Oracle® Communications Diameter Signaling Router (DSR)

SDS Software Upgrade Procedure

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1. INTRODUCTION

1.1 Purpose and Scope

This document describes methods utilized and procedures executed to perform an application's software upgrade on in-service SDS servers and SDS DP blades in an SDS network. Supported paths are major upgrades from SDS 4.0 to SDS 5.0 and minor upgrades from SDS Software Release 4.0.0-40.x to a later 4.0.y-40.z release. The audience for this document includes Tekelec customers as well as the SDS group: Global Software Delivery. This document provides step-by-step instructions to execute any Release 4.0.x software upgrade.

The SDS software includes all Tekelec Platform Distribution (TPD) software. Any TPD upgrade necessary is included automatically as part of the SDS software upgrade. The execution of this procedure assumes that the SDS software load (ISO file, CD-ROM or other form of media) has already been delivered to the customer's premises. This includes delivery of the software load to the local workstation being used to perform this upgrade. *The distribution of the SDS software load is outside the scope of this procedure*.

1.2 References

- [1] SDS SW Installation and Configuration Guide, UG006385, Tekelec
- [2] Database Management: Backup and System Restoration, UG005196, Tekelec, Current revision.
- [3] SDS 4.0 Disaster Recovery Guide, UG006387, Tekelec, Current revision
- [4] HP Solutions Firmware Upgrade Pack Release Notes, 795-000-2xx, v2.1.5 (or latest 2.1 version)
- [5] Platform 6.x Configuration Procedure Reference, 909-2209-001, v. A or greater, 2012
- [6] TPD 6.X PXE Installation Procedure, 909-2244-001, Tekelec, Current revision.

1.3 Acronyms

Acronym	Meaning
CSV	Comma-separated Values
DB	Database
DP	Database Processor
DR	Disaster Recovery
GA	General Availability
GUI	Graphical User Interface
HA	High Availability
IMI	Internal Management Interface
IPM	Initial Product Manufacture
ISO	ISO 9660 file system (when used in the context of this document)
LA	Limited Availability
МОР	Method of Procedure
MP	Message Processing or Message Processor
NE	Network Element
NO or NOAM	Network OAM&P
OAM	Operations, Administration and Maintenance
OAM&P	Operations, Administration, Maintenance and Provisioning
SDS	Subscriber Database Server
SO or SOAM	System OAM
TPD	Tekelec Platform Distribution
UI	User Interface
VIP	Virtual IP
VPN	Virtual Private Network
XMI	External Management Interface
XSI	External Signaling Interface

1.4 Terminology

This section describes terminology as it is used within this document.

Term	Meaning	
Upgrade	The process of converting an application from its current release on a System to a newer release.	
Major Upgrade	An upgrade from a current major release to a newer major release. An example of a major upgrade is: SOME_APPLICATION 1.0.0_10.1.0 to 2.0.0_20.1.0.	
Incremental Upgrade	An upgrade from a current build to a newer build within the same major release. An example of an incremental upgrade is: SOME_APPLICATION 2.0.0_20.1.0 to 2.0.0_20.2.0.	
Software Only Upgrade	An upgrade that does not require a Database Schema change, only the software is changed.	
DB Conversion Upgrade	An upgrade that requires a Database Schema change performed during upgrade that is necessitated by new feature content or bug fixes. For release 1.0, this is a manual procedure not performed automatically by software.	
Single Server Upgrade	The process of converting an SDS server from its current release on a single server to a newer release.	
Backout	The process of converting a single SDS server to a prior version. This could be performed due to failure in Single Server Upgrade.	
Downgrade	The process of converting an SDS server from its current release to a prior release. This could be performed due to a misbehaving system.	
Rollback	Automatic recovery procedure that puts a server into its pre-upgrade status. This procedure occurs automatically during upgrade if there is a failure.	
Source Release	Software release to upgrade from.	
Target Release	Software release to upgrade to.	
Health Check	Procedure used to determine the health and status of the network. This includes statuses displayed from the GUI. This can be observed Pre-Server Upgrade, In-Progress Server Upgrade, and Post-Server Upgrade.	
Upgrade Ready	 State that allows for graceful upgrade of a server without degradation of service. It is a state that a server is required to be in before it can be upgraded. The state is defined by the following attributes: Server is Forced Standby Server is Application Disabled (Signaling servers will not process any traffic) 	
UI	User interface. "Platcfg UI" refers specifically to the Platform Configuration Utility User Interface, which is a text-based user interface.	

Table 2 - Terminology

1.5 How to use this Document

When executing this document, there are a few key points which help to ensure that the user understands the author's intent. These points are as follows;

- 1) Before beginning a procedure, completely read the instructional text (it will appear immediately after the Section heading for each procedure) and all associated procedural WARNINGS or NOTES.
- 2) Before execution of a STEP within a procedure, completely read the left and right columns including any STEP specific WARNINGS or NOTES.
- If a procedural STEP fails to execute successfully or fails to receive the desired output, STOP and contact Oracle's Tekelec Customer Care Center (US: 1-888-367-8552, Intl: +1-919-460-2150) for assistance before attempting to continue.

1.5.1 Executing Procedures

The user should be familiar with the structure and conventions used within these procedures before attempting execution. **Table 3** and the details below provide an example of how procedural steps might be displayed within this document.

Column 1: Step

- Table 3, Column 1, contains the Step number and also a checkbox if the step requires action by the user.
- Sub-steps within a given Step X are referred to as Step X.Y. (See example: Step 1 has sub-steps Steps 1.1 to 1.2).
- Each checkbox should be checked-off in order to keep track of the progress during execution of the procedure.

Column 2: Procedure

• **Table 3**, column 2, contains a heading which indicates the server/IP being accessed as well as text instructions and/or notes to the user. This column may also describe the operations to be performed or observed during the step.

Column 3: Result

- Table 3, column 3, generally displays the results of executing the instructions (shown in column 2) to the user.
 - The Result column may also display any of the following:
 - Inputs (commands or responses) required by the user.
 - Outputs which should be displayed on the terminal.
 - Illustrations or graphic figures related to the step instruction.
 - Screen captures from the product GUI related to the step instruction.

Procedure x: Verifying the Time in GMT

Step	Procedure	Result	
1.	Active Provisioning Site VIP:	CentOS release 5.7 (Final) Kernel 2.6.18-274.7.1.e15prerel5.0.0_72.32.0 on an x86_64	
	1) Access the command prompt.	Password: <root_password></root_password>	
	2) Log into the server as the " root " user.		
	NOTE: The password will not appear on the screen as the characters are typed.		
2.	Active Provisioning Site VIP:	*** TRUNCATED OUTPUT *** VPATH=/opt/TKLCcomcol/runcm5.13:/opt/TKLCcomcol/cm5.13 PELEASE=5_16	
	Output similar to that shown on the right will appear as the server returns to a command prompt.	RUNID=00 VPATH=/var/TKLC/rundb:/usr/TKLC/appworks:/usr/TKLC/awpss7:/usr/TKLC/sds PRODPATH=/opt/TKLCcomcol/cm5.13/prod RUNID=00 [root@sds-mrsvnc-a ~]#	
3.	Active Provisioning Site VIP:	[root@sds-mrsvnc-a ~]# date -u Thu Jan 26 16:37:10 UTC 2012 [root@sds-mrsvnc-a ~]#	
	Verify that the correct Date & Time are displayed in GMT (+/- 4 min.).		
THIS PROCEDURE HAS BEEN COMPLETED			

1.6 Activity Logging

All activity while connected to the system should be logged using a convention which notates the **Customer Name**, **Site/Node** location, **Server hostname** and the **Date**. All logs should be provided to Oracle's Tekelec Customer Care Center for archiving post upgrade.

1.7 Recommendations

No specific recommendations have been identified for the current version of this procedure.

1.7.1 Use of Health Checks

The user may execute the **Perform Health Check** or **View Logs** steps freely or repeat as many times as desired in between procedures during the upgrade process. It is not recommended to do this in between steps within a procedure, unless there is a failure to troubleshoot.

1.7.2 Large Installation Support

For large systems containing multiple Signaling Network Elements, it may not be feasible to apply the software upgrade to every Network Element within a single maintenance window. However, whenever possible, Primary and DR Provisioning Site Network Elements should be upgraded within the same maintenance window. When multiple maintenance windows are required, replication may be allowed and provisioning re-enabled between scheduled maintenance windows.

2. GENERAL DESCRIPTION

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

2.1 Supported Upgrade Paths

The supported SDS upgrade path is shown in Figure 1 and Figure 2.



NOTE: Initial installation is not within the scope of this upgrade document. See [1] for initial installation requirements.

3. UPGRADE OVERVIEW

This section lists the required materials and information needed to execute an upgrade. It also provides a brief timing overview of the activities needed to upgrade the source release software that is installed and running on an SDS server to the Target Release software. The approximate time required is outlined in **Sections 3.3- 3.7**. These tables are used to plan and estimate the time necessary to complete your upgrade.

Timing values are estimates only. They estimate the completion time of a step or group of steps for an experienced user. These tables are not to be used to execute procedures. Detailed steps for each procedure begin with **Procedure 1** in **Section 5**.

3.1 Upgrade Requirements

The following levels of access, materials and information are needed to execute an upgrade:

- Target-release ISO image file (*Example:* 872-2079-02-5.0.0-50.x.y-x86_64.iso)
- VPN access to the customer's network.
- GUI access to the SDS Network OAM&P VIP with Administrator privileges.
- SSH/SFTP access to the SDS Network OAM&P XMI VIP as the "root" user.

NOTE: All logins into the SDS Active and DR site servers are made via the External Management (XMI) VIP unless otherwise stated.

- User logins, passwords, IP addresses and other administration information. See Section 3.1.2.
- Direct access to server IMI IP addresses from the user's local workstation is preferable in the case of a Backout.

NOTE: If direct access to the IMI IP addresses cannot be made available, then target server access can be made via a tandem connection through the Active Primary SDS (i.e. An SSH connection is made to the Active Primary SDS XMI first, then from the Active Primary SDS, an 2nd SSH connection can be made to the target server's IMI IP address).

3.1.1 ISO Image File

You must obtain a copy of the target release ISO image file. This file is necessary to perform the upgrade. The SDS ISO image file will be in the following format:

Example: 872-2079-05-5.0.0-50.8.0-x86 64.iso

NOTE: Actual number values may vary between releases.

Prior to the execution of this upgrade procedure it is assumed that the SDS ISO image file has already been delivered to the customer's system. The delivery of the ISO image requires that the file be placed on the disk of a PC workstation with GUI access to the Active Primary SDS XMI VIP. If the user performing the upgrade is at a remote location, it is assumed the ISO file is has already been transferred to the Active Primary SDS server prior to starting the upgrade procedure.

3.1.2 Logins, Passwords and Site Information

Obtain all the information requested in the following table. This ensures that the necessary administration information is available prior to an upgrade. Consider the confidential nature of the information recorded in this table. While all of the information in the table is required to complete the upgrade, there may be security policies in place that require secure disposal once the upgrade has been completed.

NE Туре	NE Name [†]
Primary Site	
DR Site	
Software	Values
Source Release Level:	
Target Release Level:	
Target Release ISO file name:	
Access Information	Values
[‡] Primary Site XMI VIP (GUI):	
[‡] DR Site XMI VIP:	
GUI Administrator Username:	
GUI Administrator Password:	
"root" user Password:	
iLO user "root" user Password:	
Customer VPN Instructions:	

Table 4 – Logins, Passwords and Site Information

[†] NOTE: The NE Name may be viewed from the Primary Site GUI under [Main Menu \rightarrow Configuration \rightarrow Network Elements].

⁺ NOTE: The XMI VIP may be viewed from the Primary Provisioning Site GUI under [Main Menu \rightarrow Configuration \rightarrow Server Groups].

3.2 Upgrade Maintenance Windows



!! WARNING !!

IT IS RECOMENDED THAT SOAM SITES CONTAINING MATED MESSAGE PROCESSORS BE UPGRADED IN SEPARATE MAINTENANCE WINDOWS IF AT ALL POSSIBLE.

Table 5 - Upgrade Maintenance Windows

Maintenance Window 1 Date: NOTE: The NE Name may be viewed from the Primary Provisioning Site GUI under [Main Menu → Configuration → Network Elements]	 Record the Site NE Name of the Primary Provisioning Site and the DR Provisioning Site to be upgraded during Maintenance Window 1 in the space provided below: "Check off" the associated Check Box as Upgrade is completed for each site. Primary Provisioning SDS Site:		
Maintenance Window 2 Date: NOTE: The NE Name may be viewed from the Primary Provisioning Site GUI under [Main Menu → Configuration → Network Elements].	Record the Site NE Name of each SOAM to be upgraded during Maintenance Window 2 in the space provided below: "Check off" the associated Check Box as Upgrade is completed for each SOAM. SOAM1:		
Maintenance Window 3 Date: NOTE: The NE Name may be viewed from the Primary Provisioning Site GUI under [Main Menu → Configuration → Network Elements].	 Record the Site NE Name of each SOAM to be upgraded during Maintenance Window 3 in the space provided below: "Check off" the associated Check Box as Upgrade is completed for each SOAM. SOAM1:		

Maintenance Window 4 Date: NOTE: The NE Name may be viewed from the Primary Provisioning Site GUI under [Main Menu → Configuration → Network Elements].	Record the Site NE Name of each SOAM to be upgraded during Maintenance Window 4 in the space provided below: "Check off" the associated Check Box as Upgrade is completed for each SOAM. SOAM1:		
	SOAM5: SOAM10:		
Maintenance Window 5	 Record the Site NE Name of each SOAM to be upgraded during Maintenance Window 5 in the space provided below: "Check off" the associated Check Box as Upgrade is completed for each SOAM. 		
	SOAM1: SOAM6:		
NOTE: The NE Name may be viewed from the Primary	SOAM2: SOAM7:		
Provisioning Site GUI under [Main Menu →	SOAM3: SOAM8:		
Configuration → Network Elements].	SOAM4: SOAM9:		
	SOAM5: SOAM10:		
Maintenance Window 6	 Record the Site NE Name of each SOAM to be upgraded during Maintenance Window 6 in the space provided below: "Check off" the associated Check Box as Upgrade is completed for each SOAM. 		
	SOAM1: SOAM6:		
NOTE: The NE Name may be viewed from the Primary	SOAM2: SOAM7:		
Provisioning Site GUI under [Main Menu →	SOAM3: SOAM8:		
Configuration → Network Elements].	SOAM4: SOAM9:		
	SOAM5: SOAM10:		

3.3 Upgrade Preparation Overview

The pre-upgrade procedures shown in the following table should be executed prior to the upgrade maintenance window and may be executed outside a maintenance window if desired.

Procedure	re Procedure Title	Elapse (Hours:	ed Time Minutes)
Number		This Step	Cumulative
1	Required Materials Check	00:15	00:15
2	ISO Administration	*	*

 Table 6 - Upgrade Preparation Procedures

***NOTE:** ISO transfers to the target systems cannot be estimated since times will vary significantly depending on the number of systems and the speed of the network.

These factors significantly affect the total time needed to complete upgrade and therefore require the scheduling of multiple maintenance windows to complete all activities.

The ISO transfers to the target systems should be performed prior to, outside of, the scheduled maintenance window. The user should schedule the required maintenance windows accordingly.

3.4 Primary Provisioning / DR Provisioning Execution Overview

The procedures shown in the following table are executed inside a maintenance window.

Procedure	Procedure Title	Elapsed Time (Hours:Minutes)		
Number		This Step	Cumulative	
3	Disable AppProcControl Table Replication	00:05	00:05	
4	Terminate User Sessions	00:05	00:10	
5	Disable Global Provisioning	00:05	00:15	
6	Inhibit DR Provisioning Site Servers	00:05	00:20	
7	Inhibit Primary Provisioning Site Servers	00:05	00:25	
8	Database Backup	01:00	01:25	
9	Upgrade DR Provisioning Site NE	01:00	02:25	
10	Upgrade Primary Provisioning Site NE	01:00	03:25	
11	Allow Primary Provisioning Site Servers	00:05	03:30	
12	Allow DR Provisioning Site Servers	00:05	03:35	
13	Enable Global Provisioning	00:05	03:40	

Table 7 - Primary Provisioning / DR Provisioning Upgrade Procedures

3.5 SOAM Upgrade Execution Overview

The procedures shown in the following table should be executed inside a maintenance window.

Procedure	Procedure Title	Elapsed Time (Hours:Minutes)	
		This Step	Cumulative
14	Inhibit SOAM Servers	00:05	00:05
15	Upgrade SOAM NE (SOAM Servers)	01:30	01:35
16	Upgrade SOAM NE (DP Servers)	00:05	01:40
Appendix F	Disable Hyperthreading	00:05	01:45

Table 8 - SOAM Upgrade Procedures

3.6 Post Upgrade Execution Overview

These procedures are performed only after all sites on network have been upgraded.

Procedure	Procedure Title	Elapsed Time (Hours:Minutes)		Elapsed TiTitle(Hours:Minu	
Number		This Step	Cumulative		
Appendix G.1	Enable AppProcControl Replication	00:05	00:05		
Appendix G.2	Accept Upgrade	*	*		

 Table 9 - Post Upgrade Procedures

3.7 Recovery Procedures Overview

These procedures are customized to the specific situation encountered and therefore do not have well established timeframes.

Procedure	Procedure Title	Elapsed Time (Hours:Minutes)	
Numper		This Step	Cumulative
17	Backout DP SOAM NE	*	*
18	Backout DR SDS NE	*	*
19	Backout Primary SDS NE	*	*

Table 10 - Backout Procedures

4. SDS UPGRADE MATRIX

Upgrading the SDS product in the customer network is a task which requires multiple procedures of varying types. The matrix shown below provides a guide to the user as to which procedures are to be performed on which site types. As always, the user should contact Oracle's Tekelec Customer Care Center for assistance if experiencing difficulties with the interpretation or execution of any of the procedures listed.



NOTE: Primary Provisioning and DR Provisioning sites must be upgraded in the same maintenance window.

Table 11 - SDS Upgrade Matrix

SDS Upgrade: List of Procedures

Procedure No :	Title :	Page No :
1	Required Materials Check	18
2	ISO Administration & Pre-Upgrade Checks	19
3	Disable AppProcControl Table Replication	31
4	Terminate User Sessions	33
5	Disable Global Provisioning	36
6	Inhibit DR Provisioning Site Servers	38
7	Inhibit Primary Provisioning Site Servers	41
8	Database Backup	45
9	Upgrade DR Provisioning Site NE	52
10	Upgrade Primary Provisioning Site NE	56
11	Allow Primary Provisioning Site Servers	69
12	Allow DR Provisioning Site Servers	65
13	Enable Global Provisioning	73
14	Inhibit SOAM Servers	78
15	Upgrade SOAM NE (SOAM Servers)	88
16	Upgrade SOAM NE (DP Servers)	93
Appendix F	Disable Hyperthreading	166
Appendix G	Finalizing Upgrade	166

Table 12 - SDS Upgrade: List of Procedures

5. UPGRADE PREPARATION

This section provides detailed procedures to prepare a system for upgrade execution. These procedures may be executed outside of a maintenance window.

5.1 Required Materials Check

This procedure verifies that all required materials needed to perform an upgrade have been collected and recorded.

Proce	Procedure 1: Required Materials Check				
Step	This procedure verifies that all required materials are present.				
	Check off ($$) each step as it is completed. Boxes have been provided for this purpose under each step number.				
	SHOULD THIS PROC	EDURE FAIL, CONTACT ORACLE'S TEKELEC CUSTOMER CARE CENTER AND ASK FOR			
	UPGRADE ASSISTA	NCE.			
1.	Verify all required materials are present.	 Materials are listed in Section 3.1: Required Materials. Verify all required materials are present. 			
2.	Verify all administration data needed during upgrade.	• Double-check that all information in Section 3.1.2 is filled-in and accurate.			
	• •				

5.2 Release Notes

This section contains any release-specific information that might be helpful to complete the software upgrade procedure.

5.2.1 Discrepancies in Primary / DR Provisioning Sites Release Levels

When upgrading SDS to the target release, the following alarms *may be reported* on the GUI during the period of time period when the Primary Provisioning Site NE is at the new software level and the DR Provisioning Network Element is at the old software level:

- 31124: A DB replication audit command detected errors
- 31105: The DB merge process (inetmerge) is impaired by a s/w fault

These alarms, if present, will exist for the Active and Standby DR Provisioning Site servers. They should clear themselves automatically within 5 minutes, and will cease to be raised once the DR Provisioning Site NE is upgraded to the same software level as the Primary Provisioning Site. To avoid seeing these alarms altogether, the upgrade of the Primary Provisioning Site and DR Provisioning Site NEs should be performed within the same maintenance window.

5.3 Perform Health Check (Upgrade Preparation)

This procedure is part of Software Upgrade Preparation and is used to determine the health and status of the SDS network and servers. This may be executed multiple times but must also be executed at least once within the time frame of 24-36 hours prior to the start of a maintenance window.

• Execute SDS Health Check procedures as specified in Appendix B.

5.4 Perform Firmware Verification (Upgrade Preparation)

This procedure is part of Software Upgrade Preparation and is used to determine the whether a firmware update is required. If [4] has been provided with the upgrade kit, follow its instructions to verify the firmware on SDS rack mount servers and SOAM/DP blades. Execute firmware upgrade procedures if required by [4]:

- Execute Section entitled "Upgrade DL360 or DL380 Server Firmware" of [5] for SDS rack mount servers.
- Execute Section entitled "Upgrade Blade Server Firmware" of [5] for SDS blades.

5.5 ISO Administration & Pre-Upgrade Checks

ISO transfers to the target servers may require a significant amount of time depending on the number of systems and the speed of the network. These factors may significantly affect total time needed and require the scheduling of multiple maintenance windows to complete the entire upgrade procedure. The ISO transfers to the target servers should be performed prior to the first scheduled maintenance window. Schedule the required maintenance windows accordingly before proceeding.

Check off ($\sqrt{}$) each step as it is completed. Boxes have been provided for this purpose under each step number.

SHOULD ANY STEP IN THIS PROCEDURE FAIL, STOP AND CONTACT ORACLE'S TEKELEC CUSTOMER CARE CENTER FOR ASSISTANCE BEFORE CONTINUING!

Step	Procedure	Result				
1.	Using the VIP address, access the Primary Provisioning Site GUI.	• Access the Primary Provisioning Site GUI as specified in Appendix A .				
2.	Active Provisioning Site VIP:	Connected using VIP to sds-mrsvnc-a (ACTIVE NETWORK OAM&P)				
	Select	Administration Main Menu: Status & Manage -> Files				
	<u>Main Menu</u>	Configuration Filter				
	→ Status & Manage → Eilos	Aumis & Events				
	7 1 1103	Status & Manage File Name				
	as shown on the right.	Network Elements Server 872-2459-001-4.0.0_40.1.1-SDS-x86_64.iso				
		auditRemoteAudit MSISDN 17857849999-17857850009.20120803013830.report				
		auditRemoteAudit MSISCN 17857849999-17857850009.20120803014308.report				
		Processes Backup.sds.sds-mrsvic-a.Configuration.NETWORK_OAMP.20120801_021501.AUT				
		Backup sds.sds-mrsvic-a.Configuration.NETWORK_OAMP.20120802_021501.AUT				
		Backup sds.sds-mrsvnc-a.Configuration.NETWORK_OAMP.20120803_021502.AU				
		Backup sds sds-mrsvic-a.Configuration.NETWORK_OAMP.20120804_021501.AUT				

Procedure 2: ISO Administration & Pre-Upgrade Checks

Procedure 2: ISO Administration & Pre-Upgrade Checks

Step	Procedure	Result		
3.	Active Provisioning Site VIP:	Main Menu: Status & Manage -> Files		Tue Aug 07 20:41
	1) Verify the hostname of the server currently using	sds-mrsvnc-a sds-mrsvnc-b qs-mrsvnc-1 drsds-dallastr-a so-carync-a	so-carync-b	dp-carync-1
	the Active Provisioning	File Name	Size Type	Timestamp
	Site VIP.	872-2469-001-4.0.0_40.1.1-SDS-x86_64.iso	810.5 MB iso	2012-08-06 20:33:28 UTC
	2) Using the cursor, select	audit/RemoteAudit MSISDN 17857849999-17857850009.20120803013830.report	411 B report	2012-08-03 01:38:37 UTC
	the hostname of the	audit/RemoteAudit.MSISDN.17857849999-17857850009.20120803014308.report	670 B report	1 2012-08-03 01:43:15 UTC
	server from the list tabs.	Backup.sds.sds-mrsvnc-a.Configuration.NETWORK_OAMP.20120801_021501.AUTO.tar	6.6 MB tar	2012-08-01 02:15:03 UTC
	 Click on the "Upload" button. 	Backup.sds.sds-mrsvnc-a.Configuration.NETWORK_OAMP.20120802_021501.AUTO.tar	6.6 MB tar	2012-08-02 02:15:03 UTC
		provexport/export_RongImsiOnly.imsi.201109221600.csv Delete View Upload Download 58.3 GB used (25.10%) of 232.3 GB available System utiliz		

Procedure 2: ISO Administration & Pre-Upgrade Checks

Step	Procedure	Result
Step 4.	ProcedureActive Provisioning Site VIP:1) Click on the "Browse" dialogue button located in the 	Result Station 685.418 2017 Station 685.418 2017 File: Browse Cancel Upload Cancel Cancel Choose File to Upload ? X Look in: SDS_Upgrade_Files ? X Wy Recent Documents % ? X * * * * * Documents * * * * * * * * * *
	File" dialogue button. NOTE 1: It is recommended to access the ISO file for the target release from a local hard drive partition as opposed to a network or flash drive location. NOTE 2: Depending on network conditions, this upload may take an extended period of time (> 60 min.). Alternatively, the ISO file can be manually transferred to the	Desktop Desktop My Documents My Computer My Network File name: 872-2358-103-3.0.0_10.8.1-SDS-x86_64.iso Den Cancel
	"/var/TKLC/db/ filemgmt" directory of the Active Provisioning Site server using SFTP.	File: F:\872-2358-102-3.0.0_10 Browse Upload

Procedure 2: ISO Administration & Pre-Upgrade Checks

Step	Procedure	Result					
5.	Active Provisioning Site	Provisioning Site		do conne d	conne D		
	•	qs-mrsvno-1 drsds-dailasti-a	so-carync-a	so-car	rync-o	dp-carync-1 dp-	-carync-2
	Click the <u>TimeStamp</u> link		S	ize	Type T	mestamp	•
	the right panel.	.150	0	50.4 MB	150 2	012-01-26 16:07:03 0	TC
			1:	55 B	log 2	012-01-24 22:45:34 U	TC
			1:	55 B	log 2	012-01-24 22 45 27 0	TC
			1:	55 B	10g 2	012-01-24 22:45:17 U	TC
			3.	5 MB	xml 2	012-01-24 22:45:09 0	TC
			3.	1 MB	xml 2	012-01-24 22:45:09 U	TC
			3.	6 MB	xml 2	012-01-24 22:45:09 U	TC
			1	55 B	log 2	012-01-24 22:40:31 U	TC
	The user should be presented with a reverse- sorted list of files showing the newest files at the top. The ISO file uploaded in Step 4 of this procedure should now appear at the top most position in the "Filename " column.	Filter sds-mrsvnc-a sds-mrsvnc-a Sds-mrsvnc-a sds-mrsvnc-a File Name 872-2469-001-4.0.0_40.1.1-S audit/RemoteAudit.MSISDN.17 audit/RemoteAudit.MSISDN.17 Backup.sds.sds-mrsvnc-a.Co	vnc-b qs-r DS-x86_64.is 7857849999-1 7857849999-1 nfiguration.NE	mrsvnc-1 7857850 7857850 TWORK_	l dr 0009.20 0009.20 _OAMP.	<mark>sds-dallastx-a</mark> 120803013830.r 120803014308.r 20120801_0215	
7.	Active Provisioning Site VIP:	Connected using VIP to sds-mrsvr	IC-a (ACTIVE NE	TWORK O	AM&P)		
	Select	Main Menu	Main M	enu: St	tatus 8	& Manage -> HA	
	Main Menu	Configuration	Cilles .			-	
	\rightarrow Status & Manage \rightarrow HA	Alarms & Events	riter				
		Security Log Status & Manage	Hostname	1) 	HA Role	Max Allowed HA Ro	le Mate Host
	as snown on the right.	- Network Elements	sds-mrsvn	ic-a	Standb	Adive Standby	sds-mrsvi
		- Server	2021020		Chairao	(Charlos)	sds-mrsvi
		- Database	da-mravino	e1	Ubserv	er Observer	sds-mrsvi
		- 📑 KPIs	drsds-dall.	astr-a	Active	Active	
		Processes	so-caryne-	a	Active	Active	so-caryno
		Files	dp-caryne-	1	Active	Active	a carjino
			of earlier				

