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Network Signaling Group

System Healthcheck Procedure

EAGLE Releases 31.5 and earlier

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 System Health Check or the Upgrade.
Refer to Appendix B for instructions on accessing this site.

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

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FAX: 919-460-2126
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CHANGE HISTORY

Date	ENG Version#	ECN Revision #	Author	Description	Approved* (Yes/No)
1/5/05	1.0	A	C. Villareal	Adjusted output to avoid line wrap, prepared for publication.	Yes
3/22/05	1.1		Robert Kress	Update for PR 60861	No
3/24/05	1.2		Robert Kress	Peer review Updates	Yes
5/24/05	1.3		Robert Kress	Update for PR 83517	No
5/27/05	1.4		Thomas Mills	Update for PR 61714- Verifying EROUTE	No
7/15/05	2.0		Robert Kress	Peer review Updates	Yes
8/3/05	2.1	B	I Sutcliffe	Prepared for publication: updated consolidated Tekelec address in Plano, Tx on cover page and Tekelec's Customer Care phone number. Inserted on cover page a Caution note about using this procedure prior to an upgrade. Added instructions on how to access the Customer Support site	Yes
8/7/05	2.2-2.8		L. Witherspoon	Update for PR 58392: Multiple Routing Context PR 88790: fix typo in Procedure 3.20 Step 20	No
9/01/05	2.9		L. Witherspoon	Peer review Updates	No
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3/9/07	4.3	E	I. Sutcliffe	Prepared for publication	Yes

TABLE OF CONTENTS

List of Tables

List of Procedures

1. INTRODUCTION

1.1 Purpose and Scope

This document describes Tekelec's recommended methods and procedures to be used to evaluate Site and STP data retrieved from in-service EAGLE STP or any other Tekelec product using the EAGLE's hardware platform. The intended audience for this document is EAGLE® Engineering, Documentation, Customer Service personnel and any craft person who has completed EAGLE® training and is familiar with the EAGLE® interface. The scope of this document is specifically to determine the health of an in-service EAGLE prior to a software upgrade or an extension shelf installation. In general, this document may be used for an instance where the health determination of the EAGLE is required (i.e. troubleshooting).

Analysis of data captured during this procedure is out of the scope of this document. Analysis of the data is covered in reference [1].

1.2 References

[1] *Health Check Analysis Work Instruction*, WI005139, rev. 2.0, Tekelec, Dec. 2001

1.3 Acronyms

Table 1. Acronyms

Acronym	Definition
ASM	Application Services Module
AST	Associate State for Maintenance
BITS	Building Integrated Timing System
DPC	Destination Point Code
DSM	Database Services Module
EUAT	EAGLE Upgrade Automation Tool
FOA	First Office Application
GPL	Generic Program Load
IMT	Interprocessor Message Transport
IS-ANR	In Service - Abnormal
IS-NR	In Service - Normal
MCP	Measurements Collector/Poller
PST	Primary State for Maintenance
SCCP	Signaling Connection Control Part

2. GENERAL DESCRIPTION

The System Health Check may be performed on any EAGLE-platform-based STP by any qualified EAGLE® customer or Customer Care Center personnel. The health check is to be performed as directed by software release upgrade procedures or extension shelf installation MOP. It may also be utilized during FOA, hardware installations, or customer problem analysis. This document outlines a series of commands and procedures to be performed on the switch. With each command, there is a description of the command, expected command output, and what problems may be detected with the command. If the desired goal/output is not obtained by executing the command the Customer Care Center should be contacted to investigate the deficiencies. The entire set of commands should be executed each time in order to obtain a complete system status and configuration. The goal of this health check procedure is to be non-intrusive. Currently, only spare equipment swap out and the IMT bus testing are intrusive and should be executed during a maintenance window. The procedures that are intrusive are highlighted in the table in Section 2.3..

2.1 Recommendations for Performing Health Check

As indicated above, the commands in this document should be executed during periods of FOA, new software or hardware installations, upgrades, or customer problems. This document should be referenced in all software upgrade, extension shelf installation, and Customer Service FOA plans.

2.1.1 Frequency of Health Check

The frequency of executing these commands should be documented in upgrade execution procedures, extension shelf installation MOP, and the release FOA plan/strategy developed by Tekelec. Currently for upgrade, three health checks are executed. The recommended time frames of these checks are the following: two weeks prior (UHC1), forty-eight hours prior (UHC2), and seventy-two hours following an upgrade (UHC3). For extension shelf, one health check is executed prior to installation. The exact time is based on availability of personnel and scheduled maintenance windows.

2.1.2 Data Capture

During the execution of this procedure, some method of data capture is necessary for proper analysis and for future reference. If a terminal emulation application is being used which supports capturing, the application should be enabled. In Release 26.0 and above, a KSR or VT320 terminal may be selected as the capture terminal since output from the user terminal can be echoed to those terminal types. If no other method is available, input and output from the user terminal can be echoed to a configured printer. A capture file must be generated so a comparison can be made with other capture files from the same node to determine if any system degradation occurred between the two capture periods.

2.1.3 Step Check-Off and Recording Configuration

All steps in this Health Check are to be initialed by the person performing the check after each step. Blanks have been provided under each step number for this purpose. Also certain steps request recording of data, which is specific to the configuration of the switch being checked.

Note that the Health Check may take several hours to complete depending on the size of the system, the version of TDMs in use and user experience. Execution times of individual procedures are noted throughout the document.

2.2 Health Check Record

Each time the System Health Check has been completed, record the date, the reason for the health check (upgrade preparation, new installation, post-upgrade verification, etc.) and record which procedure passed/failed in the following table.

Table 2. Health Check Record

DATE	Reason for running health check	List any procedures that failed (Procedure number and name)	Technician Signature
	Upgrade HC #1		
	Upgrade HC #2		
	Upgrade HC #3		
	Extension Shelf HC		

2.3 Health Check Type

The following table lists the procedures to be executed depending on the type of health check being performed.

Table 3. Health Check Type Procedures

Procedure	Non-Intrusive Upgrade (UHC1, UHC3)	Intrusive Upgrade (UHC2)	Extension Shelf, New Product
3.2 Health Check Preparation	√	√	√
3.3 General System Status	√	√	√
3.4 Report System Troubles	√	√	√
3.5 Verifying Database Status	√	√	n/a
3.6 Verifying GPLs	√	√	n/a
3.7 Retrieving Obituaries	√	√	√
3.8 Verifying STPLAN	√	√	n/a
3.9 Verify SCCP Load	√	√	n/a
3.10 Verifying LNP and LSMS	√	√	n/a
3.11 Verifying SEAS	√	√	n/a
3.12 Verifying optional features	√	√	√
3.13 Verifying IP Signaling Status	√	√	√
3.14 Verifying EROUTE	√	√	√
3.15 Verifying IMT Status	√	√	√
3.16 Verifying Clock Status (See note 1)	√	√	√
3.17 Verifying MPS (See note 1)	√	√	n/a
3.18 Retrieving Trouble Data	√	√	√
3.19Verifying Unsupported or Obsolete System References	n/a	√	n/a
3.20 Verifying Fixed and Removable Disks (Part 1)	n/a	√	n/a
3.21 Testing IMT Status	n/a	√	√
3.22 Verifying Fixed and Removable Disks (Part 2)	n/a	√	n/a
3.23 Table Capacity Status	√	√	n/a
3.24 Verification of the IP database	√	√	n/a
3.25 Health Check Conclusion	√	√	√
Note 1: Intrusive procedures are shaded.			

3. PROCEDURES

3.1 Pre-Health Check Requirements

Procedure 1. Verifying Pre-Health Check Requirements

S T E P #	This procedure verifies that all pre-healthcheck requirements have been met. Check off (√) each step as it is completed. Boxes have been provided for this purpose under each step number. Should THIS PROCEDURE FAIL, Contact the Customer Care Center AND **ASK FOR HEALTHCHECK ASSISTANCE.**	
1 ☐	Complete Pre-Health Check tasks	All applicable tasks in Table 4 must be completed before continuing.

Table 4. Pre-Health Check Requirements

√	Tasks to be completed prior to Health Check execution
	For Health Check #2 - Verify that on-site personnel are available.
	For Health Check #2 – Verify that Upgrade MO cartridges are on-site.
	Verify that all terminal and modem recourses are available for remote access.
	If the procedure for verifying EROUTE is to be run during this Health Check: Obtain and record the IP addresses for the Yellow and Blue networks for both ESP-1A and ESP-1B. These addresses can be obtained by the following: 1) Login to the Netra ESP-1A 2) Issue the command **ifconfig –a** to get the addresses labeled **eri0** and **eri1** 3) Record the addresses below. ESP- 1A Yellow Network IP Address (eri0): _____ ESP- 1A Blue Network IP Address (eri1): _____ 4) Login to the Netra ESP-1B 5) Issue the command **ifconfig –a** to get the addresses labeled **eri0** and **eri1** 6) Record the addresses below. ESP- 1B Yellow Network IP Address (eri0): _____ ESP- 1B Blue Network IP Address (eri1): _____

3.2 Health Check Preparation

Procedure 2. Health Check Preparation

S T E P #	This procedure starts capturing all commands and command output to a printer or other terminal configured to capture data such as a modem used by the Customer Care Center. See Section 2.1.2 for recommendation on data capture. Estimated time for completion: 10 minutes	
1 ☐	Issue the command to log in to the EAGLE terminal.	**login:uid=XXXXXX** *(Where XXXXXX is your login ID)*
2 ☐	Response to login command is displayed.	tekelecstp 98-03-09 08:29:20 EST Rel XX.X.X User logged in on terminal X ;
3 ☐	Issue the command to retrieve terminal status.	**rtrv-trm**
4 ☐	Response to retrieve terminal command is displayed. ☐ Record the numbers that appear in the TRM column below corresponding to the terminal port being used to capture, OAP terminals, and user terminal. In this example, terminal 12 is a printer, terminal 10 is the user's terminal, and terminal 1 is the OAP. Refer to Section 2.1.2 for information on how to set up terminals for data capture. CAPTURE _____ OAP _____ _____ USER _____ ☐ If not already activated, start mechanism to capture data. Refer to Section 2.1.2 for recommendation on data capture. ☐ Record the initial output group configuration for the user's and capture terminals. Also record user's TMOUT value ☐ Verify that all terminal groups for the printers show YES. If so, skip to step 7. If any groups show 'NO', continue to step 5.	tekelecstp 98-03-09 08:29:23 EST Rel XX.X.X TRM TYPE COMM FC TMOUT MXINV DURAL 1 OAP 19200 -7-E-1 SW 30 5 00:01:00 2 NONE 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 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 NO NO 13 YES YES YES YES YES YES 14 NO NO NO NO NO NO 15 NO NO NO NO NO NO 16 NO NO NO NO NO NO ; USER ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ TMOUT ____ CAP ___ ___ ___ ___ ___ ___ ___ ___ ___ ___
5 ☐	Issue the command to change all terminal groups.	**chg-trm:trm=P:all=yes** *(Where P is the location of the capture terminal.)*
6 ☐	Response to change terminal command is displayed.	tekelecstp 98-03-09 03:01:10 EST Rel XX.X.X-YY.Y.Y chg-trm:trm=P:all=yes Command entered at terminal #X. ; tekelecstp 98-03-09 03:01:11 EST Rel XX.X.X-YY.Y.Y CHG-TRM: MASP A – COMPLTD ;

Procedure 2. Health Check Preparation

7 ☐	Issue the command to activate capture.	**act-echo:trm=P** *(Where P is a terminal port that was selected in step 5)*
8 ☐ ☐	Response to activate command is displayed. Verify that the capture terminal is correctly collecting data.	tekelecstp 98-03-09 08:29:26 EST Rel XX.X.X-YY.Y.Y Scroll Area Output will be echoed to Terminal X. ;
9 ☐	If all terminal groups for the user terminal are not set to "NO" and method for capturing output is enabled, issue the command to change all terminal groups to "NO."	**chg-trm:trm=X:all=no:tmout=0:sa=yes:sys=yes:db=yes** *(Where X is the location of the user's terminal recorded in step 4.)*
10 ☐	Response to change terminal command is displayed.	tekelecstp 98-03-09 03:01:10 EST Rel XX.X.X-YY.Y.Y chg-trm:trm=X:all=no Command entered at terminal #X. ; tekelecstp 98-03-09 03:01:11 EST Rel XX.X.X-YY.Y.Y CHG-TRM: MASP A – COMPLTD ;
11 ☐	Issue the command to display optional features	**rtrv-feat**
12 ☐ ☐	Response to retrieve feature command is displayed. Record the on/off status of the features in the following table.	tekelecstp 98-03-09 03:01:11 EST Rel XX.X.X-YY.Y.Y EAGLE FEATURE LIST GTT = on GWS = on NRT = on X25G = off LAN = off CRMD = on SEAS = off LFS = on MTPRS = on FAN = on DSTN5000 = on WNP = on CNCF = on TLNP = on SCCPCNV = on TCAPCNV = on IPISUP = on DYNRTK = on X252000 = off INP = off PLNP = on NCR = on ITUMTPRS = off SLSOCB = off EGTT = off VGTT = on MGTT = off MPC = on ITUDUPPC = off GFLEX = off GSMSCRN = off GPORT = off MEASPLAT = off TSCSYNC = off E5IS = off ;

Note: The following table lists all possible feature bits. Feature bits differ between releases, so one may appear in this table that will not exist on a particular Eagle. Prior to release 30.0, features LNP and LNP12MIL were controlled via feature bits that are displayed in Step 12. In EAGLE Release 30.0 and higher, all LNP features (including LNP48MIL and LNP96MIL) are controlled via feature access keys that are displayed in Step 14.

GTT	ON / OFF	**GWS**	ON / OFF	**NRT**	ON / OFF
X25G	ON / OFF	**LAN**	ON / OFF	**CRMD**	ON / OFF
SEAS	ON / OFF	**LFS**	ON / OFF	**MTPRS**	ON / OFF
FAN	ON / OFF	**DSTN5000**	ON / OFF	**WNP**	ON / OFF
CNCF	ON / OFF	**TLNP**	ON / OFF	**SCCPCNV**	ON / OFF
TCAPCNV	ON / OFF	**IPISUP**	ON / OFF	**DYNRTK**	ON / OFF
X252000	ON / OFF	**INP**	ON / OFF	**PLNP**	ON / OFF
NCR	ON / OFF	**ITUMTPRS**	ON / OFF	**SLSOCB**	ON / OFF
EGTT	ON / OFF	**VGTT**	ON / OFF	**MGTT**	ON / OFF
MPC	ON / OFF	**ITUDUPPC**	ON / OFF	**GFLEX**	ON / OFF
GSMSCRN	ON / OFF	**GPORT**	ON / OFF	**MEASPLAT**	ON / OFF
TSCSYNC	ON / OFF	**E5IS**	ON / OFF	**LNP**	ON / OFF
LNP12MIL	ON / OFF	**LNP48MIL**	ON / OFF		

Procedure 2. Health Check Preparation

13 ☐	If the system is running EAGLE release 28.0 or higher, issue the command to display feature keys that have been enabled.	**rtrv-ctrl-feat**
14 ☐ ☐ ☐ ☐	Response to the command is displayed. Record if LNP ported TN feature key and LNP ELAP Configuration is on and displayed as well as the current quantity [1]. Also record whether the EIR feature is on: LNP ported TN: ON / OFF Quantity: _____ LNP ELAP Config: ON/OFF EIR: ON/OFF Record if TPS feature key Configuration is on and displayed as well as the current quantity. Also record whether any temporary TPS keys are displayed as enabled. Verify no temporary TPS keys are enabled. TPS Status: ON / OFF Quantity: _____ Temporary TPS Enabled: YES/NO	rtrv-ctrl-feat Command entered at terminal #X. ; tekelecstp 02-10-08 10:45:50 EST EAGLE XX.X.X-YY.Y.Y The following features have been permanently enabled: Feature Name Partnum Status Quantity TPS 893000101 on 100 EAGLE Product 893007201 on ---- LNP ELAP Configuration 893010901 on ---- LNP ported TNs 893011012 on 96000000 EIR 893012301 on ---- The following features have been temporarily enabled: Feature Name Partnum Status Quantity Trial Period Zero entries found. The following features have expired temporary keys: Feature Name Partnum Zero entries found.
15 ☐	All steps in this procedure were completed.	

[1] LNP feature access keys are introduced in EAGLE Release 30.0. If feature access key outputs "off" for status or does not appear in output the feature is OFF. In earlier releases, LNP features are displayed in Step 12.

