Oracle® Communications
EAGLE Application Processor

System Health Check Guide

Release 17.0

F73805-01

March 2023

ORACLE®

CAUTION: Use only the guide downloaded from the Oracle Technology Network (OTN) (http://www.oracle.com/technetwork/indexes/documentation/oracle-comms-tekelec-2136003.html).
Before upgrading your system, access the My Oracle Support web portal (https://support.oracle.com) and review any Knowledge Alerts that may be related to the System Health Check or the Upgrade.

Refer to **My Oracle Support** section for instructions on accessing My Oracle Support

MY ORACLE SUPPORT

My Oracle Support (https://support.oracle.com) is your initial point of contact for all product support and training needs. A representative at Customer Access Support can assist you with My Oracle Support registration.

Call the Customer Access Support main number at 1-800-223-1711 (toll-free in the US), or call the Oracle Support hotline for your local country from the list at http://www.oracle.com/us/support/contact/index.html. When calling, make the selections in the sequence shown below on the Support telephone menu:

- For Technical issues such as creating a new Service Request (SR), select **1**.
- For Non-technical issues such as registration or assistance with My Oracle Support, select **2**.
- For Hardware, Networking and Solaris Operating System Support, select **3**.

You are connected to a live agent who can assist you with My Oracle Support registration and opening a support ticket.

My Oracle Support is available 24 hours a day, 7 days a week, 365 days a year.

ACRONYMS

This section lists the terms and acronyms specific to this document.

Table 1. Acronyms

Acronym/Term	Definition
MPS	Multi-Purpose Server
OC-EPAP	Oracle Communications EAGLE Application Processor
TPD	Tekelec Platform Distribution
RTDB	Real Time Database

WHAT'S NEW IN THIS GUIDE

This section introduces the documentation updates for Release 17.0 in Oracle Communications EAGLE Application Processor System Health Check Guide.

Release 17.0 –F73805-01, March 2023

- The command 'service <servicename>' is updated as 'systemctl <servicename>' throughout the document.
- Updated **System Status** section with EPAP 17.0 parameters at step 6.
- Updated **System Status** section with new errors that Syscheck may report at step 7.

Table of Contents

List of Figures

1 Introduction

1.1 Purpose and Scope

This document describes the Oracle recommended methods and procedures to evaluate the health of the setup. This document is intended for use for systems running on EPAP release 17.0

This document is intended for EAGLE engineering, integration, documentation, technical services, and any craft person who has completed EPAP training and is familiar with EPAP interface.

The document is written to support all customer configurations. All of the commands specified in the procedures should be executed unless explicitly stated otherwise in the individual procedure. Not doing so may result in a delay in the analysis performed by Oracle support.

1.2 Terminology

Multiple servers may be involved with the procedures in this manual. Therefore, most steps in the written procedures begin with the name or type of server to which the step applies. For example:

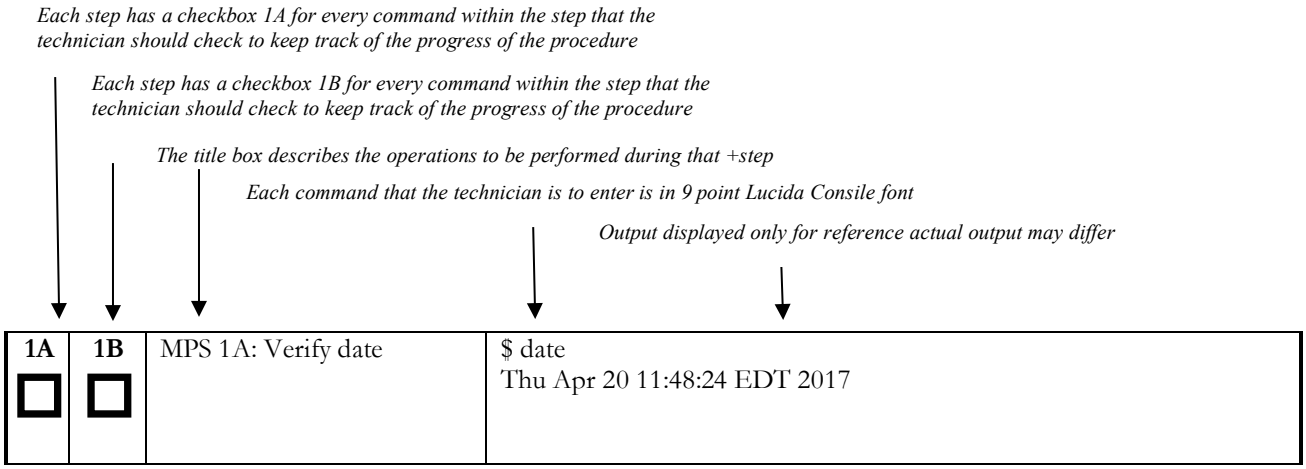


Figure 1. Example of a step that indicates the Server on which it needs to be executed

2.1.1 Configuration I: Health Check on Provisionable EPAP Mated Pairs

An EPAP system is a pair of MPS servers (an A and a B node). Current deployments of EPAP support two geographically separated EPAP systems that are "mated", meaning they communicate and replicate PDB information between the two sites. From the PDB perspective, these systems are working in a redundant configuration, this is, one Active and one Standby.
Therefore a mated pair of EPAP systems consists of four MPS servers, an A and a B node for each EPAP system.
This document describes how to conduct the health check of the EPAP software on one system, that system consisting of two MPS servers (A and B).

2.1.2 Configuration II: Health Check on Non-Provisionable EPAP Pairs

EPAP provides the ability to expand the concept of a mated pair of EPAP systems to have up to 24 EPAP systems (48 MPS servers total) configured such that two of the MPS-A servers will run the PDBA software and handle provisioning (Provisionable nodes) and the other 22 MPS-B and 22 MPS-A servers will only run the RTDB software, taking their updates from the two Provisionable servers.
This document describes how to conduct the health check of the EPAP software on one system, that system consisting of two Non-Provisionable servers.

2.1.3 Configuration III: Health Check on Standalone Provisionable EPAP

A Standalone PDB runs the PDB process only and is connected to Non-Provisionable running RTDB only. Up to 22 Non-Provisional EPAP mated pairs can be connected to 2 Standalone PDB EPAPs that are configured as Active/Standby.
This document describes how to conduct the health check of the EPAP software on one system, that system consisting of a single Provisionable server.

Note: Most of the steps to perform health check are common for all three configurations except a few steps which will be exclusively highlighted to run on a particular configuration.

3 Pre-Health Check Requirements

- User shall have the access to the server on which health check is to be performed via Securelink, VPN and/or via Modem or a PC with null modem cable for connection to serial port.
- User shall be able to log into the web GUI, such as a PC with Internet Explorer, or via lynx text GUI.
- User shall have the terminal capture enabled to allow review of the output.
- User shall have the passwords for the following users as mentioned in table below:

User	Password
epapconfig	
epapdev	
admusr	

4 EPAP Health Check

4.1 System Status

These steps can be performed on any of the EPAP configurations as mentioned in section 2. For mated pairs, commands should be run on both of the servers.

STEP #	Steps To Be Completed	Expected output/command to be executed
1. ☐	**MPS X:** Login as admusr	**login: admusr** **password: <admusr_password>**
2. ☐	**MPS X:** Record the TPD version	`$ getPlatRev` Refer to Media and Documentation section of EPAP 17.0 Release Notes for correct TPD Release.
3. ☐	**MPS X:** Verify that the time difference between servers is 30 seconds or less.	`$ sudo date ;  sudo clock` Thu Apr 20 11:48:24 EDT 2017 Thu 20 Apr 2017 11:48:25 AM EDT -0.031459 seconds
4. ☐	**MPS X:** Verify that the ntp server is in sync Delay should be less than 30 seconds	`$ ntpq -p` remote refid st t when poll reach delay offset jitter ========== mate 192.168.2.100 14 u 149m 1024 0 9.383 -631537 0.000
5. ☐	**MPS X:** Record the last reboot occurred	`$ uptime` 12:03:59 up 9:12, 2 users, load average: 0.32, 0.35, 0.32 **Note**: A server reboot is recommended after every 180 days.
6. ☐	**MPS X:** Record the EPAP release number from rpm query.	`$ rpm -qi TKLCepap` Name : TKLCepap Relocations: (not relocatable) Version : 170.0.12 Vendor: Tekelec Release : 17.0.0.0.0_170.12.0 Build Date: Fri 10 March 2023 02:57:50 PM EST Install Date: Mon 13 March 2023 04:16:44 AM EDT Build Host: trina-7.tekelec.com Group : Development/Build Source RPM: TKLCepap-170.0.12-17.0.0.0.0_170.12.0.src.rpm Size : 119117355 License: ▒ TEKELEC 2005-2023 Signature : (none)

		Packager : <@tekelec.com> URL : http://www.tekelec.com/ Summary : Oracle Communications EPAP Package Description : This is the Oracle Communications EAGLE Application Processor(EPAP) Package. The Package installs EPAP software. EPAP provides Provisioning Database Application (PDBA on A side) and Real Time Database (RTDB).

