms:</p> <pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y rept-stat-gpl:appl=YYYY Command entered at terminal #10. ; 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. ;</pre> |
| 3 <input type="checkbox"/> | <p>Issue the command to inhibit the card if the card is provisioned.</p> <pre>inh-card:loc=XXXX (Where XXXX is the card location of the cards determined in Step 2)</pre> |
| 4 <input type="checkbox"/> | <p>Response to the inhibit command is displayed.</p> <p>Wait for the "Command completed" response before proceeding.</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> |
| 5 <input type="checkbox"/> | <p>Issue the command to initialize the flash memory.</p> <pre>init-flash:code=appr:loc=XXXX</pre> <p>NOTE: this command causes the card to boot.</p> |
| 6 <input type="checkbox"/> | <p>Response to the init flash command is displayed.</p> <pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y FLASH Memory Download for card XXXX Started. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y FLASH Memory Download for card XXXX Completed. ;</pre> |
| 7 <input type="checkbox"/> | <p>Issue the command to allow the card¹⁸ if the card is provisioned.</p> <pre>alw-card:loc=XXXX (Where XXXX is the card location of the cards determined in Step2)</pre> <p>Note: if card is VSCCP, use alw-card:loc=xxxx:data=persist</p> |

¹⁸ Specifying the DATA=PERSIST parameter for VSCCP allows for warm restart if possible.

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| <p>8 <input type="checkbox"/></p> | <p>Response to the allow command is displayed.</p> <p>Wait for the card to finish loading before proceeding (approximately 30 seconds).</p> | <pre>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. ;</pre> |
| <p>9 <input type="checkbox"/></p> | <p>Issue the command to activate the flash memory.</p> | <pre>act-flash:loc=XXXX</pre> |
| <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 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>11 <input type="checkbox"/></p> | <p>Repeat Steps 3 – 10 for each card in the current group.</p> | |
| <p>12 <input type="checkbox"/></p> | <p>Repeat steps 1-11 for each group of cards (VSCCP, EMDC, ISP, MCP, EROUTE, EBDADCM.)</p> | |
| <p>13 <input type="checkbox"/></p> | <p>If there are GPSM-IIs in the OAM slots and steps 3-11 have been executed on these cards, continue this step. Otherwise, go to step 14</p> <p>Execute Procedure 11.</p> | <p>Reseat TDMs in both MASP.</p> |
| <p>14 <input type="checkbox"/></p> | <p>Issue the command to display the card status.</p> | <pre>rept-stat-card</pre> |
| <p>15 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> | <p>Response to the command is displayed.</p> <p>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</p> <p>For any such card that is not IS-NR or running the correct GPL, repeat Steps 3-10.</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 ASM VSCCP IS-NR Active ----- 1102 XXX-XXX-XXX ASM VSCCP IS-NR Active ----- 1103 XXX-XXX-XXX ASM EMDC IS-NR Active ----- 1104 XXX-XXX-XXX ASM EBDADCM IS-NR Active ----- 1105 XXX-XXX-XXX LIMDS0 SS7GX25 IS-NR Active ----- 1111 XXX-XXX-XXX ACMENET STPLAN IS-NR Active ----- 1113 XXX-XXX-XXX GPSM EOAM IS-NR Active ----- 1114 ----- TDM ----- IS-NR Active ----- 1115 XXX-XXX-XXX GPSM EOAM IS-NR Standby ----- 1116 ----- TDM ----- IS-NR Active ----- 1117 ----- MDAL ----- IS-NR Active ----- 1201 XXX-XXX-XXX LIMDS0 SS7ANSI IS-NR Active ----- 1202 XXX-XXX-XXX LIMDS0 SS7ANSI IS-NR Active ----- 1203 XXX-XXX-XXX LIMDS0 SS7ANSI IS-NR Active ----- 1204 XXX-XXX-XXX LIMDS0 SS7ANSI IS-NR Active ----- Command Completed. ;</pre> |