3.3 General System Status

Procedure 3: Determining General System Status

STEP #	This procedure examines the general status of all cards in the system by reporting card and system status. Look for unexplained alarms, or other entities listed as 'other'. Any system entities listed as 'other' should be documented, investigated, and explained. Look for unexplained card PST and SST states (i.e. not IS-NR/Active). Estimated time for completion: 5 minutes	
1 ☐	Issue the command to display IMT errors.	**rept-imt-lvl1:r=summary:s=h'00:e=h'fb**
2 ☐ ☐	Response to IMT report command is displayed. If UHC2 is being executed, verify that large values are not displayed in any highlighted columns.	tekelecstp 98-03-09 14:14:10 EST Rel XX.X.X ========== SUMMARY REPORT: Totals accumulated from all requested cards Count — Bus A Value — Bus B Value Transmit Packet 0M 0M Transmit Byte 0M 0M Receive Packet 0M 0M Receive Byte 0M 0M Receive Packet with CRC Error 0 0 Receive Packet with Format Error 0 0 Receive Packet with Invalid Length 0 0 Primary Control Receive Error 0 0 Primary Control Transmit Error 0 0 Primary Control Sanity Error 0 0 Violation Error 0 0 CPU Receive FIFO Full 0 0 IMT Receive FIFO Half Full 0 0 CPU Receive FIFO Half Full 0 0 DMA Terminal Count Interrupt 0 0 MSU Retransmitted 0 0 MSU Safety Packet 0 0 ASU Safety Packet 0 0 TSU Safety Packet 0 0 IMT Receive FIFO Full 0 0 SSU Safety Packet 0 0 ---------- ;END OF REPORT ;
3 ☐	Issue the status command for the MUX cards.	**rept-stat-mux**
4 ☐ ☐	Response to MUX status command is displayed. Verify that all cards are IS-NR.	tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y CARD TYPE PST SST AST 1109 HMUX IS-NR Active ----- 1110 HMUX IS-NR Active ----- 1209 HMUX IS-NR Active ----- 1210 HMUX IS-NR Active ----- 1309 HIPR IS-NR Active ----- 1310 HIPR IS-NR Active ----- Command Completed. ;
5 ☐	If any card types were reported as HMUX in step 4, issue the command to report HMUX errors.	**rept-imt-info:report=hmuxerr**
6 ☐	Response to report HMUX error command is displayed.	tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y HMUX Summary Report: Summed across all requested cards for each bucket HMUX Hourly Bucket Statistics ========== Bucket — Low Speed Statistic — BUS A Value — BUS B Value *XX* IMT Rx Packet CRC Error 0 0 IMT Rx Packet Format Error 0 0 IMT Rx Violation Error 0 0 CPU Rx FIFO Full 0 0 CPU Rx FIFO Half Full 0 0 CPU Rx FIFO Empty Before SOM 0 0 CPU Rx FIFO Empty Before EOM 0 0 CPU Rx Packet SOM Before EOM 0 0 CPU Rx Packet CRC Error 0 0 DMA terminal count 0 0 CPU Tx Buffer EOB 0 0 CPU Tx Buffer Full 0 0

Procedure 3: Determining General System Status

```
            CPU Tx Buffer Half Full                9            9
            IMT Bypass FIFO Full                   0            0
            IMT Bypass FIFO Half Full              0            0
            IMT Rx FIFO Full                       0            0
            IMT Rx FIFO Half Full                  0            0

            High Speed Statistic          BUS A Value  BUS B Value
            --------------------          -----------  -----------
            IMT Rx Packet CRC Error                0            0
            IMT Rx Disparity Error                 0            0
            IMT Rx Sync Lost Error                 0            0
            IMT Rx Code Word Error                 0            0
            CPU Rx FIFO Full                       0            0
            CPU Rx FIFO Half Full                  0            0
            CPU Rx FIFO Empty Before SOM           0            0
            CPU Rx FIFO Empty Before EOM           0            0
            CPU Rx Packet SOM Before EOM           0            0
            CPU Rx Packet CRC Error                0            0
            DMA terminal count                     0            0
            CPU Tx Buffer EOB                      0            0
            CPU Tx Buffer Full                     0            0
            CPU Tx Buffer Half Full                9            9
            IMT Bypass FIFO Full                   0            0
            IMT Bypass FIFO Half Full              0            0
            IMT Rx FIFO Full                       0            0
            IMT Rx FIFO Half Full                  0            0

            Misc Speed Statistic          BUS A Value  BUS B Value
            --------------------          -----------  -----------
            Shelf ID UART Framing Error            0            0
            Shelf ID UART Overrun Error            0            0

        HMUX CUMULATIVE Statistics

        ==========================================================================
            Low Speed Statistic           BUS A Value  BUS B Value
            -------------------           -----------  -----------
            IMT Rx Packet CRC Error                0            0
            IMT Rx Packet Format Error             4            1
            IMT Rx Violation Error               149          152
            CPU Rx FIFO Full                       0            0
            CPU Rx FIFO Half Full                  0            0
            CPU Rx FIFO Empty Before SOM           0            0
            CPU Rx FIFO Empty Before EOM           0            0
            CPU Rx Packet SOM Before EOM           0            0
            CPU Rx Packet CRC Error                0            0
            DMA terminal count                     0            0
            CPU Tx Buffer EOB                      0            0
            CPU Tx Buffer Full                     0            0
            CPU Tx Buffer Half Full            58394        58902
            IMT Bypass FIFO Full                   0            0
            IMT Bypass FIFO Half Full              0            0
            IMT Rx FIFO Full                       0            0
            IMT Rx FIFO Half Full                  0            0

            High Speed Statistic          BUS A Value  BUS B Value
            --------------------          -----------  -----------
            IMT Rx Packet CRC Error                2            2
            IMT Rx Disparity Error                 0            0
            IMT Rx Sync Lost Error                 2            2
            IMT Rx Code Word Error                 1            1
            CPU Rx FIFO Full                       0            0
            CPU Rx FIFO Half Full                  0            0
            CPU Rx FIFO Empty Before SOM           0            0
            CPU Rx FIFO Empty Before EOM           0            0
            CPU Rx Packet SOM Before EOM           0            0
            CPU Rx Packet CRC Error                0            0
            DMA terminal count                     0            0
            CPU Tx Buffer EOB                      0            0
            CPU Tx Buffer Full                     0            0
            CPU Tx Buffer Half Full              191          190
            IMT Bypass FIFO Full                   0            0
            IMT Bypass FIFO Half Full              0            0
            IMT Rx FIFO Full                       0            0
            IMT Rx FIFO Half Full                  0            0

            Misc Speed Statistic          BUS A Value  BUS B Value
            --------------------          -----------  -----------
            Shelf ID UART Framing Error            0            0
            Shelf ID UART Overrun Error            0            0

;
```

Procedure 3: Determining General System Status

7 ☐ If any card types were reported as HIPR in step 4, issue the status command that reports HIPR errors.

```
rept-imt-info:report=hiprerr
```

8 ☐ Response to status command is displayed.

Note: output abridged for brevity. This output displays information for one-bucket only.

```
    tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y
    HIPR Summary Report: Summed across all requested cards for each bucket

;

    tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y

    HIPR Hourly Bucket Statistics

    ================================================================================
    Bucket Loc   Low Speed Statistic           BUS A Value  BUS B Value
    ------ ----  -------------------           -----------  -----------
    XX     ----  IMT Rx Packet CRC Error              0            0
                 IMT Rx Packet Format Error           0            0
                 IMT Rx Violation Error               0            0
                 IMT Rx Command Error                 0            0
                 IMT Rx FIFO Full                     0            0
                 IMT Rx FIFO Half Full                0            0
                 IMT Tx FIFO Full                     0            0
                 IMT Tx FIFO Half Full                0            0

                 High Speed Statistic         BUS A Value  BUS B Value
                 --------------------         -----------  -----------
                 IMT Rx Packet Format Error           0            0
                 IMT Rx Disparity Error               0            0
                 IMT Rx Sync Lost Error               0            0
                 IMT Rx Code Word Error               0            0
                 IMT Rx Packet SOM Before EOM         0            0
                 IMT Rx Packet CRC Error              0            0
                 IMT Bypass FIFO Full                 0            0
                 IMT Bypass FIFO Half Full            0            0
                 IMT Rx FIFO Full                     0            0
                 IMT Rx FIFO Half Full                0            0
                 IMT Tx FIFO Full                     0            0
                 IMT Tx FIFO Half Full                0            0
                 IXP Rx FIFO Full                     0            0
                 IXP Rx FIFO Half Full                0            0

                 Misc Speed Statistic         BUS A Value  BUS B Value
                 --------------------         -----------  -----------
                 Shelf ID UART Framing Error          0            0
                 Shelf ID UART Overrun Error          0            0


    Command Completed.
;
```

9 ☐ Issue the command to clear IMT errors.

```
clr-imt-stats:all=yes
```

10 ☐ Response to clear IMT stats command is displayed.

```
    Tekelecstp 98-03-09 14:09:41 EST Rel XX.X.X-x.x.x
    clr-imt-stats:all=yes
    Command entered at terminal #X.
;
    Tekelecstp 98-03-09 14:09:41 EST Rel XX.X.X-x.x.x
    Clear IMT Statistics command(s) issued...
;
```

Procedure 3: Determining General System Status

11 ☐	Issue the command to report system status.	**rept-stat-sys**
12 ☐ ☐ ☐ ☐ ☐	Response to system status command is displayed. Record the Software Release: REL. _____ Record any card types that are not IS-NR. Investigate and record cards whose status cannot be explained. Card Type: _____ Card Type: _____ Record the number of IS-NR SS7IPGW and IPGWI cards. Verify the IP System is not deploying both SS7IPGW and IPGWI Cards by ensuring either SS7IPGW or IPGWI has 0 cards IS-NR. SS7IPGW Cards: _____ IPGWI Cards: _____	tekelecstp 98-03-09 14:08:38 EST Rel XX.X.X-x.x.x MAINTENANCE STATUS REPORT Maintenance Baseline established. Routing Baseline established. SCCP Baseline established. ALARMS: CRIT= 0 MAJR= X MINR= X INH= 0 OAM 1113 IS-NR Standby INH= 0 OAM 1115 IS-NR Active INH= 0 LIM CARD IS-NR= X Other= X INH= 0 X25 CARD IS-NR= X Other= X INH= 0 SCCP CARD IS-NR= X Other= X INH= 0 GLS CARD IS-NR= X Other= X INH= 0 SLAN CARD IS-NR= X Other= X INH= 0 SS7IPGW CARD IS-NR= X Other= X INH= 0 IPGWI CARD IS-NR= X Other= X INH= 0 CLOCK IS-NR= X Other= X INH= 0 IMT IS-NR= X Other= X SLK IS-NR= XX Other= X INH= 0 DLK IS-NR= X Other= X INH= 0 LINK SET IS-NR= XX Other= X INH= 0 SS7 DPC IS-NR= XX Other= X X25 DPC IS-NR= X Other= X CLUST DPC IS-NR= X Other= X XLIST DPC IS-NR= X Other= X DPC SS Actv = X Other= X SEAS SS IS-NR= X Other= X SEAS X25 IS-NR= X Other= X INH= 0 LSMS SS IS-NR= X Other= X LSMS Q.3 IS-NR= X Other= X INH= 0 TERMINAL IS-NR= X Other= XX INH= 0 Command Completed. ;
13 ☐	Issue the command to report card status.	**rept-stat-card**

Procedure 3: Determining General System Status

14 ☐ Response to card status command is displayed.

☐ Look for the slot ID of any IS-ANR or OOS-MT status cards. Ensure that any cards in this state can be explained.

☐ Record the card locations of both sets of GPSMs and TDMs:

Active GPSM _____
Active TDM _____
Standby GPSM _____
Standby TDM _____

☐ Record the card locations and part numbers for un-supported or obsolete card types as indicated below[2]:

- ASM cards running SCCP or GLS applications
- MCPM cards running MCP application.

Note, the cards in the locations shown in the rept-stat-card output for MCPM type may have a face plate that is labeled DSM. These cards are obsolete for the MCP application and may have one of the following part numbers:
870-2371-02
870-2371-03
870-2371-04
870-2371-05

```
    tekelecstp 98-03-09 14:09:05 EST Rel XX.X.X
    rept-stat-card
    Command entered at terminal #X.
;

    tekelecstp 98-03-09 14:09:05 EST Rel XX.X.X
    CARD   VERSION      TYPE    APPL       PST          SST        AST
    1101   022-115-000  LIMV35  SS7ANSI    IS-NR        Active     -----
    1102   022-115-000  LIMV35  SS7ANSI    IS-NR        Active     -----
    1103   022-115-000  LIMV35  SS7ANSI    IS-NR        Active     -----
    1104   022-115-000  LIMDS0  SS7ANSI    IS-NR        Active     -----
    1105   022-115-000  MCPM    MCP        IS-NR        Active     -----
    1106   022-115-000  LIMDS0  SS7ANSI    IS-NR        Active     -----
    1107   022-111-000  ACMENET STPLAN     IS-ANR       Active     -----
    1108   022-115-000  ASM     SCCP       IS-NR        Active     -----
    1111   -----------  ASM     SCCP       OOS-MT       Isolated   -----
    1112   022-111-000  ASM     GLS        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     -----
    Command Completed.
;
```

15 ☐ Issue the command to report card status.

rept-stat-card:loc=XXXX:mode=full
(where XXXX is the slot ID of any card that is IS-ANR or OOS-MT in step 8)

[2] If Target Release is 31.6 or above, these cards are unsupported/obsolete.

Procedure 3: Determining General System Status

16 ☐ Response to card status command is displayed.

```
    eag1030503 03-01-07 23:27:36 MST Rel XX.X.X
    CARD   VERSION      TYPE      APPL       PST           SST        AST
    XXXX   ----------  LIMDS0    SS7ANSI    OOS-MT        Isolated   ----
      ALARM STATUS       = **  0013 Card is isolated from the system
            GPL version = -----------
      IMT BUS A          = -----
      IMT BUS B          = -----
      CLOCK A            = ----
      CLOCK B            = ----
      CLOCK I            = ----
      MBD BIP STATUS     = ----
      DB STATUS          = ----
      DBD MEMORY SIZE    = ----
      HW VERIFICATION CODE = ----
      SLK A   PST        = OOS-MT          LS=e3e4        CLLI=-----------
      SLK B   PST        = OOS-MT          LS=e3e4        CLLI=-----------
      SNM    TVG RESULT  = 24 hr: ------, 5 min: ------
      SLAN   TVG RESULT  = 24 hr: ------, 5 min: ------
      SCCP   TVG RESULT  = 24 hr: ------, 5 min: ------
      EROUTE TVG RESULT  = 24 hr: ------, 5 min: ------
      SENTINEL SOCKET A  = INACTIVE
    Command Completed.
;
```

17 ☐ Repeat steps 15 – 16 for all cards that were IS-ANR or OOS-MT in step 10.

18 ☐ Issue the command to retrieve the shelves

```
rtrv-shlf
```

19 ☐ Response to retrieve shelf command is displayed.

```
    tekelecstp 98-03-09 03:01:10 EST Rel XX.X.X-YY.Y.Y
    rtrv-shlf
    Command entered at terminal #X.
;

    tekelecstp 98-03-09 03:01:10 EST Rel XX.X.X-YY.Y.Y
    SHELF DISPLAY
    FRAME SHELF     TYPE
      1     1       CONTROL
      1     2       EXTENSION
;
```

20 ☐ If release is 35.0 or higher, issue the command to retrieve STP.

```
rtrv-stp
```

21 ☐ Response to retrieve STP command is displayed.

Note: output abridged for brevity. This output displays information for one-bucket only.

```
    tekelecstp YY-MM-DD hh:mm:ss TTTT PPP  XX.x.x-YY.y.y

    Card  Part Number  Rev Serial Number  Type     DB     GPL      GPL Version
    ----  -----------  --- -------------  ----     --     ---      -----------
    1101  Empty
    1102  Empty
    1103  870-2372-01  G   10203132609    DCM      -      IPGWI    126-016-000
    1104  870-2372-01  H   10203132844    DCM      -      IPGWI    126-016-000
    1105  Empty                           MCPM             MCP
    1106  Empty                           MCPM             MCP
    1107  870-2372-01  D   10201322602    DCM      -      IPGWI    126-016-000
    1108  870-2371-03  J   10201323015    IPSM     1024M  IPS      126-016-000
    1109  MUX                                              HIPR     126-011-000
    1110  MUX                                              HIPR     126-011-000
    1111  870-1984-05  M   10200405077    DSM      4096M  VSCCP    126-016-000
    1112  Empty
    1113  870-2360-01  J   10202302488    GPSM     1024M  EOAM     126-016-000
    1114  TDM
    1115  870-2360-01  E   10202302462    GPSM     1024M  EOAM     126-016-000
    1116  TDM
    1117  MDAL
    1118  Empty

    1201  870-2671-01  T   10206235541    LIME1    512M   CCS7ITU  126-016-000
    1202  Empty
    1203  870-2198-01  J   10202382039    LIME1    -      CCS7ITU  126-016-000
    1204  870-2198-01  L   10202442005    LIME1    -      CCS7ITU  126-016-000
    1205  870-2198-01  C   10201322801    LIME1    -      CCS7ITU  126-016-000
    1206  870-2198-01  M   10203282183    LIME1    -      CCS7ITU  126-016-000
    1207  870-2198-01  C   10201322679    LIME1    -      CCS7ITU  126-016-000
    1208  870-2198-01  D   10201383680    LIME1    -      CCS7ITU  126-016-000
    1209  MUX                                              HIPR     126-011-000
    1210  MUX                                              HIPR     126-011-000
    1211  Empty
    1212  870-2198-01  C   10201322686    LIME1    -      SS7ANSI  126-016-000
    1213  Empty
    1214  870-2198-01  D   10201383719    LIME1    -      SS7ANSI  126-016-000
    1215  870-2198-01  M   10203282159    LIME1    -      SS7ANSI  126-016-000
    1216  870-2198-01  C   10201322660    LIMT1    -      SS7ANSI  126-016-000
    1217  Empty
```

Procedure 3: Determining General System Status

```
    1218  Empty

    1301  870-2671-01  P   10204395614    LIME1    512M   CCS7ITU  126-016-000
    1302  Empty
    1303  Empty
    1304  870-2198-01  M   10203282235    LIME1    -      CCS7ITU  126-016-000
    1305  870-2372-01  H   10203132575    DCM      -      IPGWI    126-016-000
    1306  Empty                           DCM              IPGWI
    1307  870-2372-01  J   10203292342    DCM      -      IPGWI    126-016-000
    1308  870-2372-01  H   10203132875    DCM      -      IPGWI    126-016-000
    1309  MUX                                              HIPR     126-011-000
    1310  MUX                                              HIPR     126-011-000
    1311  870-2372-01  C   10201322577    DCM      -      IPLIMI   126-016-000
    1312  Empty
    1313  Empty
    1314  870-2198-01  C   10201322627    LIME1    -      CCS7ITU  126-016-000
    1315  870-2372-01  J   10203292389    DCM      -      IPGWI    126-016-000
    1316  870-2372-01  E   10202102361    DCM      -      IPGWI    126-016-000
    1317  870-2372-01  J   10203342899    DCM      -      IPGWI    126-016-000
    1318  870-2372-01  E   10202102343    DCM      -      IPGWI    126-016-000

    2101  870-2372-01  H   10203132855    DCM      -      IPLIMI   126-016-000
    2102  Empty
    2103  870-1293-02  B   10201052484
    2104  870-1293-02  B   10201242864
    2105  850-0419-03  A   98492182       LIME1ATM 8M     ATMITU   126-016-000
    2106  Empty
    2107  870-2372-01  E   10202162931    DCM      -      IPGWI    126-016-000
    2108  870-2508-01  C   10205405131    DCM      -      IPGWI    126-016-000
    2109  MUX                                              BPHMUX   126-011-000
    2110  MUX                                              BPHMUX   126-011-000
    2111  870-2372-01  G   10202362581    DCM      -      IPLIMI   126-016-000
    2112  Empty
    2113  850-0615-01  C   02352090       LIME1ATM 4M     ATMITU   126-016-000
    2114  Empty
    2115  870-1293-01  A   98020372       LIME1ATM 4M     ATMITU   126-016-000
    2116  870-2198-01  C   10201322740    LIME1    -      CCS7ITU  126-016-000
    2117  870-2372-01  E   10202102320    DCM      -      IPLIMI   126-016-000
    2118  Empty                           DCM              IPLIMI

    2201  870-1984-03  A   10200301555    DSM      4096M  VSCCP    126-016-000
    2202  Empty
    2203  850-0415-01  B   98302460       TSM      1024M  GLS      126-016-000
    2204  Empty
    2205  870-2198-02  E   10205145493    LIME1    -      CCS7ITU  126-016-000
    2206  Empty
    2207  Empty
    2208  Empty
    2209  MUX                                              BPHMUX   126-011-000
    2210  MUX                                              BPHMUX   126-011-000
    2211  Empty
    2212  850-0415-02  C   00026792       TSM      1024M  GLS      126-016-000
    2213  870-1984-05  M   10203182027    DSM      4096M  VSCCP    126-016-000
    2214  Empty
    2215  870-2372-01  G   10202362611    DCM      -      IPGWI    126-016-000
    2216  870-2198-02  E   10204415161    LIME1    -      CCS7ITU  126-016-000
    2217  870-1984-05  B   10200301537    DSM      4096M  VSCCP    126-016-000
    2218  Empty

    2301  870-2372-01  G   10203132585    DCM      -      IPGWI    126-016-000
    2302  870-2508-01  C   10205405078    DCM      -      IPGWI    126-016-000
    2303  870-2372-01  H   10203132850    DCM      -      IPLIMI   126-016-000
    2304  Empty
    2305  870-2372-08  D   10206215367    DCM      -      IPLIMI   126-016-000
    2306  Empty
    2307  870-2372-01  E   10202103301    DCM      -      IPGWI    126-016-000
    2308  870-2372-01  J   10202102336    DCM      -      IPGWI    126-016-000
    2309  MUX                                              BPHMUX   126-011-000
    2310  MUX                                              BPHMUX   126-011-000
    2311  870-2372-08  D   10206215248    DCM      -      IPLIMI   126-016-000
    2312  Empty
    2313  870-2372-08  D   10206215258    DCM      -      IPLIMI   126-016-000
    2314  Empty
    2315  870-1293-02  B   10201072049    LIME1ATM 4M     ATMITU   126-016-000
    2316  Empty
    2317  870-1984-05  B   10200502199    DSM      4096M  VSCCP    126-016-000
    2318  Empty


    Command Completed.
;
```