7. ☐	**MPS X:**
	Verify system health check
		`$ sudo syscheck`
		Running modules in class disk...
		OK
		Running modules in class hardware...
		OK
		Running modules in class net...
		OK
		Running modules in class proc...
		OK
		Running modules in class services...
		OK
		Running modules in class system...
		OK
		Running modules in class upgrade...
		OK
		LOG LOCATION: /var/TKLC/log/syscheck/fail_log
		
		Syscheck may also report the following:
		* defaultroute: FAILURE:: MINOR::5000000000040000 -- Platform Health Check Failure
		* defaultroute: FAILURE:: ping6 return non-zero code.
		* defaultroute: FAILURE:: MAJOR::3000000000002000 -- Server Default Route Network Error
		* defaultroute: FAILURE:: The IPv6 default route at fe80::f64e:5ff:fe49:9b7f cannot be pinged!
		
		Note: In case one or more modules FAILED, re-run the command with verbose option like:
		`$ sudo syscheck -v`
		Record the output and contact My Oracle Support.

8. ☐	**MPS X:** Verify all current banner header messages	`$ manageBannerInfo -l` There are currently no BannerInfo messages for this side in the database. Note: In case there are any alarms record those alarms and contact My Oracle Support.
9. ☐	**MPS X:** Retrieve alarm status from alarm manager.	`$ alarmMgr --alarmStatus` Note: No output will be displayed if there are no alarms on the system. In case any output is observed record the output. Sample alarms are displayed below: `$ alarmMgr --alarmStatus` SEQ: 17272594 UPTIME: 14280330 BIRTH: 1356031430 TYPE: SET ALARM: TKSPLATMA1|tpdFanError|1.3.6.1.4.1.323.5.3.18.3.1.2.1

10. ☐	**MPS X:** Record the last lines of alarm log	$ tail -40 /var/TKLC/epap/logs/alarm.log 20170420031934|ELAP|LocalMaint|S|Minor Application|1 20170420031934|EPAP|LocalMaint|S|1000 20170420031934|ELAP|LocalMaint|S|Minor Application|2 20170420031939|EPAP|LocalMaint|C|1000 20170420031939|ELAP|LocalMaint|C|Minor Application|2 20170420031939|EPAP|LocalMaint|C|800 20170420031939|ELAP|LocalMaint|C|Minor Application|1 20170420031949|ELAP|LocalMaint|C|Major Application|40000000 20170420032432|ELAP|LocalMaint|S|Major Application|40000000 20170420032435|EPAP|LocalMaint|S|800 20170420032435|ELAP|LocalMaint|S|Minor Application|1 20170420032436|EPAP|LocalMaint|S|1000 20170420032436|ELAP|LocalMaint|S|Minor Application|2 20170420032439|EPAP|LocalMaint|C|800 20170420032439|ELAP|LocalMaint|C|Minor Application|1 20170420032440|EPAP|LocalMaint|C|1000 20170420032440|ELAP|LocalMaint|C|Minor Application|2 20170420032449|ELAP|LocalMaint|C|Major Application|40000000 20170420032931|ELAP|LocalMaint|S|Major Application|40000000 20170420032935|EPAP|LocalMaint|S|800 20170420032935|ELAP|LocalMaint|S|Minor Application|1 20170420032935|EPAP|LocalMaint|S|1000 20170420032935|ELAP|LocalMaint|S|Minor Application|2 20170420032939|EPAP|LocalMaint|C|1000 20170420032939|ELAP|LocalMaint|C|Minor Application|2 20170420032940|EPAP|LocalMaint|C|800 20170420032940|ELAP|LocalMaint|C|Minor Application|1 20170420032949|ELAP|LocalMaint|C|Major Application|40000000 20170420033432|ELAP|LocalMaint|S|Major Application|40000000 20170420033435|EPAP|LocalMaint|S|800 20170420033435|ELAP|LocalMaint|S|Minor Application|1 20170420033436|EPAP|LocalMaint|S|1000 20170420033436|ELAP|LocalMaint|S|Minor Application|2 20170420033440|EPAP|LocalMaint|C|800 20170420033440|ELAP|LocalMaint|C|Minor Application|1 20170420033440|EPAP|LocalMaint|C|1000 20170420033440|ELAP|LocalMaint|C|Minor Application|2 20170420033449|ELAP|LocalMaint|C|Major Application|40000000 20170420033541|ELAP|LocalMaint|S|Major Application|1 20170420033541|ELAP|LocalMaint|C|Major Application|1
11. ☐	**MPS X:** Record the last lines of messages log	$ tail -40 /var/log/messages Apr 20 02:56:30 Natal-A kernel: type=1305 audit(1492671389.509:3): audit_pid=3222 old=0 auid=4294967295 ses=4294967295 res=1 Apr 20 02:56:31 Natal-A xinetd[3528]: xinetd Version 2.3.14 started with libwrap loadavg labeled-networking options compiled in. Apr 20 02:56:31 Natal-A xinetd[3528]: Started working: 1 available service Apr 20 02:56:31 Natal-A ntpdate[3544]: name server cannot be used: Temporary failure in name resolution (-3) Apr 20 02:56:31 Natal-A ntpdate[3544]: name server cannot be used: Temporary failure in name resolution (-3) Apr 20 02:56:31 Natal-A ntpdate[3544]: name server cannot be used: Temporary failure in name resolution (-3) Apr 20 02:56:31 Natal-A ntpdate[3544]: name server cannot be used: Temporary failure in name resolution (-3)

		Apr 20 02:52:28 Natal-A ntpdate[3544]: step time server 192.168.2.200 offset -243.364332 sec Apr 20 02:52:29 Natal-A kernel: ACPI Warning: SystemIO range 0x0000000000000a70-0x0000000000000a71 conflicts with OpRegion 0x0000000000000a00-0x0000000000000a7f (_SB_.PCI0.SBRG.RNTR) (20090903/utaddress-254) Apr 20 02:52:29 Natal-A kernel: ACPI: This conflict may cause random problems and system instability Apr 20 02:52:29 Natal-A kernel: coretemp coretemp.0: TjMax forced to 95 degrees C by user Apr 20 02:52:29 Natal-A kernel: coretemp coretemp.0: TjMax forced to 95 degrees C by user Apr 20 02:52:29 Natal-A kernel: Cypress init Apr 20 02:52:30 Natal-A ntpd[3583]: ntpd 4.2.6p5@1.2349-o Tue Mar 7 22:14:23 UTC 2017 (1) Apr 20 02:52:30 Natal-A ntpd[3584]: proto: precision = 0.063 usec Apr 20 02:52:34 Natal-A kernel: tklc_e5appb_wd: module_layout: kernel tainted. Apr 20 02:52:34 Natal-A kernel: Disabling lock debugging due to kernel taint Apr 20 02:52:34 Natal-A kernel: tklc_e5appb_wd: loading, built Feb 20 2016, 04:46:41 Apr 20 02:52:34 Natal-A kernel: tklc_e5appb_wd: create proc entry Apr 20 02:52:35 Natal-A kernel: tklc_e5appb_wd: Driver major id is 0 Apr 20 02:54:21 Natal-A sudo: epapdev : TTY=unknown ; PWD=/var/TKLC/epap/logs ; USER=root ; COMMAND=/sbin/initctl stop TKLCsnmp Apr 20 02:54:21 Natal-A sudo: epapdev : TTY=unknown ; PWD=/var/TKLC/epap/logs ; USER=root ; COMMAND=/sbin/initctl start TKLCsnmp Apr 20 02:54:23 Natal-A sudo: epapdev : TTY=unknown ; PWD=/var/TKLC/epap/logs ; USER=root ; COMMAND=/sbin/initctl restart TKLCsnmp Apr 20 02:54:24 Natal-A init: runGsConn main process ended, respawning Apr 20 04:02:03 Natal-A kernel: Cypress exit Apr 20 04:02:04 Natal-A kernel: Cypress init Apr 20 10:18:08 Natal-A sudo: admusr : TTY=pts/0 ; PWD=/home/admusr ; USER=root ; COMMAND=/bin/su - Apr 20 11:14:24 Natal-A sudo: admusr : TTY=pts/0 ; PWD=/home/admusr ; USER=root ; COMMAND=/usr/TKLC/plat/bin/getPlatRev Apr 20 11:45:47 Natal-A sudo: admusr : TTY=pts/0 ; PWD=/home/admusr ; USER=root ; COMMAND=/sbin/clock Apr 20 11:46:30 Natal-A sudo: admusr : TTY=pts/0 ; PWD=/home/admusr ; USER=root ; COMMAND=/bin/date