Procedure 29: Restoring Prom-Based Link Cards

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| <p>S T E P #</p> | <p>This procedure updates the Prom-based Link cards with the source release GPLs. Cards in this group include SS7ANSI, CCS7ITU, SS7GX25, and STPLAN cards. This procedure updates each card with the source release GPLs.</p> <p>Approx. time: 45 seconds per LIM card. Note: Steps 3 through 12 are to be repeated for EACH low speed link card in the system.</p> |
| <p>1 <input type="checkbox"/></p> | <p>Issue the command to display the GPL status.</p> <pre>rept-stat-gpl:appl=YYYY (where YYYY is one of the PROM-based link card types listed above.)</pre> |
| <p>2 <input type="checkbox"/></p> <p>Record the CARD locations for all cards which have alarms:</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> | <pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y rept-stat-gpl:appl=YYYY Command entered at terminal #10. ; GPL Auditing ON APPL CARD RUNNING APPROVED TRIAL XXXXXXXX 1201 XXX-XXX-XXX ALM XXX-XXX-XXX XXXXXXXX 1202 XXX-XXX-XXX ALM XXX-XXX-XXX XXXXXXXX 1203 XXX-XXX-XXX XXX-XXX-XXX XXX-XXX-XXX XXXXXXXX 1204 XXX-XXX-XXX ALM XXX-XXX-XXX Command Completed. ;</pre> |
| <p>3 <input type="checkbox"/></p> | <p>Issue command to display provisioned links.</p> <pre>rept-stat-card:loc=XXXX (where XXXX is a card in alarm from Step 2.)</pre> |
| <p>4 <input type="checkbox"/></p> <p>Note whether links A and B are IS-NR for the current 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 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> |

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| 5 <input type="checkbox"/> | Issue the command to cancel the port A link to the low speed link card if the link is IS-NR. | <code>canc-slk:loc=XXXX:port=a</code> (Where XXXX is the card location of a Low Speed Link card determined in, Step 2) NOTE: Use <code>canc-dlk:loc=XXXX</code> for STPLAN cards |
| 6 <input type="checkbox"/> | Response to cancel link command is displayed. Wait for the "Command completed" response before proceeding. | <code>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y</code> <code>canc-slk:loc=XXXX:port=a</code> Command entered at terminal #10. ; <code>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y</code> Deactivate Link message sent to card ; <code>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y</code> Command Completed. ; |
| 7 | For cards with signaling links, repeat steps 5-6 for port B of the same card if it is IS-NR. | (Port B status was noted in Step4 above.) |
| 8 <input type="checkbox"/> | Issue the command to inhibit the card. | <code>inh-card:loc=XXXX</code> (Where XXXX is the card location of the cards determined in Step 2) |
| 9 <input type="checkbox"/> | Response to the inhibit command is displayed. Wait for the "Command completed" response before proceeding. | <code>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y</code> <code>inh-card:loc=XXXX</code> Command entered at terminal #10. ; <code>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y</code> Card has been inhibited. ; <code>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y</code> Command Completed. ; |
| 10 <input type="checkbox"/> | Issue the command to allow the card. | <code>alw-card:loc=XXXX</code> (Where XXXX is the card location of the cards determined in Step2) |
| 11 <input type="checkbox"/> | Response to the allow command is displayed. Wait for the card to finish loading before proceeding (approximately 30 seconds). | <code>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y</code> <code>alw-card:loc=1201</code> Command entered at terminal #10. ; <code>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y</code> Card has been allowed. ; <code>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y</code> Command Completed. ; |
| 12 <input type="checkbox"/> | Issue the command to activate the card's link if it was IS-NR in Step 4. | <code>act-slk:loc=XXXX:port=a</code> (Where XXXX is the card location of the cards determined in Step2) NOTE: Use <code>act-dlk:loc=XXXX</code> for STPLAN cards. |
| 13 <input type="checkbox"/> | Response to the activate-link command is displayed. Wait for the "Command completed" response before proceeding. | <code>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y</code> <code>act-slk:loc=XXXX:port=a</code> Command entered at terminal #10. ; <code>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y</code> Activate Link message sent to card ; <code>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y</code> Command Completed. ; |
| 14 <input type="checkbox"/> | Repeat Step 12 – 13 for port B of the same card if it was IS-NR in Step 4. | |