Procedure 2: ISO Administration & Pre-Upgrade Checks

Step	Procedure	Result		
8.	Active Provisioning Site VIP (SSH):	Main Menu: Status & Manage -> HA		
	Find the Hostname of the Standby server by locating the server currently using the Active Provisioning Site VIP and finding the server with HA Role "Standby" in the same Network Element.	Filter Image: Filter Ha Role Max Allowed HA Role Mate Hostname List Network Element Server Role sds-mrsvnc-a Active Active sds-mrsvnc-b sds_mrsvnc Network OAM&/ sds-mrsvnc-b Standby Standby standby sds-mrsvnc-a sds_mrsvnc Network OAM&/ qs-mrsvnc-1 Observer Observer sds-mrsvnc-b sds_mrsvnc Query Server drsds-dallastx-a Active Active dr_dallastx Network OAM&/ so-carync-a Standby Active so-carync-b so_carync System OAM so-carync-1 Active Active so_carync MP e Record the name of the Active Provisioning Site Standby Server Mate Standby Server Mate Standby Server Mate So_carync		
9.	VIP (SSH): Record the Standby server's name.	Active Provisioning Site Standby Server:		
10.	Active Provisioning Site VIP: Select Main Menu → Status & Manage → Files as shown on the right.	Connected using VIP to sds-mrsvnc-a (ACTIVE NETWORK OAM&P) Main Menu Administration Configuration Alarms & Events Security Log Status & Manage Network Elements Server HA Database KPIs Processes Tasks Recurrents Recurrents Recurrents Security Log Security Log Network Elements Security Log Security Log Main Menu Main Menu: Status & Manage Network Elements Security Log Security L		
11.	 Active Provisioning Site VIP: 1) Using the cursor, the Standby server's hostname (from step 9) in the top tab bar. 2) Click on the "Upload" button. 	Main Menu: Status & Manage -> Files Wed Aug Filter 1 sds-mrsvnc-a sds-mrsvnc-l gs-mrsvnc-a sds-mrsvnc-l gs-mrsvnc-a sds-mrsvnc-l gs-mrsvnc-a sds-mrsvnc-l gs-mrsvnc-a so-carync-b gs-carync-b dp-carync-b gs-carync-b dp-carync-b gs-carync-b so-carync-b gs-carync-b so-cary		

Procedure 2: ISO Administration & Pre-Upgrade Checks

12. Active Provisioning Site VIP: 1) Click on the "Browse" dialogue button located in the bottom left quadrant of the screen.	Browse
 2) Select the Drive and directory location of the ISO file for the target release. Select the ISO file and click on the "Open" dialogue button. 3) Click on the "Upload a File" dialogue button. 3) Click on the "Upload a File" dialogue button. NOTE 1: It is recommended to access the ISO file for the target release from a local hard drive partition as opposed to a network or flash drive location. NOTE 2: Depending on network conditions, this upload may take an extended period of time (> 60 min.). Alternatively, the ISO file can be manually transferred to the "/'var/TKLC/db/ filemgmt" directory of the Standby Provisioning Site server using SFTP. Choose File to Upload I Look in: Desktop I Look I Look in: Desktop I Look I Look in: Desktop I Look I	Provide_Files Provide_Files 100-2005_100_10.8.1-5D5-x86_64.iso Open R722358-103-3.0.0_10.8.1-5D5-x86_64.iso Open All Files (".") Cancel

Procedure 2: ISO Administration & Pre-Upgrade Checks

Step	Procedure	Result	
13.	Active Provisioning Site VIP:	qs-mrsvnc-1 drsds-dallastx-a so-carync-a so-carync-b dp-caryn	c-1 dp-caryno-2
	link located on the top right of	Size Type Timestamp	> ·
	the right panel.	liso 686.4 MB iso 2012-01-26	16:07:03 UTC
		155 B log 2012-01-24	22:45:34 UTC
		155 B log 2012-01-24	22:45:27 UTC
		155 B log 2012-01-24	22:45:17 UTC
		3.5 MB xml 2012-01-24	22:45:09 UTC
		3.1 MB xml 2012-01-24	22:45:09 UTC
		3.6 MB xml 2012-01-24	22:45:09 UTC
		155 B log 2012-01-24	22:40:31 UTC
14.	Active Provisioning Site VIP: The user should be presented with a reverse- sorted list of files showing the newest files at the top. The ISO file uploaded in Step 4 of this procedure should now appear at the top most position in the "Filename" column.	Main Menu: Status & Manage -> Files Filter Image: sds-mrsvnc-a sds-mrsvnc-a sds-mrsvnc-b so-carync-a sds-mrsvnc-b so-carync-a sds-mrsvnc-b sds-mrsvnc-b so-carync-a sds-mrsvnc-b sds-mrsvnc-b so-carync-a so-carync-a sds-mrsvnc-b so-carync-a so-carync-a	b dp-carync-1 Size Typ 805.8 iso MB iso 1.6 KB log 32.8 iso
		upgrade.log	32.8 log

Procedure 2:	ISO	Administration	&	Pre-Upgrade	Checks
--------------	-----	----------------	---	-------------	--------

Step	Procedure		Result					
15	Active Provisioning Site							
	VIP (GUI):	Connected using VIP to roma-sds	a (ACTIVE NETWORK O	M&P)				
	Main Menu → Administration → Software Managment → ISO Deployment as shown on the right.	 Main Menu Administration General Options Access Control Software Management Licenses Versions 	Main Menu: Adm Display Filter: - None - No ISO Va	inistration -> I	SO = ▼ ogress.			
		 ISO Deployment Upgrade Remote Servers Configuration Alarms & Events Security Log 	Table description: List of S Displaying Records 1-6 of System Name / Hostname roma-dp-1	ystems for ISO transfer 6 total First Prev Nex 9 ISO No transfer in progres	kt Last Transfer ss N/A			
		🛨 🧧 Status & Manage	roma-dr-a	No transfer in progres	s N/A			
		Measurements	roma-sds-a	No transfer in progres	S N/A			
	NOTE: On 4.0 systems,		roma-so-a	No transfer in progres				
	select Main Menu	Help	roma-so-b	No transfer in progres	s N/A			
	→ Administration		Displaying Records 1-6 of	6 total First Prev Ne	xt Last			
	→ ISO		[Transfer ISO]					
16.	Active Provisioning Site VIP: Click on the [<u>Transfer ISO</u>] link located in the bottom left quadrant of the screen.	so-carync-a No transfer so-carync-b No transfer Displaying Records 1-8 of 8 total First [Transfer ISO]	in progress N/A in progress N/A Prev Next Last					

Procedure 2: ISO Administration & Pre-Upgrade Checks

Step	Procedure	Result			
17.	Active Provisioning Site VIP:	Main Menu: Administration -> ISO [Transfer ISO]			
	The user should be presented with the ISO [Transfer ISO] Administration screen.	Note: ISOs are located in the connected server's File Management Area. Target Systems are configured via Systems Configuration. If GUI connection is to Standalone Server, ISO must be transferred to self before Upgrade.			
		Select ISO to Transfer. Select Target System(s):			
		872-2469-001-4.0.0_40.1.1-SDS-x86_64.iso Select All Deselect All dp-carync-1 drsds-dallastx-a qs-mrsvnc-1 sds-mrsvnc-1 sds-mrsvnc-b so-carync-a so-carync-b			
		Perform Media Validation before Transfer			
		Ok Cancel			
18.	 Active Provisioning Site VIP: 1) Using the pull-down menu, select the ISO file for the target release. 2) Select all servers to be upgraded. NOTE: This may be done one of two ways: a) Select All: If all servers are to be upgraded, they may be selected by clicking on the "Select All" option. b) Multi-Select: If only a group of servers are to be upgraded, they may be selected by clicking the cursor to click on the designated servers. 3) Click on the "Perform Media Validation before transfer" check box. 4) Click on the "Ok" dialogue button. 	Select ISO to Transfer: 872-2469-001-4.0.0_40.1.1-SDS-x86_64.iso 1 Select All Deselect All Decarync-2 drsds-dallastx-a gs-mrsvnc-b so-carync-a so-carync-a so-carync-b			

Procedure 2: ISO Administration & Pre-Upgrade Checks

Step	Procedure	Result					
19.	Active Provisioning Site VIP:	Main Menu: Admin	istration -> ISO	Wed Aug 08 20:05:31 2012			
	The user should be presented with the ISO Administration screen.	Display Filter: - None -	▼ [= *]	Go (LIKE wildcard:			
		Transfer ISC ISO: 872-24 2 of 7 Trans 0 of 7 Trans) in Progress[Click to Refresh] 169-001-4.0.0_40.1.1-SDS-x86_64.iso fers Successful. fers Failed.				
		Table description: List of Syst	tems for ISO transfer.				
		Displaying Records 1-7 of 7 t	otal First Prev Next Last				
		System Name / Hostname	ISO	Transfer Status			
		dp-carync-1 8	72-2459-001-4.0.0_40.1.1-SDS-x86_64.is	o Complete			
		orsus-uanasu-a o	72-2469-001-4.0.0_40.1.1-SDS-X86_64.is	o In Progress			
		sds-mrsvnc-a 8	72-2469-001-4.0.0 40.1.1-SDS-x86 64.is	o Complete			
		sds-mrsvnc-b 8	72-2469-001-4.0.0_40.1.1-SDS-x86_64.is	o In Progress			
		so-carync-a 8	72-2469-001-4.0.0_40.1.1-SDS-x86_64.is	o In Progress			
		so-carync-b 8	72-2469-001-4.0.0_40.1.1-SDS-x86_64.is	o In Progress			
		Displaying Records 1-7 of 7 t	otal First Prev Next Last				
		[Transfer ISO]					
20.	Active Provisioning Site VIP: The progress of the individual file transfers may be monitored by periodically clicking on the [Click to <u>Refresh</u>] link.	• Transfi ISO: 8 2 of 7 1 0 of 7 1	er ISO In Progress. Click to <u>Refre</u> 72-2469-001-4.0.0 40.1.1-SDS-x Fransfers Successful. Fransfers Failed.	esh] 86_64.is			
21.	Active Provisioning Site	Table description: List of S	Systems for ISO transfer.				
	VIP.	Displaying Decode 4 7 of					
	Continue to monitor the	Displaying Records 1-7 of	Total Prist Prev Next Last	Transfer Status			
	file transfer progress until	dp.compc.1	972 2460 001 4 0 0 40 1 1 505 v9	6 64 ico Complete			
	a "Transfer Status" of "Complete" is received	drede-dallaety-a	872-2469-001-4.0.0_40.1.1-505-x86	6 64 iso Complete			
	for all selected servers.	as meune 1	972 2469 001 4 0 0 40 1 1 SDS x80	6 64 iso Complete			
		ede mreune a	972-2469-001-4.0.0_40.1.1-5D5-x86	6 64 iso Complete			
		ede prevne h	972-2469-001-4.0.0_40.1.1-5D5-x80	6 64 iso Complete			
		Sus-misvic-u	072-2409-001-4.0.0_40.1.1-50-3-00	6_64.iso Complete			
		so-caryne-a	072-2409-001-4.0.0_40.1.1-503-800	6_64 iso Complete			
		Displaying Records 1.7 of	7 total First Prov Navi act	o_oviso complete			
		Displaying Records 1-1 of	Total [First Fiew Hear Last				
	NOTE: If to each sit	the network has a PXE te's PXE server ISO sto	server as defined in [6] be sure rage.	to copy the SDS ISO image			
		THIS PROCEDURE	HAS BEEN COMPLETED				

5.6 Perform Health Check (Post ISO Administration)

This procedure is part of Software Upgrade Preparation and is used to determine the health and status of the SDS network and servers.

• Execute SDS Health Check procedures as specified in Appendix B.

6. PRIMARY PROVISIONING SITE / DR PROVISIONING SITE UPGRADE EXECUTION

Call Oracle's **Tekelec Customer Care Center** at **1-888-FOR-TKLC** (1-888-367-8552); or 1-919-460-2150 (international) and inform them of your plans to upgrade this system prior to executing this upgrade.

Before upgrade, users must perform the system Health Check **Appendix B.** This check ensures that the system to be upgraded is in an upgrade-ready state. Performing the system health check determines which alarms are present in the system and if upgrade can proceed with alarms.

**** WARNING *****

If there are servers in the system, which are not in Normal state, these servers should be brought to the Normal or the Application Disabled state before the upgrade process is started. The sequence of upgrade is such that servers providing support services to other servers will be upgraded first.

**** WARNING *****

Please read the following notes on this procedure:

Procedure completion times shown here are estimates. Times may vary due to differences in database size, user experience, and user preparation.

Where possible, command response outputs are shown as accurately as possible. EXCEPTIONS are as follows:

- Session banner information such as time and date.
- System-specific configuration information such as hardware locations, IP addresses and hostnames.
- ANY information marked with "XXXX" or "YYYY." Where appropriate, instructions are provided to determine what output should be expected in place of "XXXX or YYYY"
- Aesthetic differences unrelated to functionality such as browser attributes: window size, colors, toolbars and button layouts.

After completing each step and at each point where data is recorded from the screen, the technician performing the upgrade must mark the provided Check Box.

For procedures which are executed multiple times, a mark can be made below the Check Box (in the same column) for each additional iteration the step is executed.

Retention of Captured data is required as a future support reference if this procedure is executed by someone other than Oracle's Tekelec Customer Care Center.

NOTE: For large systems containing multiple Signaling Network Elements, it may not be feasible to apply the software upgrade to every Network Element within a single maintenance window. However, whenever possible, Primary Provisioning and DR Provisioning Network Elements should be upgraded within the same maintenance window. If multiple maintenance windows are required, replication may be allowed and provisioning re-enabled between scheduled maintenance windows.

6.1 Perform Health Check (Pre Upgrade)



This procedure is part of Software Upgrade Preparation and is used to determine the health and status of the SDS network and servers. This may be executed multiple times but must also be executed at least once within the time frame of 24-36 hours prior to the start of a maintenance window.

• Execute SDS Health Check procedures as specified in Appendix B.

6.2 Primary Provisioning Site / DR Provisioning Site Upgrade

The following procedure details how to disable global provisioning and inhibit replication the Provisioning Site and DR Provisioning Site sites. This procedure must be executed before these Network Elements can be upgraded.

Check off ($\sqrt{}$) each step as it is completed. Boxes have been provided for this purpose under each step number.

SHOULD ANY STEP IN THIS PROCEDURE FAIL, STOP AND CONTACT ORACLE'S TEKELEC CUSTOMER CARE CENTER FOR ASSISTANCE BEFORE CONTINUING!

6.2.1 Disable AppProcControl Table Replication

Disable AppProcControl Table Replication Site sites. This procedure must be executed before these Network Elements can be upgraded.

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15	=1
Ċ	1

NOTE: Database AppProcControl replication will be re-enabled in Appendix G.1 after the last SOAM site is upgraded.

Procedure 3: Disable AppProcControl Table Replication

Step	Procedure	Result
1.	Active Provisioning Site VIP (SSH):	CentOS release 5.7 (Final) Kernel 2.6.18-274.7.1.e15prerel5.0.0_72.32.0 on an x86_64
	1) Access the command prompt.	sds-mrsvnc-a login: root Password: <root_password></root_password>
	2) Log into the server as the " root " user.	
2.	Active Provisioning Site VIP (SSH): Output similar to that shown on the right may appear as the server accesses the command prompt.	<pre>*** TRUNCATED OUTPUT *** VPATH=/var/TKLC/rundb:/usr/TKLC/appworks:/usr/TKLC/awpss7 PRODPATH=/opt/TKLCcomcol/cm5.13/prod RUNID=00 VPATH=/opt/TKLCcomcol/runcm5.13:/opt/TKLCcomcol/cm5.13 PRODPATH= RELEASE=5.13 RUNID=00 VPATH=/var/TKLC/rundb:/usr/TKLC/appworks:/usr/TKLC/awpss7:/usr/TKLC/sd s PRODPATH=/opt/TKLCcomcol/cm5.13/prod RUNID=0 [root@sds-mrsvnc-a ~]#</pre>

Procedure 3:	Disable AppProcControl	Table Replication
--------------	------------------------	--------------------------

Step	Procedure	Result
3.	Active Provisioning Site VIP:	[root@sds-mrsvnc-a ~]# itrunc RepAuditCmd
	Disable audit.	
	NOTE : This step is only needed for a major upgrade. It can also be run on SDS 5.0 without harm, but note that the command will fail because the table no longer exists.	
4.	Active Provisioning Site VIP:	<pre>[root@sds-chltnc-a ~]# iset -fexcludeTables='AppProcControl' NodeInfo where "1=1"</pre>
	Disable replication for the AppProcControl table.	=== changed 10 records === [root@sds-chltnc-a ~]#
5.	Active Provisioning Site VIP:	<pre>[root@sds-chltnc-a ~]# iset -fuse_remote_auth='0' -fuse_local_auth='1' user where "username='guiadmin'"</pre>
	Enable guiadmin GUI access.	[root@sds-chltnc-a ~]#
	NOTE : This step is only needed for a major upgrade but it can be run anytime without harm.	
6.	Active Provisioning Site VIP:	[root@sds-mrsvnc-a ~]# exit logout
	Exit from the server command line.	
		THIS PROCEDURE HAS BEEN COMPLETED

6.2.2 Terminate User Sessions

Procedure 4: Terminate User Sessions

Step	Procedure	Result					
1.	Using the VIP address, access the Primary Provisioning Site GUI.	Access the Primary Provisioning Site GUI as specified in Appendix A.					
2.	Active Provisioning Site VIP: THIS STEP MAY ONLY BE PERFORMED BY THE CUSTOMER! Select Main Menu → Administration → Access Control → Sessions as shown on the right. NOTE: On 4.0 systems, select Main Menu → Administration → Sessions	Connected using V Main Menu Main Menu Main Menu Genera Access 0 Access	/IP to rome add -a (ACTIVE NETWORK (Ion I Options Control a pa IEEE Main Menu: Adm Servers Ion Vents Servers Ion Vents adge cols attom Agent	Expindion Inne Thu Oct 21 16 14 04 2012 EDT	Sessions		
3.							
	Active Provisioning	Sess ID	Expiration Time	Login Time	User	Group	
	Active Provisioning Site VIP:	Sess ID	Expiration Time No Expiry	Login Time Wed Sep 21 10:10 12 2011 EDT	User guladmin	Group admin	
	Active Provisioning Site VIP: THIS STEP MAY ONLY BE PERFORMED BY	Sess ID 10 13	Expiration Time No Expiry No Expiry	Login Time Wed Sep 21 10:10:12 2011 EDT Tue Sep 20 23 21:30 2011 EDT	User guladmin guladmin	Group admin admin	
	Active Provisioning Site VIP: THIS STEP MAY ONLY BE PERFORMED BY THE CUSTOMER!	Sess ID 10 13 14	Expiration Time No Expiry No Expiry No Expiry	Login Time Wed Sep 21 10:10:12:2011 EDT Tue Sep 20:23:21:30:2011 EDT Wed Sep 21:08:10:34:2011 EDT	User guladmin guladmin guladmin	Group admin admin admin	
	Active Provisioning Site VIP: THIS STEP MAY ONLY BE PERFORMED BY THE CUSTOMER!	Sess ID 10 13 14 16	Expiration Time No Expiry No Expiry No Expiry No Expiry	Login Time Wed Sep 21 10:10:12:2011 EDT Tue Sep 20:23:21:30:2011 EDT Wed Sep 21:08:10:34:2011 EDT Wed Sep 21:08:36:09:2011 EDT	User guladmin guladmin guladmin guladmin	Group admin admin admin admin	
	Active Provisioning Site VIP: THIS STEP MAY ONLY BE PERFORMED BY THE CUSTOMER! In the right panel, the	Sess ID 10 13 14 16 17	Expiration Time No Expiry No Expiry No Expiry No Expiry No Expiry	Login Time Wed Sep 21 10:10:12:2011 EDT Tue Sep 20:23:21:30:2011 EDT Wed Sep 21:08:10:34:2011 EDT Wed Sep 21:08:30:09:2011 EDT Wed Sep 21:09:24:30:2011 EDT	User guladmin guladmin guladmin guladmin	Group admin admin admin admin admin	
	Active Provisioning Site VIP: THIS STEP MAY ONLY BE PERFORMED BY THE CUSTOMER! In the right panel, the user will be presented with the list of Active GUI	Sess ID 10 13 14 16 17 17	Expiration Time No Expiry No Expiry No Expiry No Expiry No Expiry No Expiry	Login Time Wed Sep 21 10:10:12:2011 EDT Tue Sep 20:23:21:30:2011 EDT Wed Sep 21:08:10:34:2011 EDT Wed Sep 21:08:30:09:2011 EDT Wed Sep 21:09:24:30:2011 EDT Wed Sep 21:09:15:04:2011 EDT	User guladmin guladmin guladmin guladmin guladmin	Group admin admin admin admin admin admin	
	Active Provisioning Site VIP: THIS STEP MAY ONLY BE PERFORMED BY THE CUSTOMER! In the right panel, the user will be presented with the list of Active GUI sessions connected to	Sess ID 10 13 14 16 17 17 17	Expiration Time No Expiry No Expiry No Expiry No Expiry No Expiry No Expiry No Expiry	Login Time Wed Sep 21 10:10:12 2011 EDT Tue Sep 20 23 21:30 2011 EDT Wed Sep 21 08:10:34 2011 EDT Wed Sep 21 08:36:09 2011 EDT Wed Sep 21 09:24:30 2011 EDT Wed Sep 21 09:15:04 2011 EDT Wed Sep 21 09:24:30 2011 EDT	User guladmin guladmin guladmin guladmin guladmin guladmin	Group admin admin admin admin admin admin admin	
	Active Provisioning Site VIP: THIS STEP MAY ONLY BE PERFORMED BY THE CUSTOMER! In the right panel, the user will be presented with the list of Active GUI sessions connected to the Active Provisioning	Sess ID 10 13 14 16 17 17 17 18 19	Expiration Time No Expiry No Expiry No Expiry No Expiry No Expiry No Expiry No Expiry No Expiry	Login Time Wed Sep 21 10:10:12:2011 EDT Tue Sep 20:23:21:30:2011 EDT Wed Sep 21:08:10:34:2011 EDT Wed Sep 21:08:30:09:2011 EDT Wed Sep 21:09:24:30:2011 EDT Wed Sep 21:09:15:04:2011 EDT Wed Sep 21:09:24:30:2011 EDT Wed Sep 21:09:58:03:2011 EDT	User guladmin guladmin guladmin guladmin guladmin guladmin guladmin	Group admin admin admin admin admin admin admin admin	
	Active Provisioning Site VIP: THIS STEP MAY ONLY BE PERFORMED BY THE CUSTOMER! In the right panel, the user will be presented with the list of Active GUI sessions connected to the Active Provisioning Site server.	Sess ID 10 13 14 16 17 17 17 18 19 20	Expiration Time No Expiry No Expiry No Expiry No Expiry No Expiry No Expiry No Expiry No Expiry No Expiry	Login Time Wed Sep 21 10:10:12:2011 EDT Tue Sep 20:23:21:30:2011 EDT Wed Sep 21:08:16:34:2011 EDT Wed Sep 21:08:36:09:2011 EDT Wed Sep 21:09:24:30:2011 EDT Wed Sep 21:09:15:04:2011 EDT Wed Sep 21:09:24:30:2011 EDT Wed Sep 21:09:58:03:2011 EDT Wed Sep 21:10:10:12:2011 EDT	User guladmin guladmin guladmin guladmin guladmin guladmin guladmin guladmin	Group admin admin admin admin admin admin admin admin admin	
	Active Provisioning Site VIP: THIS STEP MAY ONLY BE PERFORMED BY THE CUSTOMER! In the right panel, the user will be presented with the list of Active GUI sessions connected to the Active Provisioning Site server.	Sess ID 10 13 14 16 17 17 17 18 19 20 20	Expiration Time No Expiry No Expiry	Login Time Wed Sep 21 10:10:12:2011 EDT Tue Sep 20:23:21:30:2011 EDT Wed Sep 21:08:10:34:2011 EDT Wed Sep 21:08:36:09:2011 EDT Wed Sep 21:09:24:30:2011 EDT Wed Sep 21:09:15:04:2011 EDT Wed Sep 21:09:58:03:2011 EDT Wed Sep 21:10:10:12:2011 EDT Wed Sep 21:10:36:44:2011 EDT	User guladmin guladmin guladmin guladmin guladmin guladmin guladmin guladmin guladmin	Group admin admin admin admin admin admin admin admin admin admin	

Procedure 4: Terminate User Sessions

Step	Procedure	Result						
4.	Active Provisioning Site VIP:							
	THIS STEP MAY ONLY							
	BE PERFORMED BY	Sess ID Expiration 7	ine	Login Time	User	Group	12	Remote IP
	THE CUSTOMER!	11	to Exploy	Tue Sep 20 29 21 30 2011 EDT	guadmin guiadmin	admin	utc	10.25.80.52
		14	lo Expiry	Wed Sep 21 08 16 34 2011 E 1	guladmin	admin	utc	10 25 25 134
	The User ID and Remote	10	la Espary	Wed Sep 21 08 26:09 2011 EDT	generation .	admin	UTC	19 45 54 58
	IP address of each	17	lo Expiry	Wed Sep 21 09 24 30 2011 EDT	guiaomin	admin	UTC	10.25.60.190
	as seen on the right	17	to Explay	Wed Sep 21 09 15 04 2011 EDT	guiadmin	admin	ute	10.15.36.15
	as seen on the right.	13	to Expiry	Wei Sep 21 05 58 03 2011 601	guiadmin	admin	UTC	10.15.38.31
	Every attempt should be	20	to Expiry	Wed Sep 21 10 18 12 2011 EDT	guladmin	admin	UTC	10.25.90 135
	made to contact users	28	to Expiry	Wed Sep 21 10 38 44 2011 EDT	guladmin	admin	UTC	10.15.38.43
	not engaged in this	23	to Expiry	Tue Sep 20 29 21 30 2011 EDT	guiadmin	admin	UTC	10.25.60.52
	Upgrade activity and	24	to Expiry	Wed Sep 21 14 03 47 2011 EDT	quiadmin	admin	UTC	10 15 43 20
	request that they		and the and		AC 129 (201)			1000
	discontinue GUI access							
	until the upgrade activity							
5.	Site VIP: THIS STEP MAY ONLY BE PERFORMED BY THE CUSTOMER!	Sess ID	Expiration	n Time	Login Time			User
	If unable to identify or	10		No Expiry	Wed Sep 2	21 10 10 12 2	2011 EDT	guiadmin
	contact the session	13		No Expire	Tue Sec 2	0 23-21-30 2	OII FOT	quiatmin
	related to the upgrade	10	-	по Ехриу	The Gep a		STILLT	Anaoum
	activity may be selected	14		No Expiry	Wed Sep 2	21 08:16:34 2	2011 EDT	guiadmin
	and deleted as follows:	16		No Expiry	Wed Sep 2	21 08:36:09 2	2011 EDT	guiadmin
		17		No Expiry	Wed Sep 2	21 09:24:30 2	2011 EDT	guiadmin
	deletion with the cursor.	17		No Expiry	Wed Sep 2	21 09:15:04 2	2011 EDT	guiadmin
	 2) In the bottom left of the right panel, click the "Delete" dialogue button. 3) In the pop-up window, click on the "OK" dialogue button. NOTE: The Session screen prevents users from deleting the session which they are currently connected to. If attempting to do so by accident, a message may be received in the Banner area stating "Logout to delete your own session (id=xx)". 	Delete Message from w Delete	vebpage user session(Cancel	(s): 14? 3				1

Procedure 4: Terminate User Sessions

Step	Procedure	Result
6.	Active Provisioning Site VIP: THIS STEP MAY ONLY BE PERFORMED BY THE CUSTOMER! The user will receive a confirmation message in the Info tab indicating the session ID which was deleted.	Main Menu: Administration -> Session Info Login Info Session deleted (id=14). 10 No Expiry 17 No Expiry No Expiry Wed 17 No Expiry
7.	Active Provisioning Site VIP: THIS STEP MAY ONLY BE PERFORMED BY THE CUSTOMER! Delete any additional GUI sessions as needed.	• Repeat Steps 5-6 of this Procedure for each additional GUI session to be deleted.
		THIS PROCEDURE HAS BEEN COMPLETED

6.2.3 Disable Global Provisioning and Remote Import

Procedure 5: Disable Global Provisioning and Remote Import




6.2.4 Inhibit DR Provisioning Site Servers

Procedure 6: Inhibit DR Provisioning Site Servers

Step	Procedure	Result
1.	Using the VIP address, access the Primary Provisioning Site GUI.	 Access the Primary Provisioning Site GUI as specified in Appendix A.
2.	Active Provisioning Site VIP: Select Main Menu → Status & Manage → Database	Connected using VIP to sds-mrsvnc-a (ACTIVE NETWORK OAM&P) Main Menu Administration Administration Administration Alarms & Events Security Log Status & Manage Network Element Network Elements
	as shown on the right.	Server sds_mrsvnc sds-mrsvnc-a Network OAA HA sds_mrsvnc sds-mrsvnc-b Network OAA Database sds_mrsvnc sds-mrsvnc-b Network OAA KPIs sds_mrsvnc gs-mrsvnc-1 Query Server
3.	Record the name of the DR Provisioning Site NE in the space provided to the right.	 Using the information provided in Section 3.1.2 (<i>Logins, Passwords and Site Information</i>) record the name of the DR Provisioning Site NE in the space provided below: DR Provisioning Site NE:
4.	Active Provisioning Site VIP: From the "Network Element" filter pull- down, select the NE name for the DR NOAM.	Main Menu: Status & Manage -> Database Filter Info Filter Filter Reset Display Filter: Go dr dallastx sds_mrsvnc sds_mrsvnc OAM&P sds_mrsvnc NETWORK OAM&P OAM&P
5.	Active Provisioning Site VIP:	
	Click on the " GO " dialogue button located on the right end of the filter bar.	Network Element dr_dallastx Reset Display Filter: - None - Reset Go