		Apr 20 11:46:34 Natal-A sudo: admusr : TTY=pts/0 ; PWD=/home/admusr ; USER=root ; COMMAND=/sbin/clock Apr 20 11:48:24 Natal-A sudo: admusr : TTY=pts/0 ; PWD=/home/admusr ; USER=root ; COMMAND=/bin/date Apr 20 11:48:24 Natal-A sudo: admusr : TTY=pts/0 ; PWD=/home/admusr ; USER=root ; COMMAND=/sbin/clock Apr 20 12:03:59 Natal-A sudo: admusr : TTY=pts/0 ; PWD=/home/admusr ; USER=root ; COMMAND=/usr/bin/uptime Apr 20 12:10:24 Natal-A sudo: admusr : TTY=pts/0 ; PWD=/home/admusr ; USER=root ; COMMAND=/usr/TKLC/plat/bin/syscheck Apr 20 12:14:12 Natal-A sudo: admusr : TTY=pts/0 ; PWD=/home/admusr ; USER=root ; COMMAND=/usr/TKLC/epap/bin/manageBannerInfo -l Apr 20 12:35:14 Natal-A sudo: admusr : TTY=pts/0 ; PWD=/home/admusr ; USER=root ; COMMAND=/usr/bin/clear Apr 20 12:35:19 Natal-A sudo: admusr : TTY=pts/0 ; PWD=/home/admusr ; USER=root ; COMMAND=/sbin/vgdisplay -v Apr 20 12:46:35 Natal-A sudo: admusr : TTY=pts/0 ; PWD=/home/admusr ; USER=root ; COMMAND=/usr/bin/free Apr 20 12:54:45 Natal-A sudo: admusr : TTY=pts/0 ; PWD=/home/admusr ; USER=root ; COMMAND=/bin/df -h
12. ☐	**MPS X:** Verify the attributes of volume groups If the output does not contain the “logical volume” sections, contact Oracle Support so that corrective procedures can be scheduled to be performed.	$ sudo vgdisplay -v --- Logical volume --- LV Path /dev/vgroot/logs LV Name logs VG Name vgroot LV UUID Fy9hhq-zz90-7WwG-xC30-c22K-zZgs-npnP75 LV Write Access read/write LV Creation host, time Natal-A, 2017-04-17 22:55:23 -0400 LV Status available # open 1 LV Size 20.00 GiB Current LE 640 Segments 1 Allocation inherit Read ahead sectors auto - currently set to 256 Block device 253:6 --- Logical volume --- LV Path /dev/vgroot/rt LV Name rt

		VG Name vgroot LV UUID eNZJoS-FTh8-brF5-XA1l-0qJS-t0IE-hSwvis LV Write Access read/write LV Creation host, time Natal-A, 2017-04-17 22:55:24 -0400 LV Status available # open 1 LV Size 19.69 GiB Current LE 630 Segments 1 Allocation inherit Read ahead sectors auto - currently set to 256 Block device 253:7 --- Logical volume --- LV Path /dev/vgroot/db LV Name db VG Name vgroot LV UUID WAhMqc-1v0Z-s9vX-Mpe3-EM8f-D8w4-FuJQe7 LV Write Access read/write LV Creation host, time Natal-A, 2017-04-17 22:55:25 -0400 LV Status available # open 1 LV Size 83.69 GiB Current LE 2678 Segments 1 Allocation inherit Read ahead sectors auto - currently set to 256 Block device 253:8 --- Logical volume --- LV Path /dev/vgroot/free LV Name free VG Name vgroot LV UUID JEBXAj-mpa0-ygZm-IUOm-bETP-QcNc-OKlIIN LV Write Access read/write LV Creation host, time Natal-A, 2017-04-17 22:55:26 -0400 LV Status available

		# open 1 LV Size 142.72 GiB Current LE 4567 Segments 1 Allocation inherit Read ahead sectors auto - currently set to 256 Block device 253:9 --- Physical volumes --- PV Name /dev/md2 PV UUID RynwYj-PTdf-eHsL-x9hs-CgHC-1DiP-g0sStS PV Status allocatable Total PE / Free PE 8930 / 0
13. ☐	**MPS X:** Record the total amount of free and used physical and swap memory in the system.	`$ free` total used free shared buffers cached Mem: 8059380 2659476 5399904 539560 234092 1139488 -/+ buffers/cache: 1285896 6773484 Swap: 2064380 0 2064380
14. ☐	**MPS X:** Verify db filesystem use is less than 90%. Note any other filesystem at 80% or higher use. Output will vary for each server.	`$ df -h` Filesystem Size Used Avail Use% Mounted on /dev/mapper/vgroot-plat_root 976M 285M 640M 31% / tmpfs 3.9G 0 3.9G 0% /dev/shm /dev/md1 244M 40M 192M 17% /boot /dev/mapper/vgroot-plat_tmp 976M 2.0M 923M 1% /tmp /dev/mapper/vgroot-plat_usr 3.9G 2.5G 1.3G 67% /usr /dev/mapper/vgroot-plat_var 976M 145M 780M 16% /var /dev/mapper/vgroot-plat_var_tklc 3.9G 2.1G 1.7G 56% /var/TKLC /dev/mapper/vgroot-db 83G 51G 28G 65% /var/TKLC/epap/db /dev/mapper/vgroot-free 141G 60M 134G 1% /var/TKLC/epap/free /dev/mapper/vgroot-logs 20G 569M 19G 3% /var/TKLC/epap/logs

		/dev/mapper/vgroot-rt 20G 45M 19G 1% /var/TKLC/epap/rt
15. ☐	**MPS X:** Verify disk mirroring configuration and RAID status	`$ cat /proc/mdstat` Personalities : [raid1] md1 : active raid1 sdb2[1] sda2[0] 262080 blocks super 1.0 [2/2] [UU] md2 : active raid1 sdb1[1] sda1[0] 468447232 blocks super 1.1 [2/2] [UU] bitmap: 1/4 pages [4KB], 65536KB chunk unused devices: <none>
16. ☐	**MPS X:** Record the hard drive and partition size	`$ fdisk -l /dev/sd[a-z]` Disk /dev/sda: 480.1 GB, 480103981056 bytes 255 heads, 63 sectors/track, 58369 cylinders Units = cylinders of 16065 * 512 = 8225280 bytes Sector size (logical/physical): 512 bytes / 4096 bytes I/O size (minimum/optimal): 4096 bytes / 4096 bytes Disk identifier: 0x000cfb5b Device Boot Start End Blocks Id System /dev/sda1 1 58336 468578304 fd Linux raid autodetect /dev/sda2 * 58336 58369 262144 fd Linux raid autodetect Disk /dev/sdb: 480.1 GB, 480103981056 bytes 255 heads, 63 sectors/track, 58369 cylinders Units = cylinders of 16065 * 512 = 8225280 bytes Sector size (logical/physical): 512 bytes / 4096 bytes I/O size (minimum/optimal): 4096 bytes / 4096 bytes Disk identifier: 0x000eba47 Device Boot Start End Blocks Id System /dev/sdb1 1 58336 468578304 fd Linux raid autodetect /dev/sdb2 * 58336 58369 262144 fd Linux raid autodetect Disk /dev/sdc: 4089 MB, 4089446400 bytes 256 heads, 63 sectors/track, 495 cylinders Units = cylinders of 16128 * 512 = 8257536 bytes Sector size (logical/physical): 512 bytes / 512 bytes I/O size (minimum/optimal): 512 bytes / 512 bytes Disk identifier: 0x488965c1

17. ☐	**MPS X:** Verify smartctl output	$ smartctl -A -l error /dev/sda smartctl 5.43 2012-06-30 r3573 [x86_64-linux-2.6.32-642.15.1.el6prerel7.4.0.0.0_88.37.0.x86_64] (local build) Copyright (C) 2002-12 by Bruce Allen, http://smartmontools.sourceforge.net === START OF READ SMART DATA SECTION === SMART Attributes Data Structure revision number: 1 Vendor Specific SMART Attributes with Thresholds: ID# ATTRIBUTE_NAME FLAG VALUE WORST THRESH TYPE UPDATED WHEN_FAILED RAW_VALUE 5 Reallocated_Sector_Ct 0x0032 100 100 000 Old_age Always - 0 9 Power_On_Hours 0x0032 100 100 000 Old_age Always - 17015 12 Power_Cycle_Count 0x0032 100 100 000 Old_age Always - 40 170 Unknown_Attribute 0x0033 100 100 010 Pre-fail Always - 0 171 Unknown_Attribute 0x0032 100 100 000 Old_age Always - 0 172 Unknown_Attribute 0x0032 100 100 000 Old_age Always - 0 174 Unknown_Attribute 0x0032 100 100 000 Old_age Always - 38 175 Program_Fail_Count_Chip 0x0033 100 100 010 Pre-fail Always - 386979594890 183 Runtime_Bad_Block 0x0032 100 100 000 Old_age Always - 0 184 End-to-End_Error 0x0033 100 100 090 Pre-fail Always - 0 187 Reported_Uncorrect 0x0032 100 100 000 Old_age Always - 0 190 Airflow_Temperature_Cel 0x0022 077 068 000 Old_age Always - 23 (Min/Max 19/33) 192 Power-Off_Retract_Count 0x0032 100 100 000 Old_age Always - 38 194 Temperature_Celsius 0x0022 100 100 000 Old_age Always - 34 197 Current_Pending_Sector 0x0032 100 100 000 Old_age Always - 0 199 UDMA_CRC_Error_Count 0x003e 100 100 000 Old_age Always - 0 225 Load_Cycle_Count 0x0032 100 100 000 Old_age Always - 1266712