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| <input type="checkbox"/> 15 | Issue command to display provisioned links. | <pre>rept-stat-card:loc=XXXX</pre> |
| <input type="checkbox"/> 16 <input type="checkbox"/> | Response displayed. Verify that the links that were IS-NR in Step 4 are IS-NR now. | <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-ElF:FAC-El 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> |
| <input type="checkbox"/> 17 | Repeat Steps 3 - 16 for each card in the group from Step 2 that has an alarm. | |
| <input type="checkbox"/> 18 | Repeat Steps 1-17 for each Prom-Based Link card group (SS7ANSI, CCS7ITU, SS7GX25, STPLAN.) | |
| <input type="checkbox"/> 19 | Issue the command to display the GPL status. | <pre>rept-stat-card</pre> |
| <input type="checkbox"/> 20 <input type="checkbox"/> | Response to the command is displayed. Verify that all Prom-Based Link cards are IS-NR and are running the Source-Release GPL versions, as per your reference list of GPLs For any card that is not IS-NR or running the correct GPL, repeat Steps 3-16. | <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 ASM SCCP IS-NR Active ----- 1102 XXX-XXX-XXX ASM SCCP IS-NR Active ----- 1103 XXX-XXX-XXX ASM GLS IS-NR Active ----- 1104 XXX-XXX-XXX ASM GLS IS-NR Active ----- 1105 XXX-XXX-XXX LIMDS0 SS7GX25 IS-NR Active ----- 1111 XXX-XXX-XXX ACMENET STPLAN IS-NR Active ----- 1113 XXX-XXX-XXX GPSM EOAM IS-NR Active ----- 1114 ----- TDM ----- IS-NR Active ----- 1115 XXX-XXX-XXX GPSM EOAM IS-NR Standby ----- 1116 ----- TDM ----- IS-NR Active ----- 1117 ----- MDAL ----- IS-NR Active ----- 1201 XXX-XXX-XXX LIMDS0 SS7ANSI IS-NR Active ----- 1202 XXX-XXX-XXX LIMDS0 CCS7ITU IS-NR Active ----- 1203 XXX-XXX-XXX LIMDS0 SS7GX25 IS-NR Active ----- 1204 XXX-XXX-XXX LIMDS0 STPLAN IS-NR Active ----- Command Completed. ;</pre> |

Procedure 30: Restoring Flash-Based Link Cards

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| <p>S T E P #</p> | <p>High Speed Link cards include ATMANSI, IPLIMI, IPLIMI, SS7IPGW, SS7ML (MPL/MIM/MPLT), IPGWI, ATMITU, and VXWSLAN cards.</p> <p>This procedure updates each card with the source release GPLs.</p> <p>Approx. time: 4 min per ATMANSI SS7ML (MPL) and 8 min per DCM SS7ML (MIM/MPLT)</p> <p>Note: Steps 3 through 16 are to be repeated for EACH Link card in the system.</p> |
| <p>1 <input type="checkbox"/></p> | <p>Issue the command to display the GPL status.</p> <pre>rept-stat-gpl:appl=YYYY (Where YYYY is one of the Flash-Based High Speed Link card types listed above.)</pre> |
| <p>2 <input type="checkbox"/></p> | <p>Response to the command is displayed.</p> <p>Record the CARD locations for all cards which have alarms:</p> <pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y rept-stat-gpl:appl=YYYY Command entered at terminal #10. ; 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>3 <input type="checkbox"/></p> | <p>Issue command to display provisioned links.</p> <pre>rept-stat-card:loc=XXXX (Where XXXX is a card in alarm from Step 2.)</pre> |
| <p>4 <input type="checkbox"/></p> <p><input type="checkbox"/></p> | <p>Response displayed.</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> |