Procedure 6: Inhibit DR Provisioning Site Servers

Step	Procedure		Result				
6.	Active Provisioning Site VIP:	Main Menu: Statu	is & Manage -> Da	atabase (Filt	tered)		
	The user should be	Filter 🕶 Info 💌					
	presented with the list of servers associated	Network Element	Server	Role	HA Role	Status	
	Provisioning Site	NO_RLGHNC	sds-righnc-a	NETWORK OAM&P	Active	Normal	
		NO_RLGHNC	sds-righnc-b	NETWORK OAM&P	Standby	Normal	
		NO_RLGHNC	sds-righnc-qs	QUERY SERVER	Not Applicable	Normal	
7.	Active Provisioning Site VIP:	Main Menu: Statu	s & Manage -> Da	atabase (Filt	ered)		
	Using the cursor,	Filter					
	select the server which displays	Network Element	Server	Role	HA Role	Status	
	"QUERY SERVER" under the "Role" column	NO_RLGHNC	sds-righnc-a	NETWORK OAM&P	Active	Normal	
		NO_RLGHNC	sds-rlghnc-b	NETWORK OAM&P	Standby	Normal	
		NO_RLGHNC	sds-rlghnc-qs	QUERY SERVER	Not Applicable	Normal	
8.	Active Provisioning Site VIP:	Main Menu: Sta	tus & Manage ->	Database	(Filtered	1)	
	Holding the Ctrl key,	Filter - Info	•				
	use the cursor to select the server which displays	Network Element	Server	Role	HA Role	Status	
	"Standby" under the "HA Role" or "OAM	sds_mrsvnc	sds-mrsvnc-a	NETWORK OAM&P	Active	Normal	
	Max HA Role" column.	sds_mrsvnc	sds-mrsvnc-b	NETWORK OAM&P	Standby	Normal	
		sds_mrsvnc	qs-mrsvnc-1	QUERY SERVER	Not Applicable	Normal	
9.	Active Provisioning Site VIP:	Main Menu: Sta	tus & Manage ->	Database	(Filtered)	
	Holding the Ctrl key,	Filter 👻 Info	•				
	use the cursor to select the server which displays "Active" under the "HA Role" or "OAM	Network Element	Server	Role	HA Role	Status	
		sds_mrsvnc	sds-mrsvnc-a	NETWORK OAM&P	Active	Iormal	
	Max HA Role" column.	sds_mrsvnc	sds-mrsvnc-b	NETWORK OAM&P	Standby	Normal	
		sds_mrsvnc	qs-mrsvnc-1	QUERY SERVER	Not Applicable	Normal	

Procedure 6: Inhibit DR Provisioning Site Servers

Step	Procedure		Result			
10.	Active Provisioning Site VIP: 1) Click on the "Inhibit Replication" dialogue button in the bottom left of the right panel.	ort Inhibit Replic	Cation Backu			
	 2) In the pop-up window, click on the "OK" dialogue button. NOTE: As a result of inhibiting Replication to the opport Minor 	Message from webpag	pr to serverlist sds-mrsvnc-a,s	:ds-mrsvnc-b,qs-mr	rsvnc-1.	2
	to the server, Minor Alarm (Event ID 31113): "Replication Manually Disabled" will alarm until Replication is once again allowed.					
11.	Active Provisioning Site VIP: It may take a minute or more for servers to transition to "Inhibited" state.	• Note: It may take a m	ninute or more for the serve	ers to transition t	to " Inhibited " st	ate.
12.	Active Provisioning Site VIP: <i>Wait</i> until each	Network Element dr_da	illastx 💌 Reset Dis	play Filter: - None	Reset	Go
	server shows as inhibited before proceeding.					
13.	Active Provisioning Site VIP:	Network Element	Server	Role	iday	Re pl Status
	Verify that all servers in this Network	sds_mrsvnc	sds-mrsvnc-a	NETWORK OAM&P	9-21 8.484 UTC	Inhibited
	is "Inhibited" under the "Repl Status"	sds_mrsvnc	sds-mrsvnc-b	NETWORK OAM&P	9-21 8.484 UTC	Inhibited
	column.	sds_mrsvnc	qs-mrsvnc-1	QUERY SERVER	9-21 8.484 UTC	Inhibited
	THIS PROCEDURE HAS BEEN COMPLETED					

6.2.5 Inhibit Primary Provisioning Site Servers

Procedure 7: Inhibit Primary Provisioning Site Servers

Step	Procedure	Result
1.	Using the VIP address, access the Primary Provisioning Site GUI.	• Access the Primary Provisioning Site GUI as specified in Appendix A.
2.	Active Provisioning Site VIP: Select Main Menu → Status & Manage → Database as shown on the right.	Connected using VIP to sds-mrsvnc-a (ACTIVE NETWORK OAM&P) Main Menu Administration Configuration Alarms & Events Security Log Security Log Network Elements Server HA Database
		KPIs sds_mrsvnc qs-mrsvnc-1 Query Server
3.	Record the name of the Primary Provisioning Site NE in the space provided to the right.	 Using the information provided in Section 3.1.2 (<i>Logins, Passwords and Site Information</i>) record the name of the Primary Provisioning Site NE in the space provided below: Primary Provisioning Site NE:
4.	Active Provisioning Site VIP: From the "Network Element" filter pull- down, select the NE name for the Primary Provisioning Site.	Main Menu: Status & Manage -> Database Filter Info Filter Filter Display Filter: All - Osmar dr_dallastx svnc-a sds_mrsvnc svnc-a sds_mrsvnc sds-mrsvnc-b Sds_mrsvnc Sds-mrsvnc-b
5.	Active Provisioning Site VIP:	
	Click on the " GO " dialogue button located on the right end of the filter bar.	Network Element Sds_mrsvnc Reset Display Filter: - None Reset Go

Procedure 7: Inhibit Primary Provisioning Site Servers

Step	Procedure	<u> </u>			Result						
6.	Active Provisioning Site VIP:	Network Element	Server	Role	HA	Role 5	itatus	DB Level	DB B	lirthday	Repl Status
	The user should be	sds_mrsvnc	sds-mrsvnd	-a NETWO	RK Acti	Active Minor		61435	5 2012-01-12 14:56:51.4611		
	presented with the list of servers associated with the Primary Provisioning Site NE.	sds_mrsvnc	sds-mrsvnd	ob NETWO	RK Star	ndby N	Iormal	61435	2012	01-12 6:51.461 UTC	
		sds_mrsvnc	qs-mrsvnc-	1 QUERY SERVE	R App	licable ¹	lormal	61435	2012	2-01-12 6:51.461 UTC	
7.	Active Provisioning Site VIP: Using the cursor,	Main Menu: S	Status &	Manage ->	• Datał	oase	(Filt	ered)			
	select the server which displays	Network Element	Se	rver	R	ole		HA Rol	е	Status	
	"QUERY SERVER" under the "Role"	NO_RLGHNC	sd	sds-righnc-a		NETWORK OAM&P Activ		Active		Normal	
	column.	NO_RLGHNC	sds-righnc-b		NI O/	NETWORK OAM&P		Standb	y	Normal	
		NO_RLGHNC	sd	s-righnc-qs	QI SE	UERY ERVER	\supset	Not Applica	able	Normal	
8.	Active Provisioning Site VIP: Holding the Ctrl key,	Main Menu:	Status	s & Manage	e -> Da	atab	ase	(Filte	red)	
	select the server	Network Element	t S	erver	R	ole		HA Rol	le	Status	
	"Standby" under the "HA Role" or "OAM	sds_mrsvnc	s	ds-mrsvnc-a	N	ETWO	RK	Active		Normal	
	column.	sds_mrsvnc	S	ds-mrsvnc-b	N	ETWO AM&P	RK (Standt	by	Normal	
		sds_mrsvnc	q	s-mrsvnc-1	Q	UERY	2	Not Applica	able	Normal	

Procedure 7: Inhibit Primary Provisioning Site Servers

Step Procedure		Res	sult			
9. Active Provisioning Site VIP: 1) Click on the "Inhibit Replication" dialogue button in the bottom left of the right panel.	ort Inhibit Rep	olication Backu	1			
2) In the pop-up window, click on the "OK" dialogue button. NOTE: As a result of inhibiting Replication to the server, Minor Alarm (Event ID 31113): "Replication Manually Disabled" will alarm until Replication is once	Message from webp	page ation to serverlist sds-mrsvnd e? OK Cance	:-a,sds-mrsvnc-b,c	qs-mrsvnc-	× 1.	2
10. Active Provisioning Site VIP: It may take a minute or more for servers to transition to "Inhibited" state.	Note: It may take a	a minute or more for the s	ervers to transit	ion to " In	hibited" st	ate.
11. Active Provisioning Site VIP: Using the cursor,	Main Menu: St	tatus & Manage	-> Databa	ase		
select the server which displays "Active" under the "HA Role" or "OAM Max HA Role"	Network Element	Server	Role	OAM Max HA Role	Applicati Max HA Role	
column.	sds_mrsvnc	sds-mrsvnc-a	Network OAM&P	Active	ovs	
	sds_mrsvnc	sds-mrsvnc-b	Network OAM&P	Standby	005	
	sds_mrsvnc	qs-mrsvnc-1	Query Server	Observe	005	
Alarm (Event ID 31113): "Replication Manually Disabled" will alarm until Replication is once again allowed. 10. Active Provisioning Site VIP: It may take a minute or more for servers to transition to "Inhibited" state. 11. Site VIP: Using the cursor, select the server which displays "Active" under the "HA Role" or "OAM Max HA Role" column.	Note: It may take a Main Menu: St Filter Info Network Element sds_mrsvnc sds_mrsvnc sds_mrsvnc	a minute or more for the s tatus & Manage Server sds-mrsvnc-a sds-mrsvnc-b qs-mrsvnc-1	ervers to transit	ion to "In ase OAM Max HA Role Active Standby Observe	hibited" sta Applicati Max HA Role	ate.

Procedure 7: Inhibit Primary Provisioning Site Servers

Step	Procedure		Result			
12.	Active Provisioning Site VIP: 1) Click on the "Inhibit Replication" dialogue button in the bottom left of the right panel.	ort Inhibit Repli	cation Backu			
	2) In the pop-up window, click on the "OK" dialogue button. NOTE: As a result of inhibiting Replication to the server, Minor Alarm (Event ID 31113): "Replication Manually Disabled" will alarm until Replication is once again allowed.	Message from webpage	ge on to serverlist sds-mrsvnc-a,: OK Cancel	sds-mrsvnc-b,qs-mr	rsvnc-1.	2
13.	Active Provisioning Site VIP: It may take a minute or more for servers to transition to "Inhibited" state.	 Note: It may take a m 	ninute or more for the serv	ers to transition	to " Inhibited " st	ate.
14.	Active Provisioning Site VIP: <i>Wait</i> until each server shows as	Network Element sds_n	nrsvnc 💌 Reset Disp	olay Filter: - None	Reset	Go
	inhibited before proceeding.				> > >	
15.	Active Provisioning Site VIP:	Network Element	Server	Role	day	Repl Status
	Verify that all servers in this Network	sds_mrsvnc	sds-mrsvnc-a	NETWORK OAM&P	9-21 6.484 UTC	Inhibited
	is "Inhibited" under the "Repl Status"	sds_mrsvnc	sds-mrsvnc-b	NETWORK OAM&P	9-21 6.484 UTC	Inhibited
	column.	sds_mrsvnc	qs-mrsvnc-1	QUERY SERVER	9-21 6.484 UTC	Inhibited
	THIS PROCEDURE HAS BEEN COMPLETED					

6.2.6 Database Backup (Provisioning)

Step	Procedure		Result						
1.	Using the VIP address, access the Primary Provisioning Site GUI.	Access the Prin	• Access the Primary Provisioning Site GUI as specified in Appendix A.						
2.	Active Provisioning Site VIP: Select → Status & Manage → Database as shown on the right.	Connected using VIP to sd Main Menu Administration Configuration Alarms & Events Security Log Status & Manage Status & Manage Server Server HA Server HA Server MA Server Server Server Server Server Server Server Server Server Server Server Server Server Server Server	S-mrsvnc-a (ACTIVE NET) Main Me Filter • Network Ele sds_mrsvnc sds_mrsvnc	Main Menu: Status & Manage -> Database Filter Info Network Element Server Role sds_mrsvnc sds-mrsvnc-a Network OAL sds_mrsvnc sds-mrsvnc-b Network OAL sds_mrsvnc gs-mrsvnc-1 Query Server					
3.	Active SDS VIP:	Main Menu: Statu	ıs & Manage -≻ D	atabase					
	1) Select the name of the Network OAM&P Active role.	Filter Info Network Element	Server	Role	OAM Max HA Role	Applicatio Max HA Role	Status		
		sds_mrsvnc	sds-mrsvnc-a	Network OAM&P	Active	oos	Normal	1	
	Backup " button.	sds_mrsvnc	sds-mrsvnc-b	Network OAM&P	Standby	005	Minor		
		sds_mrsvnc	qs-mrsvnc-1	Query Server	Observer	005	Minor		
		so_carync	so-carync-a	System OAM	Standby	005	Normal		
		Disable Provisioning	Report Allow Replicat	On Backup	Compar	e Res	store		

Step Procedure Result Active SDS VIP: Main Menu: Status & Manage -> Database [Backup] 4. Fri Sep 07 21:37:03 20 The user will be present with the Database Backup backup form. Description Field Value Server: sds-mrsvnc-a Select data for Provisioning Select the type of Backup to backup perform. Configuration Select the backup archive compression algorithm. The following file suffix will be applied for the selected option: gzip · bzip2 Compression .tar.gz - gzip compression, none .tar.bz2 - bzip2 compression. .tar - no compression. Archive Name (without the Archive Name Backup.sds.sds-mrsvnc-a.ProvisioningAndConfiguration.NETWORK_OA/ compression type suffix). May not contain the following Comment characters: ** \$ Ok Cancel Active SDS VIP: Database Backup 5. Field Value 1) Uncheck Server: sds-mrsvnc-a Configuration so Select data for Provisioning only Provisioning backup Configuration data is backed up. 2) Enter a comment in the comment field. 3) Click "Ok" button. gzip • bzip2 Compression 🔿 none * Backup.sds.sds-mrsvnc-a.Provisioning.NETWORK_OAMP.20121031_11C* Archive Name Comment Upgrade 3 Ok Cancel Active SDS VIP: Info . 6. Info Wait for the Info tab message to indicate nfiguration Backup on sds-mrsvnc-a status MAINT_IN_PROGRESS. successful backup. sds-mrsvnc-a status MAINT_CMD_SUCCESS. Success ss: Provisioning Backup on sds-mrsvnc-a status MAINT_CMD_SUCCESS. Success 1 Durability Admin Status is: None Durability Operational Status is: NO Disk.

Step	Procedure		Resu	ılt			
7.	1) Record the hostname of each	Using the worksheet p to be upgraded in the s	rovided in Appendi space provided bel	x C.5, record	the hostname	e of each	Server
	 with the Primary NOAM NE (identified in Step 3 of "Check off" the associated Check Box for each Server as Steps 13 - 25 completed. 					3 - 25 ar	e
	Procedure 7) and the DR NOAM NE (identified in Step 3	Primary SDS N	O-A:				
	of Procedure 6).	Primary SDS N	О-В:				
	25 of this Procedure for each Server listed to the right.	Primary Query	Server:				
	3) "Check off" each Check Box as Steps	DR SDS NO-A:					
	13 - 25 are completed for each Server listed to the						
DR Query Server:							
8.	Active Provisioning Site VIP:	g Communications Diameter Signal Router Full Address Resolution					
		 Ain Menu 					
	NOTE: If this is a MAJOR upgrade	 Administration General Options 	Main Menu: Admin	nistration -> :	Software Ma	nagemen	t -> Upgr
	from 4.x to 5.x, then	Access Control	Tasks +				
	Otherwise, continue	Software Managemen		OAM Max HA Role	Server Role	Function	Start Time
	with this step.	– 📑 ISO Deployment	Hostname	Max Allowed HA Role	Application Versi	on	Upgrade ISO
	Select	 Remote Servers Configuration Network Elements 	dts3-sds-a	Err Active Active	Network OAM&P dts3_sds 5.0.0-50.19.0	OAM&P	Backup N
	Main Menu → Administration → Software Mangment → Upgrade	 Services Resource Domains Servers 	dts3-sds-b	Norm Standby Active	Network OAM&P dts3_sds 5.0.0-50.19.0	OAM&P	Backup N
	as shown on the right.	 Server Groups Places Place Associations 	dts3-qs-1	Norm Observer Obsrvr	Query Server dts3_sds 5.0.0-50.19.0	QS	Backup N
		 Docp Network Alarms & Events Security Log 	dts3-drno-a	Warn Active Active	Network OAM&P dts3_drno 5.0.0-50.19.0	OAM&P	Backup N
		■ 🖶 Status & Manage — 📑 Network Elements	dts3-so-a	Norm Active	System OAM dts3_so	OAM	Backup N

Step	Procedure		Result						
	Active Provisioning								
9.	Site VIP:		Server Status	Server Role	Function	Upgrade State	Stat		
		Hostname	OAM Max HA Role	Network Element		Start Time	Fin		
	1) Using the vertical scroll bar in the right		Max Allowed HA Role	Application Version	on	Upgrade ISO			
	panel, scroll to the		Err	Network OAM&P	OAM&P	Backup Needed			
	hostname of the next	dts3-sds-a	Active	dts3_sds			1		
	server from the list in		Active	5.0.0-50.19.0	0.000	Dealers Needed			
	Step 7.	dte3.ede.h	Standby	dte3 ede	UAM&P	Backup Needed			
	2) Verify that the	0150-505-0	Active	5.0.0-50.19.0			1		
	Upgrade State		Norm	Query Server	QS	Backup Needed			
	snows "Backup Needed"	dts3-qs-1	Observer	dts3_sds					
	Needed .		Obsrvr	5.0.0-50.19.0					
			Warn	Network OAM&P	OAM&P	Backup Needed			
		dts3-drno-a	Active	dts3_drno					
			Active	E 0 0 E0 40 0					
10.	Active Provisioning	0.20 20 0	Active	5.0.0-50.19.0					
	Site VIP:		Norm	System OAM	OAM	Backup Needed			
	1) Using the cursor.	dts3-so-b	Standby	dts3_so					
	select the row		Active	5.0.0-50.19.0					
	containing the		Norm	MP	SDS	Backup Needed			
	server from the list in	dts3-do-1	Active	dts3 so					
	Step 7.								
	2) Click the "Backup" dialogue button located across the bottom left of the right panel.	Backup ISO Clear	nup Prepare	Initiate Co	mplete				
	Active Provisioning		Active	5.0.0-50.19.0	_				
11.	Site VIP:		Norm	System OAM	OAM	Not Ready			
		dts3-so-b	Standby	dts3_so					
	Select		Active	5.0.0-50.19.0					
	Main Menu → Administration → Software Mangment → Upgrade When this backup is finished, verify that the Upgrade State is "Not Ready"					N P			
12.	Active Provisioning Site VIP: Backup all remaining servers.	Repeat Steps 8 - 11 of operations may be perf When all servers listed this Procedure is	this Procedure ormed in paralle in Step 7 have f completed.	for each additior I for multiple sei nad Upgrade St	nal server l rvers. ate change	isted in Step 7. The	hen		

Step	Procedure	Result
13.	Active Provisioning Site VIP (SSH):	CentOS release 5.7 (Final) Kernel 2.6.18-274.7.1.e15prerel5.0.0_72.32.0 on an x86_64
	1) Access the command prompt.	sds-mrsvnc-a login: root Password: <root_password></root_password>
	 Log into the server as the "root" user. 	
	NOTE : This Step and all remaining Steps are only for a MAJOR upgrade from 4.x to 5.x.	
14.	Active Provisioning	*** TRUNCATED OUTPUT ***
	Output similar to that	VPATH=/var/TKLC/rundb:/usr/TKLC/appworks:/usr/TKLC/awpss7 PRODPATH=/opt/TKLCcomcol/cm5.13/prod
	shown on the right may appear as the server accesses the command prompt.	RUNID=00 VPATH=/opt/TKLCcomcol/runcm5.13:/opt/TKLCcomcol/cm5.13 PRODPATH= RELEASE=5.13 BUNDD=00
		VPATH=/var/TKLC/rundb:/usr/TKLC/appworks:/usr/TKLC/awpss7:/usr/TKLC/sds PRODPATH=/opt/TKLCcomcol/cm5.13/prod RUNID=0
	NOTE: The run from the	e following Steps 15 - 23 provide a full backup of COMCOL run environment. These shall command line of every server in the Network Element to be upgraded.
	NOTE: The	following Steps 15 - 23 may be performed in parallel on each server.
15.	Active Provisioning Site VIP:	Note : Skip this step for the Active Provisioning Site, Active NO server (which should be our local host at this point). No SSH session is required to reach this first server.
	Access each server on the Server	[root@sds-mrsvnc-a ~]# ssh <server name=""></server>
	Worksheet via SSH.	(Answer 'yes' if you are prompted to confirm the identity of the server.)
16.	Active Provisioning Site VIP:	[root@sds-mrsvnc-a ~]# cd /usr/TKLC/appworks/etc/exclude_parts.d
	Change directory to exclude_parts.d/	
17.	Active Provisioning Site VIP:	[root@sds-mrsvnc-a exclude_parts.d]# vim Appworks.db_parts
	Edit Appworks.db_parts	

Step	Procedure	Result			
18.	Active Provisioning Site VIP:	Delete all lines after the header comments; the resulting file should look similar to this example:			
	Delete lines	<pre>####################################</pre>			
19.	Active Provisioning Site VIP:	Save and exit:			
	Save and exit	:wq!			
20.	Active Provisioning Site VIP:	[root@sds-mrsvnc-a exclude_parts.d]# cd			
	Change directory to root home.				
21.	Active Provisioning Site VIP:	[root@sds-mrsvnc-a ~]# /usr/TKLC/appworks/sbin/full_backup			
	Run backup utility.	Output similar to the following will indicate successful completion:			
		Success: Full backup of COMCOL run env has completed. Archive file			
		Backup.dsr.blade01.FullRunEnv.NETWORK_OAMP.20110417_021502.UPG.tar.gz written in /var/TKLC/db/filemgmt.			
		(Errors will also report back to the command line.)			
22.	Active Provisioning Site VIP:	Reference the list in Step 7 and check off the server which just completed backup.			
	Mark this server's backup as complete.				
23.	Remote Server:	Unless you are already on the Active Provisioning Site active server, exit to return to the Active Provisioning Site.			
	Exit from the remote server to return to the Active Provisioning Site.	[root@tks5039999 ~]# exit logout			

Step	Procedure	Result			
24.	Active Provisioning Site VIP: Backup all remaining servers.	 Repeat Steps 15 - 23 of this Procedure for each additional server in Step 7. These operations may be performed in parallel on multiple servers. 			
25.	Active Provisioning Site VIP (SSH): Exit from the server	[root@sds-mrsvnc-a filemgmt]# exit logout			
	NOTE: Steps 13 - 25 are only for a MAJOR upgrade from 4.x to 5.x.				
	THIS PROCEDURE HAS BEEN COMPLETED				

6.2.7 Upgrade DR Provisioning Site NE

Procedure 9: Upgrade DR Provisioning Site NE

Step	Procedure	Result				
1.	Using the VIP address, access the Primary Provisioning Site GUI.	Access the Primary Provisioning Site GUI as specified in Appendix A.				
2.	Active Provisioning Site VIP: Select Main Menu → Status & Manage → Database as shown on the right.	Connected using VIP to sds-mrsvnc-a (ACTIVE NETWORK OAM&P) Main Menu Administration Configuration Alarms & Events Security Log Status & Manage Network Elements Server HA Database KPIs Processes				
3.	Record the name of the DR Provisioning Site NE in the space provided to the right.	Using the information provided in Section 3.1.2 (<i>Logins, Passwords and Site Information</i>) record the name of the DR Provisioning Site NE in the space provided below: DR Provisioning Site NE:				
4.	Active Provisioning Site VIP: From the "Network Element" filter pull- down, select the NE name for the DR Provisioning Site.	Main Menu: Status & Manage -> Database Filter Filter Network Element - All - dr_dallastx sds_mrsvnc sds_mrsvnc sds_mrsvnc sds_mrsvnc sds_mrsvnc sds_mrsvnc sds_mrsvnc sds_mrsvnc				
5.	Active Provisioning Site VIP:					
	Click on the " GO " dialogue button located on the right end of the filter bar.	Network Element dr_dallastx Reset Display Filter: - None Reset Go				

Procedure 9: Upgrade DR Provisioning Site NE

Step	Procedure		Resu	lt			
6.	Active Provisioning	Network Element	Server	Role	HA Role	Status	
	The user should be	NO_RLGHNC	sds-righnc-a	NETWORK OAM&P	Active	Minor	
	presented with the list of servers associated	NO_RLGHNC	sds-righnc-b	NETWORK OAM&P	Standby	Minor	
	with the DR Provisioning Site	NO_RLGHNC	sds-righnc-qs	QUERY SERVER	Not Applicable	Minor	
	Identify each " Server " and its associated " Role " and " HA Role ".						
	"Server" and its associated "Role" and "HA Role".						
7.	Active Provisioning Site VIP:	• Identify the DR Provisioning Site "Server" names and record them in the space below:					
	Record the " Server " names appropriately in the space provided to the right.	Query Serve	er:				
		DR Provisioning S	Site Standby Server:				
		DR Provisioning	g Site Active Server:				



NOTE: In this Procedure, Steps 10 and 11 (below), to initiate upgrade, may be executed in parallel.

8.	Active Provisioning Site VIP: Prepare Upgrade for the DR Provisioning Site Query Server.	•	Prepare Upgrade for the DR Provisioning Site - Query Server (identified in Step 7 of this Procedure) as specified in Appendix C.1 (Prepare Upgrade).	
9.	Active Provisioning Site VIP: Prepare Upgrade for the DR Provisioning Site Standby Server.	•	Prepare Upgrade for the DR Provisioning Site - Standby Server (identified in Step 7 of this Procedure) as specified in Appendix C.1 (Prepare Upgrade).	
10.	Active Provisioning Site VIP: Initiate Upgrade for the DR Provisioning Site Query Server.	•	Initiate Upgrade for the DR Provisioning Site - Query Server (identified in Step 7 of this <i>Procedure</i>) as specified in Appendix C.2 (Initiate Upgrade).	

Procedure 9: Upgrade DR Provisioning Site NE

Step	Procedure	Result
11.	Active Provisioning Site VIP: Initiate Upgrade for the DR Provisioning Site Standby Server.	 Initiate Upgrade for the DR Provisioning Site - Standby Server (identified in Step 7 of this Procedure) as specified in Appendix C.2 (Initiate Upgrade).
12.	Active Provisioning Site VIP: Monitor Upgrade for the DR Provisioning Site Query Server.	• Monitor Upgrade for the DR Provisioning Site - Query Server (identified in Step 7 of this Procedure) as specified in Appendix C.3 (Monitor Upgrade).
13.	Active Provisioning Site VIP: Monitor Upgrade for the DR Provisioning Site Standby Server.	 Monitor Upgrade for the DR Provisioning Site - Standby Server (identified in Step 7 of this Procedure) as specified in Appendix C.3 (Monitor Upgrade).
14.	Active Provisioning Site VIP: Complete Upgrade for the DR Provisioning Site Query Server.	• Complete Upgrade for the DR Provisioning Site - Query Server (identified in Step 7 of this Procedure) as specified in Appendix C.4 (Complete Upgrade).
15.	Active Provisioning Site VIP: Complete Upgrade for the DR Provisioning Site Standby Server.	• Complete Upgrade for the DR Provisioning Site - Standby Server (identified in Step 7 of this Procedure) as specified in Appendix C.4 (Complete Upgrade).



!! WARNING !! STEPS 8-15 MUST BE COMPLETED BEFORE CONTINUING ON TO STEP 16.

16.	Active Provisioning Site VIP: Prepare Upgrade for the DR Provisioning Site Active Server.	•	Prepare Upgrade for the DR Provisioning Site - Active Server (identified in Step 7 of this Procedure) as specified in Appendix C.1 (Prepare Upgrade).
17.	Active Provisioning Site VIP: Initiate Upgrade for the DR Provisioning Site Active Server.	•	Initiate Upgrade for the DR Provisioning Site - Active Server (<i>identified in Step</i> 7 of this <i>Procedure</i>) as specified in Appendix C.2 (<i>Initiate Upgrade</i>).