Procedure 3: Determining General System Status

22 ☐	Issue the command to retrieve event log.	**rtrv-log:dir=bkwd:num=100:mode=full:edate=*yymmdd*:type=alarm:slog=act** *(Where yymmdd is yesterday's date.)*
23 ☐ ☐	Response to retrieve log command is displayed. If report terminates without the "end of log reached" displayed, continue to next step. Otherwise, skip to step 25.	tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y Card 1115; SYS REL= XX.x.x-YY.y.y; STP CLLI= tekelecstp; Timezone= EST ****06-05-12 04:57:00**** 6364.0005 GPL SYSTEM BLBEPM Alarm cleared running non-activated GPL ****06-05-12 04:54:00**** 6362.0004 * GPL SYSTEM BLBEPM Card is running non-activated GPL ****06-05-12 04:54:00**** 6361.0003 GPL SYSTEM BLBEPM Alarm cleared for GPL ****06-05-12 04:52:28**** 6360.0014 CARD 1101 SS7EPM Card is present ASSY SN: 061050018 ****06-06-07 17:11:09**** 5001.0009 CARD 1115 EOAM MASP became active **UAM Report terminated - end of log reached** END OF LOG REPORT. ;
24 ☐	Issue the command to retrieve the next set of events.	**rtrv-log:next=500**
25 ☐ ☐	Response to retrieve log command is displayed. If report terminates without the "end of log reached" display, the command can be repeated.[3]	tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y Card 1115; SYS REL= XX.x.x-YY.y.y; STP CLLI= tekelecstp; Timezone= EST ****06-05-12 04:57:00**** 6364.0005 GPL SYSTEM BLBEPM Alarm cleared running non-activated GPL ****06-05-12 04:54:00**** 6362.0004 * GPL SYSTEM BLBEPM Card is running non-activated GPL ****06-05-12 04:54:00**** 6361.0003 GPL SYSTEM BLBEPM Alarm cleared for GPL ****06-05-12 04:52:28**** 6360.0014 CARD 1101 SS7EPM Card is present ASSY SN: 061050018 ****06-06-07 17:11:09**** 5001.0009 CARD 1115 EOAM MASP became active UAM Report terminated - end of log reached END OF LOG REPORT. ;
26 ☐	Repeat steps 20 – 23 to issue the retrieve log command for the standby log.	rtrv-log:dir=bkwd:num=100:mode=full:edate=*yymmdd*:type=alarm:**slog=stb** *(Where yymmdd is yesterday's date.)*
27 ☐	Repeat steps 20 – 24 to issue the retrieve log command for the UIM log types.	rtrv-log:dir=bkwd:num=100:mode=full:edate=*yymmdd*:**type=uim:slog=act** *(Where yymmdd is yesterday's date.)*
28 ☐	If release is 35.0 or higher, issue the command to retrieve the STP.	**rtrv-stp:display=power**
29 ☐ ☐	Response to retrieve power frame command is displayed. None of the power threshold numbers should be prefix with a "+" sign.	tekelecstp YY-MM-DD hh:mm:ss TTTT PPP XX.x.x-YY.y.y Power Threshold Power Consumption Frame (Amps) (Watts) (Amps) (Watts) ----- ---------- ---------- ---------- ---------- CF00 45 2160 37.71 1810 EF00 40 1920 33.99 1631 EF01 35 1680 10.00 480 EF04 +30 +1440 14.06 675 Command Completed. ;
30 ☐	All steps in this procedure were completed.	

[3] The amount of alarms and UIMs during a 24-period can vary greatly depending on the size and how tightly configured and controlled the system is. Retrieving additional log enters may be beneficial.

3.4 Report System Troubles

This procedure examines non-network system troubles that should be corrected. Some examples of non-network troubles are:

- Terminal Failed
- Card has bad A or B system clock
- Card is not running approved GPL
- LIM denied SCCP service
- IMT Bus A failed

If there are any non-network troubles, which cannot be resolved, they should be documented.
In some cases, non-network troubles may not be correctable. For example, a terminal port connected to a modem will report Terminal Failed if the modem is not dialed in. **If this health check is being performed in preparation for an upgrade, contact the Customer Care Center upon completion of the health check to verify that the upgrade can be performed with these troubles unresolved.**

The procedure will also examine the devices that have their alarms inhibited. In some cases, these alarm inhibits may need to be cleared.

Procedure 4: Reporting System Troubles

S T E P #	This procedure examines non-network system troubles that should be corrected (See examples above.) Estimated time for completion: 2 minutes	
1 ☐	Issue the command to report trouble status.	**rept-stat-trbl**
2 ☐	Response to trouble status command is displayed. Record any non-network troubles. Trouble _____	tekelecstp 98-03-09 14:09:29 EST Rel XX.X.X rept-stat-trbl Command entered at terminal #X. ; tekelecstp 98-03-09 14:09:29 EST Rel XX.X.X Searching devices for alarms... ; tekelecstp 98-03-09 14:09:30 EST Rel XX.X.X SEQN UAM AL DEVICE ELEMENT TROUBLE TEXT 5728.0048 * TERMINAL 14 Terminal failed 5729.0048 * TERMINAL 15 Terminal failed 5730.0155 * DLK 1107,A STPLAN connection unavailable 5731.0013 ** CARD 1214 SS7ANSI Card is isolated from the system 5604.0013 ** CARD 1111 SCCP Card is isolated from the system 5732.0236 ** SLK 1214,A lsn1214 REPT-LKF: not aligned 5733.0236 ** SLK 1214,B lsn1214 REPT-LKF: not aligned 5734.0236 ** SLK 1106,A lsnx1 REPT-LKF: not aligned 5735.0318 ** LSN lsn1214 REPT-LKSTO: link set prohibited 5736.0318 ** LSN lsnx1 REPT-LKSTO: link set prohibited Command Completed. ;
3 ☐	Issue the command to report inhibited alarms	**rept-stat-alm:display=inhb**
4	Response to alarm status command is displayed.	tekelecstp 98-03-09 14:10:29 EST Rel XX.X.X rept-stat-alm Command entered at terminal #X. ; tekelecstp 98-03-09 14:10:29 EST Rel XX.X.X 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. ;
5 ☐	All steps in this procedure were completed.	

3.5 Verifying Database Status

Procedure 5: Verifying Database Status

STEP#	This procedure verifies that your database is coherent, not in transition and that all cards are running at the same database level. **Estimated time for completion: 3 minutes**	
1 ☐ ☐	Perform this step only if on-site personnel are available. If no personnel are available then skip to step 2. Insert a current release system cartridge into the MDAL.	
2 ☐	Issue the command to report database status.	**rept-stat-db:display=all**
3 ☐ ☐ ☐ ☐	Response to database command is displayed. (MDAL status is not shown if removable cartridge is not installed.) Examine the columns labeled C, T and LEVEL output by this command. All entries in C should be coherent which is indicated by a Y. Verify entries in column 'T' show 'N'. (except the MDAL and TDM-BKUP), which indicates that the database is not in transition All entries in LEVEL are numeric values. These values varies based on the system, however all entries in this column should be the same value except TDM-BKUP and MDAL.	tekelecstp 98-03-09 14:30:30 EST Rel XX.X.X DATABASE STATUS: >> OK << TDM 1114 (ACTV) TDM 1116 (STDBY) C LEVEL TIME LAST BACKUP C LEVEL TIME LAST BACKUP - -------- ---------- - -------- ---------- FD BKUP Y XXX 97-10-20 14:17:18 EST Y XXX 97-10-20 14:17:18 EST FD CRNT Y YYY Y YYY MDAL 1117 - -------- RD BKUP Y ZZZ 97-10-05 10:26:12 EST CARD/APPL LOC C T LEVEL TIME LAST UPDATE EXCEPTION --------- ---- - - ---------- ---------- ---------- SCCP 1101 Y N XXX 97-10-20 14:15:17 - SCCP 1102 Y N XXX 97-10-20 14:15:17 - GLS 1103 Y N XXX 97-10-20 14:15:17 - GLS 1104 Y N XXX 97-10-20 14:15:17 - SS7GX25 1105 Y N XXX 97-10-20 14:15:17 - STPLAN 1111 Y N XXX 97-10-20 14:15:17 - TDM-CRNT 1114 Y N XXX 97-10-20 14:15:17 - TDM-BKUP 1114 Y - YYY 97-10-10 13:07:09 DIFF LEVEL TDM-CRNT 1116 Y N XXX 97-10-20 14:15:17 - TDM-BKUP 1116 Y - YYY 97-10-10 13:07:09 DIFF LEVEL MDAL 1117 Y - ZZZ 97-10-03 09:55:22 DIFF LEVEL SS7ANSI 1201 Y N XXX 97-10-20 14:15:17 - SS7ANSI 1202 Y N XXX 97-10-20 14:15:17 - SS7ANSI 1203 Y N XXX 97-10-20 14:15:17 - CCS7ITU 1211 Y N XXX 97-10-20 14:15:17 - GLS 1218 Y N XXX 97-10-20 14:15:17 - ;
4 ☐	All steps in this procedure were completed.	

3.6 Verifying GPLs

Procedure 6: Verifying GPLs

STEP #	This procedure verifies that all GPLs are correctly distributed throughout the system, including TDMs and removable cartridges. Estimated time for completion: 5 minutes	
1 ☐	Issue the command to display GPL status.	`rtrv-gpl`
2 ☐	Response to retrieve GPL command is displayed. Verify that all GPLs in the APPROVED, TRIAL, and REMOVE TRIAL columns match those in the RELEASE column. Also verify that no GPL alarms exist. (Alarms are shown here as an example.) Verify that the removable can be read and its GPL contents correspond to current Release GPLs.	tekelecstp 98-03-09 09:21:11 EST Rel XX.X.X GPL Auditing ON APPL CARD RELEASE APPROVED TRIAL REMOVE TRIAL UTILITY 1114 XXX-XXX-XXX XXX-XXX-XXX XXX-XXX-XXX XXX-XXX-XXX UTILITY 1116 XXX-XXX-XXX XXX-XXX-XXX XXX-XXX-XXX ---------- OAM 1114 XXX-XXX-XXX XXX-XXX-XXX XXX-XXX-XXX XXX-XXX-XXX OAM 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 ---------- 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 ---------- 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 ---------- 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 ---------- ;
3 ☐	All steps in this procedure were completed.	

3.7 Retrieving Obituaries

Procedure 7: Retrieving Obituaries

STEP #		
	This procedure retrieves all recently logged obituaries. These obituaries describe the status of the system just before a processor restarted due to a hardware or software failure. The data includes a register and stack dump of the processor, card location, reporting module number, software code location, and class of the fault detected. **Estimated time for completion: 5 minutes**	
1 ☐	Issue the command to retrieve obits from MASP A	**rtrv-obit:loc=1113**
2 ☐	Response to retrieve obit command is displayed.	tekelecstp 98-03-09 18:58:47 EST Rel XX.X.X rtrv-obit:loc=1113 Command entered at terminal #X. ; tekelecstp 98-03-09 18:58:47 EST Rel XX.X.X NOTICE: Only 1 obit(s) to retrieve in the log. ; tekelecstp 98-03-09 18:58:47 EST Rel XX.X.X ----------
☐	Capture any obits that have been generated since the last system health check. If this is the first check, record any unexplained obits.	STH: Received a BOOT Appl-obituary reply for restart Card 1113 Module SYETSK.C Line 202 Class 1016 Register Dump : EFL=00003246 CS =0058 EIP=0011007d SS =0060 EAX=12345678 ECX=00000000 EDX=00000000 EBX=ffffffff ESP=0000f3d8 EBP=0000f3f4 ESI=002c2a38 EDI=0003f018 DS =0060 ES =0060 FS =0060 GS =0060 Stack Dump : [SP+1E]=0000 [SP+16]=0029 [SP+0E]=0000 [SP+06]=0000 [SP+1C]=0000 [SP+14]=e38c [SP+0C]=0000 [SP+04]=0000 [SP+1A]=0000 [SP+12]=0000 [SP+0A]=0000 [SP+02]=1234 [SP+18]=0058 [SP+10]=0000 [SP+08]=0000 [SP+00]=5678 User Data Dump : 00 80 03 00 96 00 01 00 00 00 00 00 ac 81 03 00 .... 00 00 00 00 f4 ba 03 00 88 45 01 00 60 00 a7 45 ....E..`..E 01 00 60 00 00 00 00 00 ..`. Report Date:98-03-09 Time:21:06:34 ----------;
3 ☐	Issue the command to retrieve obits from MASP B.	**rtrv-obit:loc=1115**
4 ☐	Response to retrieve obit command is displayed.	tekelecstp 98-03-09 18:58:56 EST Rel XX.X.X rtrv-obit:loc=1115 Command entered at terminal #X. ; tekelecstp 98-03-09 18:58:56 EST Rel XX.X.X NOTICE: Only 3 obit(s) to retrieve in the log. ; tekelecstp 98-03-09 18:58:56 EST Rel XX.X.X ----------
☐	Capture any obits that have been generated since the last system health check. If this is the first check, record any unexplained obits.	STH: Received a BOOT Appl-obituary reply for restart Card 1108 Module EMM_EXPM.C Line 1365 Class 0201 Register Dump : EFL=00000046 CS =0058 EIP=0000408d SS =0060 EAX=00108b00 ECX=55555555 EDX=00000000 EBX=00000000 ESP=00108af8 EBP=00108b0c ESI=00000000 EDI=00000032 DS =0060 ES =0060 FS =0060 GS =0060 Stack Dump : [SP+1E]=0000 [SP+16]=0010 [SP+0E]=5555 [SP+06]=0000 [SP+1C]=0000 [SP+14]=8b28 [SP+0C]=5555 [SP+04]=0006 [SP+1A]=0002 [SP+12]=5555 [SP+0A]=1616 [SP+02]=0000 [SP+18]=0e93 [SP+10]=5555 [SP+08]=1616 [SP+00]=0200 User Data Dump : 16 16 16 16 55 55 55 55 55 55 55 55 ....UUUUUUUU Report Date:98-03-09 Time:19:48:26 ---------- ;
5 ☐	All steps in this procedure were completed.	

3.8 Verifying STPLAN

Procedure 8: Verifying STPLAN

STEP #		
	Perform procedure only if LAN feature is on, see Procedure 3.2, Step 12 **This procedure displays STPLAN status. Verify that all cards that should be in service show a state of IS-NR. Record cards that do not show the expected status.** **Estimated time for completion: 1 minute**	
1 ☐	Issue the command to display SLAN status.	**rept-stat-slan**
2 ☐ ☐	Response to STP LAN status command is displayed. Verify that all SLAN-configured cards that should be in service are IS-NR.	eag1030503 03-01-07 01:21:43 MST Rel XX.x.x-y.y.y SLAN Subsystem Report OOS-MT Fault ----- SLAN Cards Configured= 1 Cards IS-NR= 1 CARD VERSION PST SST AST HOST Cap EAGLE Cap --- 1107 XXX-XXX-XXX IS-NR Active ----- 0% 0% --- AVERAGE USAGE per HOST CAPACITY = 0% AVERAGE USAGE per EAGLE CAPACITY = 0% CARDS DENIED SLAN SERVICE: 1101, 1102 Command Completed. ;
3 ☐	All steps in this procedure were completed.	

3.9 Verify SCCP Load

Procedure 9: Verify SCCP Load

STEP #		
	Perform procedure only if GTT, GWS, or LNP features are on, see Procedure 3.2, Step 12 **This procedure verifies that SCCP card loads are all below 40%. Verify that all cards that should be in service show PST - IS-NR. Record cards that do not show the expected status.** **Estimated time for completion: 1 minute**	
1 ☐	Issue the command to display SCCP status.	**rept-stat-sccp**
2 ☐ ☐	Response to SCCP status command is displayed. Verify that the number in the column labeled MSU USAGE is below 40% for all cards. Record any card slots, which are above 40% for later use. SCCP _____ SCCP _____ SCCP _____	tekelecstp 98-03-09 19:47:19 EST Rel XX.X.X SCCP SUBSYSTEM REPORT IS-NR Active ----- SCCP Cards Configured= 4 Cards IS-NR= 4 Capacity Threshold = 60% CARD VERSION PST SST AST MSU USAGE CPU USAGE --- 1218 XXX-XXX-XXX IS-NR Active ----- 29% 4% 1108 XXX-XXX-XXX IS-NR Active ----- 33% 5% 1111 XXX-XXX-XXX IS-NR Active ----- 39% 6% --- SCCP Service Average MSU Capacity = 33% Average CPU Capacity = 5% Command Completed. ;
3 ☐	All steps in this procedure were completed.	

3.10 Verifying LNP and LSMS

If either steps 2 or 6 fail, contact the Customer Care Center upon completion of the health check to resolve any issue so that the upgrade can be performed.