		226 Load-in_Time 0x0032 100 100 000 Old_age Always - 3614 227 Torq-amp_Count 0x0032 100 100 000 Old_age Always - 70 228 Power-off_Retract_Count 0x0032 100 100 000 Old_age Always - 1020808 232 Available_Reservd_Space 0x0033 100 100 010 Pre-fail Always - 0 233 Media_Wearout_Indicator 0x0032 097 097 000 Old_age Always - 0 234 Unknown_Attribute 0x0032 100 100 000 Old_age Always - 0 241 Total_LBAs_Written 0x0032 100 100 000 Old_age Always - 1266712 242 Total_LBAs_Read 0x0032 100 100 000 Old_age Always - 3024125 SMART Error Log Version: 1 No Errors Logged **Note:** If any error is observed record the error and contact Oracle Support.
18. ☐	**MPS X:** Start Disk Integrity Check	`$ smartctl -t short /dev/sda` smartctl 5.43 2012-06-30 r3573 [x86_64-linux-2.6.32-642.15.1.el6prerel7.4.0.0.0_88.37.0.x86_64] (local build) Copyright (C) 2002-12 by Bruce Allen, http://smartmontools.sourceforge.net === START OF OFFLINE IMMEDIATE AND SELF-TEST SECTION === Sending command: "Execute SMART Short self-test routine immediately in off-line mode". Drive command "Execute SMART Short self-test routine immediately in off-line mode" successful. Testing has begun. Please wait 1 minutes for test to complete. Test will complete after Fri Apr 21 10:37:14 2017 Use smartctl -X to abort test.

19. ☐	**MPS X:** Verify and record Disk Integrity Check results	`$ sleep 60; smartctl -l selftest /dev/sda` smartctl 5.43 2012-06-30 r3573 [x86_64-linux-2.6.32-642.15.1.el6prerel7.4.0.0.0_88.37.0.x86_64] (local build) Copyright (C) 2002-12 by Bruce Allen, http://smartmontools.sourceforge.net === START OF READ SMART DATA SECTION === SMART Self-test log structure revision number 1 Num Test_Description Status Remaining LifeTime(hours) LBA_of_first_error # 1 Short offline Completed without error 00% 17015 - **Note:** Record if any error is reported and contact Oracle Support.

20. ☐	**MPS X:**
	Record any hard disk sector error
		`$ smartctl -a /dev/sda | grep -i LBA`
		241 Total_LBAs_Written 0x0032 100 100 000 Old_age Always - 1266713
		242 Total_LBAs_Read 0x0032 100 100 000 Old_age Always - 3024305
		Num Test_Description Status Remaining LifeTime(hours) LBA_of_first_error
		SPAN MIN_LBA MAX_LBA CURRENT_TEST_STATUS
		Note: No error should be observed in case any error is observed output will be like as mentioned below, record the output and contact Oracle Support
		40 51 a0 11 8e 57 e0 Error: UNC 160 sectors at LBA = 0x00578e11 = 538001
		40 51 a8 11 8e 57 e0 Error: UNC 168 sectors at LBA = 0x00578e11 = 538001
		Num Test_Description Status Remaining LifeTime(hours) LBA_of_first_error
		`If UNC errors are found, execute following command:`
		`$ smartctl -a /dev/sda`

21. ☐	**MPS X:** Disk integrity step on second HDD	Repeat steps from 17 to 20 for **"/dev/sdb"** disk drive.
22. ☐	**MPS X:** Repeat the procedure for mate EPAP	Repeat steps from 1 to 21 on mate EPAP server, if setup is not PDBonly.

4.2 System Configuration

These steps can be performed on any of the EPAP configurations as mentioned in section 2. For mated pairs, commands should be run on both of the servers.

STEP #	Steps To Be Completed	Expected output/command to be executed 1.
1. ☐	**MPS X:** Login as admusr	login: admusr password: <admusr_password>
2. ☐	**MPS X:** Record and verify the system configuration Select Option 1 from epapconfig menu.	$ sudo su - epapconfig MPS Side A: hostname: Sucre-a hostid: 4b0a688d Platform Version: 6.1.4-7.4.0.0.0_88.37.0 Software Version: EPAP 162.0.13-0.59261 Fri Apr 21 08:27:27 EDT 2017 /-----EPAP Configuration Menu----------\ /----------\ | 1 | Display Configuration | |---|---| | 2 | Configure Network Interfaces Menu | |---|---| | 3 | Set Time Zone | |---|---| | 4 | Exchange Secure Shell Keys | |---|---| | 5 | Change Password | |---|---| | 6 | Platform Menu | |---|---| | 7 | Configure NTP Server | |---|---| | 8 | PDB Configuration Menu | |---|---| | 9 | Security | |---|---| | 10 | SNMP Configuration | |---|---| | 11 | Configure Alarm Feed | |---|---| | 12 | Configure SNMP Agent Community | |---|---| | 13 | Mate Disaster Recovery | |---|---| | e | Exit | \----------/ Enter Choice: 1 MPS Side A: hostname: Sucre-a hostid: 4b0a688d Platform Version: 6.1.4-7.4.0.0.0_88.37.0 Software Version: EPAP 162.0.13-0.59261 Fri Apr 21 09:41:50 EDT 2017 EPAP A Provisioning Network IP Address = 10.75.141.104 EPAP A Provisioning Network IP Address v6 = Not configured EPAP B Provisioning Network IP Address = 10.75.141.105 EPAP B Provisioning Network IP Address v6 = Not configured Provisioning Network Netmask = 255.255.255.0 Provisioning Network Prefix = Not configured Provisioning Network Default Router = 10.75.141.1

		Provisioning Network Default Router v6 = Not configured EPAP A Backup Prov Network IP Address = Not configured EPAP A Backup Prov Network IP Address v6 = Not configured EPAP B Backup Prov Network IP Address = Not configured EPAP B Backup Prov Network IP Address v6 = Not configured Backup Prov Network Netmask = Not configured Backup Prov Network Prefix v6 = Not configured Backup Prov Network Default Router = Not configured Backup Prov Network Default Router v6 = Not configured EPAP A Sync Network Address = 192.168.2.100 EPAP B Sync Network Address = 192.168.2.200 EPAP A Main DSM Network Address = 192.168.120.100 EPAP B Main DSM Network Address = 192.168.120.200 EPAP A Backup DSM Network Address = 192.168.121.100 EPAP B Backup DSM Network Address = 192.168.121.200 EPAP IP Version = IPv4 EPAP A HTTP Port = 80 EPAP B HTTP Port = 80 EPAP A HTTP SuExec Port = 8001 EPAP B HTTP SuExec Port = 8001 EPAP A Banner Connection Port = 8473 EPAP B Banner Connection Port = 8473 EPAP A Static NAT Address = Not configured EPAP B Static NAT Address = Not configured PDBI Port = 5873 Remote MPS A Static NAT Address = Not configured Remote MPS A HTTP Port = 80 Local PDBA Address = 10.250.54.108 Local PDBA Address v6 = 0000:0000:0000:0000:0000:0000:0000:0000 Remote PDBA Address = 0.0.0.0 Time Zone = America/New_York PDB Database = None - Non-provisionable Site Preferred PDB = 10.250.54.108 Allow updates from alternate PDB = Yes Press return to continue...
3. ☐	**MPS X:** Record and verify the ntp configuration Select Option 7 from epapconfig menu and then Option 1 from EPAP Configure NTP Server Menu.	`$ sudo su - epapconfig` MPS Side A: hostname: Sucre-a hostid: 4b0a688d Platform Version: 6.1.4-7.4.0.0.0_88.37.0 Software Version: EPAP 162.0.13-0.59261 Fri Apr 21 08:27:27 EDT 2017 /-----EPAP Configuration Menu----------\ /----------\ | 1 | Display Configuration | |----|----------| | 2 | Configure Network Interfaces Menu | |----|----------| | 3 | Set Time Zone | |----|----------| | 4 | Exchange Secure Shell Keys | |----|----------| | 5 | Change Password | |----|----------| | 6 | Platform Menu | |----|----------| | 7 | Configure NTP Server | |----|----------| | 8 | PDB Configuration Menu |

		|----|----------| | 9 | Security | |----|----------| | 10 | SNMP Configuration | |----|----------| | 11 | Configure Alarm Feed | |----|----------| | 12 | Configure SNMP Agent Community | |----|----------| | 13 | Mate Disaster Recovery | |----|----------| | e | Exit | \----------/ Enter Choice: 7 Verifying connectivity with mate... MPS Side A: hostname: Sucre-a hostid: 4b0a688d Platform Version: 6.1.4-7.4.0.0.0_88.37.0 Software Version: EPAP 162.0.13-0.59261 Fri Apr 21 09:46:58 EDT 2017 /-----EPAP Configure NTP Server Menu-\ /----------\ | 1 | Display External NTP Server | |----|----------| | 2 | Add External NTP Server | |----|----------| | 3 | Remove External NTP Server | |----|----------| | e | Exit | \----------/ Enter Choice: 1 Note: If external NTP servers configured, the output will be: ntpserver1 10.10.10.10 ntpserver2 20.20.20.20 Press return to continue... Note: If no external NTP servers configured, the output will be: There are no External NTP Servers. Press return to continue...
4. ☐	**MPS X:** Exit from epapconfig menu	MPS Side A: hostname: Sucre-a hostid: 4b0a688d Platform Version: 6.1.4-7.4.0.0.0_88.37.0 Software Version: EPAP 162.0.13-0.59261 Fri Apr 21 09:53:03 EDT 2017 /-----EPAP Configure NTP Server Menu-\ /----------\ | 1 | Display External NTP Server | |----|----------| | 2 | Add External NTP Server | |----|----------| | 3 | Remove External NTP Server | |----|----------| | e | Exit | \----------/ Enter Choice: e