Procedure 9: Upgrade DR Provisioning Site NE

Step	Procedure	Result
18.	Active Provisioning Site VIP:	
	Monitor Upgrade for the DR Provisioning Site Active Server.	Monitor Upgrade for the DR Provisioning Site - Active Server (identified in Step 7 of this Procedure) as specified in Appendix C.3 (Monitor Upgrade).
19.	Active Provisioning Site VIP:	
	Complete Upgrade for the DR Provisioning Site Active Server.	• Complete Upgrade for the DR Provisioning Site - Active Server (identified in Step 7 of this Procedure) as specified in Appendix C.4 (Complete Upgrade).
		THIS PROCEDURE HAS BEEN COMPLETED

6.2.8 Upgrade Primary Provisioning Site NE

Procedure 10: Upgrade Primary Provisioning Site NE

Step	Procedure	Result				
1.	Using the VIP address, access the Primary Provisioning Site GUI.	 Access the Primary Provisioning Site GUI as specified in Appendix A. 				
2.	Active Provisioning					
	Site VIP:	 Connected using VIP to sds-mrss Main Menu 	vnc-a (ACTIVE NETWORK OA	(M&P)		
	Select	🖬 🧰 Administration	Main Menu: Status & Manage -> Databas			
	Main Menu	 Configuration Alarms & Events 	Filter 🔻 Info 🔻			
	→ Database	💿 🧰 Security Log	Network Element	Server		
	as shown on the	n 📑 🤤 Status & Manage	dr_dallastx	drsds-dallastx-a		
	right.	Server	sds_mrsvnc	sds-mrsvnc-a		
			sds_mrsvnc	sds-mrsvnc-b		
		Collection	so_carync	so-carync-a		
		💽 HA	so_carync	so-carync-b		
		🏹 Database	so_carync	dp-carync-1		
		💽 KPIs	so_carync	dp-carync-2		
	Active Provisioning	Primary Provisioning	Site NE:			
4.	Site VIP:	Main Menu: Status &	Manage -> Datal	base		
	From the "Network	Filter 💌 Info 💌				
	Element" filter pull-	Filter				
	name for the					
	Primary	Network Element sds_mrsv	nc 🖌 Reset Display	Filter:		
	Provisioning Site.	- All -	+v	0.000		
		ede mrevno sds mrsv	/IC sync-a	NETW		
		so_caryn	c	OAM&		
		sds_mrsvnc s	ds-mrsvnc-b	NETW OAM&		
		so_carync s	o-carync-a	SYSTE		
5.	Active Provisioning					
	Click on the " GO " dialogue button	Network Element sds_mrsvnc	Reset Display Filter:	- None Reset Go		
	located on the right			5		
	end of the filter bar.			Ę		

Procedure 10: Upgrade Primary Provisioning Site NE

Step	Procedure			R	esult				
6.	Active Provisioning Site VIP:	Network Element	Server	Role	HA Role	Status	DB Level	DB Birthday	Repl Status
	The user should be	sds_mrsunc	sds-mrsvnc-a	NETWORK OAM8P	Active	Minor	61435	2012-01-12 14:56-51.461 UTC	Inhibited
	presented with the list	sds_mrsvnc	sds-mrsvnc-b	NETWORK OAM&P	Standby	Minor	Unknown	2012-01-12 14:55:51.451 UTC	Inhibited
	with the Primary	sds_mrsvnc	gs-mrsvnc-1	QUERY SERVER	Not Applicable	Minor	Unionown	2012-01-12 14:55:51.461 UTC	Inhibited
	NE.								
	Identify each " Server " and its associated "Role" and " HA Role" .								
7.	Active Provisioning Site VIP:	 Identify the provided b 	 Identify the Primary Provisioning Site "Server" names and record them in the space provided below: 						
	Record the "Server" names appropriately	Quei	y Server: _						
	to the right.	Provisioning Site Standby Server:							
		Provisioning Site Active Server:							
1									

NOTE: In this Procedure, Steps 10 and 11 (below), to initiate upgrade, may be executed in parallel.

8.	Active Provisioning Site VIP: Prepare Upgrade for the Primary Provisioning Site - Query Server.	•	Prepare Upgrade for the PRIMARY Provisioning Site - Query Server (identified in Step 7 of this Procedure) as specified in Appendix C.1 (Prepare Upgrade).	
9.	Active Provisioning Site VIP: Prepare Upgrade for the Primary Provisioning Site - Standby Server.	•	Prepare Upgrade for the PRIMARY Provisioning Site - Standby Server (identified in Step 7 of this Procedure) as specified in Appendix C.1 (Prepare Upgrade).	
10.	Active Provisioning Site VIP: Initiate Upgrade for the Primary Provisioning Site - Query Server.	•	Initiate Upgrade for the Provisioning Site - Query Server (identified in Step 7 of this <i>Procedure</i>) as specified in Appendix C.2 (Initiate Upgrade).	

Procedure 10:	Upgrade Prima	ry Provisioning Site NE
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Step	Procedure		Result
11.	Active Provisioning Site VIP:		
	Initiate Upgrade for the Primary Provisioning Site - Standby Server .	•	Initiate Upgrade for the PRIMARY Provisioning Site - Standby Server (identified in Step 7 of this Procedure) as specified in Appendix C.2 (Initiate Upgrade).
12.	Active Provisioning Site VIP:		
	Monitor Upgrade for the Primary Provisioning Site - Query Server .		
	NOTE: If performed in parallel with the Standby Provisioning Site Server upgrade (see previous STEP), the Upgrade State for the Query server may not show " Success " until after the Standby Server reaches the same state.	•	Monitor Upgrade for the PRIMARY Provisioning Site - Query Server (identified in Step 7 of this Procedure) as specified in Appendix C.3 (Monitor Upgrade).
13.	Active Provisioning Site VIP:		
	Monitor Upgrade for the Primary Provisioning Site - Standby Server .	•	Monitor Upgrade for the PRIMARY Provisioning Site - Standby Server (identified in Step 7 of this Procedure) as specified in Appendix C.3 (Monitor Upgrade).
14.	Active Provisioning Site VIP:		
	Complete Upgrade for the Primary Provisioning Site - Query Server.	•	Complete Upgrade for the PRIMARY Provisioning Site - Query Server (identified in Step 7 of this Procedure) as specified in Appendix C.4 (Complete Upgrade).
15.	Active Provisioning Site VIP:		
	Complete Upgrade for the Primary Provisioning Site - Standby Server.	•	Complete Upgrade for the PRIMARY Provisioning Site - Standby Server (identified in Step 7 of this Procedure) as specified in Appendix C.4 (Complete Upgrade).



!! WARNING !! STEPS 8 - 15 MUST BE COMPLETED BEFORE CONTINUING ON TO STEP 16.

Procedure 10:	Upgrade Primary	Provisioning	Site NE

Step	Procedure	Result				
16.	Active Provisioning Site VIP:	Connected using VIP to roma-sds-a (All All Main Menu Administration Administration	ACTIVE NETWORK OAM &P) Main Menu: Adm	ninistratio	on -> Software Mana	gement -> Up
	Main Manu	 Access Control Software Management 	Filter 🕶 Tasks 👻			
	Administration → Administration →Software Managmnt	- Elicenses - Versions - ISO Deployment	Hostname	OAM Max HA Role Max Allowed HA Role	Network Element Appl Version	Role Function
	- Opgrade	Demote Servers	roma-sds-a	Active	sds_roma	Network OAM&P
	as shown on the right.	🖬 🧰 Configuration 🖬 📫 Alarms & Events	roma-ede-b	Active Standby Active	50.13.0 6ds_roma 50.13.0	Network OAM&P
		 Security Log Status & Manage 	roma-so-a	Active	sds_roma 50.13.0	System OAM OAM
		Communication Agent Soc	roma-so-b	Standby Active	sds_roma 50.13.0	System OAM OAM
		- 🔅 Help	roma-dp-1	Active Active	sds_roma 50.13.0	MP SDS
	NOTE : On 4.0 svstems. select		roma-dr-a	Active Active	dr_roma 50.13.0	Network OAM&P OAM&P
	Main Menu → Administration → Upgrade					
17.	Active Provisioning Site VIP:	Hostname	etwork Element		Role	Upgrade State
		Aţ	oplication Version		Function	Server Status
	 Using the vertical scroll bar in the right 	sds-mrsvnc-a	0_MRSVNC 0.0-3.0.0 10.8.1		OAM&P	Not Ready
	panel, scroll to the	N	0_MRSVNC		NETWORK OAM&P	Not Ready
	Primary	sds-misvic-b 3.	0.0-3.0.0_10.8.1		OAM&P	Err
	Active Server (identified in Step 7 of this Procedure).	sds-mrsvnc-qs NO_MRSVNC 3.0.0-3.0.0_10.8.1			QUERY_SERVER UNDEFINED	Not Ready
	2) Verify that the Upgrade State shows "Not Ready".					
18.	Active Provisioning	Netwo	rk Element		Role	Upgrade State
	Site VIP:	Hostname Applic	ation Version		Function	Server Status
	 Using the cursor, select the row containing the 	sds-mrsvnc-a NO_M 3.0.0-3	RSVNC 1.0.0_10.8.0		NETWORK OAM&P OAM&P	Not Ready
	Primary Provisioning Site -	sds-mrsvnc-b 3.0.0-3	RSVNC 1.0.0_10.8.1		NETWORK OAM&P OAM&P	Not Ready
	Active Server (identified in Step 7 of this Procedure).	sds-mrsvnc-qs NO_M 3.0.0-3	RSVNC 1.0.0_10.8.1		QUERY_SERVER UNDEFINED	Not Ready
	2) Click the " Prepare Upgrade " dialogue button located in the bottom left of the right panel.	Prepare Upgrade	nitiate Upgrade	Monitor U	Ipgrade Complete U	pgrade

Procedure 10:	Upgrade Primary	/ Provisioning	Site NE
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e Ready] Ø
Forced Standby and the Application being ally be inhibited.

!! IMPORTANT !! THE USER SESSION WILL AUTOMATICALLY END AT THIS TIME AND THE USER WILL BE LOGGED OUT OF THE GUI.

Procedure 10:	Upgrade F	Primary Pro	ovisioning	Site NE
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Step	Procedure	Result
20.	The "Security Alert" dialogue box shown to the right may or may not appear at this time depending on "Internet Explorer" settings. If experienced, click the "Yes" dialogue button to continue.	Security Alert Information you exchange with this site cannot be viewed or changed by others. However, there is a problem with the site's security certificate. Image: Imag
	<u>Otherwise</u> : Select "Logout" at the top right of the screen.	Welcome guiadmin [Logout] Melp
21.	Active OAM VIP: The user's session will end and the screen shown to the right may appear as the Standby Server goes through HA switchover and becomes the "Active" server.	Image: System Session Expired - Windows Internet Explorer Image: System Session Expired - Windows Internet Explorer Image: System Session Expired
22.	Wait at least 30 seconds before continuing on to the next Step.	 Wait at least 30 seconds for the PRIMARY Provisioning Site - Standby Server to transition to the "Active" Server and take control of the VIP address.
23.	Active OAM VIP: Newer systems skip directly to the next step. On older systems, click the <u>Return to</u> <u>Tekelec System</u> <u>Login</u> link located on the top center of the right panel.	You are not logged in anymore. Either your login session has expired or an HA switchover has occured. Return to Tekelec System Login

Procedure 10:	Upgrade Primar	y Provisioning	Site NE

Step	Procedure	Result
24.	Active OAM VIP: The user should be presented a login screen similar to the one shown on the right. Login to the GUI using the default user and password.	Oracle System Login Fri Feb 28 16:53:04 2014 EST Log In Enter your username and password to log in Session timed out at 4:53:04 pm. Username: guiadmin Password: userna
		Change password Log In Welcome to the Oracle System Login. Unauthorized access is prohibited. This Oracle system requires the use of Microsoft Internet Explorer 7.0, 8.0, or 9.0 with support for JavaScript and cookies. Oracle and logo are registered service marks of Oracle Corporation. Copyright © 2013 Oracle Corporation All Rights Reserved.
25.	Active OAM VIP: The user should be presented the SDS Main Menu as shown on the right. Verify that the message shown across the top of the right panel indicates that the browser is using the "VIP" connected to the Active OAM server. NOTE: The message may show connection to either a "NETWORK OAM&P" or a "SYSTEM OAM" depending on the selected NE.	Connected using VIP to sds-mrsvnc-a (ACTIVE NETWORK OAM&P) Main Menu Users User Groups User Sessions Single Sign-On

Procedure 10:	Upgrade Primary	/ Provisionina	Site NE
1100004410 101	opgrado i innarj	, i iovioioiiiiig	

Step	Procedure	Result					
26	Active Provisioning	Connected upter VIII to mena adda a (A					
	Site VIP:	Ain Menu				6 M	
	Select	Administration	Main Menu: Adm	inistrati	on -> 50	rtware managen	ient -> Up
	Main Menu	 Access Control Software Management 	Filter 🔻 Tasks 👻	0.00			
	→ Administration	- Licenses	Hostname	HA Role	Network Elem	ient	Role
	\rightarrow Upgrade	ISO Deployment		Max Allowed HA Role	Appl Version		Function
	as shown on the	Remote Servers	roma-ada-a	Active Active	sds_roma 50.13.0		Network OAM&P OAM&P
	right.	Alarms & Events	roma-sds-b	Standby Active	sds_roma 50.13.0		Network OAM&P OAM&P
		 Security Log Status & Manage 	roma-so-a	Active	sds_roma		System OAM
		 Measurements Communication Agent 	roma-so-b	Standby	sds_roma		System OAM
		🖬 🖿 SDS – 🧇 Help	roma-do-1	Active	sds_roma		OAM MP
		- 🛱 Logout		Active	50.13.0 dr_roma		SDS Network OAM&P
			roma-or-a	Active	50.13.0		OAM&P
	systems, select <u>Main Menu</u> → Administration → Upgrade						I
27	Active Provisioning	s	ds_mrsvnc			NETWORK OAM P	Ready
	Site VIP:	sds-mrsvnc-a	.0.0-3.0.0_10.9.0			OAM&P	ETT
	1) Using the vertical scroll bar in the right panel, scroll to the row containing the Primary Provisioning Site - Active Provisioning Site Server (identified in Step 7 of this Procedure).	1				2	
	 Verify that the Upgrade State shows "Ready". 						
28.	Active Provisioning Site VIP:						
	Initiate Upgrade for the Primary Provisioning Site - Active Server .	Initiate Upgrade for the 7 of this Procedure) as a	e PRIMARY Provisi specified in Append	ioning Sit lix C.2 (In	e - Active hitiate Upg	e Server (identified rade).	in Step
29.	Active Provisioning Site VIP:						
	Monitor Upgrade for the Primary Provisioning Site - Active Server .	Monitor Upgrade for th 7 of this Procedure) as	e PRIMARY Provis specified in Append	sioning S dix C.3 <i>(M</i>	ite - Activ Ionitor Upg	e Server (identifie grade).	d in Step

Procedure 10:	Upgrade Primary Provisioning	Site NE
1100004410 10.	opgrado i milary i roviolorning	

Step	Procedure	Result
30.	Active Provisioning Site VIP: Complete Upgrade for the Primary Provisioning Site - Active Server.	• Complete Upgrade for the PRIMARY Provisioning Site - Active Server (identified in Step 7 of this Procedure) as specified in Appendix C.4 (Complete Upgrade).
31.	Active Provisioning Site VIP (SSH): 1) Access the active server command prompt.	CentOS release 5.7 (Final) Kernel 2.6.18-274.7.1.e15prerel5.0.0_72.32.0 on an x86_64 sds-mrsvnc-a login: root Password: <root_password></root_password>
	2) Log into the server as the "root" user.	
32.	Active Provisioning Site VIP (SSH): Change a ComAgent setting.	<pre>[root@sds-mrsvnc-a ~]# iset -fvalue=0 LongParam where "name='CAConnectToCLevel'" === changed 1 records === [root@sds-mrsvnc-a ~]#</pre>
33.	Active Provisioning Site VIP (SSH): Exit from the server command line.	[root@sds-mrsvnc-a filemgmt]# exit logout
		THIS PROCEDURE HAS BEEN COMPLETED

6.2.9 Allow Primary Provisioning Site Servers

Procedure 11: Allow Primary Provisioning Site Servers

Step	Procedure		Result						
1.	Using the VIP address, access the Primary Provisioning Site GUI.	• Access the Primary Provisioning Site GUI as specified in Appendix A.							
2.	Active Provisioning Site VIP: Select	Connected using VIP to sds-mrsvnc-	-b (ACTIVE NETWORK DAME Main Menu: Stat	هه) tus & Manage -> ۱)atabase				
	Main Manua	🗖 🧰 Configuration	Filter - Info -	1					
	Main Menu → Status & Manage	Alarms & Events							
	→ Database	Security Log	Network Element	Server	Role				
		Network Elements	sds_mrsvnc	sds-mrsvnc-a	Network OAM				
	as shown on the	💽 Server	sds_mrsvnc	sds-mrsvnc-b	Network OAM				
	ngnt.	📑 HA	so_carync	so-carync-a	System OAM				
		💽 Database	so_carync	so-carync-o	System OAM				
		💽 KPIs	so_calync	dp-caryne-1	MP Notwork OAk				
3.	the Primary Provisioning Site NE in the space provided to the right.	record the name of the Prima Primary Provisioning	Site NE:	NE in the space provid	led below:				
4.	Active Provisioning Site VIP:	Main Menu: Status &	Manage -> Dat	abase					
	Click "Filter" pull-	Filter 👻 Info 👻							
	"Network Element"	Filter							
	filter pull-down, select								
	the NE name for the	Network Element: sds_mrsv	nc 🚩 Reset Disp	olay Filter:					
	Provisioning Site.	- All -		07 81100					
		sds_mrsvnc sds_mrsv so_caryne	nc svnc-a	NETW OAM&I					
		sds_mrsvnc sr	ds-mrsvnc-b	NETW OAM&					
		so_carync se	o-carync-a	SYSTE					
5.	Active Provisioning Site VIP:			<u>_</u>					
	Click on the " GO" dialogue button	Network Element sds_mrsvnc	Reset Display Fil	ter None Rese	Go				
	located on the right end of the filter bar.								

Procedure 11: Allow Primary Provisioning Site Servers

Step	Procedure			Re	sult					
6.	Active Provisioning	Network Element	Server	Role	HA Role	Status	DB Leve	DB Birt	hday	Repl Status
		sds_mrsvnc	sds-mrsvnc-a	NETWORK OAM&P	Active	Minor	61435	2012-0	1-12 1.461 UTC	Inhib/ted
	presented with the list	sds_mrsvnc	sds-mrsvnc-b	NETWORK	Standby	Minor	Unknown	2012-0	1-12 1.451 UTC	Inhibited
	of servers associated with the Primary	sds_mrsvnc	qs-mrsvnc-1	QUERY	Not	Minor	Unknow	2012-0	1-12 1.461 UTC	Inhibited
	Provisioning Site NE.									
7.	Active Provisioning Site VIP:	Network Element	Server	Role		OAM Max HA Role	Application Max HA Role	Status	DB Level	OAM Repl Status
	select the server which displays	sds_mrsvnc	sds-mrsvnc-a	Netwo OAM&F	rk P	Active	dos	Normal	683064	Normal
	"Active" under the "OAM Max HA	sds_mrsvnc	sds-mrsvnc-b	Netwo OAM&F	rk P	Standby	005	Normal	683064	Normal
	Role" column.	sds_mrsvnc	qs-mrsvnc-1	Query	Server	Observe	008	Normal	683064	Normal
8.	 Active Provisioning Site VIP: 1) Click on the "Allow Replication" dialogue button in the bottom left of the right panel. 2) In the pop-up window, click on the "OK" dialogue button. NOTE: As a result of Allowing Replication to the server, Minor Alarm (Event ID 31113): "Replication Manually Disabled" should clear momentarily. 	port Allo Message from Allow Are y	w Replication	erlist sds-mrsv	nc-a,sd:	5-mrsvno	:-b,qs-mrs	× svnc-1.		2
9.	Active Provisioning Site VIP: It may take a minute or more for servers to transition from "Inhibited" state.	 Note: It may 	take a minute or i	more for the	servers	to tran	sition fro	m " Inh	ibited"	state.
10.	Active Provisioning Site VIP:	Network Element	Server	Role	HA Ro	le Statu	s DB Le	vel DB B	lirthday	Repl Status
	Light the surger	NO_RLGHNC	sds-righnc-a	OAM&P	Stand	ay Minor	Unkno	wn 2013 21:1	1:32.418 U	TC Intubited
	select the server	NO_RLGHNC	sds-righnc-b	NETWORK OAM&P	Active	Minor	Unkno	wn 2012 21:1	1:32.418 UT	TC Inhibited
	which displays "QUERY SERVER"	NO_RLGHNC	sds-righnc-qs	SERVER	Applic	able Minor	Unkno	wn 2012 21:1	1-01-25 1-32-418 U	TC Inhibited
	under the " Role" column.			-						

Procedure 11: Allow Primary Provisioning Site Servers

Step	Procedure		Result									
11.	Active Provisioning Site VIP:	Network Element	Server	Role	HA Role	Status	DB Leve	DB Birthday	Repi Status			
	Holding the Ctrl key	sds_mrsvnc	sds-mrsvnc-a	NETWORK	Active	Minor	3161241	2012-02-21 18:20:55.484 UTC	Inhibited			
	use the cursor to select the server	sds_mrsvnc	sds-mrsvnc-b	NETWORK	Standby	linor	Unknown	2012-02-21 18:20:55.484 UTC	Inhibited			
	which displays "Standby" under the "OAM Max HA Role" column.	sds_mrsvnc	qs-mrsvnc-1	QUERY SERVER	Not Applicable	Minor	Unknown	2012-02-21 18:20:56:484 UTC	Inhibited			
12.	Active Provisioning Site VIP:											
	1) Click on the "Allow Replication" dialogue button in the bottom left of the right panel.	port Allo	Allow Replication Back									
2) In the pop-up window, click on the "OK" dialogue button. Allow replication to serverlist sds-mrsvnc-a.sds-mrsvnc-b.os-mrsvnc-1.												
Are you sure? Allowing Replication to the server, Minor Alarm (Event ID 31113): "Replication Manually Disabled" should clear momentarily.												
13.	Active Provisioning Site VIP:											
	It may take a minute or more for servers to transition from " Inhibited " state.	Note: It mayNote: You m	take a minute o ay be required to	r more for the o log back in t	servers o the Ac	to trans tive Pro	sition fro ovisionin	m " Inhibited " sta g Site VIP.	ate.			
14.	Active Provisioning Site VIP:	Main Menu	: Status & M	lanage ->	Serv	er	_					
	From the "Network Element" filter pull- down, select the NE name for the Primary Provisioning Site .	Filter Filter Network Element: - All - Reset Display Filter: dr_dallastx - All - drsds-dallastx-b drsds-dallastx-b sds_mrsvnc sds_mrsvnc sds-mrsvnc-a sds-mrsvnc-b										

Step	Procedure		Result						
15.	Active Provisioning Site VIP:								
	Click on the "GO " dialogue button located on the right end of the filter bar.	Network Element	sds_mrsvnc 📉Rese	Display Filter.	I - None Rese	Go			
16.	Active Provisioning Site VIP:	Network Element	Server	Role	> H Birthday	Repl Status			
	Verify that every server in this Network Element is now blank under the "Repl Status" column.	sds_mrsvnc	sds-mrsvnc-a	NETWORK OAM&P	2-02-21 A 20:56.484 UTC	Allowed			
		sds_mrsvnc	sds-mrsvnc-b	NETWORK OAM&P	8 2-02-21 20:56.484 UTC	Allowed			
		sds_mrsvnc	qs-mrsvnc-1	QUERY SERVER	N 2-02-21 A 20:56.484 UTC	Allowed			
		THIS PROCE	DURE HAS BEEN	COMPLETED	>				

6.2.10 Allow DR Provisioning Site Servers

Procedure 12: Allow DR Provisioning Site Servers

Step	Procedure	Result							
1.	Using the VIP address, access the Primary Provisioning Site GUI.	• Access the Primary Provisioning Site GUI as specified in Appendix A.							
2.	Active Provisioning Site VIP: Select <u>Main Menu</u> → Status & Manage → Database as shown on the right.	Connected using VIP to sds-mrsvnc-b (ACTIVE NETWORK OAM&P) Main Menu Administration Configuration Alarms & Events Security Log Status & Manage Network Elements Server Role Server Network Elements Server Server Adamsse HA Database KPIs Processes							
3.	Record the name of the Primary DR Provisioning Site NE in the space provided to the right.	 Using the information provided in Section 3.1.2 (<i>Logins, Passwords and Site Information</i>) record the name of the DR Provisioning Site NE in the space provided below: DR Provisioning Site NE:							
4.	Active Provisioning Site VIP: From the "Network Element" filter pull- down, select the NE name for the DR Provisioning Site.	Hain Menu: Status & Manage -> Database Filter Filter Network Element - All - dr_dallastx sds_mrsvnc sds_mrsvnc sds_mrsvnc sds_mrsvnc sds_mrsvnc sds_mrsvnc sds_mrsvnc sds-mrsvnc sds-mrsvnc							
5.	Active Provisioning Site VIP: Click on the "GO" dialogue button located on the right end of the filter bar.	Network Element: dr_dallastx Reset Display Filter: - None Reset Go							

Site Servers

Step	Procedure	sult	sult						
6.	Active Provisioning	Network Element	Server	Role	HA Role	Status	DB Level	08 Birthday	Repl Status
	Sile VIF.	NO_RLGHINC	sds-righnc-a	NETWORK	Standby	Minor	Unknown	2012-01-25 21.11.32.418 UTC	Inhibited
	presented with the list	NO_RLGHNC	sds-righno-b	NETWORK	Active	Minor	Unknown	2012-01-25 21:11:32:418 UTC	Inhibited
	of servers associated with the DR	NO_RLGHNC	sds-righnc-qs	QUERY	Not Applicable	Minor	Unknown	2012-01-25 21:11:32:418 UTC	Inhibited
	Provisioning Site NE.								
7.	Active Provisioning	Network Element	Server	Role	HA Role	Status	DB Leve	al DB Birthday	Repl Status
	Site VIP:	NO_RLGHNC	sds-righnc-a	NETWORK OAM&P	Standby	Minor	Unknow	m 2012-01-25 21:11:32.418 UTC	Inhibited
	Using the cursor, select the server	NO_RLGHNC	sds-righnc-b	NETWORK OAM&P	Active	Minor	Unknow	m 2012-01-25 21:11:32.418 UTC	Inhibited
	which displays "QUERY SERVER"	NO_RLGHNC	sds-righnc-qs	QUERY SERVER	Not Applicab	Not Minor Unknown		2012-01-25 21:11:32.418 UTC	Inhibited
	under the " Role " column.								
8.	Active Provisioning Site VIP:	Network Element	Server	Role	HA Role	Status	DB Leve	DB Birthday	Repi Status
	Holding the Ctrl key.	sds_mrsvnc	sds-mrsvnc-a	NETWORK OAM&P	Active	Minor	3161241	2012-02-21 18:20:55:484 UTC	Inhibited
	use the cursor to	sds_mrsvnc	sds-mrsvnc-b	NETWORK OAM&P	Standby	linor	Unknown	2012-02-21 18:20:55.484 UTC	Inhibited
	which displays	sds_mrsvnc	qs-mrsvnc-1	QUERY	Not Applicable	Minor	Unknown	2012-02-21 18:20:56:484 UTC	Inhibited
	"OAM Max HA Role" column.								
9.	Active Provisioning Site VIP:	Network Element	Server	Role	HA Role	Status	DB Leve	DB Birthday	Repl Status
	Holding the Ctrl key	sds_mrsvnc	sds-mrsvnc-a	NETWORK OAM&P	Active	llinor	3161241	2012-02-21 18:20:56:484 UTC	Inhibited
	use the cursor to	sds_mrsvnc	sds-mrsvnc-b	NETWORK OAM&P	Standby	Minor	Unknown	2012-02-21 18:20:55:484 UTC	Inhibited
	which displays	sds_mrsvnc	gs-mrsvnc-1	QUERY SERVER	Not Applicable	Minor	Unknown	2012-02-21 18:20:56.484 UTC	Inhibited
	"OAM Max HA Role" column.								