Procedure 10: Verifying LNP and LSMS

STEP #		
	Perform procedure only if LNP feature is on, see Procedure 3.2, Steps 12 **This procedure displays LNP subsystem and LSMS statuses. Ensure that all cards that should be in service show PST - IS-NR. Record cards that do not show the expected status.** **This procedure shall also evaluate the SCCP hardware to determine if an upgrade to Release 30.0 or above is valid. Check for minimum hardware is required for EAGLE 30.0 and higher** **Estimated time for completion: 1 minute**	
1 ☐	Issue the command to display LNP status.	`rept-stat-lnp`
2 ☐	Response to LNP status command is displayed. Verify that cards are that are supposed to be in service are IS-NR. Verify that there are no errors.	tekelecstp 98-03-09 10:00:35 EST Rel XX.X.X LNP SUBSYSTEM REPORT IS-NR Active ----- ASSUMING MATE'S LOAD LNP Cards Configured=15 CARD PST SST GTT STATUS LNP STATUS CPU USAGE 1201 IS-NR Active ACT ACT 1% 1208 IS-NR Active ACT ACT 1% 1218 IS-NR Active ACT ACT 1% 1301 IS-NR Active ACT ACT 1% 1308 IS-NR Active ACT ACT 0% 1318 IS-NR Active ACT ACT 1% 2108 IS-NR Active ACT ACT 1% 2118 IS-NR Active ACT ACT 1% 2208 IS-NR Active ACT ACT 1% 2218 IS-NR Active ACT ACT 1% 2308 IS-NR Active ACT ACT 1% 1101 IS-NR Active ACT ACT 1% 1102 IS-NR Active ACT ACT 1% 1103 IS-NR Active ACT ACT 1% 1108 IS-NR Active ACT ACT 1% LNPQS: SSN STATUS = Allowed MATE SSN STATUS = Prohibited ACG: OVERLOAD LEVEL = 0 MIC USAGE = 0% AVERAGE USAGE: GTT = 1% LNPMR = 1% LNPQS = 1% AVERAGE CPU USAGE = 1% TOTAL ERRORS: GTT: 0 out of 1603 LNPMR: 0 out of 38 LNPQS: 0 out of 5406 Command Completed. ;
3 ☐	If LNP48MIL or higher is ON as recorded in the table following Procedure 3.2 Step 12 then skip to Step 7. Otherwise, issue the command to display LSMS status.	`rept-stat-lsms`
4 ☐	Response to LSMS status command is displayed. Verify that all entries are “IS-NR” and there are no alarms.	tekelecstp 98-03-09 10:00:44 EST Rel XX.X.X GPL PST SST AST LSMS SYSTEM IS-NR Active ----- TDM TRM 15 IS-NR Active ----- TDM TRM 16 IS-NR Active ----- OAP A XXX-XXX-XXX IS-NR Active ----- OAP B XXX-XXX-XXX IS-NR Active ----- Q.3 Assoc A1 IS-NR Active ----- Q.3 Assoc B1 IS-NR Active ----- LSMS SYSTEM ALARM STATUS = No Alarms. OAP A ALARM STATUS = No Alarms. OAP B ALARM STATUS = No Alarms. Q.3 Assoc A1 ALARM STATUS = No Alarms. Q.3 Assoc B1 ALARM STATUS = No Alarms. Command Completed.

Procedure 10: Verifying LNP and LSMS

5 ☐	Issue the command to display card status.	**rept-stat-card:mode=full:loc=XXXX** *(Where XXXX is the location of each SCCP card displayed in Procedure 3.10 Step 2)*
6 ☐ ☐	Response to card status command is displayed. Verify that all cards have at least 1024MB of daughterboard memory.	tekelecstp 04-01-30 10:01:44 EST Rel XX.X.X CARD VERSION TYPE APPL PST SST AST 1107 114-030-000 TSM SCCP IS-NR Active ----- ALARM STATUS = No Alarms. IMT VERSION = 114-030-000 PROM VERSION = 023-002-000 IMT BUS A = Conn IMT BUS B = Conn CLOCK A = Idle CLOCK B = Active CLOCK I = Idle MBD BIP STATUS = valid DB STATUS = valid DBD MEMORY SIZE = 1024M HW VERIFICATION CODE = ---- SCCP % OCCUP = 0% SNM TVG RESULT = 24 hr: ------, 5 min: ------ Command Completed. ;
7 ☐	If LNP is ON as recorded in Procedure 3.2 Step 12 then issue the command to retrieve LNP options. Otherwise, skip to next procedure.	**rtrv-lnpopts**
8 ☐ ☐	Response to LNP options command is displayed. Record audit status: AUD: _____ If LNP auditing is on, skip to next procedure.	tekelecstp 00-03-23 11:07:27 EST Rel XX.x.x LNP OPTIONS ---------- AMASLPID = 000000000 INCSLP = no AMACTYPE = 000 AMAFEATID = 000 CIC = 0000 AUD = off SP = FRCSMPLX = no ADMHIPRI = no GTWYSTP = no ;
9 ☐	If release is 27.0 or above and the LNP48MIL feature is enabled or the LNP ELAP Configuration feature key is on, skip to next procedure. Otherwise, issue the command to turn LNP Audit on.	**chg-lnpopts:aud=on**
10 ☐	Response to LNP options command is displayed.	tekelecstp 00-03-23 11:07:43 EST Rel. XX.x.x CHG-LNPOPTS: MASP A - COMPLTD ;
11 ☐	For UHC#2, the LNP Audit must be allowed to run for at least 24 hours.	**NOTE**: allow LNP auditing to run for at least 24 hours prior to upgrade.
12 ☐	All steps in this procedure were completed.	

3.11 Verifying SEAS

Procedure 11: Verifying SEAS

STEP #		
	Perform procedure only if SEAS feature is on, see Procedure 3.2, Step 12 **This procedure verifies that SEAS links and OAP(s) are available. Ensure that all cards/OAPs that should be in service show PST - IS-NR. Record cards that do not show the expected status.** **Estimated time for completion: 1 minute**	
1 ☐	Issue the command to display SEAS status.	**rept-stat-seas**
2 ☐	Response to SEAS status command is displayed. Verify that all entries are "IS-NR" and there are no alarms.	tekelecstp 98-03-09 10:00:29 EST Rel XX.X.X GPL PST SST AST SEAS SYSTEM IS-NR Active ----- TDM TRM 15 IS-NR Active ----- TDM TRM 16 IS-NR Active ----- OAP A XXX-XXX-XXX IS-NR Active ----- OAP B XXX-XXX-XXX IS-NR Active ----- X25 Link A1 IS-NR Active ----- X25 Link B1 IS-NR Active ----- SEAS SYSTEM ALARM STATUS = No Alarms. SEAS OAP A ALARM STATUS = No Alarms. SEAS OAP B ALARM STATUS = No Alarms. X25 Link A1 ALARM STATUS = No Alarms. X25 Link B1 ALARM STATUS = No Alarms. X25 A1 PVCs IS-NR = 1,2,3 X25 A1 PVCs OOS-MT = --- X25 B1 PVCs IS-NR = 1,2,3 X25 B1 PVCs OOS-MT = --- Command Completed. ;
3 ☐	All steps in this procedure were completed.	

3.12 Verifying optional features

Procedure 12: Verifying optional features

STEP #	This procedure displays information on which optional features have been enabled. Estimated time for completion: 1 minute	
1 ☐	Issue the command to retrieve STP options.	**rtrv-stpopts**
2 ☐ ☐	Response to the command is displayed. Record whether the following options are turned on: DSMAUD: ON / OFF Note: DSMAUD only displayed with certain features enabled (e.g. GFLEX, INP, GPORT)	e1190601 YY-MM-DD hh:mm:ss zzz PPPPP 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 no MTPRSIT 5000 MTPLPRST yes MTPT10ALT 30000 UIMRD no SLSCNV off CRITALMINH no DISPACTALMS no NPCFMTI 14-00-00-00 DSMAUD ON RPTLNPMRSS yes HMUXABUS yes HMUXBBUS yes HMUXTVG on RANDSLS off GR2878RGLBL yes RSTRDEV on ;
3 ☐	If E5IS feature is recorded as on in Procedure 3.2, Step 12 then issue the retrieve command. Otherwise, skip to step 5. Issue the command to retrieve the status (on or off) of the copy function for the Eagle Support for Integrated Sentinel (EIS) feature.	**rtrv-eisopts**
4 ☐ ☐	Response to the command is displayed. Record whether the eiscopy function is turned on: EISCOPY: ON / OFF	e1190601 YY-MM-DD hh:mm:ss zzz PPPPP XX.x.x-YY.y.y EIS OPTIONS ------------------ EISCOPY = OFF
5 ☐	Issue the command to retrieve user-specified options for the IP networks used by the Eagle.	**rtrv-netopts**
6 ☐	Response to the command is displayed.	e1190601 YY-MM-DD hh:mm:ss zzz PPPPP XX.x.x-YY.y.y rtrv-netopts Command entered at terminal #X. ; e1190601 YY-MM-DD hh:mm:ss zzz PPPPP XX.x.x-YY.y.y NETWORK OPTIONS ------------------ PVN = 172.20.50.0 PVNMASK = 255.255.252.0
7 ☐	All steps in this procedure were completed.	

3.13 Verifying IP Signaling Status

Procedure 13: Verifying IP Signaling Status

S T E P #	This procedure displays the status of IP Signaling connections and Application Servers. Verify that all IP Signaling connections and Application Servers that should be in service show a state of IS-NR. Record connections or Application Servers that do not show the expected status. Estimated time for completion: 1 minute	
1 ☐	Issue the command to display SCTP Association status.	**rept-stat-assoc**
2 ☐	Response to SCTP Association status command is displayed. Verify that all SCTP Associations that should be in service are IS-NR.	eag1030503 03-01-07 01:21:43 MST Rel XX.x.x-y.y.y ASSOCIATION PST SST ipgwa1 IS-NR ASP-ACTIVE ipgwa2 IS-NR ASP-ACTIVE iplima1 IS-NR ESTABLISHED iplima2 IS-NR ESTABLISHED Command Completed. ;
3 ☐	Issue the command to display TCP Socket status.	**rept-stat-applsock**
4 ☐ ☐	Response to TCP Sockert status command is displayed. Verify that all TCP Sockets that should be in service are IS-NR.	eag1030503 03-01-07 01:21:43 MST Rel XX.x.x-y.y.y SOCKET PST SST ipgws1 IS-NR NEA-FEA ipgws2 IS-NR NEA-FEA iplims1 IS-NR NEA-FEA iplims2 IS-NR NEA-FEA Command Completed. ;
5 ☐	Issue the command to display Application Server status.	**rept-stat-as**
6 ☐	Response to Application Server status command is displayed. Verify that all Application Servers that should be in service are IS-NR.	eag1030503 03-01-07 01:21:43 MST Rel XX.x.x-y.y.y AS PST SST ipgwas1 IS-NR AS-ACTIVE ipgwas2 IS-NR AS-ACTIVE Command Completed. ;
7 ☐	All steps in this procedure were completed.	

3.14 Verifying EROUTE

Procedure 14: Verifying EROUTE

STEP #		
	This procedure displays the status of the STC cards, and also displays any cards that are denied EROUTE service. Record cards that are denied EROUTE service. **This procedure issues the "netstat" command to STC cards to determine if IP addresses have been associated with the card. Record cards that do not have IP addresses associated with them.** **This procedure pings the ESP from the STC cards to determine whether or not an STC card can communicate over its IP link to the ESP. Record STC cards that cannot communicate over their IP link to the ESP.** **Estimated time for completion: 7 minutes**	
1 ☐	Perform this procedure only if the E5IS feature is on as recorded in Procedure 3.2, Step 12 Issue the command to display EROUTE status.	**rept-stat-eroute**
2 ☐	Response to EROUTE status command is displayed. ☐ Verify that all cards listed are in IS-NR state. Note: if any cards are denied eroute service, the text "CARDS DENIED EROUTE SERVICE:" will be displayed followed by the card locations.	tekelecstp 98-03-09 19:47:19 EST Rel XX.X.X EROUTE SUBSYSTEM REPORT IS-NR Active ----- STC Cards Configured= 7 Cards IS-NR= 7 EISCOPY BIT = ON System Threshold = 80% Total Capacity System Peak EROUTE Load: 8000 Buffers/Sec System Total EROUTE Capacity: 9600 Buffers/Sec SYSTEM ALARM STATUS = No Alarms. CARD VERSION PST SST AST TVG USAGE CPU USAGE --- 1205 236-024-005 IS-NR Active ----- 35% 52% 1211 236-024-005 IS-NR Active ----- 35% 52% 1303 236-024-005 IS-NR Active ----- 35% 52% 1311 236-024-005 IS-NR Active ----- 35% 52% 1313 236-024-005 IS-NR Active ----- 35% 52% 2211 236-024-005 IS-NR Active ----- 35% 52% 2213 236-024-005 IS-NR Active ----- 35% 52% --- EROUTE Service Average TVG Capacity = 35% Average CPU Capacity = 52% Command Completed. ;
3 ☐	Issue the command to display network status for the card.	**Pass:loc=xxxx:cmd="netstat –i"** *(where XXXX is the slot ID of an STC card that is IS-NR in step 2)*

Procedure 14: Verifying EROUTE

4 ☐	Response to netstat command is displayed. ☐ Verify both Port A (Seeq 0) and Port B (Seeq 1) of the STC card have an associated IP address.	e10710 05-05-31 14:26:50 EST UNKNOWN ??.?.?-55.28.0 PASS: Command sent to card ; e10710 05-05-31 14:26:50 EST UNKNOWN ??.?.?-55.28.0 DPLend (unit number 0): Flags: (0x863) UP BROADCAST ARP RUNNING 10MB HDX DIX Type: ETHERNET_CSMACD Internet address: 172.20.48.11 Broadcast address: 172.20.255.255 Netmask 0xffff0000 Subnetmask 0xffff0000 Ethernet address is 00:00:00:00:00:0b Metric is 0 Maximum Transfer Unit size is 485 685002 packets received; 1 packets sent 0 multicast packets received 0 multicast packets sent 0 input errors; 0 output errors 0 collisions; 0 dropped seeq (unit number 1): Flags: (0x78063) UP BROADCAST MULTICAST ARP RUNNING AUTONEG 100MB FDX D IX Type: ETHERNET_CSMACD Internet address: 192.168.178.96 Broadcast address: 192.168.178.255 Netmask 0xffffff00 Subnetmask 0xffffff00 Ethernet address is 00:00:17:0c:24:e5 Metric is 0 Maximum Transfer Unit size is 1500 24158824 packets received; 1703911 packets sent 24158824 multicast packets received 1703904 multicast packets sent 0 input errors; 0 output errors 0 collisions; 0 dropped lo (unit number 0): Flags: (0x8069) UP LOOPBACK MULTICAST ARP RUNNING 10MB HDX DIX Type: SOFTWARE_LOOPBACK Internet address: 127.0.0.1 Netmask 0xff000000 Subnetmask 0xff000000 Metric is 0 Maximum Transfer Unit size is 32768 0 packets received; 0 packets sent 0 multicast packets received 0 multicast packets sent 0 input errors; 0 output errors 0 collisions; 0 dropped seeq (unit number 0): Flags: (0x78063) UP BROADCAST MULTICAST ARP RUNNING AUTONEG 100MB FDX D IX ` Type: ETHERNET_CSMACD Internet address: 192.168.177.97 Broadcast address: 192.168.177.255 Netmask 0xffffff00 Subnetmask 0xffffff00 Ethernet address is 00:00:17:0c:24:e4 Metric is 0 Maximum Transfer Unit size is 1500 26021319 packets received; 2389075 packets sent 26021156 multicast packets received 1703906 multicast packets sent 0 input errors; 0 output errors 0 collisions; 0 dropped ; e10710 05-05-31 14:26:56 EST UNKNOWN ??.?.?-55.28.0 NETSTAT command complete
5 ☐	Repeat steps 3 - 4 for all STC cards that are IS-NR in step 2.	
6 ☐	Issue the commands to ping the Yellow and Blue ESP-1A and ESP-1B network IP addresses. Note: The required IP Addresses were obtained and recorded in the Pre-HealthCheck requirements in section 3.	**Pass:loc=xxxx:cmd="ping xxx.yyy.zzz.aaa"** **Pass:loc=xxxx:cmd="ping xxx.yyy.zzz.bbb"** **Pass:loc=xxxx:cmd="ping xxx.yyy.zzz.ccc"** **Pass:loc=xxxx:cmd="ping xxx.yyy.zzz.ddd"** *(where XXXX is the slot ID of an STC card that is IS-NR in step 2)* *(where* **xxx.yyy.zzz.aaa** *is the IP address of the ESP-1A Yellow network)* *(where* **xxx.yyy.zzz.bbb** *is the IP address of the ESP-1A Blue network) (where* **xxx.yyy.zzz.ccc** *is the IP address of the ESP-1B Yellow network) (where* **xxx.yyy.zzz.ddd** *is the IP address of the ESP-1B Blue network)*

Procedure 14: Verifying EROUTE

7 ☐	Responses to “ping” commands are displayed. ☐ Verify the ping is successful on all four ESP-1A and ESP-1B network addresses. Note: If the ping is unsuccessful the result will be “PING: no answer from xxx.yyy.zzz.aaa“	pass:loc=1213:cmd="ping 172.20.48.11" Command entered at terminal #5. ; e10710 05-05-27 15:32:57 EST Rel XX.X.X PASS: Command sent to card ; e10710 05-05-27 15:32:57 EST UNKNOWN Rel XX.X.X PING command in progress ; e10710 05-05-27 15:32:58 EST Rel XX.X.X ; e10710 05-05-27 15:32:59 EST Rel XX.X.X PING 172.20.48.11: 56 data bytes 64 bytes from 172.20.48.11: icmp_seq=0. time=0. ms 64 bytes from 172.20.48.11: icmp_seq=1. time=0. ms 64 bytes from 172.20.48.11: icmp_seq=2. time=0. ms ----172.20.48.11 PING Statistics---- 3 packets transmitted, 3 packets received, 0% packet loss round-trip (ms) min/avg/max = 0/0/0 PING command complete ;
8 ☐	Repeat steps 6 - 7 for all STC cards that are IS-NR in step 2.	
9 ☐	All steps in this procedure were completed.	

3.15 Verifying IMT Status

Procedure 15: Verifying IMT Status

STEP #		
	This procedure verifies that the IMT Bus is free of errors. This procedure is run in correspondence with Procedure 3.3. **Estimated time for completion: 5 minutes**	
1 ☐	Issue the command to display IMT errors.	**rept-imt-lvl1:r=summary:s=h'00:e=h'fb**
2 ☐	Response to IMT report command is displayed. ☐ Ensure that all highlighted columns contain zeroes.	tekelecstp 98-03-09 14:13:31 EST Rel XX.X.X 5741.1083 SYSTEM INFO REPT COND: system alive Report Date:98-03-10 Time:14:13:31 ; tekelecstp 98-03-09 14:14:10 EST Rel XX.X.X ========== SUMMARY REPORT: Totals accumulated from all requested cards Count — Bus A Value — Bus B Value Transmit Packet: 0M / 0M Transmit Byte: 0M / 0M Receive Packet: 0M / 0M Receive Byte: 0M / 0M Receive Packet with CRC Error: 0 / 0 Receive Packet with Format Error: 0 / 0 Receive Packet with Invalid Length: 0 / 0 Primary Control Receive Error: 0 / 0 Primary Control Transmit Error: 0 / 0 Primary Control Sanity Error: 0 / 0 Violation Error: 0 / 0 CPU Receive FIFO Full: 0 / 0 IMT Receive FIFO Half Full: 0 / 0 CPU Receive FIFO Half Full: 0 / 0 DMA Terminal Count Interrupt: 0 / 0 MSU Retransmitted: 0 / 0 MSU Safety Packet: 0 / 0 ASU Safety Packet: 0 / 0 TSU Safety Packet: 0 / 0 IMT Receive FIFO Full: 0 / 0 SSU Safety Packet: 0 / 0 ;END OF REPORT ;
3 ☐	Issue the status command for the MUX cards.	**rept-stat-mux**
4 ☐	Response to MUX status command is displayed. ☐ Verify that all cards are IS-NR.	tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y CARD TYPE PST SST AST 1109 HMUX IS-NR Active ----- 1110 HMUX IS-NR Active ----- 1209 HMUX IS-NR Active ----- 1210 HMUX IS-NR Active ----- 1309 HIPR IS-NR Active ----- 1310 HIPR IS-NR Active ----- Command Completed. ;
5 ☐	If any card types were reported as HMUX in step 4, issue the status command that reports HMUX errors.	**rept-imt-info:report=hmuxerr**

Procedure 15: Verifying IMT Status

6 ☐	Response to status command is displayed. Note: output abridged for brevity. This output displays information for one-bucket only.	tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y HMUX Summary Report: Summed across all requested cards for each bucket ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y HMUX Hourly Bucket Statistics ========== Bucket Loc Low Speed Statistic BUS A Value BUS B Value ------ ---- ------------------ ---------- ---------- *XX* ---- IMT Rx Packet CRC Error 0 0 IMT Rx Packet Format Error 0 0 IMT Rx Violation Error 0 0 IMT Rx Command Error 0 0 IMT Rx FIFO Full 0 0 IMT Rx FIFO Half Full 0 0 IMT Tx FIFO Full 0 0 IMT Tx FIFO Half Full 0 0 High Speed Statistic BUS A Value BUS B Value ------------------- ---------- ---------- IMT Rx Packet Format Error 0 0 IMT Rx Disparity Error 0 0 IMT Rx Sync Lost Error 0 0 IMT Rx Code Word Error 0 0 IMT Rx Packet SOM Before EOM 0 0 IMT Rx Packet CRC Error 0 0 IMT Bypass FIFO Full 0 0 IMT Bypass FIFO Half Full 0 0 IMT Rx FIFO Full 0 0 IMT Rx FIFO Half Full 0 0 IMT Tx FIFO Full 0 0 IMT Tx FIFO Half Full 0 0 IXP Rx FIFO Full 0 0 IXP Rx FIFO Half Full 0 0 Misc Speed Statistic BUS A Value BUS B Value ------------------- ---------- ---------- Shelf ID UART Framing Error 0 0 Shelf ID UART Overrun Error 0 0 Command Completed. ;
7 ☐	If any card types were reported as HIPR in step 4, issue the status command that reports HIPR errors.	**rept-imt-info:report=hiprerr**

Procedure 15: Verifying IMT Status

8 ☐ Response to status command is displayed.