		MPS Side A: hostname: Sucre-a hostid: 4b0a688d Platform Version: 6.1.4-7.4.0.0.0_88.37.0 Software Version: EPAP 162.0.13-0.59261 Fri Apr 21 09:53:04 EDT 2017 /-----EPAP Configuration Menu----------\ /----------\ | 1 | Display Configuration | |---|---| | 2 | Configure Network Interfaces Menu | |---|---| | 3 | Set Time Zone | |---|---| | 4 | Exchange Secure Shell Keys | |---|---| | 5 | Change Password | |---|---| | 6 | Platform Menu | |---|---| | 7 | Configure NTP Server | |---|---| | 8 | PDB Configuration Menu | |---|---| | 9 | Security | |---|---| | 10 | SNMP Configuration | |---|---| | 11 | Configure Alarm Feed | |---|---| | 12 | Configure SNMP Agent Community | |---|---| | 13 | Mate Disaster Recovery | |---|---| | e | Exit | \----------/ Enter Choice: e
5. ☐	**MPS X:** Record /etc/hosts configuration	$ cat /etc/hosts # # Do not modify this file by hand. Refer to Oracle Configuration # documentation. # # The order of the aliases in this file is significant # to the installation process. # 127.0.0.1 localhost loghost ::1 localhost6 loghost6 192.168.120.100 dsmm-a 192.168.121.100 dsmb-a 192.168.120.200 dsmm-b 192.168.121.200 dsmb-b 192.168.2.200 mate sync-b ntppeerB hasync-1a 192.168.2.100 sync-a hasync-1b 192.168.2.201 mate-ipdptp0 server_ppp0 192.168.2.202 mate-ppp client_ppp0 192.168.2.101 Natal-A-ipdptp0 server_ppp1 192.168.2.102 Natal-A-ppp client_ppp1 192.168.1.1 Natal-A-prov-bkup 0000:0000:0000:0000:0000:ffff:c0a8:0101 Natal-A-prov-bkup

		192.168.1.2 mate-prov-bkup 0000:0000:0000:0000:0000:ffff:c0a8:0102 mate-prov-bkup 192.168.2.1 switch1A 192.168.2.2 switch1B 192.168.2.3 switch1C 192.168.2.4 switch1D 10.75.141.47 Natal-A prova-ip pdba 10.75.141.48 Natal-B mate-prov provb-ip
6. ☐	**MPS X:** Verify and Record IPs configured on each interface	$ ifconfig -a eth01 Link encap:Ethernet HWaddr 00:00:17:0E:A6:A1 inet addr:10.75.141.47 Bcast:10.75.141.127 Mask:255.255.255.128 inet6 addr: 2606:b400:605:b917:200:17ff:fe0e:a6a1/64 Scope:Global inet6 addr: fe80::200:17ff:fe0e:a6a1/64 Scope:Link UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1 RX packets:245677 errors:0 dropped:0 overruns:0 frame:0 TX packets:226616 errors:0 dropped:0 overruns:0 carrier:0 collisions:0 txqueuelen:1000 RX bytes:22862561 (21.8 MiB) TX bytes:34665179 (33.0 MiB) Memory:fdee0000-fdefffff eth02 Link encap:Ethernet HWaddr 00:00:17:0E:A6:A0 inet addr:192.168.120.100 Bcast:192.168.120.255 Mask:255.255.255.0 inet6 addr: fe80::200:17ff:fe0e:a6a0/64 Scope:Link UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1 RX packets:309286 errors:0 dropped:0 overruns:0 frame:0 TX packets:37256 errors:0 dropped:0 overruns:0 carrier:0 collisions:0 txqueuelen:1000 RX bytes:27886372 (26.5 MiB) TX bytes:9283384 (8.8 MiB) Memory:fde60000-fde7ffff eth03 Link encap:Ethernet HWaddr 00:00:17:0E:A6:9F inet6 addr: fe80::200:17ff:fe0e:a69f/64 Scope:Link UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1 RX packets:358342 errors:0 dropped:0 overruns:0 frame:0 TX packets:75045 errors:0 dropped:0 overruns:0 carrier:0 collisions:0 txqueuelen:1000 RX bytes:35115211 (33.4 MiB) TX bytes:14585533 (13.9 MiB) Memory:fdfe0000-fdffffff eth03.1 Link encap:Ethernet HWaddr 00:00:17:0E:A6:9F inet addr:192.168.2.100 Bcast:192.168.2.255 Mask:255.255.255.0 inet6 addr: fe80::200:17ff:fe0e:a69f/64 Scope:Link UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1 RX packets:53064 errors:0 dropped:0 overruns:0 frame:0 TX packets:48451 errors:0 dropped:0 overruns:0 carrier:0 collisions:0 txqueuelen:0 RX bytes:6687487 (6.3 MiB) TX bytes:12384253 (11.8 MiB) eth03.3 Link encap:Ethernet HWaddr 00:00:17:0E:A6:9F inet addr:192.168.121.100 Bcast:192.168.121.255 Mask:255.255.255.0 inet6 addr: fe80::200:17ff:fe0e:a69f/64 Scope:Link UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1 RX packets:305278 errors:0 dropped:0 overruns:0 frame:0 TX packets:26424 errors:0 dropped:0 overruns:0 carrier:0 collisions:0 txqueuelen:0 RX bytes:23410936 (22.3 MiB) TX bytes:2183472 (2.0 MiB) eth04 Link encap:Ethernet HWaddr 00:00:17:0E:A6:9E inet addr:192.168.1.1 Bcast:192.168.1.255 Mask:255.255.255.0

		UP BROADCAST MULTICAST MTU:1500 Metric:1 RX packets:0 errors:0 dropped:0 overruns:0 frame:0 TX packets:0 errors:0 dropped:0 overruns:0 carrier:0 collisions:0 txqueuelen:1000 RX bytes:0 (0.0 b) TX bytes:0 (0.0 b) Memory:fdf60000-fdf7ffff lo Link encap:Local Loopback inet addr:127.0.0.1 Mask:255.0.0.0 inet6 addr: ::1/128 Scope:Host UP LOOPBACK RUNNING MTU:65536 Metric:1 RX packets:2198539 errors:0 dropped:0 overruns:0 frame:0 TX packets:2198539 errors:0 dropped:0 overruns:0 carrier:0 collisions:0 txqueuelen:0 RX bytes:191477466 (182.6 MiB) TX bytes:191477466 (182.6 MiB)
7. ☐	**MPS X:** Record EuiDB settings	`$ uiEdit` "EPAP_B_INCR_DNLOAD_BACKUP_MCASTADDR" is set to "225.10.81.15" "LNP_ENABLED" is set to "FALSE" "EPAP_A_RTDB_DEBUG_LEVEL" is set to "50" "EPAP_B_GS_BANNER_PORT" is set to "8473" "EPAP_A_HSDOWNLOAD" is set to "OFF" "EPAP_A_GS_BANNER_PORT" is set to "8473" "PDBA_STATS_ENABLED" is set to "OFF" "EPAP_DATA_SPLIT" is set to "OFF" "max_passwd_age" is set to "180" "new_user_default_groups" is set to "readonly" "max_concurrent_user_logins" is set to "1" "max_concurrent_logins" is set to "20" "PROVISIONABLE_MPS" is set to "YES" "PDBA_LOCAL_NAME_V6" is set to "0000:0000:0000:0000:0000:0000:0000:0000" "passwd_expiry_warn_days" is set to "7" "HTTP_ENABLED" is set to "No" "SNMP_ALARM_FEED" is set to "ON" "session_idle_timeout" is set to "10" "EPAP_A_STANDBY" is set to "FALSE" "EPAP_BINLOGS_THRESHOLD" is set to "80" "DSM_MIN_MEM_SIZE" is set to "3235" "SLOG_CAPACITY_ALARMS_ENABLED" is set to "TRUE" "EPAP_B_FULL_DNLOAD_BACKUP_MCASTADDR" is set to "225.10.81.17" "EPAP_A_NAME" is set to "Natal-A" "EPAP_B_PROV_NETWORK_IP_ADDRESS" is set to "10.75.141.48" "EPAP_B_SLOG" is set to "YES" "EPAP_B_STANDBY" is set to "FALSE" "MAX_RECORD_DELAY" is set to "15" "PDBA_IMSI_PREFIX" is set to "" "EPAP_A_MAINT_DEBUG_LEVEL" is set to "0" "EPAP_STATUS_B" is set to "ACTIVE" "logon_msg" is set to "NOTICE: This is a private computer system. Unauthorized access or use may lead to prosecution." "SELF_HEAL_DN_FEATURE" is set to "OFF" "EPAP_B_SUEXEC_HTTP_PORT" is set to "8001" "EPAP_A_DSM_MAIN_NETWORK_ADDRESS" is set to "192.168.120.100" "EPAP_QS_ALARMS_ENABLED" is set to "ON" "EPAP_B_INCR_DNLOAD_MAIN_MCASTADDR" is set to "225.10.80.14" "PDB_RTDB_SYNC" is set to "YES" "EPAP_B_MAINT_DEBUG_LEVEL" is set to "0" "PROVISIONING_NETWORK_NETMASK" is set to "255.255.255.128"