Procedure 12: Allow DR Provisioning Site Servers

Step	Procedure	Result						
10.	Active Provisioning Site VIP: 1) Click on the "Allow Replication" dialogue button in the bottom left of the right panel.	port Allow Replication Back						
	 2) In the pop-up window, click on the "OK" dialogue button. NOTE: As a result of Allowing Replication to the server, Minor Alarm (Event ID 31113): "Replication Manually Disabled" should clear momentarily. 	Message from webpage Allow replication to serverlist sds-mrsvnc-a,sds-mrsvnc-b,qs-mrsvnc-1. Are you sure? OK Cancel						
11.	Active Provisioning Site VIP: It may take a minute or more for servers to transition from "Inhibited" state.	• Note: It may take a minute or more for the servers to transition from "Inhibited" state.						
12.	Active Provisioning Site VIP: From the "Network Element" filter pull- down, select the NE name for the DR Provisioning Site.	Main Menu: Status & Manage -> Database Filter Filter Info Reset Display Filter. Network Element - All - Reset Display Filter. - All - - All - - All - OAM&P sds_mrsvnc svnc-a OAM&P sds_mrsvnc sds-mrsvnc-b NETWO OAM&P OAM&P						
13.	Active Provisioning Site VIP: Click on the "GO" dialogue button located on the right end of the filter bar.	Network Element dr_dallastx Reset Display Filter: - None Go						

Procedure 12: Allow DR Provisioning Site Servers

Step	Procedure		Result							
14.	Active Provisioning Site VIP: Verify that every server in this Network Element is now blank under the "Repl Status" column.	Network Element	Server	Role	HA Role	day	Repl Status			
		sds_mrsvnc	sds-mrsvnc-a	NETWORK OAM&P	Active	-21 .484 UTC	Allowed			
		sds_mrsvnc	sds-mrsvnc-b	NETWORK OAM&P	Standb	-21 .484 UTC	Allowed			
		sds_mrsvnc	qs-mrsvric-1	QUERY SERVER	Not Applica	-21 .484 UTC	Allowed			
	THIS PROCEDURE HAS BEEN COMPLETED									
6.2.11 Enable Global Provisioning and Remote Import

Procedure 13: Enable Global Provisioning and Remote Import



Procedure 13: Enable Global Provisioning and Remote Import



Proce	dure 13	: Enable Global	Provisioning	and Remote	Import

11000		<u>J</u>			
7.	Check Services.	If there are no Services (o procedure. Otherwise, con	ther than Signaling) liste <i>tinue with the next step.</i>	d as " Unspecified ," skip	the remainder of this
8.	Active Provisioning Site VIP: 1) The user will be	Main Menu: Configura	ation -> Services	-Tue Oct 16 19:36:11 2012	
	presented with the		to the APP Made and	to the DF Mature of	
	"Services" configuration	Name	Intra-NE Network	Inter-NE Network	
	screen as shown on the	OAM	IMI	XMI	
	right.	Replication	IMI	XMI	
	2) Select the "Edit"	Signaling	Unspecified	Unspecified	
	dialogue button.	HA_Primary	IMI	XMI	
		T T Communication Age D Communication Age D SDS Age Help B Logout	nt Edit Report		
9.	Active Provisioning Site VIP: 1) Leave "Signaling" set to "Unspecified" and set the other services values so all Intra-NE Network traffic is directed across IMI and all Inter-NE	Main Menu: Cor	nfiguration -> S	ervices [Edit] —Mon Oct 22 20:28:	20 20:
	Network traffic is across	Name	Intra-NE Network	Inter-NE Network	
	XMI.	OAM	IMI 💌	XMI	~
	 Select the "Apply" dialogue button. 	Replication	IMI	XMI	×
	NOTE: These are	Signaling		Unspecified	
	recommended names.		onspecified	Chapterned	~
	recommended names. Service names may vary according to those used	HA_Secondary	IMI 💌	XMI	✓
	recommended names. Service names may vary according to those used during installation.	HA_Secondary HA_MP_Secondary		XMI	✓✓✓
	recommended names. Service names may vary according to those used during installation.	HA_Secondary HA_MP_Secondary Replication_MP	IMI V IMI V	XMI XMI XMI	
	recommended names. Service names may vary according to those used during installation.	HA_Secondary HA_MP_Secondary Replication_MP ComAgent	IMI V IMI V IMI V IMI V	XMI XMI XMI XMI XMI	

10.	Active Provisioning Site VIP: 1) The user should be presented with a banner information message stating "Data committed" 2) Select the "Ok" dialogue button.	Main Menu: Configur	ation a.N IMI Unsp	E Network	dit] Tue nter-NE XMI XMI Unspe XMI	Oct 16 19:36:53 2012
11.	Active Provisioning Site VIP:	Main Menu: Config	jura	tion -> Service	es	🧼 н
	The user will be presented with the " Services " configuration			Mo	n Oct 2	22 20:19:23 2012 L
	screen as shown on the right	Name		Intra-NE Network	h	nter-NE Network
		OAM		IMI	X	KMI
		Replication		IMI	X	KMI
		Signaling		Unspecified	U	Jnspecified
		HA_Secondary		IMI	×	KMI
		HA_MP_Secondary		IMI	×	KMI
		Replication_MP		IMI	×	KMI
		ComAgent		IMI	×	KMI
		THIS PROCEDURE HAS	BEEN	COMPLETED		

6.3 Perform Health Check (Post Upgrade of Primary / DR Provisioning Sites)

This procedure is part of Software Upgrade Preparation and is used to determine the health and status of the SDS network and servers.

• Execute SDS Health Check procedures as specified in Appendix B.

NOTE: As a result of disabling Global Provisioning, Minor Alarm (Event ID 10008): "Provisioning Manually Disabled" will alarm until Global Provisioning is re-enabled. It may be ignored for this Health Check.

NOTE: For major upgrade only: As a result of operating NO and DP layers at different software versions, Minor Alarm (Event ID 31216): "SysMetric configuration error" may alarm for each sublevel DP until the entire SDS network has been upgraded. It may be ignored for this Health Check.

6.4 SOAM Upgrade Execution

Call Oracle's **Tekelec Customer Care Center** at **1-888-FOR-TKLC** (1-888-367-8552); or 1-919-460-2150 (international) and inform them of your plans to upgrade this system prior to executing this upgrade.

Before upgrade, users must perform the system Health Check **Appendix B.** This check ensures that the system to be upgraded is in an upgrade-ready state. Performing the system health check determines which alarms are present in the system and if upgrade can proceed with alarms.

**** WARNING *****

If there are servers in the system, which are not in Normal state, these servers should be brought to the Normal or the Application Disabled state before the upgrade process is started. The sequence of upgrade is such that servers providing support services to other servers will be upgraded first.

**** WARNING *****

Please read the following notes on this procedure:

Procedure completion times shown here are estimates. Times may vary due to differences in database size, user experience, and user preparation.

Where possible, command response outputs are shown as accurately as possible. EXCEPTIONS are as follows:

- Session banner information such as time and date.
- System-specific configuration information such as hardware locations, IP addresses and hostnames.
- ANY information marked with "XXXX" or "YYYY." Where appropriate, instructions are provided to determine what output should be expected in place of "XXXX or YYYY"
- Aesthetic differences unrelated to functionality such as browser attributes: window size, colors, toolbars and button layouts.

After completing each step and at each point where data is recorded from the screen, the technician performing the upgrade must mark the provided Check Box.

For procedures which are executed multiple times, a mark can be made below the Check Box (in the same column) for each additional iteration that is executed.

Retention of Captured data is required as a future support reference if this procedure is executed by someone other than Oracle's Tekelec Customer Care Center.

NOTE: For large systems containing multiple Signaling Network Elements, it may not be feasible to apply the software upgrade to every Network Element within a single maintenance window. However, whenever possible, Primary and DR Provisioning Site Network Elements should be upgraded within the same maintenance window. If multiple maintenance windows are required, replication may be allowed and provisioning re-enabled between scheduled maintenance windows.

6.5 Perform Health Check (Pre Upgrade)

This procedure is part of Software Upgrade Preparation and is used to determine the health and status of the SDS network and servers. This may be executed multiple times but must also be executed at least once within the time frame of 24-36 hours prior to the start of a maintenance window.

• Execute SDS Health Check procedures as specified in Appendix B.

6.6 SOAM Upgrade

The following procedure details how to upgrade SDS SOAM sites.

Check off ($\sqrt{}$) each step as it is completed. Boxes have been provided for this purpose under each step number.

SHOULD ANY STEP IN THIS PROCEDURE FAIL, STOP AND CONTACT ORACLE'S TEKELEC CUSTOMER CARE CENTER FOR ASSISTANCE BEFORE CONTINUING!

6.6.1 Inhibit SOAM Servers and Perform Server Backup

Step	Procedure	Result			
1.	Using the VIP address, access the Primary Provisioning Site GUI.	Access the Primary Provi	sioning Site GUI as specified ir	n Appendix A.	
2.	Active Provisioning Site VIP:	Connected using VIP to sds-mrs	vnc-a (ACTIVE NETWORK OAM&	P)	
	Select	 Administration 	Main Menu: Status &	Manage -> Database	
	<u>Main Menu</u> → Status & Manage	o 🧰 Configuration 💿 🧰 Alarms & Events	Filter - Info -		
	→ Database	Security Log	Network Element	Server	
	as shown on the	Status & Manage	dr_dallastx	drsds-dallastx-a	
	right.	Server	sds_mrsvnc	sds-mrsvnc-a	
			sds_mrsvnc	sds-mrsvnc-b	
		Collection	so_carync	so-carync-a	
		💽 HA	so_carync	so-carync-b	
		💽 Database	so_carync	dp-carync-1	
		💽 KPIs	so_carync	dp-carync-2	
3.	Record the name of the SOAM NE to be upgraded.	Using the information provided record the name of the SOAM SOAM NE:	d in Section 3.1.2 (<i>Logins, Pas</i> I NE to be upgraded in the spa	swords and Site Information) ce provided below:	

Step	Procedure	Result				
4.	Active Provisioning Site VIP: From the "Network Element" filter pull- down, select the name for the SOAM NE.	Main Menu: Sta Filter • Error Filter Network Element sds_mrsvnc sds_mrsvnc	atus & Manage - Info Info Info Info Info Info Info Info	> Database Display Filte NETWO OAM&P NETWO OAM&P	е r. [RK 1 0.	
5.	Active Provisioning Site VIP:				}	
	Click on the " GO " dialogue button located on the right end of the filter bar.	Network Element: SO	_carync 💌 Reset D	Display Filter: - No		eset Go
6.	Active Provisioning Site VIP:	Network Element	Server	Role	HA Role	Status
	The user should be presented with the list	so_carync	so-carync-a	SYSTEM OAM	Active	Normal
	of servers associated with the SOAM NE.	so_carync	so-carync-b	SYSTEM OAM	Standby	Normal
		so_carync	dp-carync-1	MP	Active	Normal
		so_carync	dp-carync-2	MP	Active	Normal
7.	Active Provisioning Site VIP:	Network Element	Server	Role	HA Role	Status
	Using the Ctrl key to select multiple rows,	so_carync	so-carync-a	SYSTEM OAM	Active	Normal
	which displays " MP " under the " Role "	so_carync	so-carync-b	SYSTEM OAM	Standby	Normal
	column.	so_carync	dp-carync-1	MP	Active	Normal
		so_carync	dp-carync-2	MP	Active	Normal

Procedure 14: Inhibit SOAM Servers

Step	Procedure	Result
8.	Active Provisioning Site VIP: 1) Click on the "Inhibit Replication" dialogue button in the bottom left of the right panel.	ort Inhibit Replication Backu
	2) In the pop-up window, click on the "OK" dialogue button.	Message from webpage Image: Comparison of the server list dp-carync-1, dp-carync-2. Are you sure? 2 Inhibit replication to server list dp-carync-1, dp-carync-2. Are you sure?
	NOTE: As a result of inhibiting Replication to the server, Minor Alarm (Event ID 31113): "Replication Manually Disabled" will alarm until Replication is once again allowed.	OK Cancel
9.	Active Provisioning Site VIP:	Main Menu: Status & Manage -> Database
	From the "Network Element" filter pull- down, select the name for the SOAM NE.	Filter Info Filter Reset Display Filter: - All - - All - - All - - All - - dr_dallastx - allastx sds_mrsvnc - allastx so_carync - allastx so_carync - allastx
10.	Active Provisioning Site VIP:	
	Click on the " GO " dialogue button located on the right end of the filter bar.	Network Element: so_carync Reset Display Filter: - None - Reset Go

Step	Procedure		Result						
11.	Active Provisioning Site VIP:	Network Element	Server		Role		HA R	hday	Repl Status
	Verify that all MP servers now show	so_carync	so-carync-a		SYSTEM	MOAM	Active	2-21 6.484 UTC	
	"Inhibited" under the "Repl Status"	so_carync	so-carync-b		SYSTEM	I OAM	Stand	2-21 6.484 UTC	
	column.	so_carync	dp-carync-1	(MP		Active	2-21 6.484 UTC	Inhibited
		so_carync	dp-carync-2		MP		Active	2-21 6.484 UTC	Inhibited
12.	Active Provisioning Site VIP:	Network Element	Server	Role	HA Role	Status	DB Lev	ve DB Birthday	Repl Status
	Holding the Ctrl key	so_carync	so-carync-a	SYSTEM OAM	Active	Normal	31612	41 2012-02-21 18:20:56.484 UT	>
	to select multiple	so_carync	so-carync-b	SYSTEM OAM	Standby	Normal	31612	41 2012-02-21 10:20:56:484 UT	с
	servers which display	so_cannc	dp-carync-1	MP	Active	Minor	Unkno	wn 2012-02-21 18:20:56.484 UT	C Inhibited
	under the " Role " column.	so_carync	dp-carync-2	MP	Active	Minor	Unkno	wn 2012-02-21 18:20:56.484 UT	C Inhibited
13.	Active Provisioning Site VIP: 1) Click on the "Inhibit Replication" dialogue button in the bottom left of the right panel.	ort Inhibit i	Replication	Backu	1				
	 2) In the pop-up window, click on the "OK" dialogue button. NOTE: As a result of inhibiting Replication to the server, Minor Alarm (Event ID 31113): "Replication Manually Disabled" will alarm until Replication is once again allowed. 	Message from v Inhibit i Are you	vebpage replication to serve u sure? OK	rlist so-caryr Cancel	nc-a,so-ca	2 arync-b		2	

Step	Procedure			Result			
14.	Active Provisioning Site VIP: From the "Network Element" filter pull- down, select the name for the SOAM NE.	Main Menu: S Filter Erro Filter Network Element sds_mrsvnc sds_mrsvnc so_carync	tatus & Manage r • Info • so_carync • Re - All - dr_dallastx sds_mrsvnc so_carync sds-mrsvnc-b so-carync-a	e -> Datab	Filter:		
15.	Active Provisioning Site VIP: Click on the "GO" dialogue button located on the right end of the filter bar.	Network Element: S	so_carync 🖌 Reset	Display Filter:	- None -	Reset	Go
16.	Active Provisioning Site VIP: Verify all servers in this Network Element now show "Inhibited" under the "Repl Status" column.	Network Element so_carync so_carync so_carync so_carync	Server so-carync-a so-carync-b dp-carync-1 dp-carync-2	Role SYSTEM OAM SYSTEM OAM MP MP	HA Role Active Standb Active	hday 2-21 56.484 UTC 2-21 56.484 UTC 2-21 56.484 UTC 2-21 2-21	Repl Status Inhibited Inhibited Inhibited

Step	Procedure		Resul	t			
17.	1) Record the hostname of each server associated	• Using the worksheet posterver (SO, DP) assoc	rovided in Appendi iated with the SOA	x C.5, record M NE to be u	the hostname ograded.	es for ead	ch
	with the SOAM NE (identified in Step 3 of this Procedure).	"Check off" the assoc by executing Steps 24	tiated Check Box f - 34 shown below.	or each serve	r as backup i	s comple	eted
	2) Repeat Steps 24 - 34 of this Procedure for each Server listed	SOAM-A:					
	to the right.	SOAM-B:					
	 3) "Check off" each Check Box as Steps 24 - 34 are completed 	DP1:					
	for each Server listed to the right.	DP2:					
		DP3:					
		DP4:					
18.	Active Provisioning Site VIP:	Connected using VIP to dts3-sds-a	ications Diameter Sig 9.0 (ACTIVE NETWORK OAM&I	nal Router Full A ආ	Address Resolu	tion	
	NOTE: If this is a	 Administration 	Main Menu: Admi	nistration ->	Software Mai	nagemer	nt -> Up
	from 4.x to 5.x, then	— General Options	Filter 🔻 Tasks 💌				
	skip to Step 23.	🖻 🚔 Software Managemen		Server Status	Server Role	Function	Upgrade
	Otherwise, continue with this step.	– 📑 Versions – 📑 ISO Deployment	Hostname	OAM Max HA Role	Network Element	on	Start Time
		upgrade Remote Servers		Err	Network OAM&P	OAM&P	Backu
	Select	Configuration	dts3-sds-a	Active	dts3_sds		
	Main Menu	- Network Elements		Active	5.0.0-50.19.0		
	→ Administration	- Services		Norm	Network OAM&P	OAM&P	Backu
	→Software Mangment	- Servers	dts3-sds-b	Standby	dts3_sds		
	-> Opgrade	— 📑 Server Groups		Norm	Ouepy Server	05	Backu
	as shown on the	- Places	dts3-qs-1	Observer	dts3_sds		Datakti
	right.	Place Associations DSCP		Obsrvr	5.0.0-50.19.0		
		i DSCP		Warn	Network OAM&P	OAM&P	Backu
		🖬 🧰 Alarms & Events	dts3-drno-a	Active	dts3_drno		
		Security Log		Active	5.0.0-50.19.0 Svistem CAM	OAM	Backer
		Status & Manage — IN Network Elements	dts3-so-a	Active	dts3_so	OAM	Backu
				1.0			

Procedure 14: Inhibit SOAM Servers

Step	Procedure	Result					
4.0	Active Provisioning						
19.	Site VIP:		Server Status	Server Role	Function	Upgrade State	Stat
	1) Using the vertical	Hostname	OAM Max HA Role	Network Element		Start Time	Fin
	scroll bar in the right		Max Allowed HA Role	Application Version	on	Upgrade ISO	
	row containing the		Err	Network OAM&P	OAM&P	Backup Needed	
	hostname of the next	dts3-sds-a	Active	dts3_sds			
	server from the list in Step 17		Norm	Network OAM&P	OAMSE	Backup Needed	
	Step 17.	dts3-sds-b	Standby	dts3_sds			
	2) Verify that the		Active	5.0.0-50.19.0			
	shows "Backup		Norm	Query Server	QS	Backup Needed	
	Needed".	dts3-qs-1	Observer	dts3_sds			
			Ubsrvr	5.0.0-50.19.0	OAMER	Paokup Noodod	
		dts3-drno-a	Active	dts3 drno	OAMAF	Backup Needed	
			Active	E 0 0 E0 10 0			1
20	Active Provisioning	0.0000	Active	5.0.0.50.40.0			
20.	Site VIP:		Norm	System OAM	OAM	Backup Needed	
	1) Using the cursor	dts3-so-b	Standby	dts3_so	0.0	Datkup Heeded	
	select the row		Active	5.0.0-50.19.0			
	containing the		Norm	MP	SDS	Backup Needed	
	server from the list in	dts3-do-1	Active	dts3 so			
	Step 17.						
	2) Click the "Backup" dialogue button located across the bottom left of the right panel.	Backup ISO Clea	nup Prepare	Initiate Co	mplete		
24	Active Provisioning		Active	5.0.0-50.19.0			
Z 1.	Site VIP:		Norm	System OAM	OAM	Not Ready)
	Calast	dts3-so-b	Standby	dts3_so			
	Select		Active	5.0.0-50.19.0	000	Net Deed.	
	Main Menu → Administration → Software Mangment → Upgrade When this backup is finished, verify that the Upgrade State is "Not Ready"						
22.	Active Provisioning Site VIP: Backup all remaining servers.	Repeat Steps 18 - 21 operations may be per When all servers listed this Procedure is	of this Procedure formed in paralle I in Step 17 have completed.	e for each additic I for multiple ser had Upgrade S	onal server vers. State chang	listed in Step 17. T ged to " Not Ready ",	These then

Procedure 14: Inhib	oit SOAM Servers
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Step	Procedure	Result
23.	Active Provisioning Site VIP:	CentOS release 5.7 (Final) Kernel 2.6.18-274.7.1.e15prerel5.0.0_72.32.0 on an x86_64
	1) Access the command prompt.	sds-mrsvnc-a login: root Password: <root_password></root_password>
	2) Log into the server as the " root " user.	
	NOTE : This Step and all remaining Steps are only for a MAJOR upgrade from 4.x to 5.x.	
ſ	NOTE: T shall run f	The following Steps 24 - 34 provide a full backup of COMCOL run environment. These from the command line of every server in the SOAM Network Element to be upgraded. The following Steps 24 - 34 may be performed in parallel on each server.
24.	Server to be Upgraded (SSH):	CentOS release 5.7 (Final) Kernel 2.6.18-274.7.1.e15prerel5.0.0_72.32.0 on an x86_64
	1) Access the command prompt.	sdsSO-carync-a-a login: root Password: <root_password></root_password>
	 Log into the server as the "root" user. 	
25.	Server to be Upgraded (SSH):	*** TRUNCATED OUTPUT ***
	Output similar to that	VPATH=/var/TKLC/rundb:/usr/TKLC/appworks:/usr/TKLC/awpss7 PRODPATH=/opt/TKLCcomcol/cm5.13/prod
	snown on the right may appear as the server accesses the	VPATH=/opt/TKLCcomcol/runcm5.13:/opt/TKLCcomcol/cm5.13 PRODPATH=
	command prompt.	RELEASE=5.13 RUNID=00 VPATH=/var/TKLC/rundb:/usr/TKLC/appworks:/usr/TKLC/awpss7:/usr/TKLC/sd
		s PRODPATH=/opt/TKLCcomcol/cm5.13/prod
		RUNID=0 [root@sdsSO-carync-a-a ~]#
26.	Server to be Upgraded (SSH):	[root@sdsSO-carync-a-a ~]# cd /usr/TKLC/appworks/etc/exclude_parts.d
	Change directory to "exclude_parts.d".	
27.	Server to be Upgraded (SSH):	<pre>[root@sdsSO-carync-a-a exclude_parts.d]# vim Appworks.db_parts</pre>
	Edit file "Appworks.db_parts".	

Step	Procedure	Result					
28.	Server to be Upgraded (SSH):	Delete all lines after the header comments; the resulting file should look similar to this example:					
	Delete lines	*****					
		<pre># Name: Appworks.db_parts # Title: Lists the IDB database parts to be excluded from a full backup</pre>					

		# Def parts					
29.	Server to be Upgraded (SSH): Save and exit	Save and exit: :wq!					
30.	Server to be Upgraded (SSH):	[root@sdsSO-carync-a-a exclude_parts.d]# cd /root/					
	Change directory to root home.						
31.	Server to be Upgraded (SSH):	[root@sdsSO-carync-a-a ~]# /usr/TKLC/appworks/sbin/full_backup					
	Run backup utility.	Output similar to the following will indicate successful completion:					
		Success: Full backup of COMCOL run env has completed. Archive file					
		Backup.dsr.blade01.FullRunEnv.NETWORK_OAMP.20110417_021502.UPG.tar.gz written in /var/TKLC/db/filemgmt.					
		(Errors will also report back to the command line.)					
32.	Server to be Upgraded (SSH):	[root@sdsSO-carync-a-a filemgmt]# exit logout					
	Exit from the server command line.						

Step	Procedure		Result			
33.	Server to be Upgraded (SSH): Mark this server's backup as complete.	•	Reference the list in Step 17 and check off the server which just completed backup.			
34.	Active Provisioning Site VIP: Backup all remaining servers to be upgraded. NOTE: Steps 23 - 34 are only for a MAJOR upgrade from 4.x to 5.x.	•	Repeat Steps 24 - 33 of this Procedure for each additional server in the SOAM NE to be upgraded referencing the list in Step 17. These operations may be performed in parallel on multiple servers.			
	THIS PROCEDURE HAS BEEN COMPLETED					

6.6.2 Upgrade SOAM NE (SOAM Servers)

NOTE: Be sure to run Appendix F (Disable Hyperthreading) on each DP of this SOAM NE if hyperthreading has not been disabled there during installation or prior upgrade.

Step	Procedure		R	lesult				
1.	Record the name of the SOAM NE in the space provided to the right.	 Using the information provided in Section 3.1.2 (<i>Logins, Passwords and Site Information</i>) record the name of the SOAM NE in the space provided below: SOAM NE:						
2.	Using the VIP address, access the Primary Provisioning Site GUI.	Access the Primary Provisioning Site GUI as specified in Appendix A.						
3.	Active Provisioning Site VIP:	Connected using XMI to so carry						and and a state of the
	Select	i 🚊 Main Menu 💼 🧰 Administration	Main Menu: S	Status & Man	age -> Da	tabase	(Filter	ed)
	Main Monu	Configuration	Filter • Warn	ing • Into •				
	→ Status & Manage → Database	 Security Log Status & Manage 	Network Element	Server	Role	HA Role	Status	DB Level
		- Network Elements	so_carync	so-carync-a	SYSTEM OAM	Standby	Normal	0
	right.	E HA	so_carync	so-carync-b	SYSTEM	NA	Unknown	Unknow
4.	Active Provisioning Site VIP: From the "Network Element" filter pull- down, select the name for the SOAM NE.	Filter Filter Filter Status Sds_mrsvnc So_carync	s & Manage Info arync Res allastx mrsync arync sds-mrsync-b so-carync-a	et Display	Filter:			

Procedure 15: Upgrade SOAM NE (SOAM Servers)

Procedure 15: Upgrade SOAM NE (SOAM Servers)

Step	Procedure	Result							
5.	Active Provisioning Site VIP:		<u> </u>						
	Click on the " GO" dialogue button	Network Element: So_c	arync 🔽 Reset Disp	lay Filter: - None	Reset	Go	<u>+</u>		
	located on the right end of the filter bar.								
6.	Active Provisioning Site VIP:	Main Menu: St	atus & Manage	e -> Datab	ase (F	iltere	d)		
	Record the names of the Standby and	Filter 🔻 Info	▼						
	Active SOAM in Step 7 below.	Network Element	Server	Role	OAM Max HA Role	Applicat Max HA Role	State		
		so_carync	so-carync-a	System OAM	Active	005	Norn		
		so_carync	so-carync-b	System OAM	Standby	008	Norn		
		so_carync	dp-carync-1	MP	Active	005	Norr		
7.	Using the list of servers associated with the SOAM NE shown in the above steps	 Identify the "SOAM" Server names and record them in the space provided below: Standby SOAM: 							
	Record the Server names of the SOAM Servers associated with the SOAM NE.	Active SOAM:							
8.	Active Provisioning Site VIP: Prepare Upgrade for the Standby SOAM Server.	• Prepare Upgrade for the Standby SOAM Server (identified in Step 7 of this Procedure) as specified in Appendix C.1 (Prepare Upgrade).							
9.	Active Provisioning Site VIP: Initiate Upgrade for the Standby SOAM Server.	 Initiate Upgrade for the Standby SOAM Server (identified in Step 7 of this Procedure) as specified in Appendix C.2 (Initiate Upgrade). 							
10.	Active Provisioning Site VIP: Monitor Upgrade for the Standby SOAM Server.	• Monitor Upgrade for the Standby SOAM Server (<i>identified in</i> Step 7 of this Procedure) as specified in Appendix C.3 (<i>Monitor Upgrade</i>).							
11.	Active Provisioning Site VIP: Complete Upgrade for the Standby SOAM Server.	Complete Upgrade for as specified in Appen	or the Standby SOAM Sendix C.4 (Complete Upgra	rver (identified ir ade).	n Step 7 of	this Proce	dure)		

Procedure 15: Upgrade SOAM NE (SOAM Servers) Step Procedure Result **!! WARNING !!** STEPS 8-11 MUST BE COMPLETED BEFORE CONTINUING ON TO STEP 12. Active Provisioning 12. Site VIP: Prepare Upgrade for the Active SOAM Server (identified in Step 7 of this Procedure) as • Prepare Upgrade for specified in Appendix C.1 (Prepare Upgrade). the Active SOAM Server. **Active Provisioning** 13. Site VIP: Initiate Upgrade for the Active SOAM Server (identified in Step 7 of this Procedure) as ٠ Initiate Upgrade for specified in Appendix C.2 (Initiate Upgrade). the Active SOAM Server. Active Provisioning 14. Site VIP: Monitor Upgrade for the Active SOAM Server (identified in Step 7 of this Procedure) as ٠ Monitor Upgrade for specified in Appendix C.3 (Monitor Upgrade). the Active SOAM Server. **Active Provisioning** 15. Site VIP: Complete Upgrade for the Active SOAM Server (identified in Step 7 of this Procedure) as • Complete Upgrade specified in Appendix C.4 (Complete Upgrade).



for the Active SOAM

Server.

!! WARNING !! STEPS 12 - 15 MUST BE COMPLETED BEFORE CONTINUING ON TO STEP 16.