| | | |
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| 5 <input type="checkbox"/> | Issue the command to cancel the next link to the card. | <pre>canc-slk:loc=XXXX:port=a (Where XXXX is the card location of a High Speed Link cards determined in, Step 2) NOTE: use canc-dlk:loc=XXXX for VXWLAN cards.</pre> |
| 6 <input type="checkbox"/> | <p>Response to cancel link command is displayed.</p> <p>Wait for the "Command completed" response before proceeding.</p> | <pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y canc-slk:loc=XXXX:port=a Command entered at terminal #10. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Deactivate Link message sent to card ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Command Completed. ;</pre> |
| 7 <input type="checkbox"/> | For cards with signaling links, repeat Steps 5 and 6 for each port of the same card that was IS-NR in Step 4. | |
| 8 <input type="checkbox"/> | Issue the command to inhibit the card. | <pre>inh-card:loc=XXXX (Where XXXX is the card location of the cards determined in Step 2)</pre> |
| 9 <input type="checkbox"/> | <p>Response to the inhibit command is displayed.</p> <p>Wait for the "Command completed" response before proceeding.</p> <p>NOTE: wait an <u>additional</u> 20 seconds before proceeding to allow the card to reboot.</p> | <pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y inh-card:loc=XXXX Command entered at terminal #10. ; 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> |

| | | |
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| 10 <input type="checkbox"/> | Issue the command to initialize the flash memory. | <code>init-flash:code=appr:loc=XXXX</code> NOTE: this command causes the card to boot. |
| 11 <input type="checkbox"/> | Response to the init flash command is displayed. Wait for the card to finish loading before proceeding (approximately 60 seconds). | <code>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y</code> <code>init-flash:code=appr:loc=XXXX</code> <code>Command entered at terminal #10.</code> ; <code>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y</code> <code>FLASH Memory Download for card XXXX Started.</code> ; <code>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y</code> <code>FLASH Memory Download for card XXXX Completed.</code> ; |
| 12 <input type="checkbox"/> | Issue the command to allow the card. | <code>alw-card:loc=XXXX</code> <i>(Where XXXX is the card location of the cards determined in Step2)</i> |
| 13 <input type="checkbox"/> | Response to the allow command is displayed. Wait for the card to finish loading before proceeding (approximately 30 seconds). | <code>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y</code> <code>alw-card:loc=1201</code> <code>Command entered at terminal #10.</code> ; <code>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y</code> <code>Card has been allowed.</code> ; <code>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y</code> <code>Command Completed.</code> ; |
| 14 <input type="checkbox"/> | Issue the command to activate the card's next link. | <code>act-slk:loc=XXXX:port=a</code> <i>(Where XXXX is the card location of the cards determined in Step2)</i> NOTE: Use <code>act-dlk:loc=XXXX</code> for cards with data links. |
| 15 <input type="checkbox"/> | Response to the activate-link command is displayed. Wait for the "Command completed" response before proceeding. | <code>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y</code> <code>act-slk:loc=XXXX:port=a</code> <code>Command entered at terminal #10.</code> ; <code>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y</code> <code>Activate Link message sent to card</code> ; <code>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y</code> <code>Command Completed.</code> ; |
| 16 <input type="checkbox"/> | Repeat Step 14 – 15 for each port of the same card that was IS-NR in Step 4 for cards with signaling links. | |
| 17 <input type="checkbox"/> | Issue the command to activate the flash memory. | <code>act-flash:loc=XXXX</code> |
| 18 <input type="checkbox"/> | Response to the command is displayed. | <code>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y</code> <code>act-flash:loc=XXXX</code> <code>Command entered at terminal #10.</code> ; <code>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y</code> <code>FLASH Memory Activation for card XXXX Started.</code> ; <code>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y</code> <code>FLASH Activation for card XXXX Completed.</code> ; |