		"EPAP_A_SLOG" is set to "YES" "EPAP_B_HTTP_PORT" is set to "80" "PDBA_ERROR_LOG_DEBUG_LEVEL" is set to "20" "EPAP_A_SIMPLEX_MODE" is set to "FALSE" "EPAP_A_TOPNODE_MAIN_MCASTADDR" is set to "225.10.80.18" "EPAP_A_PROV_NETWORK_IP_ADDRESS" is set to "10.75.141.47" "PDBA_REMOTE_B_NAME" is set to "0.0.0.0" "EPAP_IP_VERSION" is set to "IPv4" "EPAP_STATUS_A" is set to "UP" "euidb_version" is set to "3" "PDB_CAP_LIMIT_ENABLED" is set to "OFF" "EPAP_B_SUEXEC_HTTPS_PORT" is set to "8002" "EPAP_A_HTTP_PORT" is set to "80" "EPAP_A_DSM_BACKUP_NETWORK_ADDRESS" is set to "192.168.121.100" "UI_IP_AUTHORIZATION_ENABLED" is set to "FALSE" "EPAP_B_NAME" is set to "Natal-B" "EPAP_B_HSAUDIT" is set to "ON" "PDBA_MAX_COMMAND_RECORDS" is set to "1000000" "EPAP_A_INCR_DNLOAD_BACKUP_MCASTADDR" is set to "225.10.81.11" "EPAP_A_SYNCH_NETWORK_ADDRESS" is set to "192.168.2.100" "apache_403_error_message" is set to "NOTICE: This workstation is not authorized to access the GUI." "EPAP_A_SUEXEC_HTTP_PORT" is set to "8001" "EPAP_B_SYNCH_NETWORK_ADDRESS" is set to "192.168.2.200" "EPAP_B_HSDOWNLOAD" is set to "OFF" "min_passwd_len" is set to "8" "max_account_inactivity" is set to "0" "EAGLE_ALARM_FEED" is set to "ON" "EPAP_A_RTDB_AUDIT" is set to "ON" "PDBA_GPORT_INSTALLED" is set to "FALSE" "EPAP_RELEASE" is set to "0.593" "MATE_MPS_HTTPS_PORT" is set to "443" "PDBA_REMOTE_NAME" is set to "0.0.0.0" "PDBA_DEBUG_LOG_DEBUG_LEVEL" is set to "20" "EPAP_A_SUEXEC_HTTPS_PORT" is set to "8002" "EPAP_QS_THRESHOLD" is set to "200" "EPAP_A_HSAUDIT" is set to "ON" "EPAP_A_HTTPS_PORT" is set to "443" "PDBA_DN_PREFIX" is set to "" "EPAP_A_TOPNODE_BACKUP_MCASTADDR" is set to "225.10.81.19" "PDBA_GFLEX_INSTALLED" is set to "FALSE" "EPAP_A_FULL_DNLOAD_BACKUP_MCASTADDR" is set to "225.10.81.13" "PROVISIONING_NETWORK_PREFIX_V6" is set to "" "MATE_MPS_HTTP_PORT" is set to "80" "EPAP_B_TOPNODE_MAIN_MCASTADDR" is set to "225.10.80.20" "PDBI_PORT" is set to "5873" "passwd_reuse_limit" is set to "5" "RTDB_CLIENT_DB_DIFF" is set to "10000" "apache_403_error_message_default" is set to "NOTICE: This workstation is not authorized to access the GUI." "EPAP_B_SIMPLEX_MODE" is set to "FALSE" "PDBA_INP_INSTALLED" is set to "FALSE" "ALTERNATE_PDBA_ALLOWED" is set to "YES" "EPAP_B_RTDB_DEBUG_LEVEL" is set to "50" "HTTPS_ENABLED" is set to "Yes" "EPAP_A_INCR_DNLOAD_MAIN_MCASTADDR" is set to "225.10.80.10" "EPAP_B_FULL_DNLOAD_MAIN_MCASTADDR" is set to "225.10.80.16"

		"EPAP_B_TOPNODE_BACKUP_MCASTADDR" is set to "225.10.81.21" "EIR_BLK_EXPANSION_100K" is set to "OFF" "PROVISIONING_NETWORK_DEFAULT_ROUTER" is set to "10.75.141.1" "RTDB_HOMING_POLICY" is set to "PDBA_LOCAL_NAME" "PDBA_MAX_COMMAND_DELAY" is set to "-1" "EPAP_B_RTDB_AUDIT" is set to "ON" "PDBA_LOCAL_NAME" is set to "10.75.141.47" "PDBA_COMMAND_LOG_DEBUG_LEVEL" is set to "20" "EPAP_B_DSM_MAIN_NETWORK_ADDRESS" is set to "192.168.120.200" "EPAP_B_DSM_BACKUP_NETWORK_ADDRESS" is set to "192.168.121.200" "EPAP_B_HTTPS_PORT" is set to "443" "EPAP_A_FULL_DNLOAD_MAIN_MCASTADDR" is set to "225.10.80.12" "DN_BLK_EXPANSION_200K" is set to "OFF" "max_failed_logins" is set to "3" "PDB_SUB_CAPACITY" is set to "255000000"

8. ☐	**MPS X:**
	Verify the DB structure
		`$ uiEdit | grep PROVISIONABLE`
		"PROVISIONABLE_MPS" is set to "YES"
		If provisionable_mps is set to yes then verify PDB database structure else skip this step from non-prov setups.
		
		`$ grep ibdata /etc/my.cnf`
		innodb_data_file_path = ibdata1:2G;ibdata2:2G;ibdata3:2G;ibdata4:2G;ibdata5:2G;ibdata6:2G;ibdata7:2G;ibdata8:2G;ibdata9:2G;ibdata10:2G;ibdata11:2G;ibdata12:2G;ibdata13:2G;ibdata14:2G;ibdata15:2G;ibdata16:2G;ibdata17:2G;ibdata18:2G;ibdata19:2G;ibdata20:2G;ibdata21:2G;ibdata22:2G;ibdata23:2G;ibdata24:2G;ibdata25:2G;ibdata26:2G;ibdata27:2G;ibdata28:2G;ibdata29:2G;ibdata30:2G;ibdata31:2G;ibdata32:2G;ibdata33:2G;ibdata34:2G;ibdata35:2G;ibdata36:2G;ibdata37:2G;ibdata38:2G;ibdata39:2G;ibdata40:2G;ibdata41:2G;ibdata42:2G;ibdata43:2G;ibdata44:2G;ibdata45:2G;ibdata46:2G;ibdata47:2G;ibdata48:2G;ibdata49:2G;ibdata50:2G
		NOTE:
		If Disk size is 480G there should be 50 ibdata files
		If Disk size is 300G there should be 25 ibdata files

9. ☐	**MPS X:** Verify ibdata files: Number of ibdata files in output of pdbInfo should match the output of above step	`$ pdbInfo` backupdate:1497872303 birthdate:1244822987 datafiles:ibdata1:2G,ibdata2:2G,ibdata3:2G,ibdata4:2G,ibdata5:2G,ibdata6:2G,ibdata7:2G,ibdata8:2G,ibdata9:2G,ibdata10:2G,ibdata11:2G,ibdata12:2G,ibdata13:2G,ibdata14:2G,ibdata15:2G,ibdata16:2G,ibdata17:2G,ibdata18:2G,ibdata19:2G,ibdata20:2G,ibdata21:2G,ibdata22:2G,ibdata23:2G,ibdata24:2G,ibdata25:2G,ibdata26:2G,ibdata27:2G,ibdata28:2G,ibdata29:2G,ibdata30:2G,ibdata31:2G,ibdata32:2G,ibdata33:2G,ibdata34:2G,ibdata35:2G,ibdata36:2G,ibdata37:2G,ibdata38:2G,ibdata39:2G,ibdata40:2G,ibdata41:2G,ibdata42:2G,ibdata43:2G,ibdata44:2G,ibdata45:2G,ibdata46:2G,ibdata47:2G,ibdata48:2G,ibdata49:2G,ibdata50:2G
10. ☐	**MPS X:** Verify operational status of EPAP software	`$ systemctl status  Epap` ~~ /etc/init.d/Epap status ~~ --- process maint is running. process prov is running. process provRcvr is running. process provRMTP is running. process rtdb is running. process topnode is running. process eirlog is running. process eaglelog is running. process epapsmdbmntr is running.

		process epapSnmpAgent is running. process epapSnmpAL is running. process epapSnmpHBS is running. --- EPAP application is running.