Procedure 15: Upgrade SOAM NE (SOAM Se	ervers)
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Step	Procedure	,		,	Re	sult					
17.	Active Provisioning Site VIP: From the "Network Element" filter pull- down, select the name for the SOAM NE.	Main Menu Filter • Filter Network Elem sds_mrsvnc sds_mrsvnc	Error	tus & M ✓ Info D_carync All - _dallastx ds_mrsvnc D_carync sds-mr so-cary	Rese	-> Da	play F NETY OAM NETY OAM	ilter:			
18.	Active Provisioning Site VIP: Click on the "GO" dialogue button located on the right	Network Elemen	nt so_c	arync 💌	Reset	Display F	ilter:	None -	Reset	Go	
19.	Active Provisioning Site VIP:	Network Elemen	it S	Server		Role		HA Role	Status	DB Level	
	The user should be presented with the list	so_carync	9	so-carync-a		SYSTEM	IOAM	Active	Minor	Unknov	wn (
	of servers associated with the SOAM NE.	so_carync	5	so-carync-b		SYSTEM	I OAM	Standby	Minor	Unkno	wn :
		so_carync	c	ip-carync-1		MP		Active	Normal	Unknov	wn :
		so_carync	c	dp-carync-2		MP		Active	Minor	Unknow	wn (
20.	Active Provisioning Site VIP:	Network Element	Server		Role	HA Role	Status	DB Level	DB Birthday	ÿ	Repl Status
	Holding the Ctrl key,	so_carync	so-caryn	0-a	SYSTEM OAM	Active	Minor	Unknown	2012-02-24 18:20:56.48	4 UTC	Inhibited
	select the servers that display "SYSTEM	so_carync	so-caryn	cb	SYSTEM OAM	Standby	Minor	Unknown	2012-02-21	4 UTC	Inhibited
	OAM" under the "Role" column.	so_carync	dp-caryn	c-1	MP	Active	Minor	Unknown	2012-02-21 18:20:56.48	4 UTC	Inhibited
		so_carync	dp-caryn	c-2	MP	Active	Minor	Unknown	2012-02-21 18:20:56.48	4 UTC	Inhibited

Procedure 15: Upgrade SOAM NE (SOAM Servers)



THIS PROCEDURE HAS BEEN COMPLETED

6.6.3 Upgrade SOAM NE (DP Servers)

Procedure 16: Upgrade SOAM NE (DP Servers)

Step	Procedure		Result	
	Active Provisioning			
1.	Site VIP:	Connected using VIP to sds-	mrsvnc-a (ACTIVE NETWOR	RK OAM&P)
	Select	 Main Menu Administration Configuration 	Main Menu: Sta	atus & Manage -> Database
	→ Status & Manage	🧃 🧰 Alarms & Events	Filter V Into	•
	→ Database	🧃 🧰 Security Log	Network Element	Server
	as shown on the	Status & Manage	dr_dallastx	drsds-dallastx-a
	right.	Server	sds_mrsvnc	sds-mrsvnc-a
		- Replication	sds_mrsvnc	sds-mrsvnc-b
		💽 Collection	so_carync	so-carync-a
		💽 HA	so_carync	so-carync-b
		💽 Database	so_carync	dp-carync-1
		💽 KPIS	so_carync	dp-carync-2
	the SOAM NE which was upgraded in Procedure 15.	SOAM NE:	CAM NE IN the space pro	vided below:
3.	Active Provisioning Site VIP:	Main Menu: Status	s & Manage -> Da	tabase
	From the "Network	Filter - Error -	Info 💌	
	Element" filter pull-		1110 +	
	down, select the name for the SOAM	Filter		
	NE.	Network Element so_ca	arync 🔽 Reset Di	splay Filter: [
		dr_da	llastx	
		sds_mrsvnc sds_r so_ca	nrsvnc hc-a arync	OAM&P
		sds_mrsvnc	sds-mrsvnc-b	NETWORK OAM&P
		so_carync	so-carync-a	SYSTEM O.
4.	Active Provisioning Site VIP:			
	Click on the " GO " dialogue button located on the right end of the filter bar.	Network Element: So_cary	nc v Reset Display F	Filter: - None Reset Go

Procedure 16: Upgrade SOAM NE (DP Servers)

Step	Procedure		Result						
5.	Active Provisioning Site VIP:	Network Element	Server	Role	HA Role	Status	DB Level		
	The user should be presented with the list	so_carync	so-carync-a	SYSTEM OAM	Active	Minor	Unknov	vn (
	of servers associated with the SOAM NE.	so_carync	so-carync-b	SYSTEM OAM	Standby	Minor	Unknov	vn :	
		so_carync	dp-carync-1	MP	Active	Norma	I Unknov	vn	
		so_carync	dp-carync-2	MP	Active	Minor	Unknov	vn	
6.	Active Provisioning Site VIP:	Main Menu: 9	Status & Man	age -> D	ataba	se (F	iltere	d)	
	Record the names of each DP Server (Role = MP) in Step 7 below	Filter - Info							
		Network Element	Server	Role	O M R	AM lax HA ole	Applicat Max HA Role	Stati	
		so_carync	so-carync-a	System	A MAC	ctive	00S	Norn	
		so_carync	so-carync-b	System	DAM S	tandby	00S	Norn	
		so_carync	dp-carync-1	MP	A	ctive	005	Norr	
7.	Using the list of servers associated with the SOAM NE shown in the above steps	Identify the "DP" Server names and record them in the space provided below: DP1: DP6:							
	Record the Server names of the DPs associated with the	DP2:		DP7:					
	SOAM NE.	DP3:		DP8:					
		DP4:	_ DP9:						
		DP5:	DP10:						

Procedure 16: Upgrade SOAM NE (DP Servers)

Step	Procedure	Result

	!! WARNING !!	S tl	teps 8 - 11 of this Procedure may only be executed in parallel for up to $\frac{1}{2}$ of ne DP Servers associated with the SOAM NE being upgraded.
8.	Active Provisioning Site VIP:	•	Prepare Upgrade for the DP1 Server (<i>identified in</i> Step 7 of this Procedure) as specified in Appendix C.1 (<i>Prepare Upgrade</i>).

	Prepare Upgrade for the DP1Server .	NOTE: If executing upgrade for multiple DPs in parallel, repeat this "Prepare Upgrade" step for the other DPs before continuing to the next Step.
9.	Active Provisioning Site VIP:	 Initiate Upgrade for the DP1 Server (identified in Step 7 of this Procedure) as specified in Appendix C.2 (Initiate Upgrade).
	Initiate Upgrade for the DP1 Server .	NOTE: If executing upgrade for multiple DPs in parallel, DPs can be multi-selected using the [CTRL] key.
10.	Active Provisioning Site VIP:	Monitor Upgrade for the DP1 Server (identified in Step 7 of this Procedure) as specified in
	Monitor Upgrade for the DP1 Server .	Appendix C.3 (Monitor Upgrade).
11.	Active Provisioning Site VIP:	Complete Upgrade for the DP1 Server (identified in Step 7 of this Procedure) as specified in
	Complete Upgrade for the DP1 Server .	Appendix C.4 (Complete Upgrade).



ſ

!! WARNING !!

STEPS 8 - 11 MUST BE COMPLETED BEFORE CONTINUING ON TO STEP 12 OF THIS PROCEDURE.

12.	Active Provisioning Site VIP:	Connected using VIP to sds-mrs	vnc-a (ACTIVE NETWORK O	AM&P)
	Select	Main Menu: Status & Manage -> Database		
	Main Menu → Status & Manage	Configuration Alarms & Events	Filter - Info -	
	→ Database	Security Log	Network Element	Server
as shown on the	🖻 😋 Status & Manage	dr_dallastx	drsds-dallasbi-a	
	right.	- Metwork Elements	sds_mrsvnc	sds-mrsvnc-a
		Server	sds_mrsvnc	sds-mrsvnc-b
		Collection	so_carync	so-carync-a
		📑 HA	so_carync	so-carync-b
		💽 Database	so_carync	dp-carync-1
		💽 KPIs	so_carync	dp-carync-2

Procedure 16: Upgrade SOAM NE (DP Servers)

Step	Procedure		Re	esult				
13.	Active Provisioning Site VIP: From the "Network Element" filter pull- down, select the name for the SOAM NE.	Main Menu: Sta Filter • Error Filter Network Element [sds_mrsvnc sds_mrsvnc so_carync	atus & Manage	-> Databa	ilter: WORK &P WORK &P			
14.	Active Provisioning Site VIP: Click on the "GO" dialogue button located on the right end of the filter bar.	Network Element: So	_carync 💌 Reset	Display Filter:	None -	Reset	Go	
15.	Active Provisioning Site VIP:	Network Element	Server	Role	HA Role	Status	DB Level	
	The user should be presented with the list	so_carync	so-carync-a	SYSTEM OAM	Active	Minor	Unknown	
	with the SOAM NE.	so_carync	so-carync-b	SYSTEM OAM	Standby	Minor	Unknown	
		so_carync	dp-carync-1	MP	Active	Normal	Unknown	
		so_carync	dp-carync-2	MP	Active	Minor	Unknown	

Procedure 16: Upgrade SOAM NE (DP Servers)

Step	Procedure	N	,	Re	sult				
16.	Active Provisioning Site VIP:	Network Element	Server	Role	HA Role	Status	D8 Leve	DB Birthday	Repl
	Holding the Ctrl key,	so_carync	so-carync-a	SYSTEM OAM	Active	Normal	3161241	2012-02-21 18:20:56:484 UTC	Allowed
	servers which	so_carync	so-carync-b	SYSTEM OAM	Standby	Normal	3161241	2012-02-21 18:20:56:494 UTC	Allowed
	during Steps 8 - 11.	so_carync	dp-carync-1	MP	AGENT	Minor	Unknown	2012-02-21 18:20:56:484 UTC	Inhibited
	CAUTION:	so_carync	dp-caryno-2	MP	Active	Minor	Unknown	2012-02-21 18:20:56:484 UTC	Inhibited
	n upgrading in phases (e.g. 1/2 of the installed MPs during each phase), then the user should be careful to select only those MPs which completed upgrade during the current phase.								
17.	Active Provisioning Site VIP: 1) Click on the "Allow Replication" dialogue button in the bottom left of the right panel.	port Allo	w Replication	Back	1				
	 2) In the pop-up window, click on the "OK" dialogue button. NOTE: As a result of Allowing Replication to the server, Minor Alarm (Event ID 31113): "Replication Manually Disabled" should clear momentarily. 	Message from Allow Are y	replication to serve rou sure?	rlist dp-caryn Cancel	c-1,dp-c	arync-2.	2		

Procedure 16: Upgrade SOAM NE (DP Servers)

Step	Procedure	Result			
18.	Active Provisioning Site VIP: From the "Network Element" filter pull- down, select the name for the SOAM NE.	Main Menu: State Filter Filter Filter Sds_mrsvnc Sds_mrsvnc So_carync	us & Manage ->	Database	
19.	Active Provisioning Site VIP:			}	
	Click on the " GO " dialogue button located on the right end of the filter bar.	Network Element: So_ca	arync 💌 Reset Disp	lay Filter: - None -	Reset Go
20.	Active Provisioning Site VIP:	Network Element	Server	Role	y Repl Status
	Verify that all servers in this Network	so_carync	so-carync-a	SYSTEM OAN	Allowed
	"Allowed" under the "Repl Status"	so_carync	so-carync-b	SYSTEM OAN	Allowed
	column.	so_carync	dp-carync-1	MP	Allowed
		so_carync	dp-carync-2	MP	Allowed
21.	Active Provisioning Site VIP: Select <u>Main Menu</u> → Communication Agent → Maintenance → Connection Status as shown on the right.	Connected using VIP to Main Menu Main Menu Configuration Alarms & Events Security Log Status & Manag Measurements Communication Configuration Maintenance Maintenance Maintenance Maintenance	Agent on Status ervices Status	IETWORK OAM&P) U: Communic Name nc-1 nc-2 01dsr02dpa	a

Procedure 16: Upgrade SOAM NE (DP Servers)

Step	Procedure	Result			
22.	Active Provisioning Site VIP:	Main Menu: Communication Agent -> Maintenance -> Connection			
	Verify that all expected	Filter -			
	Connections for the DPs "Allowed" in Steps 16- 20 of this procedure are present before continuing to the next step.	Server Name Automatic Connections Count Configured Connections Count + dp-carync-1 1 of 1 InService 1 of 2 InService 3 + dp-carync-2 1 of 1 InService 1 of 2 InService 3 + mo1nc01dsr02dpa 1 of 1 InService 2 of 2 InService 2 + mo1nc02dsr02dpa 1 of 1 InService 2 of 2 InService 2 + mo1nc02dsr02dpa 1 of 1 InService 2 of 2 InService 2 1. Verify that the "Automatic Connections Count" shows "x of x" for all entries (i.e. matching numbers). 1			
		 <u>Active/Active MPs:</u> Verify that the "Configured Connections Count" shows "y of y" for all entries (<i>i.e. matching numbers</i>). <u>Active/Standby MPs:</u> Verify that the "Configured Connections Count" shows "1 of 2" for all entries. 			
23.	1) Transfer the Server names of the DPs associated with the SOAM NE (identified in Step 7 of this Procedure).	 Transfer the Server names of each DP recorded in Step 7 in the space provided below: "Check off" the associated Check Box as Steps 8 - 22 are completed for each DP. DP1: DP6: 			
	 2) "Check off" each Check Box as Steps 8 - 22 are completed for the DP listed to the right. 	DP2: DP7: DP3: DP8:			
		DP4: DP9: DP5: DP10:			
24.	Active Provisioning Site VIP: Perform SW Upgrade for the remaining DP Servers.	Repeat Steps 8 - 23 of this procedure for the remaining DP Servers associated with the SOAM NE being upgraded.			
		THIS PROCEDURE HAS BEEN COMPLETED			



!!! WARNING !!!

Procedures in Appendix G (Finalizing Upgrade) **should only be executed** after all SOAM sites/servers on the network have been upgraded to the target release.

6.7 Perform Health Check (Post SOAM Upgrade)

This procedure is part of Software Upgrade Preparation and is used to determine the health and status of the SDS network and servers.

• Execute SDS Health Check procedures as specified in Appendix B.

7. RECOVERY PROCEDURES

Upgrade procedure recovery issues should be directed to Oracle's Tekelec Customer Care Center. Before executing any of these procedures, contact Oracle's Tekelec Customer Care Center at 1-888-FOR-TKLC (1-888-367-8552); or 1-919-460-2150 (International). Persons performing the upgrade should be familiar with these documents.

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

Warning

Do not attempt to perform these backout procedures without first contacting Oracle's Tekelec Customer Care Center at 1-888-FOR-TKLC or 1-888-367-8552; or for international callers 1-919-460-2150.

Warning

Backout procedures WILL cause traffic loss.

NOTE: These recovery procedures are provided for the Backout of an Upgrade ONLY! (i.e. Backout from a failed target release to the previously installed release). Backout of an initial installation is not supported.

The reason to execute a backout has a direct impact on any additional backout preparation that must be done. Backout procedure **WILL** cause traffic loss. Since all possible reasons cannot be predicted ahead of time, contact Oracle's Tekelec Customer Care Center as stated in the **Warning** box above.

NOTE: Verify that the two backup archive files created using Procedure 8 in Section 6.2.6 "Database Backup (Provisioning)" are present on every server that is to be backed-out. These archive files are located in the /var/TKLC/db/filemgmt directory and have different filenames than other database backup files. The filenames will have the format

Backup.<application>.<server>.FullDBParts.<role>.<date_time>.UPG.tar.bz2

and

Backup. <application>.<server>.FullRunEnv.<role>.<date_time>.UPG.tar.bz2

7.1 Backout DP SOAM NE

Step	Procedure	Result
1.	Using the VIP address, access the Primary Provisioning Site Active NO command prompt.	• Execute Procedure 3 "Disable AppProcControl Table Replication"
2 .	Using the VIP address, access the Primary Provisioning Site GUI.	• Access the Primary Provisioning Site GUI as specified in Appendix A.

Step	Procedure	Result					
3	Active SDS VIP:		8:8:8:8:8:8:8:8:8:8:8	:8:8:8:8:8:8:8:8:	8282828282	020202020202020	
J.	Select Main Menu	Connected using VIP to sds-mrsvnc-	Main Mer	ork oam&p	e) is&Ma	nage -> Da	itabase
	→ Status & Manage	Alarms & Events	Filter 🔻	Info 💌			
	as shown on the right.	 Security Log Status & Manage Network Elements 	Network Elen	nent	Server		Role
	5	💽 Server 💽 HA 💽 Database	sds_mrsvnc sds_mrsvnc		sds-mrsv sds-mrsv	nc-a nc-b	Network OAM
		📑 KPIs	ada mrauna		0.0 000000	o.1	Outors Panior
4.	Record the name of the DP SOAM NE to be downgraded (Backed out) in the space provided to the right.	Record the name of the DP SO DP SOAM NE:	DAM NE which	will be " B a	acked o	ut".	
5	Active SDS VIP:	Main Menu: Status & Manag	Main Menu: Status & Manage -> Database (Filtered)				
	From the "Network Element" filter pull- down, select the name for the DP SOAM NE.	Filter Filter Filter Sds_mrsvnc Gs-mrsvnc Gs-mrsvnc Gs-mrsvnc	C-b	ilter: - None NETWORK OAM&P QUERY SEA	RVER		
c	Active SDS VIP:				{		
6 .		Filter					0
	button located on the right end of the filter bar.	Network Element so_carync 💌 Ret	Display Filte	r: - None -	~	Reset	Go
7	Active SDS VIP:	Network Element Server	Role HA	Role Status	DB Level	DB Birthday	Repl
	The user should be	so_carync so-carync-a		dh, Normal	3164095	2012-02-21 18:20:56:484 UTC	
	of servers associated with the DP SOAM	so_carync so-carync-b	SYSTEM OAM Acti	ve Normal	3164095	18:20:30 484 UTC 2012-02-21	
	NE.	so canno do-canno2	NP Arts	ve Normal	3164095	18:20:56 404 UTC 2012-22-21	
	Identify each " Server" and its associated " Role " and " HA Role ".					2.20:56.484 UTC	

Step	Procedure	Result			
8.	Using the list of servers associated with the DP SOAM NE shown in the above Step 7.	Identify the DP SOAM "Server" names and record them in the space provided below: Standby DP SOAM:			
	names of the DPs associated with the DP SOAM NE.	Active DP SOAM: DP1: DP6:			
		DP2: DP7:			
		DP3: DP8:			
		DP4: DP9:			
		DP5: DP10:			
9.	Active SDS VIP: Click the "Logout" link on the server GUI.	Welcome guiadmin [Logout] Help Fri Nov 18 14:43:32 2011 UTC ge = A 1-32-character string. at least one alpha and must			
10.	Using the VIP address, access the System OAM GUI .	Access the System OAM GUI as specified in Appendix A.			
11.	System OAM GUI:				
	Select	Connected using VIP to sas-mrsvnc-a (ACTIVE NETWORK OAM&P)			
	Main Monu	Main Menu: Status & Manage -> Database			
	→ Status & Manage	■ Configuration ■ Alarms & Events Filter Info			
	→ Database	Status & Manage Network Element Server Role			
	as shown on the right.	Network Elements Server sds_mrsvnc sds-mrsvnc-a Network OAM			
		C HA C Database sds_mrsvnc sds-mrsvnc-b Network OAM			
		- KPIs Cupy Parise			

Procedure 17: Backout DP SOAM NE



out DP SOAM NE

Step	Procedure	Result
16.	Active SDS VIP: Using the list of servers recorded in step 8, inhibit all servers associated with the DP SOAM NE.	Inhibit all servers associated with the DP SOAM NE (listed in Step 8) using instructions specified in Steps 2 - 16 of Procedure 14 (Inhibit SOAM Servers and Perform Server Backup).
		NOTE: Steps 17 and 18 of this Procedure may be executed in parallel for DPs associated with the DP SOAM NE being Backed Out.
17	Active SDS VIP:	
	Referencing the list of servers recorded in Step 8 , backout the DP1 Server .	Backout the target release for the DP1 Server as specified in Appendix D (Backing out a Single Server).
18.	1) Record the Server names of the DPs associated with the DP SOAM NE	 Record the Server name of each DP to be "Backed Out" in the space provided below: "Check off" the associated Check Box as Appendix D is completed for each DP.
	2) Beginning with DP2, backout each DP Server.	DP1: DP6:
	3) "Check off" each Check Box as backout is completed for the DP Server listed to its right.	DP2: DP7: DP3: DP8:
		DP4: DP9:
		DP5: DP10:
19.	Active SDS VIP: Backout the Standby DP SOAM Server.	Backout the target release for the Standby DP SOAM Server as specified Appendix D (Backing out a Single Server).
20.	Active SDS VIP: Backout the Active DP SOAM Server.	Backout the target release for the Active DP SOAM Server as specified in Appendix D (Backing out a Single Server).
21.	Using the VIP address, access the System OAM GUI .	Access the System OAM GUI as specified in Appendix A.

Step	Procedure	Result					
22	System OAM GUI:						
		Connected using EXTERNAL to so	sSO-carync-a (ACTIVE SY	STEM OAM)			
	Select	🗖 🛅 Administration	Administration Main Menu: Status & Manage -> Database (Filtered)				
	Main Menu	 Configuration Alarms & Events 	Filter 💌				
	→ Status & Manage → Database	🖬 🧰 Security Log	Network Element	Server	Role		
		Status & Manage	SO_CARYNC	sdsSO-carync-a	SYSTEM OAM		
	as shown on the right.	💽 Server 💽 Replication	SO_CARYNC	sdsSO-carync-b	SYSTEM OAM		
		Collection	SO_CARYNC	dp-carync-1	MP		
		📑 Database 📑 KPIs	SO_CARYNC	dp-carync-2	МР		
		📑 Processes					
23	System OAM GUI:						
	1) Click on the	1		Enable provisioning. Are you sure?			
	"Enable Site	I					
	Provisioning"			OK Car	ncel		
	bottom left corner of						
	the right panel.	Enable Site Provisioni	ng F				
	2) In the pop-up						
	window, click on the " OK " dialogue	1		2			
	button.						
24.	System OAM GUI:	Welcome guiad	nin [Logout]				
	Click the "Logout"						
	link on the server GUI.		🤣 Help				
		Fri Nov 18 14:43:33	2 2011 UTC				
		ge = A 1-32-character strin	g.				
		acteast one alpha and mu	SL				
	Liging the VID						
25.	address, access the						
	Primary Provisioning	Access the Primary Provisi	oning Site GLII as sr	pecified in Annendix A			
	Sile GOI.						
	Active SDS VIP:	Allow all servers associate	ed with the DP SOAN	INE (listed in Step 8) us	ing instructions as		
26.		specified in:		(5		
	Using the list of servers recorded in	•					
	step 8, Allow all	• Steps 16 - 24 of	Procedure 15 "Upg	irade SUAM NE (SUAI	vi Servers)", and		
	with the DP SOAM	• Steps 12 - 20 of	Procedure 16 "Upg	rade SOAM NE (DP Ser	vers)".		
	NE.						

Procedure 17: Backout DP SOAM NE

Step	Procedure	Result			
27.	Active SDS VIP:				
	Execute Health Check at this time only if no other servers require Back Out.	Execute Health Check procedures (Post Backout) as specified in Appendix B , if Backout procedures have been completed for all required servers.			
	Otherwise, proceed with the next Backout.				
	THIS PROCEDURE HAS BEEN COMPLETED				

7.2 Backout DR SDS NE

Procedure 18: Backout DR SDS NE

Step	Procedure	Result
6.	Using the VIP address, access the Primary Provisioning Site GUI.	• Access the Primary Provisioning Site GUI as specified in Appendix A.
7.	Active SDS VIP:	
	Select <u>Main Menu</u> → Status & Manage → Database	Connected using VIP to sds-mrsvnc-a (ACTIVE NETWORK OAM&P) Administration Configuration Alarms & Events
	as shown on the	Security Log Security Log Network Element Server Role
	right.	Server sds_mrsvnc sds-mrsvnc-a Network OAM.
		The sds_mrsvnc sds-mrsvnc-b Network OAM
		- KPIs Cupp Parint
8.	Active SDS VIP: Record the name of the DR SDS Network Element.	Record the name of the DR SDS NE which will be "Backed out". DR SDS NE:
	Active SDS VIP	Main Manue Status & Managa > Database (Elterad)
9.	From the "Network	Filter
	Element" filter pull- down, select the	Filter
	name for the DR SDS NE.	Network Element: sds_mrsvnc V Reset Display Filter: - None - - All -
		sds_mrsvnc dr dellasbo rsvnc-b OAM&P
	Active SDS VIP:	sds mrsvnc as-mrsvnc-1 QUERY SERVER
10.	Click the "CO"	Filter
	button located on the right end of the filter bar.	Network Element dr. dallastx V Reset Display Filter: - None - V E Reset Go
11.	Active SDS VIP:	Network Element Server Role Role Status DB DB Birthday Repl Status
	The user should be	sds_mrsvnc sds-mrsvnc-a NETWORK Standby Normal 3164095 2018-02-21 0AM&P Standby Normal 3164095 2018-02-21 18:20:51:484 UTC
	of servers associated with the DR SDS NF	sds_mrsvnc sds-mrsvnc-b NETWORK Active Normal 3164095 2012-02-01 0AM&P Active Normal 3164095 2012-02-01 18:20:55:484 UTC
	Identify each	sds_mrsvnc q=mrsvnc-1 QUERY Not SERVER Applicable Normal 3164555 2012-02-21 18:20:56.484 UTC
	"Server" and its associated "Role" and "HA Role".	
Procedure 18: Backout DR SDS NE

Step	Procedure	Result
12.	Using the list of servers associated with the DR SDS NE shown in the above Step 11. Record the Server names associated with the DR SDS NE.	Identify the DR SDS "Server" names and record them in the space provided below: Standby DR SDS: Active DR SDS:
		Query Server:
13.	Active SDS VIP: Select <u>Main Menu</u> → SDS → Configuration → Options as shown on the right.	Connected using VIP to roma-sds-a (ACTIVE NETWORK OAM&P) Welcome gui Main Menu Administration Fri Nov 01 12:45: Alarms & Events Security Log Fri Nov 01 12:45: Status & Manage Variable Value Description Measurements Configuration Value Description Connections Nat Hosts Display Command Output Value Description comments Connections Nat Hosts Destination Map Allow Connections Value Default = UNCH Maint Transaction Size South Southers Blacklist Log Provisioning Messages Value Output = Souther or not to 10 command log
14.	Active SDS VIP: Disable Connections: 1) Un-check the "Allow Connections" check box. 2) Click on the "Apply" dialogue button.	Connected using VIP to roma-sds-a (ACTIVE NETWORK OAMBEP) We Main Menu Administration Configuration Fill Alarms & Events Fill Security Log Status & Manage Measurements Variable Configuration Variable Configuration Configuration Agent Status & Manage Variable Configuration Configuration Status & Manage Variable Measurements Configuration Status & Manage Variable Not Hosts Options Not Hosts Options Not Hosts Options Destinations Options Destination Map Destination Map

COUT DR SDS NE
(

Step	Procedure	Result				
15.	Active SDS VIP:	Connected using VIP to roma-sds-a (ACTIVE NETWORK OAM&P)	Welcome			
	The user should be presented with a confirmation message (in the banner area) stating: "Update	Main Menu Main Menu Main Menu: SDS -> Config Main Menu: SDS -> Config Main Menu: SDS -> Config Successi Update successful. Diate successful.	guration -> Options Fri Nov 01 1			
	NOTE: As a result of not allowing connections, Critical (Event ID 14100): "Interface Disabled" will alarm until Connections are Allowed again.	Status & Manage Network Elements Server HA Display Command Output Display Command Output Processes Allow Connections Server Server	Value Descrip Whether or not to dl and responses on th provisioning data. DEFAULT = UNCHE Deprovisioning connex DEFAULT = CHECK Solution DEFAULT = CHECK 50 commands DEFAULT = SO; RAI			
16.	Active SDS VIP: Using the list of servers recorded in step 12, inhibit all servers associated with the DR SDS NE.	Inhibit replication to all servers associated with the DR SE in Procedure 6 (<i>Inhibit DR Provisioning Site Servers</i>).	DS NE (listed in Step 7) as specified			
		NOTE: Steps 17 and 18 of this Procedure may be	e executed in parallel.			
17.	Active SDS VIP: Backout Standby - DR SDS Server.	Backout the Standby - DR SDS Server as specified in Ap Server).	opendix D (Backing out a Single			
18.	Active SDS VIP: Backout Query Server.	Backout the Query Server - DR as specified in Appendix	D (Backing out a Single Server).			
19.	Active SDS VIP: Backout Active - DR SDS Server.	Backout the Active - DR SDS Server as specified in App Server).	endix D (Backing out a Single			
20.	Active SDS VIP: Using the list of servers recorded in step 12, Allow all servers associated with the DR SDS NE. Using the VIP	Allow replication to all servers associated with the DR SD Procedure 12 (Allow DR Provisioning Site Servers). Access the Primary SDS GUI as specified in Appendix A.	S NE (listed in Step 7) as specified in			
	address, access the Primary SDS GUI.					