Note: output abridged for brevity. This output displays information for one-bucket only.

```
    tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y
    HIPR Summary Report: Summed across all requested cards for each bucket

;

    tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y

    HIPR Hourly Bucket Statistics

    ============================================================================
    Bucket Loc   Low Speed Statistic           BUS A Value  BUS B Value
    ------ ----  ------------------            -----------  -----------
    XX     ----  IMT Rx Packet CRC Error               0            0
                 IMT Rx Packet Format Error            0            0
                 IMT Rx Violation Error                0            0
                 IMT Rx Command Error                  0            0
                 IMT Rx FIFO Full                      0            0
                 IMT Rx FIFO Half Full                 0            0
                 IMT Tx FIFO Full                      0            0
                 IMT Tx FIFO Half Full                 0            0

                 High Speed Statistic          BUS A Value  BUS B Value
                 --------------------          -----------  -----------
                 IMT Rx Packet Format Error            0            0
                 IMT Rx Disparity Error                0            0
                 IMT Rx Sync Lost Error                0            0
                 IMT Rx Code Word Error                0            0
                 IMT Rx Packet SOM Before EOM          0            0
                 IMT Rx Packet CRC Error               0            0
                 IMT Bypass FIFO Full                  0            0
                 IMT Bypass FIFO Half Full             0            0
                 IMT Rx FIFO Full                      0            0
                 IMT Rx FIFO Half Full                 0            0
                 IMT Tx FIFO Full                      0            0
                 IMT Tx FIFO Half Full                 0            0
                 IXP Rx FIFO Full                      0            0
                 IXP Rx FIFO Half Full                 0            0

                 Misc Speed Statistic          BUS A Value  BUS B Value
                 --------------------          -----------  -----------
                 Shelf ID UART Framing Error           0            0
                 Shelf ID UART Overrun Error           0            0


    Command Completed.
;
```

9 ☐ All steps in this procedure were completed.

3.16 Verifying Clock Status

Procedure 16: Verifying Clock Status

S T E P #	This procedure verifies your system clock status. Specifically, the primary and secondary BITS clocks and the A and B clocks going to each card are examined. Both the Primary and Secondary BITS clocks should be good (IDLE or ACTIVE) on both the active and standby MASP. There should be no cards reporting a bad A clock and no cards reporting a bad B clock in step 2. Estimated time for completion: 1 minutes	
1 ☐	Issue the command to report clock status.	**rept-stat-clk**
2 ☐	Response to clock status command is displayed. ☐ Verify that both BITS clocks are either in IDLE or ACTIVE state on both ACTIVE and STANDBY MASP. ☐ All highlighted cards-with-bad-CLK values should equal zero. ☐ Verify that the card location of the standby TDM that is displayed matches the value that was recorded in Procedure 3.3, Step 14	tekelecstp 98-03-09 14:09:41 EST Rel XX.X.X rept-stat-clk Command entered at terminal #X. ; tekelecstp 98-03-09 14:09:41 EST Rel XX.X.X CARD LOC= 1114 (Standby) CARD LOC= 1116 (Active) PRIMARY BITS = Active PRIMARY BITS = Active SECONDARY BITS = Idle SECONDARY BITS = Idle HS PRIMARY CLK = Active HS PRIMARY CLK = Active HS SECONDARY CLK = Idle HS SECONDARY CLK = Idle TSC CLOCK = Clock A TSC CLOCK = Clock A PST SST AST SYSTEM CLOCK IS-NR Idle ----- # Cards using CLK A = X # Cards with bad CLK A = 0 # Cards using CLK B = X # Cards with bad CLK B = 0 # Cards using CLK I = X PST SST AST HS SYSTEM CLOCK IS-NR ACTIVE ALMINH # Cards using HSCLK A = 001 # Cards with bad HSCLK A = 000 # Cards using HSCLK B = 000 # Cards with bad HSCLK B = 000 # Cards using HSCLK I = 000 Command Completed. ;
3 ☐	If executing an intrusive Health Check [UHC2], continue with this step. Otherwise, skip to Step 7.	☐ Unseat the card in the standby GPSM slot as recorded in Procedure 3.3, Step 14 ☐ Unseat the standby TDM card as recorded in Procedure 3.3, Step 14
4 ☐	Issue the command to report clock status.	**rept-stat-clk**
5 ☐	Response to clock status command is displayed. ☐ Verify that BITS clock for the TDM just removed is Isolated. ☐ Verify that all cards are using the clock on the other TDM.	tekelecstp 98-03-09 14:09:41 EST Rel XX.X.X rept-stat-clk Command entered at terminal #X. ; tekelecstp 98-03-09 14:09:41 EST Rel XX.X.X CARD LOC = 1114 (Isolated) CARD LOC = 1116 (Active) PRIMARY BITS = ----- PRIMARY BITS = Active SECONDARY BITS = ----- SECONDARY BITS = Idle PST SST AST SYSTEM CLOCK IS-NR Idle ----- # Cards using CLK A = 0 # Cards with bad CLK A = Z # Cards using CLK B = Z # Cards with bad CLK B = 0 # Cards using CLK I = 0 PST SST AST HS SYSTEM CLOCK IS-NR ACTIVE ALMINH # Cards using HSCLK A = 000 # Cards with bad HSCLK A = 00Z # Cards using HSCLK B = 00Z # Cards with bad HSCLK B = 000 # Cards using HSCLK I = 000 Command Completed. ;

Procedure 16: Verifying Clock Status

6 ☐		☐ ☐	Re-seat the standby TDM card that was unseated in Step 3. Re-seat the standby GPSM card that was unseated in Step 3. Note: UAMs are generated during this step. An audible alarm is generated. Wait for the standby GPSM/TDM to come up in standby mode.
7 ☐	All steps in this procedure were completed.		

3.17 Verifying MPS

The purpose of this procedure is to determine the health of MPS when at least one of the following two conditions exist:

1. One of the GFLEX, GPORT, INP features is on as recorded in Procedure 3.2, Step 12
2. One of the LNP ELAP Configuration, LNP ported TN (48MIL or 96MIL quantity), EIR feature access keys is enabled as recorded in Procedure 3.2, Step14

Note: in EAGLE Release 30.0 and higher, the LNP features are controlled via feature access keys.

Procedure 17: Verifying MPS

STEP #	**This procedure checks the status of the MPS.** **Estimated time for completion: 1 minute**	
1 ☐	Issue the command to display MPS status.	**rept-stat-mps**
2 ☐	Response to MPS status command is displayed, if any of the features listed above is on. Otherwise, the MTT error 4102 is display	Integrat40 00-06-24 10:37:22 EST Rel XX.X.X-xx.xx.x VERSION PST SST AST MPS A 027-015-000 OOS-MT Fault ----- CRITICAL PLATFORM ALARM DATA = No Alarms MAJOR PLATFORM ALARM DATA = h'0123456789ABCDEF MINOR PLATFORM ALARM DATA = h'0123456789ABCDEF CRITICAL APPLICATION ALARM DATA = No Alarms MAJOR APPLICATION ALARM DATA = h'0123456789ABCDEF MINOR APPLICATION ALARM DATA = No Alarms ALARM STATUS = ** 0371 Major Platform Failure(s) VERSION PST SST AST MPS B 027-015-000 OOS-MT Fault ----- CRITICAL PLATFORM ALARM DATA = No Alarms MAJOR PLATFORM ALARM DATA = No Alarms MINOR PLATFORM ALARM DATA = No Alarms CRITICAL APPLICATION ALARM DATA = h'0123456789ABCDEF MAJOR APPLICATION ALARM DATA = h'0123456789ABCDEF MINOR APPLICATION ALARM DATA = No Alarms ALARM STATUS = *C 0373 Critical Application Failure(s) CARD PST SST LNP STAT 1106 P IS-NR Active ACT 1201 IS-ANR Active SWDL 1205 OOS-MT-DSBLD Manual ------- 1302 OOS-MT Fault ------- 1310 IS-ANR Standby SWDL CARD 1106 ALARM STATUS = No Alarms CARD 1201 ALARM STATUS = No Alarms CARD 1205 ALARM STATUS = No Alarms CARD 1302 ALARM STATUS = ** 0013 Card is isolated from the system CARD 1310 ALARM STATUS = No Alarms Command Completed. ;
3 ☐	If DSM Audit was recorded as being on in Procedure 3.12 Step 2, then skip to step 5. Otherwise, if DSM Audit is off, then execute this step. Issue the command to change STP options.	**chg-stpopts:dsmaud=on**
4 ☐	Response to the command is displayed	tekelecstp YY-MM-DD hh:mm:ss zzz PPPPP XX.x.x-YY.y.y CHG-STPOPTS: MASP B – COMPLTD ;

Procedure 17: Verifying MPS

5 ☐	Execute steps 5 – 12 only if the following 3 conditions are true. Otherwise, skip to step 13: 1. This is an intrusive Health Check [UHC2] that is being executed prior to an upgrade; 2. The source release is prior to 31.0, and the target release is 31.0 or above; 3. GFLEX or GPORT is configured (refer to Procedure 3.2, step 12).	`Insert a target release removable cartridge into the MDAL.`
6 ☐	Issue the command to initialize the active and standby GPSM cards so that they are running the target release software.	**`init-card:appl=eoam`**

7 ☐	Response to the initialize command is displayed	`tekelecstp YY-MM-DD hh:mm:ss zzz PPPPP XX.x.x-YY.y.y`
		`  init-card:appl=eoam`
		`  Command entered at terminal #X.`
		`;`

8 ☐	If Release 33.0 or later, skip to Step 10. Otherwise, issue the send-msg command that performs checks to determine whether there is enough memory available to successfully perform the upgrade.	**`send-msg:loc=XXXX:ds=1:da=h'1d:f=h'YY`** *(Where XXXX is the location of the active GPSM,* *and where YY=5a for EAGLE Release 31.0,* *YY=60 for EAGLE Release 31.3 or later).*

9 ☐
☐
	Response to send-msg is displayed.
	
	Verify that the shaded text shown below ("Entries do not exceed…") is displayed. If an MTT error is displayed instead of this text, this indicates that there is not enough memory available to proceed with the upgrade.
		`tekelecstp YY-MM-DD hh:mm:ss zzz PPPPP XX.x.x-YY.y.y Upg Phase 0`
		`send-msg:loc=XXXX:ds=1:da=h'1d:f=h'5a`
		`  Command entered at terminal #X.`
		`;`
		
		`  tekelecstp YY-MM-DD hh:mm:ss zzz PPPPP XX.x.x-YY.y.y Upg Phase 0`
		`  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'001d`
		`  Func ID = H'005a  Bus/Ret/Sut = H'0002`
		`  Violation Ind = H'0000`
		`  User Message sent to location XXXX.`
		`;`
		
		`  tekelecstp YY-MM-DD hh:mm:ss zzz PPPPP XX.x.x-YY.y.y Upg Phase 0`
		`  Entries do not exceed the capacity of GSM_SEL table`

10 ☐		Remove the removable cartridge from the MDAL.
11 ☐	Issue the command to initialize the active and standby GPSM cards so that they are running the source release software.	**`init-card:appl=eoam`**

12 ☐	Response to the initialize command is displayed	`tekelecstp YY-MM-DD hh:mm:ss zzz PPPPP XX.x.x-YY.y.y`
		`  init-card:appl=eoam`
		`  Command entered at terminal #X.`
		`;`

13 ☐	All steps in this procedure were completed.	

3.18 Retrieving Trouble Data

Procedure 18: Retrieving Trouble Data

STEP #	This procedure retrieves all recently logged troubles. Estimated time for completion: 5 minutes	
1 ☐	Issue the command to retrieve troubles from MASP A.	**rtrv-trbl:loc=1113:num=15**
2 ☐	Response to retrieve trouble command is displayed. Troubles shown here are only examples. Capture any unexplained troubles. (The troubles shown are examples only, actual troubles - if any - may differ.)	tekelecstp 98-03-09 18:59:08 EST Rel XX.X.X rtrv-trbl:loc=1113:num=10 Command entered at terminal #X. ; tekelecstp 98-03-09 18:59:08 EST Rel XX.X.X NOTICE: Only 2 trouble(s) to retrieve in the log. ; tekelecstp 98-03-09 18:59:08 EST Rel XX.X.X Card 1113 Module SCM_UTL0.C Line 4101 Class 01bc Severity 1 0f . Report Date:98-01-09 Time:19:35:00 ; tekelecstp 98-03-09 18:59:08 EST Rel XX.X.X Card 1107 Module ED_ENET.C Line 437 Class 01c3 Severity 1 bc 5e 20 00 07 2d 12 00 d4 9b 00 00 00 .^...-..... Report Date:98-03-09 Time:19:35:26 ;
3 ☐	Issue the command to retrieve troubles from MASP B.	**rtrv-trbl:loc=1115:num=15**
4 ☐	Response to retrieve trouble command is displayed. Troubles shown here are only examples. Capture any unexplained troubles. (The troubles shown are examples only, actual troubles - if any - may differ.)	tekelecstp 98-03-09 18:59:16 EST Rel XX.X.X rtrv-trbl:loc=1115:num=10 Command entered at terminal #X. ; tekelecstp 98-03-09 18:59:16 EST Rel XX.X.X NOTICE: Only 1 trouble(s) to retrieve in the log. ; tekelecstp 98-03-09 18:59:17 EST Rel XX.X.X Card XXXX Module XXXXXXXX.C Line XXXX Class XXXX Severity X 0f . Report Date:98-01-07 Time:19:53:37 ; tekelecstp 98-03-09 18:59:27 EST Rel XX.X.X 5876.1083 SYSTEM INFO REPT COND: system alive Report Date:98-03-10 Time:18:59:27 ;
5 ☐	If the amount of output displayed on the capture terminal is excessive, then issue the command to change the terminal output groups. Otherwise, skip to step 7.	**chg-trm:trm=P:all=no:sys=yes:sa=yes:db=yes** *(Where P is the location of the capture terminal used in Proc 1, Step 5.)*
6 ☐	Response to change terminal command is displayed.	tekelecstp 98-03-09 03:01:10 EST Rel XX.X.X-YY.Y.Y chg-trm:trm=P:all=no:sys=yes:sa=yes:db=yes Command entered at terminal #X. ; tekelecstp 98-03-09 03:01:11 EST Rel XX.X.X-YY.Y.Y CHG-TRM: MASP A – COMPLTD ;
7 ☐	All steps in this procedure were completed.	

3.19 Verifying Unsupported or Obsolete System References

Procedure 19: Verifying presence of Unsupported or Obsolete System References

STEP #		
	The purpose of this procedure is to determine the presence of unsupported or obsolete references in the system prior to doing an upgrade. **This procedure verifies the presence of the following:** • **obsolete cards** • **unsupported/invalid IP database references** • **network address conflicts with the PVN network address** **Note, this procedure is intrusive meaning the target EOAM must be booted temporarily to complete this procedure. To ensure accuracy, it is strongly suggested that data capture be active during this procedure because the information produced by this procedure will be used to guide replacement of obsolete cards and removal of unsupported/invalid IP database references.** **Estimated time for completion: 10 minutes**	
1 ☐	Execute steps 2 – 12 when either of the following conditions exist: 1. The target release is 31.6 or above. 2. There were obsolete/unsupported cards identified in Procedure 3.3 steps 9 and 10. Run Procedure 3.3 steps 9 and 10 if they have not been executed. Otherwise, skip the remainder of this procedure.	Insert a target release removable cartridge into the MDAL.
2 ☐	Issue the command to initialize the active and standby GPSM cards so that they are running the target release software.	**init-card:appl=eoam**
3	Response to the initialize command is displayed	tekelecstp YY-MM-DD hh:mm:ss zzz PPPPP XX.x.x-YY.y.y init-card:appl=eoam Command entered at terminal #X. ;
4 ☐	Issue the command to report card status to determine the active OAM.	**rept-stat-card**
5 ☐ ☐ ☐	Typical response to rept-stat-card command. Determine if both GPSMs are IS-NR. If not, pause 5 seconds and execute from step 4 again. Otherwise, determine the active GPSM by finding which area of shaded text reports 'active'. Record the active GPSM location: - _____ Note: any 'isolated' cards should be plugged into their slots if possible.	tekelecstp 98-03-09 14:10:05 EST Rel XX.X.X rept-stat-card Command entered at terminal #X. ; tekelecstp 98-03-09 14:10:05 EST Rel XX.X.X CARD VERSION TYPE APPL PST SST AST 1101 022-115-000 LIMV35 SS7ANSI IS-NR Active ----- 1102 022-115-000 LIMV35 SS7ANSI IS-NR Active ----- 1103 022-115-000 MCPM MCP IS-NR Active ----- 1104 022-115-000 LIMDS0 SS7ANSI IS-NR Active ----- 1105 ----------- MCPM MCP OOS-MT Isolated ----- 1106 022-112-000 LIMV35 SS7GX25 IS-NR Active ----- 1107 022-111-000 ACMENET STPLAN IS-ANR Active ----- 1108 022-115-000 ASM SCCP IS-NR Active ----- 1111 ----------- ASM SCCP OOS-MT Isolated ----- 1112 022-115-000 ASM GLS 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 ----- Command Completed.