11. ☐	**MPS X:**
	Verify operational status of PDBA software
		`$ uiEdit | grep PROVISIONABLE`
		"PROVISIONABLE_MPS" is set to "YES"
		If provisionable_mps is set to yes then verify PDBA status
		
		`$ sudo systemctl status Pdba`
		~~ /etc/init.d/Pdba status ~~
		PDBA application is running.

12. ☐	**MPS X:** Verify HA status	`$ hastatus; ssh mate hastatus` **Note:**If Proxy feature is disabled: UNINITIALIZED UNINITIALIZED **Note:** If Proxy feature is enabled, one server Active and one server Standby: ACTIVE STANDBY

13. ☐	**MPS X:**
	Record cron file configuration
		`$ cat /etc/cron.d/TS.EXAP`
		#
		# Task Scheduler cron file for EXAP
		#
		# WARNING: This file is automatically generated. Do not manually edit it.
		#
		
		SHELL=/bin/bash
		MAILTO=""
		
		# BEGTYPE=EXAPCORE
		# ID=PIC, Action="/usr/TKLC/epap/bin/pdbiImportCheck", Sched="minutely,5"
		*/5 * * * * epapdev /usr/TKLC/epap/bin/pdbiImportCheck
		# ID=EFTP, Action="/usr/TKLC/epap/bin/eirSftp.pl", Sched="minutely,5"
		*/5 * * * * epapdev /usr/TKLC/epap/bin/eirSftp.pl
		# ID=EFM, Action="/usr/TKLC/epap/bin/eirFileMgr.sh", Sched="hourly,1,10"
		10 * * * * epapdev /usr/TKLC/epap/bin/eirFileMgr.sh
		# ID=PBL, Action="/usr/TKLC/appl/bin/pruneBinaryLogs",
		Sched="minutely,10"
		*/10 * * * * epapdev /usr/TKLC/appl/bin/pruneBinaryLogs
		# ID=PDSH, Action="/usr/TKLC/appl/bin/pdbiSsh.pl", Sched="minutely,5"
		*/5 * * * * epapdev /usr/TKLC/appl/bin/pdbiSsh.pl
		# ID=MONBAN, Action="/usr/TKLC/appl/bin/monitorBanner.pl",
		Sched="hourly,1,15"
		15 * * * * epapdev /usr/TKLC/appl/bin/monitorBanner.pl
		# ID=RTDBCS, Action="/usr/TKLC/appl/bin/getRTDBClientStatus.pl",
		Sched="minutely,15"
		*/15 * * * * epapdev /usr/TKLC/appl/bin/getRTDBClientStatus.pl
		# ENDTYPE
		
		# BEGTYPE=AUTO_ON_NON_PROV
		# ID=AONP, Action="/usr/TKLC/epap/bin/autoBackupNonProv",
		Sched="minutely,5"
		*/5 * * * * epapdev /usr/TKLC/epap/bin/autoBackupNonProv
		# ENDTYPE

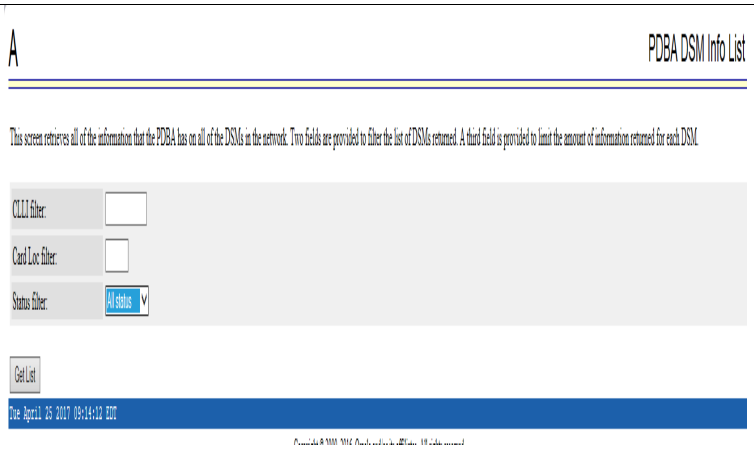
14. ☐	**MPS X:** Record /etc/passwd file	`$ cat /etc/passwd` root:x:0:0:root:/root:/bin/bash bin:x:1:1:bin:/bin:/sbin/nologin daemon:x:2:2:daemon:/sbin:/sbin/nologin

		adm:x:3:4:adm:/var/adm:/sbin/nologin lp:x:4:7:lp:/var/spool/lpd:/sbin/nologin sync:x:5:0:sync:/sbin:/bin/sync shutdown:x:6:0:shutdown:/sbin:/sbin/shutdown halt:x:7:0:halt:/sbin:/sbin/halt mail:x:8:12:mail:/var/spool/mail:/sbin/nologin uucp:x:10:14:uucp:/var/spool/uucp:/sbin/nologin operator:x:11:0:operator:/root:/sbin/nologin games:x:12:100:games:/usr/games:/sbin/nologin gopher:x:13:30:gopher:/var/gopher:/sbin/nologin ftp:x:14:50:FTP User:/var/ftp:/sbin/nologin nobody:x:99:99:Nobody:/:/sbin/nologin dbus:x:81:81:System message bus:/:/sbin/nologin rpc:x:32:32:Rpcbind Daemon:/var/cache/rpcbind:/sbin/nologin admusr:x:4996:4996:Platform remote admin user:/home/admusr:/bin/bash nscd:x:28:28:NSCD Daemon:/:/sbin/nologin vcsa:x:69:69:virtual console memory owner:/dev:/sbin/nologin apache:x:48:48:Apache:/var/www:/sbin/nologin sshd:x:74:74:Privilege-separated SSH:/var/empty/sshd:/sbin/nologin ntp:x:38:38::/etc/ntp:/sbin/nologin saslauth:x:499:76:Saslauthd user:/var/empty/saslauth:/sbin/nologin postfix:x:89:89::/var/spool/postfix:/sbin/nologin platcfg:x:5000:5000:Platform Configuration User:/home/platcfg:/usr/TKLC/plat/bin/platcfg tpdProvd:x:5010:5010:TPD Provisioning Daemon:/home/tpdProvd:/usr/bin/false syscheck:x:71:71:System Health Check User:/home/syscheck:/bin/false hids:x:4995:4995:HIDS admin user:/home/hids:/sbin/nologin dhcpd:x:177:177:DHCP server:/:/sbin/nologin nslcd:x:65:55:LDAP Client User:/:/sbin/nologin rtkit:x:498:450:RealtimeKit:/proc:/sbin/nologin rpcuser:x:29:29:RPC Service User:/var/lib/nfs:/sbin/nologin nfsnobody:x:65534:65534:Anonymous NFS User:/var/lib/nfs:/sbin/nologin named:x:25:25:Named:/var/named:/sbin/nologin tcpdump:x:72:72::/:/sbin/nologin mysql:x:27:27:MySQL Server:/var/TKLC/epap/db:/bin/false epapdev:x:3000:6001:epapdev user:/home/epapall:/bin/bash epapconfig:x:3002:6001:epapconfig user:/home/epapconfig:/home/epapconfig/runrunUI appuser:x:3004:6002:appuser user for viewing log files from the GUI:/var/TKLC/epap/logs:/bin/rbash epapssh:x:3006:6001:epapssh user:/home/epapssh:/sbin/nologin
15. ☐	**MPS X:** Backup the EuiDB	`$ sudo su - epapconfig` MPS Side A: hostname: Natal-A hostid: 4b0a2f8d Platform Version: 6.1.4-7.4.0.0.0_88.37.0 Software Version: EPAP 162.0.14-0.59311 Mon Apr 24 11:47:08 EDT 2017 /-----EPAP Configuration Menu----------\ /----------\ | 1 | Display Configuration | |----|----------| | 2 | Configure Network Interfaces Menu | |----|----------| | 3 | Set Time Zone | |----|----------| | 4 | Exchange Secure Shell Keys | |----|----------| | 5 | Change Password |

		|---|----------| | 6 | Platform Menu | |---|----------| | 7 | Configure NTP Server | |---|----------| | 8 | PDB Configuration Menu | |---|----------| | 9 | Security | |---|----------| | 10 | SNMP Configuration | |---|----------| | 11 | Configure Alarm Feed | |---|----------| | 12 | Configure Query Server | |---|----------| | 13 | Configure Query Server Alarm Feed | |---|----------| | 14 | Configure SNMP Agent Community | |---|----------| | 15 | Mate Disaster Recovery | |---|----------| | e | Exit | \----------/ Enter Choice: 6 MPS Side A: hostname: Natal-A hostid: 4b0a2f8d Platform Version: 6.1.4-7.4.0.0.0_88.37.0 Software Version: EPAP 162.0.14-0.59311 Mon Apr 24 11:48:07 EDT 2017 /-----EPAP Platform Menu-\ /----------\ | 1 | Initiate Upgrade | |---|----------| | 2 | Reboot MPS | |---|----------| | 3 | MySQL Backup | |---|----------| | 4 | RTDB Backup | |---|----------| | 5 | PDB Backup | |---|----------| | e | Exit | \----------/ Enter Choice: 3 Are you sure you want to back up the MySQL database on MPS A? [N]: Y Backing up the NPDB... NPDB Backed up Successfully to /var/TKLC/appl/free/npdbBackup_Natal-A_20170424114817.sql.gz
16. ☐	**MPS X:** Verify backups are being taken properly	$ ls -lrt /var/TKLC/epap/free/ -rw-rw-rw- 1 epapdev epap 6654607810 Apr 4 09:44 rtdbBackup_Arica-A_20170404094143_v5.295.bkp.tar.gz RTDB and PDB backup should be present in the directory