Procedure 18: Backout DR SDS NE

Step	Procedure		Result		
22	Active SDS VIP:				
	Select	Connected using VIP to roma-sds-a (Administration	Main Menu: SDS -> Configurati	on -> Options	- Fri
	<u>Main Menu</u> → SDS → Configuration	o Configuration D Alarms & Events D Security Log D Status & Manage	Apply	Value	
	\rightarrow Options	Measurements	variable	Value	Whe
	as shown on the right.	a	Display Command Output	8	comi the G data. DEF# Whet
		Connections NAI Hosts Destinations Destination	Allow Connections	0	Incor conn DEF/ Maxi mani
23.	Active SDS VIP:	Connected using VIP to roma-sds-a (50	Welcome quiêd
	Enable Connections:	Main Menu	Main Menu: SDS -> Configuratio	on -> Options	guine guine
	1) Check the "Allow Connections" check	Administration Configuration Alarms & Events Security Log	Apply		- Fri Nov 01 12:46:24
	box.	 Status & Manage Measurements 	Variable	Value	Description
	2) Click on the "Apply" dialogue	Communication Agent Sos So Sos Sos Sos Sos	Display Command Output	×	commands and respo the GUI when provisik data. DEFAULT = UNCHEC
	button	Connections NAI Hosts Destinations	Allow Connections		Whether or not to allo incoming provisioning connections. DEFAULT = CHECKER Maximum number of c
		Bestination Map Bestination Map	Max Transaction Size	commands	manipulation comman transaction. DEFAULT = 50; RAW 100 Whether or not to log
		📮 🚔 Maintenance - 📑 Connections - 📑 Command Log	Log Provisioning Messages	×	Incoming and outgoin provisioning messag command log.
24.	Active SDS VIP:	Connected using VIP to roma-sds-a	ACTIVE NETWORK OAM&P)		Welcome
	The user should be presented with a	 Administration Configuration 	Main Menu: SDS -> Configurati	on -> Options	Fri Nov 01 14
	message (in the banner area) stating: "Update	Alarms & Events Alarms & Events Alarms & View Active Alarms & View History Defined a security Log	1 Successi Update successful.		
	Successful".	🖬 🚔 Status & Manage	Apply		
		- Server	Variable	Value	Descript Whether or not to dis
	NOTE: As a result of again allowing	- MA - Ma Database - Markets - Markets	Display Command Output	8	and responses on the provisioning data. DEFAULT = UNCHEC Whether or not to all
	<i>connections, Critical</i> (Event ID 14100): "Interface Disabled"	 Tasks Active Tasks Scheduled Tasks 	Max Transaction Size	50 commands	provisioning connect DEFAULT = CHECKE Maximum number of manipulation comma
	will be cleared.	- Files		8	DEFAULT = 50; RAN
		Note: Minor Alarm 31100 raise on each server until a is no functional impact. (PR	(DB replication process (inetsync) is in II NOAM servers are also backed out 2 220871)	<i>mpaired by a s/w fa</i> to the original relea	<i>ult</i> } may se. There

Procedure 18: Backout DR SDS NE

Step	Procedure	Result
25.	Active SDS VIP: Execute Health Check at this time only if no other servers require Back Out. Otherwise, proceed with the next	Execute Health Check procedures (Post Backout) as specified in Appendix B , if Backout procedures have been completed for all required servers.
	Backout.	
		THIS PROCEDURE HAS BEEN COMPLETED

7.3 Backout Primary SDS NE

Step	Procedure			Res	ult					
1.	Using the VIP address, access the Primary Provisioning Site GUI.	Access the Prin	• Access the Primary Provisioning Site GUI as specified in Appendix A.							
2.	Active SDS VIP:	Connected using VIP to sds	-mrsvnc-a	(ACTIVE NETWOR	RK OAM&P)			ausausaus	
	Seleci	Administration	Main Menu: Status & Manage -> Database							
	<u>Main Menu</u> → Status & Manage	Configuration Alarms & Events		Filter 👻	Info 💌					
	→ Database	 Security Log Status & Manage 		Network Eleme	nt	Server		Rol	Role	
	right.	📑 Server	5	sds_mrsvnc		sds-mrs	vnc-a	Net	work OAM&P	
		📑 HA 📑 Database		sds_mrsvnc		sds-mrsvnc-b		Net	Network OAM&P	
		💽 KPIs 💽 Processes		sds_mrsvnc qs-mr		qs-mrsvi	mrsvnc-1 Que		ery Server	
3.	Active SDS VIP:	Main Menu: Statu	ıs & Ma	nage -> Da	-> Database					
	To preserve provisioning changes made since the upgrade, continue	Filter • Info •								
		Network Element	Server		Role		OAM Max HA Role	Applicati Max HA Role	Status	
	with Steps 3 - 6 .	sds_mrsvnc	sds-mrsv	nc-a	Network	OAM&P	Active	005	Normal	1
	Otherwise, skip to Step 7.	sds_mrsvnc	sds-mrsv	nc-b	Network	OAM&P	Standby	00S	Minor	
		sds_mrsvnc	qs-mrsvn	⊳ 1	Query Se	rver	Observe	005	Minor	
	1) Select the name of the Network OAM&P	so_carync	so-carync-a		System (MAG	Standby	008	Normal	
	Active role.									
	2) Then click the					2	000			
	"Backup" button.	Disable Provisioning	Report	Allow Replicatio	n Bac	kup	Compar	e Re	store	

Step	Procedure	Result					
4	Active SDS VIP:	Main Menu: Status & Manage -> Database [Backup]					
4.							
	present with the						
	backup form.	Database Backup					
		Server: sds-mrsync-a					
		Select data for backup Configuration Select the type of Backup to perform.					
		Compression © gzip Select the backup archive compression algorithm. The following file suffix will be applied for the selected option: • .tar gz - gzip compression, • .tar bz - bzip2 compression					
		tar - no compression.					
		Archive Name Backup sds.sds-mrsvnc-a.ProvisioningAndConfiguration.NETWORK_OA/ Archive Name (without the compression type suffix).					
		Comment: May not contain the following characters: * \$					
		Ok Cancel					
5	Active SDS VIP:	Database Backup					
J.		Field Value					
	 Uncheck the 	Server: sds-mrsvnc-a					
	Configuration box	Select data for Provisioning					
	so only Provisioning data is backed up.	backup Configuration					
	2) Enter a comment in the comment field.						
	3) Click "Ok" button.						
		Compression ©gzip ©bzip2 Onone *					
		Archive Name Backup.sds.sds-mrsvnc-a.Provisioning.NETWORK_OAMP.20121031_110*					
		Comment Backout 2					
		Ok Cancel					
6.	Active SDS VIP:	Info 👻					
	Wait for the Info tab	Info					
	message to indicate successful backup.	Note: ProvisioningAndConfiguration Backup on sds-mrsvnc-a status MAINT_IN_PROGRESS. Success: Provisioning Backup on sds-mrsvnc-a status MAINT_CMD_SUCCESS. Success Success: Configuration Backup on sds-mrsvnc-a status MAINT_CMD_SUCCESS. Success Durability Admin Status is: None. Durability Operational Status is: NO Disk					

Procedure 19: Backout Primary SDS NE

Step	Procedure				Result				
7	Active SDS VIP:								
		Connected using	VIP to sds-mrsvnc	-a (ACTIVE	NETWORK OF	AM&P)			
	Select	Main Menu	ration	Main	Menu: S	tatus & M	lanage -> Da	tabase	
	Main Menu	🖬 🦳 Configur	Configuration						
	→ Status & Manage → Database	a 🧰 Alarms &	Alarms & Events						
	as shown on the	 Security Status & 	Log .Manage	Netwo	rk Element	Server		Role	
	right.	📑 Netwo 📑 Serve	ork Elements r	sds_m	rsvnc	sds-mr	svnc-a	Network OAM	
		💽 HA 🏹 Datal	base	sds_m	rsvnc	sds-mr	svnc-b	Network OAM	
		🎆 KPIs		ada m	10100	00.0000	mo 1	Ouani Paniar	
8.	Record the name of the Primary SDS NE to be downgraded (Backed out) in the space provided to the right.	Record the Primary SI	name of the Prim DS NE:	ary SDS N	E which wil	l be " Back e	ed out".		
9.	Active SDS VIP:	Main Menu: S	tatus & Manage	-> Databa	ase (Filter	ed)			
	From the "Network Element" filter pull- down, select the name for the Primary SDS NE.	Filter - Info Filter Network Element sds_mrsvnc sds_mrsvnc	Filter Filter Network Element: dr_dallastx • All - • All - • Sds_mrsvnc • gs_mrsvnc • so_carync • so_carync • gs-mrsvnc-1 • QUERY SERVER						
10	Active SDS VIP:					5			
	Click the " GO " button located on the right end of the filter bar.	Filter Network Element	sds_mrsvnc 💌 🛛 R	Reset	play Filter: 🕞 N	lone -	Reset		
11	Active SDS VIP:	Network Element	Server	Role	HA Role Sta	DB	DB Birthday	Repl	
	The user should be presented with the list	sds_mrsvnc	sds-mrsvnc-a	NETWORK OAM&P	Standby Nor	mal 3164095	2012-02-21 18:20:51 484 UTC	Status	
	of servers associated	sds_mrsvnc	sds-mrsvnc-b	NETWORK OAM&P	Active Nor	mai 3164095	2012-02-31 18:20:55:484 UTC		
	SDS NE.	sds_mrsvnc	es mrsvno-1	QUERY SERVER	Not Applicable Nor	mal 3164995	2012-02-21 18:20:56.484 UTC		
	Identify each " Server" and its associated " Role " and " HA Role ".								

Procedure 19: Backout Primary SDS NE

Step	Procedure	Result	
12.	Using the list of servers associated with the Primary SDS NE shown in the	Identify the Primary SDS "Server" names and record them in the space pro	vided below:
	above Step 11. Record the Server names associated with the Primary SDS NE.	Active Primary SDS: Query Server:	
13.	Active SDS VIP: Select	Connected using VIP to roma-sds-a (ACTIVE NETWORK OAM&P) Administration Administration Main Menu: SDS -> Configuration -> Options	Welcome guiad
	→ SDS → Configuration → Options as shown on the right.	Alarms & Events Apply Security Log Variable Status & Manage Variable Measurements Variable Communication Agent Display Command Output SDS Optione Connections Allow Connections	Description Whether or not to disp commands and resport the GUI when provision data. DEFAULT = UNCHEC Whether or not to allo incoming provisioning connections
		NAL Hosts Destinations Destinations Destination Map Routing Entities Max Transaction Size Subscribers Blacklist Connections Log Provisioning Messages	Connectors DEFAULT = CHECKEC Maximum number of o manipulation comman transaction. DEFAULT = 50; RANO 100 Whether or not to log incoming and outgoin provisioning message command log.
	Active SDS VIP:		
14.	Disable Connections: 1) Un-check the "Allow Connections"	Connected using VIP to roma-sds-a (ACTIVE NETWORK OAM&P) Administration Administration Administration Alarms & Events Alarms & Events Apply	Wa
	check box. 2) Click on the "Apply " dialogue button.	Status & Manage Variable Value Measurements Communication Agent Display Command Output Value SDS Configuration Allow Connections Allow Connections NAI Hosts Destination Map Normation Map	Whell comm the G data DEFA Whell Incor conn DEFA Maxi mani

Procedure 19: Backout Primary SDS NE

Step	Procedure	Result					
15	Active SDS VIP:						
25	The user should be presented with a confirmation message (in the banner area) stating: "Update Successful".	Connected using VIP to roma-sds-3 (ACTIVE NETWORK COAMEP) Welcome Main Menu Administration Configuration Administration Administration Main Menu: SDS -> Configuration -> Options Fri Nov 01 14 Successf Update successful Apply Apply					
	NOTE: As a result of not allowing connections, Critical (Event ID 14100): "Interface Disabled" will alarm until Connections are Allowed again.	Variable Value Descrip Server HA Display Command Output Image: Server of the server of t					
16.	Active SDS VIP: Inhibit all non-active servers across all network elements.	 Inhibit <u>only</u> non-active servers (whether standby or query server) across all network elements as specified in: Procedure 6 (Inhibit DR Provisioning Site Servers), Procedure 7 (Inhibit Primary Provisioning Site Servers), and Using instructions specified in Steps 2 - 16 of Procedure 14 (Inhibit SOAM Servers and Perform Server Backup). 					
17.	Active SDS VIP: Inhibit all active servers across all network elements.	 Inhibit all remaining (ie, <i>active</i>) servers across <i>all</i> network elements as specified in: Procedure 6 (<i>Inhibit DR Provisioning Site Servers</i>), Procedure 7 (<i>Inhibit Primary Provisioning Site Servers</i>), and Using instructions specified in Steps 2 - 16 of Procedure 14 (<i>Inhibit SOAM Servers and Perform Server Backup</i>). 					
		NOTE: Steps 18 and 19 of this Procedure may be executed in parallel.					
18.	Active SDS VIP: Backout Standby - Primary SDS Server.	Backout the target release for the Standby - Primary SDS Server as specified in Appendix D (Backing out a Single Server).					
19.	Active SDS VIP: Backout Query Server.	Backout the target release for the Query Server as specified in Appendix D (Backing out a Single Server).					
	O	!! WARNING !! STEPS 18 and 19 MUST BE COMPLETED BEFORE CONTINUING.					

Step	Procedure	Result					
20.	Active SDS VIP: Backout Active - Primary SDS Server.	ackout the target release for the Active - Primary SDS Server as specified in Appendix D Backing out a Single Server).					
21.	Using the VIP address, access the Primary SDS GUI.	Access the Primary SDS GUI as specified in Appendix A.					
22.	Active SDS VIP: Select <u>Main Menu</u> → Status & Manage → Files as shown on the right.	Connected using VIP to sds-mrsvnc-a (ACTIVE NETWORK OAM&P) Main Menu Administration Administration Alarms & Events Security Log Security Log Security Log Network Elements Server HA Database KPIS Processes KPIS Tasks Tesks					
23.	Active SDS VIP: 1) Click the Timestamp header so the black arrow points downward, to sort in reverse chronology. 1) Find your backup which should start with Backup with .MAN. extension and exhibit a recent timestamp encoded after the OAMP text.	Main Menu: Status & Manage -> Files File of 22:02:19 2012 File of 22:02:19 2012 Image: Status & Manage -> Files Image: Status & Manage -> Gamesone 1 Status & Stat					

Procedure 19: Backout Primary SDS NE

Step	Procedure			Resu	ılt					
24.	Active SDS VIP: If you found the backup, continue to the next step. Otherwise, click on the Standby server's tab and repeat step 23 above	 If you found the backup, continue to the next step. Otherwise, Standby server's tab and repeat step 23 above. If the Standby serve file, you will need to set the <i>Active</i> server's Max Allowed HA Role to next 3 steps (instead of the Standby server as shown). 							k on the has the back standby in the or 22:02:19 2012	aup e
	20 00000	ada menuncial ada menuncia	an anna an t		-	h dhich	nime 1	den ded	allastea	
		File Name	da.manue.1	a concarynic a	and contribute	Size Typ	e Tim	estamp		ł.
		Backup sds.sds-mrsvnc-	DUODE OLUP201	20007 2437031	Iabi tar br2	2.8 bz2	201	2-09-07 21	42.18 UTC	ť.
		novexnotlexnot horis6natch all 20	1209071950 cev	20007_213703.8	PVV SBLDE2	2.6	201	2-09-07 19	50.031/00	
						MB 2.2				
		provexport/export_bons5 all 201209	071935.csv			MB CSV	201	2-09-07 19	:35:06 UTC	
		101101101101101101101101101101	10110110110110	101101101101	1001001001			01101101		
25.	Active SDS VIP:	Connected using VIP to sd	s-mrsvnc-a (AC	TIVE NETWO	RK OAM&P)		<u>iatiativa</u>		
	Select	🖻 🚨 Main Menu		dain Man	Chat					
	Main Manu	Administration		Main Men	u: Statu	S& Ma	inago	e -> H	A	
	→ Status & Manage	Connguration Filter Alarms & Events Security Log								
	→ HA					AM A	M Applicatic Max		Mate Hostnam	e,
	as shown on the	Status & Manage Network Elements			ole R	ole	HA Role	List		
	right.	💽 Server		sds-mrsvnc-a	A	ctive O	os	Active	sds-mrsvnc-b	:
		💽 🖽 🎬 Database		sds-mrsvnc-b		tandby O	08	Active	sds-mrsvnc-a	
26.	Active SDS VIP: 1) Identify the Standby server.	e Hostname		Applicatio Max HA Role	Max Allowed HA Role	Mate List	Mate Hostname List		Netw	
	2) Click the Edit	sds-mrsvnc-a	Active	005	Active	sds-r	nrsvn	c-b	sds_	
	ballon	sds-mrsvnc-b	Standby	os	Active	sds-r	nrsvn	c-a	sds_	
		qs-mrsvnc-1	Observer	005	Observe	r sds-r	nrsvn nrsvn	c-a c-b	sds_	
		so-carync-a	Standby	005	Active	so-ca	rync-l	b	so_c	
		so-carync-b	Active	005	Active	so-ca	rync-	а	so_c	
		dp-carync-1	Active	005	Active				so_c	
		drsds-dallastx-a	Unavailal	Unavailat					dr_d	
		Edit						000		

Procedure 19: Backout Primary SDS NE

Step	Procedure			Result						
27.	Active SDS VIP:	Main Menu: St	tatus & Manage ->	HA [Edit]						
	1) Using the drop box, set the Max		Fri							
	Allowed HA Role for	Hostname	Max Allowed HA Role	Description	1					
	the Standby server to Standby.	sds-mrsvnc-a	Active -	The maxim	num desired HA	Role for sds-mr	svnc-a			
	2) Click the Ok button	sds-mrsvnc-b	Active	The maxim	num desired HA	Role for sds-mr	svnc-b			
		qs-mrsvnc-1	Active Standby	The maxim	num desired HA	Role for qs-mrs	vnc-1			
		so-carync-a	so-carync-a Spare The maxim				nc-a			
		so-carync-b	005	The maxim	num desired HA	Role for so-cary	a for so-carync-b			
		dp-carync-1	Active -	The maxim	num desired HA	Role for dp-cary	nc-1			
		drsds-dallastx-a	Active -	The maxim	num desired HA	Role for drsds-d	lallastx-a			
				Ok Ca	incel					
20	Main Menu → Status & Manage → Database as shown on the right. Active SDS VIP:	Configuration	Filter Filter Filter Network sds_mrs sds_mrs Status & Manage	Filter Info Network Element Server sds_mrsvnc sds-m sds_mrsvnc sds-m		Role Network OAM&P Network OAM&P	OA Ma HA Ro Act			
29.	1) Select the name of				isc		-			
	the current Active server 2) Click the "Postoro" button	Network Element	Server	Role	OAM A Max N HA R Role	opplicatik Nax HA Status Role	•			
		sds_mrsvnc	sds-mrsvnc-a	Network OAM&P	Active O	Norma	al			
		sds_mrsvnc	sds-mrsvnc-b	Network OAM&P	Standby O	DOS Minor				
		Allow Replication Backup Compare Restore								

Step	Procedure	Result					
30	Active SDS VIP:	Database Restore					
	 Select your backup from the list. Click the "Ok" button. 	Select archive to Restore on server: sds-mrsvnc-a Configuration NETWORK_OAMP20120828_021501.AUTO.tar Backup.sds.sds-mrsvnc-a Provisioning NETWORK_OAMP20120828_021501.AUTO.tar Backup.sds.sds-mrsvnc-a Provisioning NETWORK_OAMP20120829_021501.AUTO.tar Backup.sds.sds-mrsvnc-a Configuration NETWORK_OAMP20120830_021501.AUTO.tar Backup.sds.sds-mrsvnc-a Provisioning NETWORK_OAMP20120830_021502.AUTO.tar Backup.sds.sds-mrsvnc-a Provisioning NETWORK_OAMP20120831_031501.AUTO.tar Backup.sds.sds-mrsvnc-a Provisioning NETWORK_OAMP20120831_021502.AUTO.tar Backup.sds.sds-mrsvnc-a Configuration NETWORK_OAMP20120801_021502.AUTO.tar Backup.sds.sds-mrsvnc-a Configuration NETWORK_OAMP20120801_021502.AUTO.tar Backup.sds.sds-mrsvnc-a Configuration NETWORK_OAMP20120901_021502.AUTO.tar Backup.sds.sds-mrsvnc-a Provisioning NETWORK_OAMP20120901_021502.AUTO.tar Backup.sds.sds-mrsvnc-a Provisioning NETWORK_OAMP20120902_021502.AUTO.tar Backup.sds.sds-mrsvnc-a Provisioning NETWORK_OAMP20120902_021502.AUTO.tar Backup.sds.sds-mrsvnc-a Provisioning NETWORK_OAMP20120902_021502.AUTO.tar Backup.sds.sds-mrsvnc-a Provisioning NETWORK_OAMP20120903_031501.AUTO.tar Backup.sds.sds-mrsvnc-a Provisioning NETWORK_OAMP20120903_031501.AUTO.tar Backup.sds.sds-mrsvnc-a Provisioning NETWORK_OAMP20120904_021501.AUTO.tar Backup.sds.sds-mrsvnc-a Provisioning NETWORK_OAMP20120904_021501.AUTO.tar Backup.sds.sds-mrsvnc-a Provisioning NETWORK_OAMP20120905_031501.AUTO.tar Backup.sds.sds-mrsvnc-a Provisioning NETWORK_OAMP20120905_031501.AUTO.tar Backup.sds.sds-mrsvnc-a Provisioning NETWORK_OAMP20120905_031501.AUTO.tar Backup.sds.sds-mrsvnc-a Frovisioning NETWORK_OAMP20120905_031501.AUTO.tar Backup.sds.sds-mrsvnc-a Frovisioning NETWORK_OAMP20120905_021501.AUTO.tar Backup.sds.sds-mrsvnc-a Frovisioning NETWORK_OAMP20120905_031501.AUTO.tar Backup.sds.sds-mrsvnc-a Frovisioning NETWORK_OAMP20120905_031501.AUTO.tar Backup.sds.sds-mrsvnc-a Frovisioning NETWORK_OAMP20120905_031501.AUTO.tar Backup.sds.sds-mrsvnc-a Provisioning NETWORK_OAMP20120905_031501.					
21	Active SDS VIP:	Database Restore Confirm Compatible Database. The selected database came from sds-mrsvnc-a on 09/07/2012 at 21:42:11 EDT and contains <u>Archive Contents</u> ProvisioningAndConfiguration data <u>Database Compatibility</u> * Confirm archive "Backup.sds.sds-mrsvnc-a.ProvisioningAndConfiguration.NETWORK_OAMP20120907_213703.MAN.tar.bz2" to Restore on server: sds-mrsvnc-a Force Restore? Force Force restore on sds-mrsvnc-a, despite compare errors. Ok Cancel					
	Note: A green color and the message "Compatible Database" will indicate a database that is suitable to restore. Click the Ok button.						
22	Active SDS VIP:	Info					
J 22.	Wait for the Info tab to show Restore Success.	Info Success: ProvisioningAndConfiguration Backup on sds-mrsvnc-a status MAINT_CMD_SUCCESS Success: Provisioning Backup on sds-mrsvnc-a status MAINT_CMD_SUCCESS. Success Success: Configuration Backup on sds-mrsvnc-a status MAINT_CMD_SUCCESS. Success Success: Configuration Backup on sds-mrsvnc-a status MAINT_CMD_SUCCESS. Success Note - Restore on sts-mrsvnc-a status MAINT_IN_PROGRESS. Durability Admin Status is: None. Durability Operational Status is: NO Disk.					

Procedure 19: Backout Primary SDS NE

Step	Procedure	Result							
33	Active SDS VIP:	Using the similar procedural steps specified in:							
33 .	Allow replication by the following order to all servers.	 Procedure 11 (Allow Primary Provisioning Site Servers), Procedure 12 (Allow DR Provisioning Site Servers). Steps 16 - 24 of Procedure 15 "Upgrade SOAM NE (SOAM Servers)", and Steps 12 - 20 of Procedure 16 "Upgrade SOAM NE (DP Servers)". 							
		Perform the following actions:							
		 Allow replication to the Active SDS. Allow replication to the Standby SDS and SDS QS. Allow replication to the Active DR SDS. Allow replication to the Standby DR SDS and DR QS. FOREACH Signaling network element: a. Allow replication to Active DP SOAM b. Allow replication to Standby DP SOAM b. Allow replication to Standby DP SOAM i. FOREACH DP:							
		c. DONE.							
	Active SDS VIP:								
34.		Connected using VIP to roma-sds-a (ACTIVE NETWORK OAM&P) Welcome (guiad						
	Select	Administration Main Menu: SDS -> Configuration -> Options	2:46:24						
	<u>Main Menu</u> ➔ SDS	Alarms & Events Apply							
	→ Configuration	A Status & Manage Variable Value Descr Measurements Whether or not	ription						
	as shown on the	Image: Communication Agent Communication Agent commands and Image: Communication Agent Display Command Output Image: Commands and Image: Comfiguration Display Command Output Image: Commands and	d respo provisio						
	right.	B Options Connections Allow Connections Mathematical Destinations Destinations Destinations	/t to allo /Isioning :HBCKE						
		Blacklist Maintenance Connections Command Log	It to log outgoin nessage						

Procedure 19: Backout Primary SDS NE



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Procedure 19: Backout Primary SDS NE

Step	Procedure				R	esult				
39.	Active Provisioning Site VIP:	Main Menu: S	tatus & I	Manage	e -> H/	A [Edit]				
	The user will be									
	presented with a list	Hostname	Max Al	x Allowed HA Role Des			n			
	of servers. Find the	sds-mrsvnc-a	Activ	Active -		The maxim	num desired HA Role fo	or sds-mrsvnc-a		
	Allowed HA Role set	sds-mrsvnc-b	Stand	iby 🔹		The maxim	um desired HA Role for sds-mrsvnc-b			
	to Standby.	qs-mrsvnc-1	Obse	rver 👻		The maxim	num desired HA Role fo	r qs-mrsvnc-1		
		so-carync-a	Activ	e •		The maxim	num desired HA Role fo	r so-carync-a		
		so-carync-b	Activ	e •		The maxim	num desired HA Role fo	r so-carync-b		
		dp-carync-1	Activ	e •		The maxim	The maximum desired HA Role for dp-			
		drsds-dallastx-a	Active	e •		The maxim	The maximum desired HA Role for drsds-dallast			
						Ok C	ancel			
40.	Active Provisioning Site VIP:	Main Menu: S	tatus &	Manag	e -> H	A [Edit]	[Edit]			
		Handware Hand Hand Ha Data Departmenta								
		sde misine a	Activ	ioweu na r	tole	The maxin	mum desired Hà Role I	for ede-mrsvnc-a		
	1) Using the drop	sde-mreunc-b	Stan	Acove The m		The maxi	wimum desired HA Role for ede-mrevno h			
	Allowed HA Role to	Sds-mrsvnc-o Standby		The maxi						
	"Active."	qs-mrsvnc-1	qs-mrsvnc-1 Standby		The maxi	The maximum desired HA Role for qs-mrsvnc-1				
		so-carync-a	Spare T Observer		The maxi	The maximum desired HA Role for so-carync-a				
		so-carync-b	005			The maxir	The maximum desired HA Role for so-caryno			
	 Click the "Ok" button. 	dp-carync-1	Activ	e •		The maxi	The maximum desired HA Role for dp-carync-1			
		drsds-dallastx-a	Activ	e •		The maxin	mum desired HA Role I	for drsds-dallastx-a		
	2									
41.	Active Provisioning Site VIP:	Main Menu: Sta	tus & Ma	nage ->	HA			Fri Sep		
	Confirm the Max	- Hiter								
	Allowed HA Role is now "Active."	Hostname	OAM Max HA Role	Application Max HA	Max Allowed	Mate Hostname List	Network Element	Server Role		
		sds-mrsvnc-a	Active	005	Active	sds-mrsvnc-b	sds mrsvnc	Network OAM&P		
		sds-mrsvnc-b	Standby	005	Active	sds-mrsvnc-a	sds_mrsvnc	Network OAM&P		
		qs-mrsvnc-1	Observer	005	Observer	sds-mrsvnc-b sds-mrsvnc-a	sds_mrsvnc	Query Server		
		so-carync-a	Standby	005	Active	so-carync-b	so_carync	System OAM		
		so-carync-b	Active	005	Active	so-carync-a	so_carync	System OAM		
		dp-carync-1	Active	008	Active		so_carync	MP		
		drsds-dallastx-a	Unavailab	I Unavailabl	(dr_dallastx	Network OAM&P		

Procedure 19: Backout Primary SDS NE

Step	Procedure	Result
		Note: Minor Alarm 31100 { <i>DB replication process (inetsync) is impaired by a s/w fault</i> } may raise on each server until all NOAM servers are also backed out to the original release. There is no functional impact. (PR 220871)
42.	Active SDS VIP:	
	Execute Health Check at this time only if no other servers require Back Out.	Execute Health Check procedures (Post Backout) as specified in Appendix B , if Backout procedures have been completed for all required servers.
	Otherwise, proceed with the next Backout.	
		THIS PROCEDURE HAS BEEN COMPLETED

APPENDIX A. ACCESSING THE OAM SERVER GUI (NOAM / SOAM SITES)

Step	Procedure	Result				
1.	Active OAM VIP:	Certificate Error: Navigation Blocked - Windows Internet Explorer				
	1) Launch Internet					
	higher and connect to the XMI Virtual IP	2 Certificate Error: Navigation Blocked				
	address (VIP) assigned to Active OAM site using data in Table 4	There is a problem with this website's security certificate.				
	2) If a Certificate Error is received, click on the link which states	The security certificate presented by this website was not issued by a trust The security certificate presented by this website was issued for a different				
	"Continue to this website (not	Security certificate problems may indicate an attempt to fool you or interce server.				
	recommended)."	We recommend that you close this webpage and do not continue to				
		Click here to close this webpage.				
		Solution to this website (not recommended).				
		More information				
2.	Active OAM VIP:					
	The user should be presented a login screen similar to the one shown on the right.	ORACLE® Oracle System Login Fri Feb 28 16:53:37 2014 EST				
	Login to the GUI					
	using the default user and password.	Log In Enter your username and password to log in				
		Username: guiadmin				
		Password: Change password				
		Log In				
		Welcome to the Oracle System Login.				
		Unauthorized access is prohibited. This Oracle system requires the use of Microsoft Internet Explorer 7.0, 8.0, or 9.0 with support for JavaScript and cookies.				
		Oracle and logo are registered service marks of Oracle Corporation. Copyright © 2013 <u>Oracle Corporation</u> All Rights Reserved.				

Appendix A: Accessing the UAW Server GUI (NUAW / SUA
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Appendix A:	Accessing the OAM	1 Server GUI	(NOAM /	SOAM Sites)
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Step	Procedure	Result						
3.	Active OAM VIP:	Attps://10.250.55.125/ - Windows Internet Explorer						
	The user should be presented the SDS							
	Main Menu as shown	File Edit View Favorites Tools Help						
	Verify that the	2 Mttps://10.250.55.125/						
	message shown	× Find: alarm Previous Next 📝 Options -						
	right panel indicates that the browser is using the " VIP " connected to the Active OAM server.							
		Communications Diameter Signal Router Full Address Resolution 5.0.0-50.19.0						
		Connected using VIP to sds-mrsvnc-a (ACTIVE NETWORK OAM&P)						
	NOTE: The message may show connection to either a "NETWORK OAM&P" or a "SYSTEM OAM" depending on the selected NE	 Main Menu Administration Configuration Alarms & Events Security Log Nature & Flement 						
		THIS PROCEDURE HAS BEEN COMPLETED						

APPENDIX B. HEALTH CHECK PROCEDURES

This procedure is part of Software Upgrade Preparation and is used to determine the health and status of the SDS network and servers.