| | | |
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| <p>19 <input type="checkbox"/></p> | <p>Issue command to display provisioned links.</p> | <pre>rept-stat-card:loc=XXXX</pre> |
| <p>20 <input type="checkbox"/> <input type="checkbox"/></p> | <p>Response displayed.</p> <p>Verify that the ports that were IS-NR for this card 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 XXXXXXX XXXXXXX 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>21 <input type="checkbox"/></p> | <p>Repeat Steps 3 - 20 for each Flash-Based High Speed Link card in the current card group.</p> | |
| <p>22 <input type="checkbox"/></p> | <p>Repeat Steps 1-21 for each group of Flash-Based High Speed Link cards (ATMANSI, IPLIMI, IPLIMI, SS7IPGW, SS7ML (MPL/MIM/MPLT), IPGWL, and VXWSLAN.)</p> | |
| <p>23 <input type="checkbox"/></p> | <p>Issue the command to display the GPL status.</p> | <pre>rept-stat-card</pre> |
| <p>24 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> | <p>Response to the command is displayed.</p> <p>Verify that all Flash-Based High Speed 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 1-15.</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 ASM ATMANSI IS-NR Active ----- 1102 XXX-XXX-XXX ASM IPLIM IS-NR Active ----- 1103 XXX-XXX-XXX ASM SS7ML IS-NR Active ----- 1104 XXX-XXX-XXX ASM VXWSLAN IS-NR Active ----- 1105 XXX-XXX-XXX LIMDS0 SS7GX25 IS-NR Active ----- 1111 XXX-XXX-XXX ACMENET STPLAN IS-NR Active ----- 1113 XXX-XXX-XXX GPSM EOAM IS-NR Active ----- 1114 ----- TDM ----- IS-NR Active ----- 1115 XXX-XXX-XXX GPSM EOAM IS-NR Standby ----- 1116 ----- TDM ----- IS-NR Active ----- 1117 ----- MDAL ----- IS-NR Active ----- 1201 XXX-XXX-XXX LIMDS0 SS7ANSI IS-NR Active ----- 1202 XXX-XXX-XXX LIMDS0 SS7ANSI IS-NR Active ----- 1203 XXX-XXX-XXX LIMDS0 SS7ANSI IS-NR Active ----- 1204 XXX-XXX-XXX LIMDS0 SS7ANSI IS-NR Active ----- Command Completed. ;</pre> |

Procedure 31: Restoring HMUX Cards

| | | |
|----------------------------------|--|--|
| S T E P # | This procedure updates each card with the source release GPLs. Approx. time: 4 min per card | |
| 1 <input type="checkbox"/> | Issue the card status command to identify the HMUX cards in the system. | <code>rept-stat-gpl:appl=bphmux</code> |
| 2 <input type="checkbox"/> | Response to the command is displayed. Record the CARD locations for all HMUX cards in the system: _____ _____ _____ _____ _____ _____ | <pre> tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y rept-stat-gpl:appl=bphmux 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 BPHMUX XX09 XXX-XXX-XXX ALM XXX-XXX-XXX XXX-XXX-XXX BPHMUX 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 BPHMUX XX09 XXX-XXX-XXX XXX-XXX-XXX XXX-XXX-XXX BPHMUX XX10 XXX-XXX-XXX ALM XXX-XXX-XXX XXX-XXX-XXX BPHMUX XX09 XXX-XXX-XXX XXX-XXX-XXX XXX-XXX-XXX BPHMUX XX10 XXX-XXX-XXX XXX-XXX-XXX XXX-XXX-XXX Command Completed. ; </pre> |
| 3 <input type="checkbox"/> | Enter the command to initialize the FLASH on the next HMUX card on the current bus. | <code>init-flash:loc=XXYY:code=appr</code> <i>(Where XX = is a shelf number and, YY depends on which bus is being flashed. 09 is bus a; 10 is bus b.)</i> |
| 4 <input type="checkbox"/> | Response to the flash initialization is shown. | <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> |
| 5 <input type="checkbox"/> | Repeat steps 3-4 for each HMUX card on the current bus. | NOTE: Steps 3-10 must be performed for all HMUX cards on one bus before performing these steps for any HMUX cards on the other bus. |