Procedure 19: Verifying presence of Unsupported or Obsolete System References

		;
6 ☐	Issue the send-msg command that performs checks for obsolete cards. Note: It is important to enter the correct active GPSM location determined in step 5. Incorrect results could be displayed otherwise.	**send-msg:loc=XXXX:ds=1:da=h'1d:f=h'61** *(Where XXXX is the location of the active GPSM)*
7 ☐ ☐ ☐	Response to send-msg is displayed. Verify the shaded text shown below, note any cards found. Unsupported/obsolete cards will be shown with ***. If obsolete cards are shown then these cards must be replaced prior to starting the upgrade. If the source release is prior to 34.0, then the IP database analysis follows the obsolete card report. Verify the shaded text shown below, note any invalid/unsupported IP database references found. Otherwise, this analysis is skipped. If no errors are found during analysis of the IP database, the report indicates the IP reference validation was successful. **If the report indicates any IP reference validation failures, then this procedure fails[4].** Continue with step 10 below to complete this procedure. Re-execute Procedure 3.19 following • obsolete card replacement to guarantee all obsolete cards have been replaced. • update of the source release IP database to remove the invalid references.	tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y y System Buffer sent has following attributes : Msg Length = H'0010 Dest Card = H'00fa Orig Subsys = H'0001 Dest Subsys = H'0001 Orig Appl ID = H'0030 Dest Appl ID = H'001d Func ID = H'0061 Bus/Ret/Sut = H'0002 Violation Ind = H'0000 User Message sent to location 1113. ; tekelecstp YY-MM-DD hh:mm:ss zzz PPPPP XX.x.x-YY.y.y Hardware Validation Test Started [ASM Obsolescence Test for all applications.] [DSM Obsolescence Test for MCP application.] *** DSM card running MCP in slot 1103 obsolete *** MCP card not responding - slot 1105 TSM card running SCCP in slot 1108 valid TSM card running SCCP in slot 1111 valid *** ASM card running GLS in slot 1112 invalid Hardware Validation Test failed - obsolete hardware found. IP Reference Validation Test Started IP Routing Key Table Analysis Starting Sock1 unresolved IP connection as1 unresolved AS as4 unresolved AS as4 unresolved AS as1204su multiple RContexts IP Routing Key Table Analysis Failed IP AS Table Analysis Starting as1204m3 unresolved ASP asp1204m3x as1204su unresolved ASP asp1204su2y IP AS Table Analysis Failed Socket Table Analysis Starting s1205b no lhost for IP connection a1204m3 version 8 M3UA IP connection not supported a1205m3 M3UA IP connection not supported on IPLIMx card a1206m3 lhost does not have an iplink table entry a1206m3 alhost does not have an iplink table entry Socket Table Analysis Failed IPLIMx SLK Analysis Starting loc=1202, port=B1 IPLIMx SLKs do not support IPLIML2 = M3UA loc=1205, port=B1 IPLIMx SLKs do not support IPLIML2 = M3UA IPLIMx SLK Analysis Failed IP Reference Validation Test Failed ;

[4] If invalid IP references are found, then skip to step 8, however this procedure fails. The invalid references must be removed from the source release database prior to upgrade.

Procedure 19: Verifying presence of Unsupported or Obsolete System References

8 ☐	If target release is prior to 35.0 skip this step and go to step 10. Issue the send-msg command that perform checks for IP address conflicts the Eagle PVN Network address. Note: It is important to enter the correct active GPSM location determined in step 5. Incorrect results could be displayed otherwise.	**send-msg:loc=XXXX:ds=1:da=h'1d:f=h'63** *(Where XXXX is the location of the active GPSM)*
9 ☐ ☐ ☐	Response to send-msg is displayed. Verify the shaded text shown below, . The results of the analysis of the IP Route and Ethernet Interface IP Address database compared to the Eagle PVN network address are shown. Verify the shaded text shown below, note any IP routes or Local Network IP address that matches the PVN. If no matches are found during analysis of the IP database, the report indicates the IP Route Conflict validation was successful. **If the report indicates there are matches to the PVN, then this procedure fails[5].** Continue with step 10 below to complete this procedure. Re-execute Procedure 3.19 following Reconfigurating an IP Route, Local Interface address or the Eagle PVN address to resolve conflicts the PVN.	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'00fa Orig Subsys = H'0001 Dest Subsys = H'0001 Orig Appl ID = H'0030 Dest Appl ID = H'001d Func ID = H'0063 Bus/Ret/Sut = H'0002 Violation Ind = H'0000 User Message sent to location 1113. ; tekelecstp YY-MM-DD hh:mm:ss zzz PPPPP XX.x.x-YY.y.y IP Route Conflict Validation Report Destination of IP Route on card loc=1301 matches Eagle PVN Local IP network address on card loc=1303 matches Eagle PVN End IP Route Conflict Validation Report. ;
10. ☐		Remove the removable cartridge from the MDAL and secure in safe location until execution of upgrade.
11. ☐	Issue the command to initialize the active and standby GPSM cards so that they are running the source release software.	**init-card:appl=eoam**
12. ☐	Response to the initialize command is displayed	tekelecstp YY-MM-DD hh:mm:ss zzz PPPPP XX.x.x-YY.y.y init-card:appl=eoam Command entered at terminal #X. ;

[5] If invalid IP references are found, then skip to step 8, however this procedure fails. The invalid references must be removed from the source release database prior to upgrade.

Procedure 19: Verifying presence of Unsupported or Obsolete System References

13. ☐ Issue the command to report card status.

```
rept-stat-card
```

14. ☐ Typical response to rept-stat-card command.
Note: Compare this output with the rept-stat-card done prior to booting the target EOAM. The display should be the same.

```
    tekelecstp 98-03-09 14:09:05 EST Rel XX.X.X
    rept-stat-card
    Command entered at terminal #X.
;
    tekelecstp 98-03-09 14:09:05 EST Rel XX.X.X
    CARD   VERSION      TYPE    APPL       PST           SST        AST
    1101   022-115-000  LIMV35  SS7ANSI    IS-NR         Active     -----
    1102   022-115-000  LIMV35  SS7ANSI    IS-NR         Active     -----
    1103   022-115-000  MCPM    MCP        IS-NR         Active     -----
    1104   022-115-000  LIMDS0  SS7ANSI    IS-NR         Active     -----
    1105   -----------  MCPM    MCP        OOS-MT        Isolated   -----
    1106   022-112-000  LIMV35  SS7GX25    IS-NR         Active     -----
    1107   022-111-000  ACMENET STPLAN     IS-ANR        Active     -----
    1108   022-115-000  ASM     SCCP       IS-NR         Active     -----
    1111   -----------  ASM     SCCP       OOS-MT        Isolated   -----
    1112   022-115-000  ASM     GLS        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     -----
    Command Completed.
;
```

15. ☐ Issue the command to report trouble status.

```
rept-stat-trbl
```

16. ☐ Response to trouble status command is displayed.

Record any non-network alarms.

Alarm _____

```
    tekelecstp 98-03-09 14:09:29 EST Rel XX.X.X
    rept-stat-trbl
    Command entered at terminal #X.
;
    tekelecstp 98-03-09 14:09:29 EST Rel XX.X.X
    Searching devices for alarms...
;
    tekelecstp 98-03-09 14:09:30 EST Rel XX.X.X
    SEQN UAM  AL DEVICE   ELEMENT      TROUBLE TEXT
    5728.0048  * TERMINAL   14         Terminal failed
    5729.0048  * TERMINAL   15         Terminal failed
    5730.0155  * DLK 1107,A            STPLAN connection unavailable
    5731.0013 ** CARD 1214 SS7ANSI     Card is isolated from the system
    5604.0013 ** CARD 1111 SCCP        Card is isolated from the system
    5732.0236 ** SLK 1214,A lsn1214    REPT-LKF: not aligned
    5733.0236 ** SLK 1214,B lsn1214    REPT-LKF: not aligned
    5734.0236 ** SLK 1106,A lsnx1      REPT-LKF: not aligned
    5735.0318 ** LSN lsn1214           REPT-LKSTO: link set prohibited
    5736.0318 ** LSN lsnx1             REPT-LKSTO: link set prohibited
    Command Completed.
;
```

3.20 Verifying Fixed and Removable Disks (Part 1)

Procedure 20: Verifying Fixed Disks Functions with TST-DSK

STEP #		
	This procedure verifies that EAGLE fixed disks and removable disk are accessible and in proper working order. Disks are exercised by issuing test disk and backup commands. If no on-site personnel are available to insert the MO cartridge then this procedure needs to be rescheduled. **Estimated time for completion: up to 4 hours**	
1 ☐	Issue the command to backup to the fixed disk.	**chg-db:action=backup**
2 ☐	Response to backup command is displayed.	sysint211 98-03-09 17:59:25 EST Rel XX.X.X 7706.1114 CARD 1115 Database BACKUP started Report Date:98-03-09 Time:17:59:25 ; sysint211 98-03-09 17:59:44 EST Rel XX.X.X BACKUP (FIXED): MASP B - Backup starts on active MASP. ; sysint211 98-03-09 18:04:08 EST Rel XX.X.X BACKUP (FIXED): MASP B - Backup on active MASP to fixed disk complete. ; sysint211 98-03-09 18:04:08 EST Rel XX.X.X BACKUP (FIXED): MASP B - Backup starts on standby MASP. ; sysint211 98-03-09 18:07:59 EST Rel XX.X.X BACKUP (FIXED): MASP B - Backup on standby MASP to fixed disk complete. ;
3 ☐	If the removable disk is inserted, then issue the command to backup to the removable disk. Otherwise, procedure needs to be rescheduled.[6]	**chg-db:action=backup:dest=remove**
4 ☐ ☐	Response to backup command is displayed. Record which MASP is active: A or B: _____ If A, then 1113/1114 are active. If B, than 1115/1116 is active.	tekelecstp 98-01-26 09:21:21 EST Rel XX.X.X BACKUP (REMOVABLE): MASP A - Backup starts on active MASP. ; tekelecstp 98-01-26 09:21:21 EST Rel XX.X.X 0465.1114 CARD 1113 Database BACKUP started Report Date:98-03-31 Time:00:02:03 ; tekelecstp 98-01-26 09:21:23 EST Rel XX.X.X BACKUP (REMOVABLE): MASP A - Backup to removable cartridge complete. ; tekelecstp 98-01-26 09:29:13 EST Rel XX.X.X 0466.1116 CARD 1113 Database action ended - OK Report Date:98-03-31 Time:00:05:08 ;
5 ☐	Remove the removable cartridge from the MDAL and set aside. Cartridge will be reinserted later in procedure.	
6 ☐	Issue the initialize card command for the active GPSM.	**init-card:loc=XXXX** *(Where XXXX is the location of the active GPSM slot recorded in step 4)*
7 ☐	Response to the initialize command is displayed.	tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y * 0261.0013 * CARD XXXX OAM 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 OAM Card is present ASSY SN: xxxxxxxx ;

[6] A removable cartridge needs to be inserted to complete the procedure. If the cartridge cannot be inserted, skip to step 5 however this procedure fails.

Procedure 20: Verifying Fixed Disks Functions with TST-DSK

8 ☐	Issue the command to log in to the EAGLE terminal.	**login:uid=XXXXXX** *(Where XXXXXX is your login ID)*
9 ☐	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 X ;
10 ☐	Issue the command to activate capture. Refer to Section 2.1.2 for information on how to set up terminals for data capture.	**act-echo:trm=P** *(Where P is a terminal port used in Procedure 3.2, Step 5)*
11 ☐	Response to activate command is displayed.	tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y act-echo:trm=P Command entered at terminal #X. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y Scroll Area Output will be echoed to Terminal X. ;
12 ☐	Reinsert the removable cartridge set aside in Step 5 back into the MDAL.	
13 ☐	Issue the command to copy GPLs from the active TDM to the removable cartridge.	**copy-gpl:sloc=XXXX:dloc=1117** *(Where XXXX is the active TDM – 1114 or 1116)*
14 ☐	Response to copy GPL command is displayed Verify command completes successfully.	tekelecstp 98-01-26 09:29:39 EST Rel XX.X.X COPY GPL: MASP Y - COPY STARTS ON ACTIVE MASP COPY GPL: MASP Y - COPY TO REMOVABLE CARTRIDGE COMPLETE (Where Y is the active MASP – A or B) ;
15 ☐	Remove the removable cartridge from the MDAL. Update the label with the release and database level. Store in a safe place for later use.	
16 ☐	Issue the commands to display disk directory of the TDM.	**disp-disk-dir:loc=XXXX** *(Where XXXX is the active TDM)*
17 ☐	Response to disp-disk-dir command is displayed. Verify command completes successfully. *Note that the output data may vary from this example.*	tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y disp-disk-dir:loc=XXXX Command entered at terminal #X. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y DISP-DISK-DIR, Loc=XXXX, Dev = FIXED(Active), Dir = :\ Filename Ext Length Last Modified Cluster LBA DMS1024 CFG 32768 03-18-38 16:48 2050 8386475 EOAM ELF 6291456 03-18-38 16:48 2051 8386539 TEOAM ELF 6291456 03-18-38 16:48 2243 8398827 IPASP TBL 262090 03-18-38 16:48 2435 8411115 DBSTAT BKP 46 03-18-38 16:48 2443 8411627 DBSTAT TBL 46 03-18-38 16:48 2444 8411691 (additional files listed …) File(s) : 350 Bytes : 1074004184 Volume : FIXED DISK Bytes free : 2133887744 Disk Size (MB) : 35003 ;
18 ☐	Issue this command to test the Fixed Disk[7].	Release 29.0 or later: **tst-disk:loc=XXXX:partition=all** Prior to release 29.0: **tst-disk:loc=XXXX** *(Where XXXX is the active TDM)*

[7] To minimize the execution time, the user may issue the TST-DISK commands for both TDMs concurrently. During Step 18, the user may hit the F9 function key and continue with Step 19. DO NOT continue past Step 19 until *both* commands complete.

Procedure 20: Verifying Fixed Disks Functions with TST-DSK

19 ☐	Response to the TST-DISK command is displayed. Progress indicator is displayed every five minutes. Verify that there are no errors and retries are indicated. Nominal command execution times prior to release 29.0 are 1 hour 45 minutes (9 GB disk) or 2 hours 37 minutes (18 GB disk). In release 29.0 or later, where the PARTITION = ALL parameter is specified, the execution time should be reduced slightly.	tekelecstp 98-01-26 09:30:01 EST Rel XX.X.X tst-disk:loc=XXXX Command entered at terminal #X. ; tekelecstp 98-01-26 09:30:01 EST Rel XX.X.X TST-DISK: TDM XXXX in progress YYYYY of ZZZZZZ LBA read ; tekelecstp 98-01-26 09:35:21 EST Rel XX.X.X TST-DISK results for TDM XXXX Total LBAs = 524286 LBA size = 512 Retries = 0 Errors = 0 ;
20 ☐	Repeat Steps 16-19 for the standby TDM.	
21 ☐	All steps in this procedure were completed.	

3.21 Testing IMT Status

Procedure 21: Testing IMT Buses

STEP #	**This procedure tests that the IMT Buses are healthy.** **This procedure should be executed in a maintenance window. If it cannot be done in a maintenance window, then this procedure needs to be rescheduled.** **Estimated time for completion: 10 minutes**	
1 ☐	Issue the command to report the status of the IMT buses.	**rept-stat-imt**
2 ☐	Response to report IMT status command is displayed.	tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y IMT PST SST AST A IS-NR Active ----- ALARM STATUS = No Alarms. IMT PST SST AST B IS-NR Active ----- ALARM STATUS = No Alarms. Command Completed. ;
3 ☐	If in a maintenance window, issue the command to inhibit the IMT bus.	**inh-imt:bus=A**
4 ☐	Response to initialize IMT bus command is displayed.	tekelecstp 01-05-02 14:15:27 EST Rel XX.X.X-YY.Y.Y Inhibit IMT Bus A command issued ; tekelecstp 01-05-02 14:15:27 EST Rel XX.X.X-YY.Y.Y 0401.0098 IMT BUS A IMT inhibited ;
5 ☐	Issue the command to test the IMT bus.	**tst-imt:bus=A**

Procedure 21: Testing IMT Buses

6 ☐ ☐	Response to test IMT bus command is displayed. "Test Passed" message displayed.	tekelecstp 01-05-02 14:15:32 EST Rel XX.X.X-YY.Y.Y IMT Fault Isolation Bus A Fault Location Probable Cause Failure(s) No Faults Found All Tests Passed ;
7 ☐	Issue the command to allow the IMT bus.	**alw-imt:bus=A**
8 ☐	Response to allow IMT bus command is displayed.	tekelecstp 01-05-02 14:15:43 EST Rel XX.X.X-YY.Y.Y Allow IMT Bus A command issued ; tekelecstp 01-05-02 14:15:43 EST Rel XX.X.X-YY.Y.Y 0403.0097 IMT BUS A IMT allowed ;
9 ☐	Issue the status command for the IMT buses.	**rept-stat-imt**
10 ☐ ☐	Response to IMT bus status command is displayed. Verify that bus has returned to IS-NR.	e1180601 01-10-02 20:06:46 EDT Rel XX.x.x-XX.xx.x IMT PST SST AST A IS-NR Active ----- ALARM STATUS = No Alarms. IMT PST SST AST B IS-NR Active ----- ALARM STATUS = No Alarms. Command Completed. ;
11 ☐	Repeat Steps 3 – 10 for IMT Bus B.	Repeat command in order to test IMT Bus B
12 ☐	All steps in this procedure were completed.	