17. ☐	**MPS X:**
	Gather application log files
		`$ sudo savelogs -all`
		Logs will be save in /var/TKLC/epap/free/ directory
		`$ ls -lrt /var/TKLC/epap/free/`
		-rw-r--r-- 1 epapdev epap 2934521 Apr 24 12:00 logsCapture_Natal-A_20170424115945.tar.bz2

18. ☐	**MPS X:** Gather system log files	`$ sudo /usr/TKLC/plat/sbin/savelogs_plat` Logs will be save in /tmp directory /tmp/savelogs_plat.Natal-A.10689.tar.bz2
19. ☐	**MPS X:** Verify DB status	`$ sudo dbstattool` DBSTATTOOL Platform=EPAP ---------- pdb_birthdate = 1244822987 (Fri Jun 12 12:09:47 2009) pdb_level = 88341800 rtdb_pdb_birthdate = 1244822987 (Fri Jun 12 12:09:47 2009) rtdb_begin_dsm_level = 88341800 rtdb_end_dsm_level = 88341800 rtdb_dsm_birthdate = 1449378182 (Sun Dec 6 00:03:02 2015) rtdb_dsm_status = 1 rtdb_load_state = 3 eagle_fmt_pdb_birthdate = 3381736696 (eagle format - be careful!) eagle_fmt_rtdb_pdb_birthdate = 929156114 (eagle format - be careful!) eagle_fmt_rtdb_dsm_birthdate = 1627424287 (eagle format - be careful!) pdba_last_upd_ipaddr = 0 pdba_last_upd_timestamp = 0 (Wed Dec 31 19:00:00 1969) dbstattool_pad1 = 0 dbstattool_pad2 = 0 dbstattool_pad3 = 0 dbstattool_pad4 = 0 dbstattool_timestamp = 0 (Wed Dec 31 19:00:00 1969) rtdb_version = 0 **Note:** Record RTDB and PDBA database levels. If they are not the same call Oracle Support.
20. ☐	**MPS X:** Verify RTDB status from GUI From GUI select "RTDB->View RTDB status" Verify RTDB and PDB Level are same and DB status is Coherent	

21. ☐	**MPS X:** Verify DMS DB levels matched and DB status is coherent on all STP cards From EPAP GUI Expand PDBA Menu -> Expand DSM Info and select PDBA DSM List	 SUCCESS: DSM list successfully retrieved. tklc9010801 3215 COHERENT 88341800 tklc9010801 3217 COHERENT 88341800 tklc9010801 3315 COHERENT 88341800 tklc9010801 3317 COHERENT 88341800 tklc9010801 4107 COHERENT 88341800 tklc9010801 4111 COHERENT 88341800 tklc9010801 4207 COHERENT 88341800 tklc9010801 4211 COHERENT 88341800 tklc9010801 4305 COHERENT 88341800 tklc9010801 5105 COHERENT 88341800 tklc9010801 5215 COHERENT 88341800 tklc9010801 5217 COHERENT 88341800 `All cards should be coherent.`
22. ☐	**MPS X:** Verify DB status on DSM cards and that their provisioning system is taking updates	Login to EAGLE and run command: `rept-stat-db:display=all` Command Accepted - Processing tklc9010801 17-04-25 14:49:04 EST EAGLE 46.5.0.0.0-70.29.0 rept-stat-db:display=all Command entered at terminal #2. ; tklc9010801 17-04-25 14:49:04 EST EAGLE 46.5.0.0.0-70.29.0 DATABASE STATUS: >> OK << TDM 1114 (ACTV) TDM 1116 (STDBY)

		C LEVEL TIME LAST BACKUP C LEVEL TIME LAST BACKUP - -------- ---------- - -------- ---------- FD BKUP Y 998220 17-04-19 03:13:08 EST Y 998220 17-04-19 03:13:08 EST FD CRNT Y 999485 Y 999485 GTT DB 193 193 MCAP 1113 MCAP 1115 - -------- - -------- RD BKUP - - - - - - - - USB BKP - - - - - - - - CARD/APPL LOC C T LEVEL TIME LAST UPDATE EXCEPTION --------- ---- - - ---------- ---------- ---------- DEIRHC 3215 Y N 999485 17-04-25 14:22:42 - DEIRHC 3217 Y N 999485 17-04-25 14:22:42 - DEIRHC 3315 Y N 999485 17-04-25 14:22:42 - DEIRHC 3317 Y N 999485 17-04-25 14:22:42 - SIPHC 4107 Y N 999485 17-04-25 14:22:42 - SIPHC 4111 Y N 999485 17-04-25 14:22:42 - SIPHC 4207 Y N 999485 17-04-25 14:22:42 - SIPHC 4211 Y N 999485 17-04-25 14:22:42 - SIPHC 4305 Y N 999485 17-04-25 14:22:42 - SIPHC 5105 Y N 999485 17-04-25 14:22:42 - SIPHC 5215 Y N 999485 17-04-25 14:22:42 - SIPHC 5217 Y N 999485 17-04-25 14:22:42 - EPAP A (ACTV) C BIRTHDATE LEVEL EXCEPTION - ---------- ---------- ---------- PDB 12-01-20 18:14:18 88341800 - RTDB Y 09-06-12 12:09:46 88341800 - RTDB-EAGLE 15-12-06 00:03:02 88341800 -

		EPAP B (STDBY) C BIRTHDATE LEVEL EXCEPTION - ---------- ---------- ---------- PDB 00-00-00 00:00:00 0 - RTDB Y 00-00-00 00:00:00 0 - RTDB-EAGLE 00-00-00 00:00:00 0 - EAGLE RTDB REPORT CARD/APPL LOC C BIRTHDATE LEVEL EXCEPTION IN-SRVC --------- ---- - ---------- ---------- ---------- ---------- DEIRHC 3315 Y 15-12-06 00:03:02 88341800 - 0d 6h 46m DEIRHC 3317 Y 15-12-06 00:03:02 88341800 - 0d 6h 46m VSCCP 4101 Y 17-04-10 13:12:28 0 - 0d 0h 11m SIPHC 4107 Y 15-12-06 00:03:02 88341800 - 0d 3h 16m SIPHC 4111 Y 15-12-06 00:03:02 88341800 - 0d 3h 16m SIPHC 4207 Y 15-12-06 00:03:02 88341800 - 0d 3h 16m SIPHC 4211 Y 15-12-06 00:03:02 88341800 - 0d 3h 16m SIPHC 4305 Y 15-12-06 00:03:02 88341800 - 0d 3h 16m SIPHC 5105 Y 15-12-06 00:03:02 88341800 - 0d 3h 16m SIPHC 5215 Y 15-12-06 00:03:02 88341800 - 0d 3h 16m SIPHC 5217 Y 15-12-06 00:03:02 88341800 - 0d 3h 16m
23. ☐	**MPS X:** Verify alarms present on STP cards	Run following command on EAGLE to check alarms `rept-stat-alm` Command Accepted - Processing tklc9010801 17-04-25 14:50:08 EST EAGLE 46.5.0.0.0-70.29.0 rept-stat-alm Command entered at terminal #2. ; tklc9010801 17-04-25 14:50:09 EST EAGLE 46.5.0.0.0-70.29.0 ALARM TRANSFER= RMC ALARM MODE CRIT= AUDIBLE MAJR= AUDIBLE MINR= AUDIBLE

		ALARM FRAME 1 CRIT= 136 MAJR= 916 MINR= 18 ALARM FRAME 2 CRIT= 0 MAJR= 136 MINR= 1 ALARM FRAME 3 CRIT= 4 MAJR= 217 MINR= 1 ALARM FRAME 4 CRIT= 0 MAJR= 181 MINR= 4 ALARM FRAME 5 CRIT= 0 MAJR= 58 MINR= 5 ALARM FRAME 6 CRIT= 0 MAJR= 15 MINR= 5 PERM. INH. ALARMS CRIT= 0 MAJR= 0 MINR= 0 TEMP. INH. ALARMS CRIT= 0 MAJR= 0 MINR= 0 TIMED INH. ALARMS CRIT= 0 MAJR= 0 MINR= 0 ACTIVE ALARMS CRIT= 140 MAJR=1523 MINR= 34 TOTAL ALARMS CRIT= 140 MAJR=1523 MINR= 34 Command Completed.