| | | |
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| 6 <input type="checkbox"/> | Enter the command to initialize the current bus. | <pre>init-mux:bus=x (Where x = a or b, depending on current bus: xx09 is bus a; xx10 is bus b.)</pre> |
| 7 <input type="checkbox"/> | Response to the initialization command is displayed. | <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 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> |
| 8 <input type="checkbox"/> | Issue the command to activate the flash on the next HMUX card on the current bus. | <pre>act-flash:loc=XXYY (Where XX = is a shelf number and, YY depends on which bus is being flashed. 09 is bus a; 10 is bus b.)</pre> |
| 9 <input type="checkbox"/> | Response to the activate command is displayed. | <pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y act-flash:loc=XX09 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 1209 Started. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y FLASH Activation for card 1209 Completed. ;</pre> |
| 10 <input type="checkbox"/> | Repeat steps 8-9 for each HMUX card on the current bus (a or b.) | |
| 11 <input type="checkbox"/> | Repeat steps 3-10 for the second bus (a or b.) | |
| 12 <input type="checkbox"/> | Issue the command to display the HMUX card GPL status. | <pre>rept-stat-gpl:appl=bphmux</pre> |
| 13 <input type="checkbox"/> | Verify that all HMUX cards are running the approved GPL. | <pre>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y rept-stat-gpl:appl=bphmux 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 BPHMUX XX09 XXX-XXX-XXX XXX-XXX-XXX XXX-XXX-XXX BPHMUX XX10 XXX-XXX-XXX XXX-XXX-XXX XXX-XXX-XXX BPHMUX XX09 XXX-XXX-XXX XXX-XXX-XXX XXX-XXX-XXX BPHMUX XX10 XXX-XXX-XXX XXX-XXX-XXX XXX-XXX-XXX BPHMUX XX09 XXX-XXX-XXX XXX-XXX-XXX XXX-XXX-XXX BPHMUX XX10 XXX-XXX-XXX XXX-XXX-XXX XXX-XXX-XXX BPHMUX XX09 XXX-XXX-XXX XXX-XXX-XXX XXX-XXX-XXX BPHMUX XX10 XXX-XXX-XXX XXX-XXX-XXX XXX-XXX-XXX Command Completed. ;</pre> |

APPENDIX A. UPGRADING BOOT-PROM GPL ON NON-IN-SERVICE AND UNPROVISIONED NETWORK CARDS

Procedure 32: Flashing Inhibited Cards

| | | |
|----------------------------------|--|--|
| S T E P # | This procedure determines any BPHCAP, BPHCAPT, BPDCM, BPMPL, or BPMPLT cards that are inhibited, and updates each card with its target release GPLs. | |
| 1 <input type="checkbox"/> | Issue the command to display the GPL status. | <code>rept-stat-gpl:appl=XXXX</code> <i>(Where XXXX is the GPL recorded in Procedure 20, Step 4)</i> |
| 2 <input type="checkbox"/> | Response to the command is displayed. <input type="checkbox"/> Record any card which shows an alarm: _____ | <code>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y</code> <code>rept-stat-gpl:appl=XXXX</code> Command entered at terminal #10. ; 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. ; |
| 3 <input type="checkbox"/> | Issue the status command for specific card | <code>rept-stat-card:loc=XXXX</code> <i>(Where XXXX is the card location recorded in the previous step.)</i> |
| 4 <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 ¹⁹ , go to step 7. | <code>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y</code> 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. |
| 5 <input type="checkbox"/> | Issue the command to inhibit card. | <code>inh-card:loc=XXXX</code> |
| 6 <input type="checkbox"/> | Response to the command is displayed. | <code>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y</code> Card has been inhibited. ; <code>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y</code> Command Completed. ; |
| 7 <input type="checkbox"/> | Issue the command to initialize the flash memory. | <code>init-flash:code=appr:loc=XXXX</code> NOTE: this command causes the card to boot. |
| 8 <input type="checkbox"/> | Response to the init flash command is displayed. Wait for the downloading to complete. | <code>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y</code> FLASH Memory Download for card XXXX Started. ; <code>tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y</code> FLASH Memory Download for card XXXX Completed. ; |