3.22 Verifying Fixed and Removable Disks (Part 2)

Procedure 22: Verifying Fixed Disks and Removable Disk Function with TST-DISK

STEP #		
	This procedure verifies that EAGLE fixed disks and removable disk are accessible and in proper working order. Disks will be exercised by issuing test disk and backup commands. If no on-site personnel are available to insert the MO cartridge then this procedure needs to be rescheduled. This procedure must be done in a maintenance window. **Estimated time for completion: up to 4 hours**	
1 ☐	Verify that a removable cartridge is not inserted in the MDAL. If in a maintenance window, issue the command to display card status.	**rept-stat-card**
2 ☐ ☐	Response to card status command is displayed. Determine which GPSM is currently Standby by looking in the column labeled SST next to the cards labeled OAM. Record the card locations of both sets of GPSMs and TDMs: Active GPSM _____ Active TDM _____ Standby GPSM _____ Standby TDM _____	tekelecstp 98-03-09 18:13:59 EST Rel XX.X.X CARD VERSION TYPE APPL PST SST AST 1101 XXX-XXX-XXX LIMV35 SS7ANSI IS-NR Active ----- 1102 XXX-XXX-XXX LIMV35 SS7ANSI IS-NR Active ----- 1103 XXX-XXX-XXX LIMV35 SS7ANSI IS-NR Active ----- 1104 XXX-XXX-XXX LIMDS0 SS7ANSI IS-NR Active ----- 1105 XXX-XXX-XXX LIMDS0 SS7ANSI IS-NR Active ----- 1106 XXX-XXX-XXX LIMV35 SS7GX25 IS-NR Active ----- 1107 XXX-XXX-XXX ACMENET STPLAN IS-ANR Active ----- 1108 XXX-XXX-XXX ASM SCCP IS-NR Active ----- 1111 XXX-XXX-XXX ASM SCCP IS-NR Active ----- 1112 XXX-XXX-XXX ASM GLS IS-NR Active ----- 1113 XXX-XXX-XXX GPSM EOAM IS-NR Standby ----- 1114 ---------- TDM ------- IS-NR Active ----- 1115 XXX-XXX-XXX GPSM EOAM IS-NR Active ----- 1116 ---------- TDM ------- IS-NR Active ----- 1117 ---------- MDAL ------- IS-NR Active ----- Command Completed. ;
3 ☐	Place spare TDM in system.	☐ Remove the card in the standby GPSM slot determined in step 2. (GPSM is reinserted later, so unseating the card is sufficient.) ☐ Remove the standby TDM card determined in step 2. ☐ Insert the spare TDM card. ☐ Insert (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.
4 ☐	Issue the command to verify the GPL versions.	**rtrv-gpl**
5 ☐ ☐	Response to retrieve GPL command is displayed. Verify the column between the Approved and Trial shows no alarms for the Standby TDM that was recorded in Step 2. If an alarm is found, go to step 6. Otherwise, skip to Step 8.	tekelecstp 98-01-26 09:21:11 EST Rel XX.X.X GPL Auditing ON APPL CARD RELEASE APPROVED TRIAL REMOVE TRIAL UTILITY 1114 XXX-XXX-XXX XXX-XXX-XXX XXX-XXX-XXX XXX-XXX-XXX UTILITY 1116 XXX-XXX-XXX XXX-XXX-XXX ALM XXX-XXX-XXX ---------- OAM 1114 XXX-XXX-XXX XXX-XXX-XXX XXX-XXX-XXX XXX-XXX-XXX OAM 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 ---------- 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 ---------- 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 ---------- 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 ---------- ;

Procedure 22: Verifying Fixed Disks and Removable Disk Function with TST-DISK

6 ☐	Issue the command to copy GPLs.	**copy-gpl:sloc=1117:dloc=XXXX** *(Where XXXX is the standby TDM recorded in step 2)*
7 ☐ ☐	Response to copy GPL command is displayed. Verify command completes successfully.	tekelecstp 97-10-24 06:54:39 EST Rel XX.X.X COPY GPL: MASP B - COPY STARTS FROM REMOVABLE CARTRIDGE TO STANDBY TDM COPY GPL: MASP B - COPY TO STANDBY TDM COMPLETE ;
8 ☐	Issue the command to repair the standby disk.	**chg-db:action=repair**
9 ☐	Response to repair command is displayed. **This command may take up to 45 minutes to complete**	sysint211 98-03-09 18:04:08 EST Rel XX.X.X BACKUP (FIXED): MASP B - Repair starts on standby MASP. ; sysint211 98-03-09 18:07:59 EST Rel XX.X.X BACKUP (FIXED): MASP B - Repair on standby MASP to fixed disk complete.
10 ☐	Issue the commands to display disk directory of the standby TDM.	**disp-disk-dir:loc=XXXX** *(Where XXXX is the standby TDM)*
11 ☐ ☐	Response to disp-disk-dir command is displayed. Verify command completes successfully. Note that the output data may vary from this example.	tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y disp-disk-dir:loc=XXXX Command entered at terminal #X. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y DISP-DISK-DIR, Loc=XXXX, Dev = FIXED(Active), Dir = :\ Filename Ext Length Last Modified Cluster LBA DMS1024 CFG 32768 03-18-38 16:48 2050 8386475 EOAM ELF 6291456 03-18-38 16:48 2051 8386539 TEOAM ELF 6291456 03-18-38 16:48 2243 8398827 IPASP TBL 262090 03-18-38 16:48 2435 8411115 DBSTAT BKP 46 03-18-38 16:48 2443 8411627 DBSTAT TBL 46 03-18-38 16:48 2444 8411691 (additional files listed …) File(s) : 350 Bytes : 1074004184 Volume : FIXED DISK Bytes free : 2133887744 Disk Size (MB) : 35003 ;
12 ☐	Issue this command to test the fixed disk.	Release 29.0 or later: **tst-disk:loc=XXXX:partition=all** Prior to Release 29.0: **tst-disk:loc=XXXX** *(Where XXXX is the standby TDM recorded in step 2)*
13 ☐ ☐	Response to the TST-DISK command is displayed. Progress indicator is displayed every five minutes. Verify that there are no errors and retries are indicated. Nominal command execution times prior to release 29.0 are 1 hour 45 minutes (9 GB disk) or 2 hours 37 minutes (18 GB disk). In release 29.0 or later, where the partition=all parameter is specified, the execution time should be reduced slightly.	tekelecstp 98-01-26 09:30:01 EST Rel XX.X.X TST-DISK: TDM 1114 in progress XXXXX of YYYYYY LBA read ; tekelecstp 98-01-26 09:35:21 EST Rel XX.X.X TST-DISK results for TDM 1114 Total LBAs = 524286 LBA size = 512 Retries = 0 Errors = 0 ;
14 ☐	Reinsert the removable cartridge set aside in Procedure 3.20 into the MDAL. Issue the commands to display disk directory of the removable cartridge.	**disp-disk-dir:loc=1117**

Procedure 22: Verifying Fixed Disks and Removable Disk Function with TST-DISK

15 ☐	Response to disp-disk-dir command is displayed. Verify command completes successfully. *Note that the output data may vary from this example.*	tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y disp-disk-dir:loc=1117 Command entered at terminal #X. ; tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y DISP-DISK-DIR, Loc=1117, Dev = FIXED(Active), Dir = :\ Filename Ext Length Last Modified Cluster LBA DMS1024 CFG 32768 03-18-38 16:48 2050 8386475 EOAM ELF 6291456 03-18-38 16:48 2051 8386539 TEOAM ELF 6291456 03-18-38 16:48 2243 8398827 IPASP TBL 262090 03-18-38 16:48 2435 8411115 DBSTAT BKP 46 03-18-38 16:48 2443 8411627 DBSTAT TBL 46 03-18-38 16:48 2444 8411691 (additional files listed …) File(s) : 350 Bytes : 1074004184 Volume : FIXED DISK Bytes free : 2133887744 Disk Size (MB) : 35003 ;
16 ☐	Issue this command to test the removable cartridge.	**tst-disk:loc=1117**
17 ☐	Response from the tst-disk command is displayed. The nominal command execution time is 20 minutes. Verify that there are no errors and no retries indicated in the tst-disk output.	tekelecstp 98-01-26 09:30:01 EST Rel XX.X.X tst-disk:Loc=1117 Command entered at terminal #X. ; tekelecstp 98-01-26 09:35:21 EST Rel XX.X.X TST-DISK results for TDM 1117 Total LBAs = 524286 LBA size = 512 Retries = 0 Errors = 0 ;
18 ☐	Remove the removable cartridge from the MDAL and place in a safe place.	
19 ☐	Issue the initialize card command for the active GPSM.	**init-card:loc=XXXX** *(Where XXXX is the location of the active GPSM slot recorded in step 2)*
20 ☐	Response to the initialize command is displayed.	tekelecstp 99-01-02 08:28:34 EST Rel XX.x.x-XX.x.x * 0261.0013 * CARD XXXX OAM Card is isolated from the system ASSY SN: xxxxxxxx ; tekelecstp 99-01-02 08:28:59 EST Rel XX.x.x-XX.x.x 5038.0014 CARD XXXX OAM Card is present ASSY SN: xxxxxxxx ; ;
21 ☐	Issue the command to log in to the EAGLE terminal.	**login:uid=XXXXXX** *(Where XXXXXX is your login ID)*
22 ☐	Response to login command is displayed.	tekelecstp 98-03-09 08:29:20 EST Rel XX.X.X User logged in on terminal X ;
23 ☐	Issue the command to activate capture. Refer to Section 2.1.2 for information on how to set up terminals for data capture.	**act-echo:trm=P** *(Where P is a terminal port used in Procedure 3.2, Step 5)*
24 ☐	Response to activate command is displayed.	tekelecstp 98-03-09 08:29:25 EST Rel XX.X.X-YY.Y.Y act-echo:trm=P Command entered at terminal #X. ; tekelecstp 98-03-09 08:29:26 EST Rel XX.X.X-YY.Y.Y Scroll Area Output will be echoed to Terminal X. ;

Procedure 22: Verifying Fixed Disks and Removable Disk Function with TST-DISK

25 ☐	Issue the command to report the status of the MDAL.	**rept-stat-card:loc=1117**
26 ☐	Response to the status command is displayed. Verify that status is IS-NR.	tekelecstp YY-MM-DD hh:mm:ss EST PPP XX.x.x-YY.y.y CARD VERSION TYPE APPL PST SST AST 1117 ----------- MDAL IS-NR Active ---- - Command Completed. ;
27 ☐	All steps in this procedure were completed.	

3.23 Table Capacity Status

The following procedure is for data collection only. It does not have any pass fail criteria and does not include command response output.

Procedure 23: Collect Table Capacity Status

STEP #	**This procedure collects the current capacity of certain database tables. Upon analysis of the health check data capture, it is Tekelec's goal to identify if table capacity is approaching any limitation prior to any impact on the EAGLE's performance.**	
1 ☐	If EAGLE release 29.0 or later, issue the following command and then skip to step 7 upon completion. If prior to release 29.0, then skip to step 2.	**rtrv-tbl-capacity**
2 ☐	Issue the following command.	**rtrv-dstn**
3 ☐	Issue the following command.	**rtrv-ls**
4 ☐	Issue the following command.	**rtrv-map**
5 ☐	If X25 feature is on (refer to Procedure 3.2, Step 12), issue the following command.	**rtrv-x25-dstn**
6 ☐	If GWS feature is on (refer to Procedure 3.2, Step 12), issue the following command.	**rtrv-scrset**
7 ☐	Issue the following command.	**rept-stat-sys**
8 ☐	If EGTT feature is on, skip to Step 10. If GTT feature is on (refer to Procedure 3.2, Step 12), issue the following command. Otherwise, skip to the end of this procedure	**rtrv-tt**
9 ☐	Issue the following command.	**rtrv-gtt:type=XX** *(Where XX is any Type displayed in step 8)*
10 ☐	If any LNP feature is on, issue the following command.	**rtrv-lnp-serv**

Procedure 23: Collect Table Capacity Status

11 ☐	If LNP feature is on and the LNP48MIL or LNP ELAP Configuration feature keys are off (refer to Procedure 3.2, Steps 12 and 14), issue the following commands. Otherwise, skip to the end of this procedure	`rtrv-mem`
12 ☐	Issue the following command.	`rtrv-lnp-sp:num=5`
13 ☐	Issue the following command.	`rtrv-lnp-npanxx:num=5`
14 ☐	Issue the following command.	`rtrv-split-npa:num=5`
15 ☐	Issue the following command.	`rtrv-lnp-lrn:num=5`
16 ☐	Issue the following command.	`rtrv-lnp-sub:tn=XXXXXX0000` *(Where XXXXXX is any ported NPANXX displayed in step 12)*
17 ☐	Issue the following command.	`rtrv-lnp-sp`
18 ☐	Issue the following command.	`rtrv-lnp-ttmap`
19 ☐	Issue the following command.	`rtrv-cspc`

3.24 Verification of the IP Database

The following procedure retrieves IP signaling information for verification of the IP database. It is for data collection only and does not have any pass fail criteria. IP command provisioning rules changed in release 34.0. The object of this procedure is to collect information necessary to validate the IP database.

The retrieve command outputs shown in this procedure are only examples. The actual data retrieved and displayed from your system will vary.

Procedure 24: Verification of the IP Database

STEP #		
	This procedure collects data from tables in the IP database. Upon analysis of the health check data capture, it is Tekelec's goal to validate the IP database and identify any invalid or unsupported references, which could impact the upgrade. This procedure should be executed when upgrading to target release 34.0 and above. **To ensure accuracy, it is strongly suggested that data capture be active during this procedure because the information produced here will be used to guide removal of unsupported IP database references.** **Estimated time for completion: 15 minutes. Completion time for this procedure may vary depending on the size of the IP database.**	
1 ☐	Execute steps 2 – 20 only if the target release is 34.0 or above. Otherwise, skip the remainder of this procedure.	
2 ☐	Issue the command to report card status	`rept-stat-card`
3 ☐ ☐	Response to card status command is displayed. Record the card locations for cards running IPLIM or IPLIMI applications. IPLIM Cards: _____ IPLIMI Cards: _____ If no IPLIM or IPLIMI cards found skip to step 6.	tekelecstp YY-MM-DD hh:mm:ss zzz PPPPP XX.x.x-YY.y.y 1101 xxx-xxx-xxx LIMV35 SS7ANSI IS-NR Active ----- 1102 xxx-xxx-xxx LIMV35 SS7ANSI IS-NR Active ----- 1103 xxx-xxx-xxx LIMV35 SS7ANSI IS-NR Active ----- 1104 xxx-xxx-xxx LIMDS0 SS7ANSI IS-NR Active ----- 1105 xxx-xxx-xxx MCPM MCP IS-NR Active ----- 1106 xxx-xxx-xxx LIMDS0 SS7ANSI IS-NR Active ----- 1107 xxx-xxx-xxx ACMENET STPLAN IS-ANR Active ----- 1108 xxx-xxx-xxx ASM SCCP IS-NR Active ----- 1111 xxx-xxx-xxx ASM SCCP OOS-MT Isolated ----- 1112 xxx-xxx-xxx ASM GLS 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 DCM IPLIM IS-NR Active ----- 1202 xxx-xxx-xxx DCM IPLIM IS-NR Active ----- 1203 xxx-xxx-xxx DCM SS7IPGW IS-NR Active ----- 1204 xxx-xxx-xxx DCM SS7IPGW IS-NR Active ----- 1205 xxx-xxx-xxx DCM IPLIM IS-NR Active ----- 1207 xxx-xxx-xxx DSM VSCCP IS-NR Active ----- 1208 xxx-xxx-xxx DSM VSCCP OOS-MT Isolated Command Completed. ;
4 ☐	Issue the command to retrieve SLK information for the IPLIM and IPLIMI cards from step 3.	`rtrv-slk:loc=XXXX` *(Where XXXX is the location of each IPLIM/IPLIMI card displayed in Step 3)*
5 ☐	For releases prior to 34.0 the response to retrieve SLK command is displayed. For releases 34.0 and higher the response to retrieve SLK command is displayed Repeat steps 4-5 for each IPLIM/IPLIMI card.	tekelecstp YY-MM-DD hh:mm:ss zzz PPPPP XX.x.x-YY.y.y rtrv-slk:loc=XXXX Command entered at terminal #X. LOC PORT LSN SLC TYPE IPLIML2 1201 A ls1201a 0 IPLIM M2PA 1201 B ls1201b 0 IPLIM SAALTALI 1201 A1 ls1201a1 2 IPLIM M3UA ; tekelecstp YY-MM-DD hh:mm:ss zzz PPPPP XX.x.x-YY.y.y rtrv-slk:loc=XXXX Command entered at terminal #X. LOC LINK LSN SLC TYPE IPLIML2 1201 A ls1201a 0 IPLIM M2PA 1201 B ls1201b 0 IPLIM SAALTALI ;
6 ☐	Issue the command to retrieve IP link information.	`rtrv-ip-lnk`

Procedure 24: Verification of the IP Database

7 ☐	Response to rtrv-ip-lnk command is displayed.	tekelecstp YY-MM-DD hh:mm:ss zzz PPPPP XX.x.x-YY.y.y LOC PORT IPADDR SUBMASK DUPLEX SPEED MACTYPE AUTO MCAST 1201 A 192.168.0.1 255.255.255.0 HALF 10 DIX NO NO 1201 B --- --- HALF 10 DIX NO NO 1202 A 192.168.0.2 255.255.255.0 HALF 10 DIX NO NO 1202 B --- --- HALF 10 DIX NO NO 1203 A 192.168.0.3 255.255.255.0 HALF 10 DIX NO NO 1203 B 192.169.0.3 255.255.255.0 HALF 10 DIX NO NO 1204 A 192.168.0.4 255.255.255.0 HALF 10 DIX NO NO 1204 B 192.169.0.4 255.255.255.0 HALF 10 DIX NO NO 1205 A 192.168.0.5 255.255.255.0 HALF 10 DIX NO NO 1205 B --- --- HALF 10 DIX NO NO 1207 A 192.168.132.7 255.255.255.0 HALF 100 DIX NO YES 1207 B 192.168.133.7 255.255.255.0 HALF 10 DIX NO YES IP-LNK table is (12 of 512) 2% full. ;
8 ☐	Issue the command to retrieve IP host information.	**rtrv-ip-host**
9 ☐	Response to retrieve IP Host command is displayed.	tekelecstp YY-MM-DD hh:mm:ss zzz PPPPP XX.x.x-YY.y.y rtrv-ip-host Command entered at terminal #x. IPADDR HOST 192.168.0.1 local1201a 192.168.0.2 local1202a 192.168.0.3 local1203a 192.168.0.4 local1204a 192.168.0.5 local1205a 192.168.0.6 local1206a 192.168.132.7 dsm1207atomps 192.168.133.7 dsm1207btomps 192.168.1.1 remote1201a 192.168.1.2 remote1202a 192.168.1.3 remote1203a 192.168.1.4 remote1204a 192.168.1.5 remote1205a 192.168.1.6 remote1206a 192.169.0.3 altlocal1203b 192.169.0.4 altlocal1204b 192.169.0.6 altlocal1206b IP Host table is (17 of 512) 3% full ;
10 ☐	Issue the command to retrieve TCP Sockets	rtrv-appl-sock

Procedure 24: Verification of the IP Database

11 ☐

Response to retrieve TCP sockets command is displayed.

```
tekelecstp YY-MM-DD hh:mm:ss zzz PPPPP XX.x.x-YY.y.y
    rtrv-appl-sock
    Command entered at terminal #x.

    SNAME s1201b
          PORT     B
          LHOST    local1201a
          RHOST    remote1201a
          LPORT    1201           RPORT    1201
          SERVER   YES            DCMPS    10
          REXMIT   FIXED          RTT      60
          OPEN     NO             ALW      NO

    SNAME s1202b
          PORT     B
          LHOST    local1202a
          RHOST    remote1202a
          LPORT    1202           RPORT    1202
          SERVER   YES            DCMPS    10
          REXMIT   FIXED          RTT      60
          OPEN     NO             ALW      NO

    SNAME s1203
          PORT     A
          LHOST    local1203a
          RHOST    remote1203a
          LPORT    1203           RPORT    1203
          SERVER   YES            DCMPS    10
          REXMIT   FIXED          RTT      60
          OPEN     NO             ALW      NO

    SNAME s1204
          PORT     A
          LHOST    local1204a
          RHOST    remote1204a
          LPORT    1204           RPORT    1204
          SERVER   YES            DCMPS    10
          REXMIT   FIXED          RTT      60
          OPEN     NO             ALW      NO

    SNAME s1205b
          PORT     A
          LHOST    ---
          RHOST    ---
          LPORT    ---            RPORT    ---
          SERVER   YES            DCMPS    10
          REXMIT   FIXED          RTT      60
          OPEN     NO             ALW      NO

    IP Appl Sock/Assoc table is (15 of 4000) 1% full

;
```