¹⁹ E2144 Cmd Rej: Location invalid for hardware configuration

| | | |
|--------------------------------|---|--|
| 8 <input type="checkbox"/> | Issue the command to activate the flash memory. | <code>act-flash:loc=XXXX</code> |
| 9 <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 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> |
| 10 <input type="checkbox"/> | If steps 5 & 6 were executed, issue the command to allow card. | <code>alw-card:loc=XXXX</code> |
| 11 <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> |
| 12 <input type="checkbox"/> | Repeat Steps 3 – 11 for all cards recorded in step 2. | |
| 13 <input type="checkbox"/> | Repeat Steps 1 – 12 for each group of Flash-Based cards (BPHCAP, BPHCAPT, BPDCM, BPMPL, and BPMPLT) | |

APPENDIX B. SAMPLES OF MESSAGES OUTPUT BY UPGRADE DURING PROCEDURE 10 STEP 1

The following are illustrative of the messages to be seen on the console during procedure 10, step 1 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 (disk=fixed)
;
ACT-UPGRADE: MASP A - IMT GPL processing.
;
ACT-UPGRADE: MASP A - GPL uploaded.
;
ACT-UPGRADE: MASP A - GPL activated.
;
ACT-UPGRADE: MASP A - GPL uploaded.
;
ACT-UPGRADE: MASP A - BPDCM GPL processing.
;
ACT-UPGRADE: MASP A - GPL uploaded.
;
ACT-UPGRADE: MASP A - GPL activated.
;
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...
;
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: 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.
;

```

The following are illustrative of the messages to be seen on the console during procedure 10, step 1 of the upgrade procedure if the **removable disk** is used for OAM conversion workspace. Headers and messages not directly output by upgrade have been omitted.

```

Using removable cartridge for OAM conversion (disk=remove)
;
ACT-UPGRADE: MASP A - IMT GPL processing.
;
ACT-UPGRADE: MASP A - GPL uploaded.
;
ACT-UPGRADE: MASP A - GPL activated.
;
ACT-UPGRADE: MASP A - GPL uploaded.
;
ACT-UPGRADE: MASP A - BPDCM GPL processing.
;
ACT-UPGRADE: MASP A - GPL uploaded.
;
ACT-UPGRADE: MASP A - GPL activated.
;
ACT-UPGRADE: MASP A - GPL uploaded.
;
Conversion of Removable Cartridge has started...
;
NOTICE: Converting XXXX.TBL
;
Conversion of Removable Cartridge complete
Marking Removable Upgrade Phase = 2...
;
Starting to format the Standby TDM...
;
Format-disk of standby fixed disk complete.
;
Starting to copy GPLs to Standby TDM from removable...
;
Starting Standby TDM restoration from removable...
;

```

```
Starting to backup Standby TDM...
;
Starting to copy system tables to Standby TDM from Active TDM...
;
Converting Standby OAM System partition.
Preserving the source-release DB version.
Marking Standby TDM Upgrade Phase = 2...
;
Conversion of Standby TDM has completed
;
Booting the Standby...
;
ACT-UPGRADE: MASP A - Active MASP will reboot and be converted for upgrade.
;
Standby MASP has not finished initializing - please wait...
;
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...
;
Starting Standby TDM restoration from removable...
;
Starting to backup Standby TDM...
;
Starting to copy system tables to Standby TDM from Active TDM...
;
Converting Standby OAM System partition.
Preserving the source-release DB version.
Marking Standby TDM Upgrade Phase = 2...
;
Conversion of Standby TDM has completed
;
Booting the Standby...
;
Standby MASP has not finished initializing - please wait...
;
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.
;
```


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: _____

Customer:(Print) _____ **Phone:** _____

Fax: _____

Start Date: _____

Completion Date: _____

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

Tekelec Signature: _____ **Date:** _____

Customer Signature: _____ **Date:** _____

APPENDIX D. ACCESSING TEKELEC'S CUSTOMER SUPPORT SITE

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

1. Go to Tekelec's Customer Support login page at <https://support.tekelec.com/index.asp>
2. Enter your assigned username and chosen password and click **Login**.
Or, if you do not have access to the Customer Support site, click **Need an Account?**
Follow instructions on the screen.

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

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