12 ☐

Issue the command to retrieve SCTP associations.

```
rtrv-assoc
```

13 ☐

For releases prior to 34.0 the response to retrieve SCTP associations command is displayed as follows.

```
tekelecstp YY-MM-DD hh:mm:ss zzz PPPPP XX.x.x-YY.y.y
    rtrv-assoc
    Command entered at terminal #x.
      ANAME a1201a
          PORT     A
          ADAPTER  M2PA
          LHOST    local1201a
          ALHOST   ---
          RHOST    remote1201a
          LPORT    1201           RPORT    1201
          ISTRMS   2              OSTRMS   2
          RMODE    LIN            RMIN     120          RMAX     800
          RTIMES   10             CWMIN    3000         M2PATSET 1
          OPEN     NO             ALW      NO

    ANAME a1202a
          PORT     A
          ADAPTER  M2PA
          LHOST    local1202a
          ALHOST   ---
          RHOST    remote1202a
          LPORT    1202           RPORT    1202
          ISTRMS   2              OSTRMS   2
          RMODE    LIN            RMIN     120          RMAX     800
          RTIMES   10             CWMIN    3000         M2PATSET 1
          OPEN     NO             ALW      NO

    ANAME a1204m3
          PORT     A
          ADAPTER  M3UA           VER      M3UA DRAFT 8
          LHOST    local1204a
          ALHOST   altlocal1204b
          RHOST    remote1204a
```

Procedure 24: Verification of the IP Database

```
          LPORT    1204          RPORT    1204
          ISTRMS   2             OSTRMS   2
          RMODE    LIN           RMIN     120           RMAX     800
          RTIMES   10            CWMIN    3000
          OPEN     NO            ALW      NO

   ANAME a1204m3a
          PORT     A
          ADAPTER  M3UA          VER      M3UA RFC
          LHOST    local1204a
          ALHOST   ---
          RHOST    remote1204a
          LPORT    1205          RPORT    1205
          ISTRMS   2             OSTRMS   2
          RMODE    LIN           RMIN     120           RMAX     800
          RTIMES   10            CWMIN    3000
          OPEN     YES           ALW      NO

   ANAME a1204su
          PORT     A
          ADAPTER  SUA           VER      SUA RFC
          LHOST    local1204a
          ALHOST   ---
          RHOST    remote1204a
          LPORT    12042         RPORT    12042
          ISTRMS   2             OSTRMS   2
          RMODE    LIN           RMIN     120           RMAX     800
          RTIMES   10            CWMIN    3000
          OPEN     NO            ALW      NO

    ANAME a1204su2
          PORT     A
          ADAPTER  SUA           VER      SUA RFC
          LHOST    local1204a
          ALHOST   ---
          RHOST    remote1204a
          LPORT    12052         RPORT    12052
          ISTRMS   2             OSTRMS   2
          RMODE    LIN           RMIN     120           RMAX     800
          RTIMES   10            CWMIN    3000
          OPEN     NO            ALW      NO
    ANAME a1205m3
          PORT     B1
          ADAPTER  M3UA          VER      M3UA RFC
          LHOST    local1205a
          ALHOST   ---
          RHOST    remote1205a
          LPORT    1205          RPORT    1205
          ISTRMS   2             OSTRMS   2
          RMODE    LIN           RMIN     120           RMAX     800
          RTIMES   10            CWMIN    3000
          OPEN     NO            ALW      NO

    ANAME a1206m3
          PORT     A
          ADAPTER  M3UA          VER      M3UA RFC
          LHOST    local1206a
          ALHOST   altlocal1206b
          RHOST    remote1206a
          LPORT    1206          RPORT    1206
          ISTRMS   2             OSTRMS   2
          RMODE    LIN           RMIN     120           RMAX     800
          RTIMES   10            CWMIN    3000
          OPEN     NO            ALW      NO


    IP Appl Sock/Assoc table is (15 of 4000) 1% full

;
```

For releases 34.0 and higher, the response to the retrieve SCTP associations command is displayed as follows:

```
tekelecstp YY-MM-DD hh:mm:ss zzz PPPPP XX.x.x-YY.y.y
    rtrv-assoc
    Command entered at terminal #x.
      ANAME a1201a
          PORT     A
          ADAPTER  M2PA
          LHOST    local1201a
          ALHOST   ---
          RHOST    remote1201a
          LPORT    1201          RPORT    1201
          ISTRMS   2             OSTRMS   2
          RMODE    LIN           RMIN     120           RMAX     800
          RTIMES   10            CWMIN    3000          M2PATSET 1
          OPEN     NO            ALW      NO

    ANAME a1202a
          PORT     A
          ADAPTER  M2PA
          LHOST    local1202a
```

Procedure 24: Verification of the IP Database

```
          ALHOST   ---
          RHOST    remote1202a
          LPORT    1202          RPORT    1202
          ISTRMS   2             OSTRMS   2
          RMODE    LIN           RMIN     120          RMAX     800
          RTIMES   10            CWMIN    3000         M2PATSET 1
          OPEN     NO            ALW      NO


    ANAME a1204m3a
          PORT     A
          ADAPTER  M3UA          VER      M3UA RFC
          LHOST    local1204a
          ALHOST   ---
          RHOST    remote1204a
          LPORT    1205          RPORT    1205
          ISTRMS   2             OSTRMS   2
          RMODE    LIN           RMIN     120          RMAX     800
          RTIMES   10            CWMIN    3000         UAPS     9
          OPEN     YES           ALW      NO

    ANAME a1204su
          PORT     A
          ADAPTER  SUA           VER      SUA RFC
          LHOST    local1204a
          ALHOST   ---
          RHOST    remote1204a
          LPORT    12042         RPORT    12042
          ISTRMS   2             OSTRMS   2
          RMODE    LIN           RMIN     120          RMAX     800
          RTIMES   10            CWMIN    3000         UAPS     10
          OPEN     NO            ALW      NO

     ANAME a1204su2
          PORT     A
          ADAPTER  SUA           VER      SUA RFC
          LHOST    local1204a
          ALHOST   ---
          RHOST    remote1204a
          LPORT    12052         RPORT    12052
          ISTRMS   2             OSTRMS   2
          RMODE    LIN           RMIN     120          RMAX     800
          RTIMES   10            CWMIN    3000         UAPS     10
          OPEN     NO            ALW      NO


     IP Appl Sock/Assoc table is (15 of 4000) 1% full
;
```

Procedure 24: Verification of the IP Database

14 ☐	If release is 31.6 or higher, issue the command to retrieve Application Server Processors, otherwise skip to step 16.	**rtrv-asp**
15 ☐	Response to retrieve Application Server Processor command is displayed.	tekelecstp YY-MM-DD hh:mm:ss zzz PPPPP XX.x.x-YY.y.y rtrv-asp Command entered at terminal #x. ASP ASSOCIATION UAPS asp1203m3 a1203m3 8 asp1204m3 a1204m3 9 asp1204m3a a1204m3a 1 asp1203su a1203su 10 asp1204su a1204su 10 asp1204su2 a1204su2 10 ASP table is (6 of 4000) 1% full. ;
16 ☐	Issue the command to retrieve Application Servers.	**rtrv-as**
17 ☐	For releases prior to 34.0, the response to the retrieve Application Server command is displayed as follows.	tekelecstp YY-MM-DD hh:mm:ss zzz PPPPP XX.x.x-YY.y.y rtrv-as Command entered at terminal #x. AS Name Mode ASP Names as1203m3 LOADSHARE asp1203m3 as1204m3 LOADSHARE asp1204m3 asp1204m3a as1203su LOADSHARE asp1203su as1204su LOADSHARE asp1204su asp1204su2 AS table is (4 of 250) 1% full. ;
	For releases 34.0 and higher, the response to the retrieve Application Server command is displayed as follows:	tekelecstp YY-MM-DD hh:mm:ss zzz PPPPP XX.x.x-YY.y.y rtrv-as Command entered at terminal #x. AS Name Mode Tr ms Association Names as1203m3 LOADSHARE 40 a1203m3 as1204m3 LOADSHARE 2000 a1204m3 a1204m3a as1203su LOADSHARE 10 a1203su as1204su LOADSHARE 10 a1204su a1204su2 AS table is (4 of 250) 1% full. ;
18 ☐	Issue the command to retrieve Application Routing Keys.	**rtrv-appl-rtkey:display=all**

Procedure 24: Verification of the IP Database

19 ☐	For releases prior to 31.12, the response to the retrieve Application Routing Key command is displayed as follows:	tekelecstp YY-MM-DD hh:mm:ss zzz PPPPP XX.x.x-YY.y.y rtrv-appl-rtkey:display=all Command entered at terminal #x. KEY:LOC DPC SI SSN OPC CICS CICE STATIC 002-001-001 ** *** ********** ********** ********** ATTR:PSTNCAT PSTNID NORM DUP 0 0 N - SNAMES:s1203 sock1 KEY:LOC DPC SI SSN OPC CICS CICE STATIC 002-001-002 5 --- ********** ********** ********** ATTR:PSTNCAT PSTNID NORM DUP 0 0 N - ASNAME:as1 KEY:LOC DPCI SI SSN OPCI CICS CICE STATIC 2-001-3 ** *** ********** ********** ********** ATTR:PSTNCAT PSTNID NORM DUP 0 0 N - ASNAME:as1204su ANAMES:a1204su a1204su2 KEY:LOC DPC SI SSN OPC CICS CICE STATIC ********** 3 --- ---------- ---------- ---------- ATTR:PSTNCAT PSTNID NORM DUP 0 0 N - ASNAME:as1204su ANAMES:a1204su a1204su2 STATIC Route Key table is (13 of 1000) 1% full 1203 Route Key table is (0 of 0) 0% full 1204 Route Key table is (0 of 0) 0% full STATIC Route Key Socket Association table is (12 of 16000) 1% full 1203 Route Key Socket Association table is (0 of 0) 0% full 1204 Route Key Socket Association table is (0 of 0) 0% full ;
	For releases 31.12 and higher, the response to the retrieve Application Routing Key command is displayed as follows:	tekelecstp YY-MM-DD hh:mm:ss zzz PPPPP XX.x.x-YY.y.y rtrv-appl-rtkey:display=all Command entered at terminal #x. KEY:LOC DPC SI SSN OPC CICS CICE STATIC 002-001-001 ** *** ********** ********** ********** ATTR:PSTNCAT PSTNID NORM DUP 0 0 N - SNAMES:s1203 sock1 KEY:LOC DPC SI SSN OPC CICS CICE STATIC 002-001-002 5 --- ********** ********** ********** RCONTEXT:- ASNAME:as1 KEY:LOC DPCI SI SSN OPCI CICS CICE STATIC 2-001-3 ** *** ********** ********** ********** RCONTEXT:4294967295 ASNAME:as1204su ANAMES:a1204su a1204su2 KEY:LOC DPC SI SSN OPC CICS CICE STATIC ********** 3 *** ---------- ---------- ---------- RCONTEXT:295 ASNAME:as1204su ANAMES:a1204su a1204su2 STATIC Route Key table is (13 of 1000) 1% full STATIC Route Key Socket Association table is (12 of 16000) 1% full ;
20 ☐	All steps in this procedure were completed.	

3.25 Health Check Conclusion

Procedure 25: Return the System to Former Configuration

STEP #	**This procedure returns the EAGLE to the configuration prior to the start of this health check.** **Estimated time for completion: 1 minute**	
1 ☐	Issue the command to changes the user's terminal output group configuration.	**chg-trm:trm=P:YYY=yes,ZZZ=no** *(Where P is the location of the printer terminal recorded in Procedure 3.2, Step 4.)* *(YYY is an output group that was recorded in Procedure 3.2, Step 4.)* *(ZZZ is another output group that was recorded in Procedure 3.2, Step 4.)*
2 ☐	Response to change terminal command is displayed.	tekelecstp 98-03-09 03:01:10 EST Rel XX.X.X-YY.Y.Y chg-trm:trm=P:YYY=yes,ZZZ=no Command entered at terminal #X. ; tekelecstp 98-03-09 03:01:11 EST Rel XX.X.X-YY.Y.Y CHG-TRM: MASP A – COMPLTD ;
3 ☐	Issue the command to changes the user's terminal output group configuration.	**chg-trm:trm=X:YYY=yes,ZZZ=no:TMOUT=TTT** *(Where X is the location of the user's terminal recorded in Procedure 3.2, Step 4.)* *(YYY is an output group that was recorded in Procedure 3.2, Step 4.)* *(ZZZ is another output group that was recorded in Procedure 3.2, Step 4.)* *(TTT is the timeout value that was recorded in Procedure 3.2, Step 4*
4 ☐	Response to change terminal command is displayed.	tekelecstp 98-03-09 03:01:10 EST Rel XX.X.X-YY.Y.Y chg-trm:trm=X:YYY=yes,ZZZ=no Command entered at terminal #X. ; tekelecstp 98-03-09 03:01:11 EST Rel XX.X.X-YY.Y.Y CHG-TRM: MASP A – COMPLTD ;
5 ☐	Issue the command to cancel capture.	**canc-echo:trm=P** *(Where P is a terminal port that was recorded in Procedure 3.2, Step 4)*
6 ☐	Response to cancel command is displayed.	tekelecstp 98-03-09 08:29:25 EST Rel XX.X.X-YY.Y.Y canc-echo:trm=P Command entered at terminal #X. ; tekelecstp 98-03-09 08:29:26 EST Rel XX.X.X-YY.Y.Y Scroll Area Output echo disabled for terminal X. ;
7 ☐	All steps in this procedure were completed.	

4. COMPLETION OF HEALTH CHECK

When the System Health Check has been completed, record all procedures completed, data along with the date into Table 2. Health Check Record on page 7. Contact the Customer Care Center at **1-888-FOR-TKLC or 919-460-2150 (international)** if any failed procedures. Be prepared to identify your Release level, which procedures failed, and at what point each procedure failed.

APPENDIX A. ESTIMATING UPGRADE TIMES

Over the last several software releases, the number of card types and the number of applications have increased dramatically. This has increased the time required for network conversion. To counter the increased time, enhancements have been added to the upgrade functionality to reduce this overall time. All these changes have caused the calculation for estimating upgrade time to become complex. To attempt to create a procedure that would accurately determine network upgrade time would be extremely difficult and hard to follow. Also the network conversion time will vary based on the size and configuration of the system as well as source and target releases. Most influential on the estimation is the one-command upgrade. The software is automatically handling more of the activity, which means it is making more decisions on how to proceed. These decisions cause the conversion to be extended rather than possibly causing an unacceptable impact on the system's capability. Real-time events such as bouncing links or links that do not return to in-service without manual intervention will slow the conversion. The upgrade attempts to continue when it encounters these events by reducing the amount of activity done concurrently, which expands the time. Below is a set of guidelines that provides information about network conversion and how these enhancements have impacted the processing. With these guidelines and the data collected in UHC1, a reasonable estimate can be determined. The estimate can be verified during the analysis of the health check.

General: A prom-based card takes approximately 1 minute to be converted. A flash-based card takes approximately 5 minutes. Prom-based card's GPLs include SS7ANSI, CCS7ITU, SS7GX25, GLS, SCCP, STPLAN, and EBDABLM. Flash-based cards include ATMANSI, ATMITU, SS7ML, IPLIM, IPLIMI, SS7IPGW, IPGWI, VSCCP, VXWSLAN, EBDADCM, HMUX, IPS, EMDC, EROUTE, and MCP. It can be assumed all new cards will be flash-based applications such as HIPR, MPLGA, MPLGI, and HCMIM.

Threshold Parameter: The thres= parameter, first available in EAGLE Release 25, allows for groups of cards of the same application to be converted simultaneously. The parameter, which has a range of 50% to 90%, specifies the minimum percent of links within the same application that remain in service during the conversion. If a system has 100 SS7ANSI links, then between 50 and 90 of them remain in-service at any given time. It is recommended that a threshold of 75 be used in all upgrades. Using 75% in this example, the upgrade should convert these cards in a minimum of four groups. The conversion time is decreased from 100 minutes to about 20 minutes if the four groups take 5 minutes each to upgrade. Because of a restriction in the flash downloading of flash-based cards, threshold does not apply to upgrading of flash-based cards until upgrading from EAGLE 28.0/IP7 6.0.

Warm Restart: With the introduction of LNP and the expansion of its capability, load time of the database onto the SCCP cards dramatically increased. Warm restart was implemented in and is available in upgrades from EAGLE 26.0 and beyond. This eliminated the need to reload the data on the cards when the data tables had not been changed. Cards that used to take 10 minutes per 2 million telephone numbers to load, only take 10 minutes per card to convert. In systems using LNP, LNP12million, INP, GPort, or GFlex, each SCCP or VSCCP card should take 10 minutes. In systems using LNP48million or LNP 96million, each VSCCP card should take 15 minutes using warm restart.

Multiple Flash Download: For upgrades from EAGLE 28.0/IP7 6.0 and beyond, the restriction that only allowed one card to be flash downloaded at a time was removed. This allowed flashed-based cards to be converted in groups when the threshold parameter is specified. If a system has 20 flash-based link cards, it takes 40 minutes at 10 minutes per group when threshold is specified as 75, a dramatic decrease from 100 minutes in previous releases.

Flash Download Loading: An additional enhancement when upgrading from EAGLE 28.0/IP7 6.0, is the loading mechanism for flash download on the card was improved to reduce the overall time. A flashed-based card is converted in approximately 3 minutes rather then 5 minutes.

SCCP Threshold: Previously, SCCP application cards were converted serially because of the N+1 configuration. In upgrades to EAGLE 29.0/IP7 7.0 and beyond, when the threshold parameter is specified, the SCCP cards are converted in groups. The number of cards in a group is based on the peak TPS rate since the start of the upgrade execution. Since the upgrade should take place during a maintenance window with low traffic, the SCCP cards typically will be converted in two groups. Higher traffic rates cause fewer cards per group. If a system has 10 SCCP cards, which took 100 minutes, this is reduced to 20 minutes.

Master Channel Network Conversion: In upgrades to EAGLE 29.0/IP7 7.0 and beyond, an E1/T1 card and its associated Channel cards are converted as one entity thus interrupting the signaling link only once during the conversions. Therefore, threshold of master/channel cards is based on the number of E1 and T1 cards in the system.

Non-provisioned Flash: The system allows for cards to be present without being provisioned. If these cards are flashed-based, they used to be downloaded with the target-release flash manually after the upgrade. In upgrades to EAGLE 29.0/IP7 7.0 and beyond, these cards are converted as part of the upgrade. Although much faster and more efficient than manually performing this task, it adds approximately 10 minutes per flash type to the network conversion when the threshold parameter is specified.

APPENDIX B. 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 the System Health Check procedure in the Upgrade Procedures section. Viewing this file requires Adobe Acrobat Reader 5.0 or later.

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. Scroll to the System Healthcheck Procedure.
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**.