Check off ($\sqrt{}$) each step as it is completed. Boxes have been provided for this purpose under each step number.

SHOULD ANY STEP IN THIS PROCEDURE FAIL, STOP AND CONTACT ORACLE'S TEKELEC CUSTOMER CARE CENTER FOR ASSISTANCE BEFORE CONTINUING!

Appendix B:	Health Check Procedures
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Step	Procedure			Res	ult							
1.	Using the VIP address, access the Primary Provisioning Site GUI.	• Access the Primary Provisioning Site GUI as specified in Appendix A.										
2	Active Provisioning						I DECEDENCES CON	0):40)X4		*****		
	Site VIP: Select	Administrati	Main Menu Main Menu: Status & Manage -> Server							er		
	<u>Main Menu</u> → Status & Manage	Configuratio	in onte	Filter -								
	→ Server	Security Log	 Alarms & Events Security Log Status & Manage Network Elements 			Network Element dr_dallastx				Server Hostname drsds-dallasti-a		
	as shown on the right.	- Status & Ma										
		Carver		dr_dallastx				drsds-dallastx-b				
		E Databas	Database			sds_mrsvnc						
			ana ¹ ilianic ana-ilianica									
3.	Active Provisioning Site VIP:	Main Menu: Status	& Manage -> Server					Prep				
		Betwork Element	Server Hostname	Appl State	Alm	Rept	Cull	DB	144	Proc		
	Verify that all server	dr_dallash	disids-dallasts-a	Endered	Rapim	Norm	Faaren	Paarm	Pagerth	Norm		
	statuses show "Norm"	ada_mravec	ada-misino-a	Enabled	Silone,	Faterm	tearm	Fairm	Factor	Factores.		
	as shown on the right.	ada_misinc	ada-misinc-b	Enabled	Napers .	Februari	Page 19	Pasers	Tagaren .	Talarm .		
		HOLEWING	80-C80/0C-5	Ensted	Napern	Norm	Factor I	Pauren	Pagette	Papers		
		30_0000	so-canno-a	Enabled	Adame.	Nom	fuurm.	Fairm	Farm	Taxen		
		HE_CWINC	dp-caryno-1	Enabled	Norm.	Nom	Norm	Paure	Trainin .	24am		
		3-0_CMY0C	dp-car)nc-2	Enabled	Name	Nom	Figures.	Tearry	Norm	Naterro		
4.	Active Provisioning Site VIP:	Main Menu: St	atus & Manag	e -> Serv	er		— Tu	e Aug :	21 11:21:51	Help 2012 EDT		
	IT any other server	Filter										
	they will appear in a colored box as shown on	Network Element	Server Hostna	me	Appl State	Alm	DB		Reporting Status	Proc		
	the right.	dr_dallastx	drsds-dallaste	b	Enabled	Norm	Nor	m	Norm	Norm		
	-	dr_dallastx	drsds-dallastr-	a	Enabled	Norm	Nor	m	Norm	Norm		
	NOTE: Other server	sds_mrsvnc	sds-mrsvnc-b		Enabled	Norm	Nor	m	Norm	Norm		
	States Include "Eff, Warn Man and Link"	sds_mrsvnc	sds-mrsvnc-a		Enabled	Err	Nor	m	Norm	Norm		
		so_carync	so-carync-a		Enabled	Norm	Norr	m	Norm	Norm		
		so_carync	so-carync-b		Enabled	Norm	Non	m	Norm	Norm		
		so_carync	dp-carync-1		Enabled	Norm	Nor	m	Norm	Norm		

Step	Procedure	Result						
5.	Active Provisioning	Connected u	ising VIP to sds-vz	wCore	-a (ACT	TIVE NE	ETWORK OAM&P)	
	Site VIP: Select <u>Main Menu</u> → Communication Agent → Maintenance → Connection Status as shown on the right.	 Main Menu Administration Configuration Alarms & Events Security Log Status & Manage Measurements Communication Age Configuration Configuration Maintenance Maintenance Routed Service SDS 		M 	Main Menu: Communic Filter ▼ Server Name			
6.	Active Provisioning Site VIP: Verify that all "Connections Counts" show equivalent counts ("n" of "n" InService, "y" of "y" InService) as shown to the right. NOTE: Active/Standby MPs will show a "Configured Connections Count" of "1 of 2 InService". This is normal and can be ignored.	Main Menu: Commu Filter Server Name Au Co • dp-vzwCore-1 3 c • dp-vzwCore-2 3 c • dp-vzwCore-3 3 c • dp-vzwCore-4 3 c		ication matic nection 3 InSer 3 InSer 3 InSer 3 InSer	on Ag s Coun vice vice vice	gent t C 7 7 7 7	-> Mainten	ance t
7.	Active Provisioning Site VIP: Select <u>Main Menu</u> → Alarm & Events → View Active as shown on the right.	Connected using VIP to sds-mrsvnc-a (ACTIVE Main Menu Administration Configuration Alarms & Events View History View History View Trap Log Security Log Status & Manage			WORK OAN 2 nu: Al. 1 Tasks Event ID Alarm Text 14188 The PDB R	MAP) arms & • Timestamp 2012-08-21 elay feature	p Sev 1 11:22:58:435 EDT MARK s is enabled but the connec	Active renty Product SDS clion to the HLRR i

Appendix B: Health Check Procedures

Step	Procedure	Result									
Q	Active Provisioning	When vie	wing Pre-Upgrade	Status:							
	Site VIP: View Alarm Status in the	lf any Ala Center fo	rms are present, S [°] r assistance before	TOP and contact Oracle's Tekelec Customer Care attempting to continue.							
	right panel.	When vie	When viewing Post-Upgrade Status:								
		Active NC Alarm I Alarm I	Active NO server may have the following expected alarms: Alarm ID = 10075 (Application processes have been manually stopped) Alarm ID = 10008 (Provisioning Manually Disabled)								
		Servers t Alarm I	Servers that still have replication disabled will have the following expected alarm: Alarm ID = 31113 (<i>Replication Manually Disabled</i>)								
		You may Alarm I Alarm I	You may also see alarms: Alarm ID = 10010 (<i>Stateful database not yet synchronized with mate database</i>) Alarm ID = 32532 (<i>Server Upgrade Pending Accept/Reject</i>)								
9.	Active Provisioning Site VIP: Select the "Export" dialogue button from the bottom left corner of the screen.	Export Report									
10.	Active Provisioning Site VIP:	Schedule	Active Alarm Dat	a Export							
		Attribute	Value	Description							
	Click the "Ok " button at the bottom of the screen.	Export Frequency	Chourty Daily Weekly	Select how often the data will be written to the export directory. Selecting "Once will perform the operation immediately. Note that the Hourly, Daily and Weekly scheduling options are only available when provisioning is enabled. [Default Once]							
		Task Name	APDE Alarm Export	Periodic export task name. [Required. The length should not exceed 24 characters. Valid characters are alphanumeric, minus sign, and spaces between words. The first character must be an alpha character. The last character must not be a minus sign.]							
		Description	-	Peniodic export task description. [Optional. The length should not exceed 255 characters. Valid characters are alphanumeric, minus sign, and spaces between words. The first character must be an alpha character. The last character must not be a minus sign.]							
		Minute	0.	Select the minute of each hour when the data will be written to the export directory. Only if Export Frequency is hourly. [Default = 0. Range = 0 to 59.]							
		Time of Day	12:00 AM	Select the time of day when the data will be written to the export directory. Only if Export Frequency is daily or weekly. Select from 15-minute increments, or fill in a specific value. [Default = 12:00 AM. Range = HH:MM with AMIPM.]							
		Day of Week	 Sunday Monday Tuesday Wednesday Thursday Friday Salurday 	Select the day of week when the data will be written to the export directory. Only if Export Frequency is weekly. [Default: Sunday.]							
			Ok								

Step	Procedure	Result					
11.	Active Provisioning Site VIP: The name of the exported Alarms CSV file will appear in the banner at the top of the right panel.	Main Menu: Alarms & Events -> View Active Filter Tasks Tasks Progress Seq # Are Name Task State Details Progress 2099 14 0 sds-mrsvnc-a APDE Alarm Export completed UTC_0.csv 100% D					
12.	Active Provisioning Site VIP: Record the filename of Alarms CSV file generated in the space provided to the right.	Example: Alarms <yyyymmdd>_<hhmmss>.csv AlarmsCSV</hhmmss></yyyymmdd>					
13.	Active Provisioning Site VIP: Select the "Report" dialogue button from the bottom left corner of the screen.	Export Report					
14.	Active Provisioning Site VIP: An Active "Alarms & Events" Report will be generated and displayed in the right panel.	Main Menu: Alarms & Events -> View Active [Report] Main Menu: Alarms & Events -> View A Thu Feb 02 15:59:31 2012 TIMESTAMP: 2012-02-02 15:36:05.350 UTC NETWORK_ELEMENT: NO_MRSVNC SERVER: sds-mrsvnc-a SEQ_NUM: 2099 EVENT_NUMBER: 14101 SEVERITY: MAJOR PRODUCT: SDS PROCESS: xds TYPE: PROV INSTANCE: No XML client connection NAME: No Remote Connections DESCR: No remote provisioning clients are connect FPP_INFO:					

Appendix B: Health Check Procedures



Appendix B: He	alth Check Procedures
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Step	Procedure	Result
17.	Active Provisioning Site VIP: Select the "Report" dialogue button from the bottom left corner of the screen.	To create a new Network Element, upload a valid configuration file: Browse Upload File
18.	Active Provisioning Site VIP:	Main Menu: Configuration -> Network Elements [Report]
	A "Network Element Report" will be generated and displayed in the right panel.	<pre>s d s N e t w o r k E l e m e n t R e p o r t Report Generated: Wed Feb 01 15:45:11 2012 UTC From: Active NETWORK_OAMP on host sds-mrsvnc-a Report Version: 3.0.0-3.0.0_10.8.1 User: guiadmin</pre>

Appendix B: Health Check Procedures



Step	Procedure	Result						
22.	Active Provisioning Site VIP:	Main Menu: Configuration -> Servers [Report]						
	A " Server Report" will be generated and displayed in the right panel.	Main Menu: Configuration -> Servers [Report] Fri Aug 03 21:08:29 2012 UTC						
	panoi	<pre>id: 0 serverGroupId: 0 serverGroupName: sds_mrsvnc_grp networkElementId: 0 networkElementName: sds_mrsvnc profileName: /var/TKLC/appworks/profiles/HP_Rackmount.xml hostname: sds-mrsvnc-a location: Morrisville_NC role: roleNOAMP interfaces:</pre>						
23.	Active Provisioning Site VIP:	File Download						
	1) Select the "Save" dialogue button from the bottom/middle of the right panel.	Do you want to open or save this file? 2 Name: ServerGroupConfig_2010Jul14_164021_UTC.txt Type: Text Document, 3.88KB From: 10.240.251.70						
	2) Click the " Save " dialogue button on the <i>File Download</i> pop-up box.	Open Save Cancel						
	3) Select a directory on the local disk drive to store the <i>"Server Group</i> <i>Report"</i> file and click the	Print Save While files from the Internet can be useful, some files can potentially harm your computer. If you do not trust the source, do not open or save this file. What's the risk?						
	"Save" dialogue button.	Save As						
		Solvent Color Disk (c) Image: Color Disk (c) Image: Color Disk (c)						
		My Computer						
		File name: erverGroupConfig_2010Jul14_164209_UTC.bt Save My Network Save as type: Text Document Cancel						
		My Network Save as type: Text Document						

Appendix B: Health Check Procedures

Step	Procedure	Result
24.	Active Provisioning Site VIP: Select → Configuration → Server Groups as shown on the right.	Connected using VIP to sds-mrsvnc-a (ACTIVE NETWORK OAM&P) Main Menu Administration Administration Network Elements Services Resource Domains Server Groups Metwork Network Alarms & Events Security Log
25.	Active Provisioning Site VIP: Select the "Report" dialogue button from the bottom left corner of the screen.	so_carync_grp so_carync
26.	Active Provisioning Site VIP: A "Server Group Report" will be generated and displayed in the right panel.	Main Menu: Configuration -> Server Groups [Report] s d s S e r v e r G r o u p R e p o r t Report Generated: Ved Feb 01 15:47:01 2012 UTC From: Active NETWORK_OAMP on host sds-mrsvnc-a Report Version: 3.0.0-3.0.0_10.8.1 User: guiadmin Server Groups Summary sds_mrsvnc_grp NE Name: sds_mrsvnc Level: A Parent: NOME Function: SDS Virtual IP Address: 010.250.055.125

Step	Procedure	Result				
27.	Active Provisioning Site VIP:	File Download				
	 Select the "Save" dialogue button from the bottom/middle of the right panel. Click the "Save" dialogue button on the <i>File Download</i> pop-up box. Select a directory on the local disk drive to store the "Server Group Report"file and click the "Save" dialogue button. 	Image: ServerGroupConfig_2010Jul14_164021_UTC.bt Image: ServerGroupConfig_2010Jul14_164011_UTC.bt Image: ServerGroupConfig_2010Jul14_164001_UTC.bt Image: ServerGroupConfi				
28.	Provide the saved files to Oracle's Tekelec Customer Care Center for Health Check Analysis.	 If executing this procedure as a pre or post Upgrade Health Check (HC1/HC2/HC3), provide the following saved files to Oracle's Tekelec Customer Care Center for proper Health Check Analysis: Active "Alarms & Events" Report [Appendix B, Step 15] Network Elements Report [Appendix B, Step 19] Server Group Report [Appendix B, Step 23] 				

Step	Procedure		Result							
	Active Provisioning	AREA STRATEGICS.		el magna neg marga m						
29.	Site VIP:	Connected us	ing VIP to	sds-mrsvnc-a	(ACTIVE NETWORK OAM&P)					
	Select	Main Menu Administration			Main Menu: Status & Manage -> HA					
	<u>Main Menu</u> → Status & Manage	Config	guration		Filter					
	→ HA	Security Security Status	ity Log s & Manad	» 20	Hostname	HA Role	Max Allowed HA Role	Mat List		
	as shown on the right.	- Ne	twork Ele	ments	sds-mrsvnc-a	Active	Active	sds		
		💽 Se	rver		sds-mrsvnc-b	Standby	Standby	sds		
		💽 🎞	tabase		qs-mrsvnc-1	Observer	Observer	sds sds		
		💽 KP	ls		drsds-dallaste	-a Active	Active			
		💽 Pro	ocesses		so-carync-a	Standby	Active	50-0		
	 Verify that the "HA Role" for all servers shows either "Active" or "Standby" as shown to the right. NOTE: An "HA Status" of "Observer" is allowed when Server Role is "Query Server". 	Filter Hostname sds-mrsvnc-3 sds-mrsvnc-1 drsds-dallasti-a so-carync-3 dp-carync-1	OAM Max HA Role Active Standby Observer Active Standby Active Active Active	Max Allowed HA Role Active Standby Observer Active Active Active	Mate Hostname List sds-mrsvnc-b sds-mrsvnc-a sds-mrsvnc-a sds-mrsvnc-a so-carync-b so-carync-a	Network Element sds_mrsvnc sds_mrsvnc sds_mrsvnc dr_dallastx so_carync so_carync so_carync	Fri Aug 03 211 Server Role Network OAM&P Ouery Server Network OAM&P System OAM System OAM MP	10:59 2012 UTC Active VIPs 10:250:55:125 10:240:39:152		
31.	Active Provisioning Site VIP: Repeat Step 30 of this procedure until the last page of the [Main Menu: Status & Manage → HA] screen is reached.	 Verify the "HA Role" for each page of the [Main Menu: Status & Manage → HA] screen, and click "Next" to reach the next page. 								
		THIS PRO	CEDUR	E HAS BEE	N COMPLET	ED				

APPENDIX C. UPGRADE OF A SINGLE SERVER

C.1 Prepare Upgrade

Appendix C.1: Prepare Upgrade

Step	Procedure		Res	sult		
1.	Using the VIP address, access the Primary Provisioning Site GUI.	Access the Primary	Provisioning Site C	GUI as spe	ecified in Appendix A.	
2.	Active Provisioning Site VIP:	Connected using VIP to roma-sds-a (A	crive Network COAM&P) Main Menu: Adm	inistratio	on -> Software Manager	nent -> Up
	Select	General Options	Filter 🔻 Tasks 🔻		-	
	Main Menu → Administration	Software Management		OAM Max HA Role	Network Element	Role
	→Software Mangment → Upgrade	Versions ISO Deployment	Hostname	Max Allowed HA Role	Appi Version	Function
	as shown on the right.	roma-sds-a	Active Active	sds_roma 50.13.0	Network OAM&P OAM&P	
		roma-sds-b	Standby Active	sds_roma 50.13.0	Network OAM&P OAM&P	
		🖬 🖿 Status & Manage 🖬 🖿 Measurements	roma-so-a	Active	sds_roma 50.13.0	System OAM OAM
		🛱 🏛 Communication Agent 🗖 🍋 SDS	roma-so-b	Standby Active	sds_roma 50.13.0	System OAM OAM
		- ở Help - ₱1 Logout	roma-dp-1	Active	sds_roma 50.13.0	MP SDS
			roma-dr-a	Active	or_roma 50.13.0	OAM&P
	NOTE: On 4.0 systems, select <u>Main Menu</u> → Administration → Upgrade					
3.	Active Provisioning	S	ds_mrsvnc		QUERY_SERVER	lot Ready
	Site VIP:	qs-mrsvnc-1	.0.0-4.0.0_40.4.2		QS N	lorm
	1) Using the vertical scroll bar in the right panel, scroll to the row containing the hostname of the server to be upgraded.	1				2
	 Verify that the Upgrade State shows "Not Ready". 					

Step **Procedure** Result **Active Provisioning** dr_dallastx NETWORK OAM&P Not Ready 4. Site VIP: drsds-dallastx-a 4.0.0-4.0.0_40.4.2 OAM8P Norm 1) Using the cursor, sds_mrsvnc QUERY_SERVER Not Ready 1 qs-mrsvnc-1 select the row 4.0.0-4.0.0_40.4.2 QS Norm containing the hostname of the server to be upgraded. Prepare Upgrade Monitor Upgrade 2) Click the "Prepare Upgrade" dialogue button located in the bottom left of the right panel. **Active Provisioning** Main Menu: Administration -> Upgrade [Make Ready] 🔗 Help 5. Site VIP: Thu Aug 23 10:05:38 2012 EDT The user should be 1 Selecting 'Ok' will result in the selected server's Max HA Capability being set presented with the to 'Standby', 'Observer' for guery servers, and its applications being disabled. Upgrade [Make Ready] Administration screen. Selected Server: qs-mrsvnc-1 Click any "Ok" Ok. Cancel dialogue button. Upgrade Ready Criteria Selected Server Status Mate Status Max HA Role Observer Standby 0 0 Critical Alarms 0 0 Major Alarms Minor Alarms 0 0 Database Server Status Norm Norm HA Server Status Norm Norm Process Server Status Norm Norm Application State Enabled Enabled Ok Cancel

Appendix C.1: Prepare Upgrade

Appendix C.1: Prepare Upgrade

Step	Procedure		Result
Step 6.	ProcedureActive Provisioning Site VIP:1) Using the vertical scroll bar in the right panel, scroll to the row containing the 	sds_mrsvnc 4.0.0-4.0.0_40.4.2	2 QUERY_SERVER Ready QS 2 Norm
	Upgrade State fails to show "Ready", the user may need to refresh the screen by selecting		
	Main Menu → Administration → Software Managmnt → Upgrade for a 2 nd time and repeating sub-steps 1) & 2) associated with this step.		
		THIS PROCEDURE HAS BEEN C	OMPLETED

C.2 Initiate Upgrade

Appendix C.2: Initiate Upgrade

Step	Procedure	Result						
1	Active Provisioning	Connected using VTR to popp-ods-2 (
	Site VIP:	Administration	Main Menu: Administration -> Software Management -> Up					
	Select	General Options						
	Main Menu → Administration	Software Management	gement	OAM Max	Network Element	Role		
	\rightarrow Software Managmnt \rightarrow Upgrade	- E Versions - E ISO Deployment	Hostname	Max Allowed HA Role	Appl Version	Function		
	as shown on the	D Remote Servers	roma-sds-a	Active Active	sds_roma 50.13.0	Network OAM&P OAM&P		
	right.	Configuration Alarms & Events	roma-sds-b	Standby Active	sds_roma 50.13.0	Network OAM&P OAM&P		
		in Security Log In Status & Manage	roma-so-a	Active Active	sds_roma 50.13.0	System OAM OAM		
		Communication Agent SDS	roma-so-b	Standby Active	sds_roma 50.13.0	System OAM OAM		
		- 🖉 Help	roma-dp-1	Active Active	sds_roma 50.13.0	MP SDS		
	NOTE: On 4.0 systems, select		roma-dr-a	Active Active	dr_roma 50.13.0	Network OAM&P OAM&P		
	Main Menu → Administration → Upgrade							
	Active Provisioning					1Dente		
2.	Site VIP:	drsds-dallastx-a 4.0	_dallastx 0.0-4.0.0_40.4.2		OAM&P N	orm		
	 Using the cursor, select the row containing the hostname of the server to be upgraded. Click the "Initiate Upgrade" dialogue button located across 	qs-mrsvnc-1	is_mrsvnc		OUERY_SERVER R	eady		
		140	0.0.4.0.0_40.4.2			ALLER .		
		Prepare Upgrade	nitiate Upgrade	Monitor U	Jpgrade Complete U	pgrade		
			² 2					
			2					
	the bottom left of the							
	light parloi.							
3.	Active Provisioning Site VIP:	Hostname M	letwork Element	Server	Group Applic	ation Version		
		qs-mrsvnc-1 s	sds_mrsvnc	sds_m	rsvnc_grp 4.0.0-4	4.0.0_40.4.2		
	Verify that the Application Version							
	shows the < source_release>.							
	Active Provisioning							
4.	Site VIP:	select						
	Using the pull-down menu located at the bottom left of the right panel, select the	872-2469-102-4.0.0_40.4.2-5 872-2469-102-4.0.0_40.4.3-5 Previous > Highlight 2n 1 1	SDS-x86_64.iso SDS-x86_64.iso watgn case					
	<target_release>.</target_release>							

Appendix C.2: Initiate Upgrade



C.3 Monitor Upgrade

Appendix C.3: Monitor Upgrade

Step	Procedure		Re	sult				
	Active Provisioning							
1.	Site VIP:	Connected using VIP to roma-sds-a	(ACTIVE NETWORK OAM&P)					
		Administration Administration Beneral Options Access Control	Main Menu: Adm	Main Menu: Administration -> Software Management -> U				
	On 5.0 Active NOAM:	Access Control	Fliter 🔻 Tasks 🔻					
	Select	Software Management Genses Versions	Hostnama	OAM Max HA Role	Network Element		Role	
	Main Menu → Administration	 Versions ISO Deployment IGO TOTAL 	Trostiane	Max Allowed HA Role	Appl Version		Function	
	→Software Managmnt → Upgrade	Configuration	roma-ede-a	Active	sds_roma 50.13.0		Network OAM&P OAM&P	
	NOTE: Then skip to	Alarms & Events	roma-sds-b	Standby Active	sds_roma 50.13.0		Network OAM&P OAM&P	
	Step 3	 Status & Manage Measurements 	roma-so-a	Active	sds_roma 50.13.0		System OAM OAM	
	On 4 0 Active NOAM	D Communication Agent	roma-so-b	Active	sos_roma 50.13.0		OAM	
	Select	– 🧇 Help – 🔯 Logout	roma-dp-1	Active Active	sds_roma 50.13.0		MP SDS	
	Main Menu	ration	roma-dir-a	Active	dr_roma 50.13.0		OAM&P	
	Then continue to Step 2.							
2.	Active Provisioning Site VIP:	drsds-dallastx-a	_dallastx		NETWORK OAM&P	Not Rea	ady	
	NOTE: Only run this step if on an SDS 4.0 NOAM. Otherwise, skip this step.	qs-mrsvnc-1	ds_mrsvnc 0.0-4.0.0_40.4.2		QUERY_SERVER Upgrad		ing	
	1) Using the cursor, select the row containing the hostname of the server to be upgraded.	Prepare Upgrade	Initiate Upgrade	Monitor U مالیہ 2	lpgrade Complete	e Upgra	de	
	2) Click the "Monitor Upgrade" dialogue button located across the bottom left of the right panel.							
Appendix C.3: Monitor Upgrade

Step	Procedure	Result				
3.	Active Provisioning Site VIP:	Main Menu: Administration -> Upgrade [Monitor]				
	The user should be	Information Item	Current Status	Details		
	presented with the	Server Name / IP	as-mission1	169 254 100 13		
	Opgrade [Monitor]	Upprade ISO	872-2469-102-4.0.0 40.4.3-SDS-x86 64.iso			
	screen.	Upgrade Started	2012-Aug-23 10:16:31 EDT	1 min, 0 sec ago		
	The initial values for	Last Status Response	ISO Validation: Task result for IP: 169.254.100.13 SUCCESS			
	the Current Status	Received at	2012-Aug-23 10:17:02 EDT	29 sec ago		
	/Details fields should be Upgrading /UPGRADING.	Upgrade State	Upgrading	UPGRADING		
	NOTE: As the upgrade progresses, time values will continue to update every 30 seconds.					
4.	Active Provisioning Site VIP:	Main Menu: Administrati	ion -> Upgrade [Monitor]	🔗 H u Aug 23 10:22:11 2012		
	When the server					
	initiates a post-	Information Item	Current Status	Details		
	upgrade reboot, the	Server Name / IP	qs-mrsvnc-1	169.254.100.13		
	Current Status	Upgrade ISO	872-2469-102-4.0.0_40.4.3-SDS-x86_64.iso	-		
	/Details fields will	Opgrade Started	2012-Aug-23 10:16:31 EDT	5 min, 40 sec ago		
	change to Upgrading	Last Status Response 169.254.100.13, server could be rebooting.		ar ne		
		Received at	2012 Aug 23 10 21 29 EDT	42 sec ago		
		Upgrade State	Upgrading	UNKNOWN		
5.	Active Provisioning Site VIP:	Main Menu: Administratio	on -> Upgrade [Monitor]	Help 23 10:32:51 2012 EDT		
	After the post-	Information Item	Current Status	Details		
	been completed, the	Server Name / IP	qs-mrsvnc-1	169.254.100.13		
	values for the	Upgrade ISO	872-2469-102-4.0.0_40.4.3-SDS-x86_64.iso	2		
	Current Status	Upgrade Started	2012-Aug-23 10:16:31 EDT	16 min, 20 sec ago		
	change to	Last Status Response	Upgrade: Task result for IP: 169.254.100.13, SUCCESS			
	Success/SUCCESS.	Received at	2012-Aug 22 10 20 29 EDT	4 min 22 sec app		
		Upgrade State	Success	SUCCESS		
6.	Active Provisioning Site VIP: NOTE: Only run this step if on an SDS 4.0 NOAM. Otherwise, skip this step. Click the "Return to server list" dialogue button located on the bottom left of the right panel.	Return to server list				

Sten	Procedure		R	205ult		
7.	Active Provisioning	Connected using VIP to roma-sds-a (A	CTIVE NETWORK OAM&P	2)		
	Site VIP: The user is returned to the Main Menu • Administration • Software Managmnt • Software Managmnt • Jupgrade …screen as shown on the right. NOTE: On 4.0 systems, to Main Menu • Administration • Jupgrade • More right. NOTE: On 4.0 systems, to Main Menu • Administration • Dygrade • Main Menu • Main Menu • Upgrade • Main Menu	Ain Menu Administration General Options	Main Menu: Ad	ministrati	on -> Software Ma	nagement -> Up
		Hostname roma-sds-a roma-sds-b roma-so-b roma-dp-1 roma-dr-a	OAM Max HA Role Max Allowed HA Role Active Active Active Active Active Active Active Active Active Active Active Active Active Active Active Active	Network Element Appl Version sds_roma s0.13.0 sds_roma s0.13.0 sds_roma s0.13.0 sds_roma s0.13.0 sds_roma s0.13.0 sds_roma s0.13.0 sds_roma s0.13.0	Role Function Network OAM&P OAM&P Network OAM&P OAM System OAM OAM System OAM OAM NP SDS Network OAM&P OAM	
8.	Active Provisioning Site VIP: 1) Using the vertical scroll bar in the right panel, scroll to the row containing the hostname of the server to be upgraded. 2) Verify that the Upgrade State shows "Success".	qs-mrsvnc-1 4	ds_mrsvnc 0.0-4.0.0_40.4.3		QUERY_SER QS	VER Success Warm 2
		THIS PROCEDURE	HAS BEEN CO	MPLETED		

Appendix C.3: Monitor Upgrade

C.4 Complete Upgrade

Appendix C.4: Complete Upgrade

Step	Procedure	Result				
1.	Active Provisioning Site VIP:	drsds-dallastx-a	dr_dallastx 4.0.0-4.0.0_40.4	2	NETWORK OAM&P OAM&P	Not Ready Norm
	1) Using the cursor, select the row containing the	qs-mrsvnc-1	sds_mrsvnc 4.0.0-4.0.0_40.4	, <mark>1</mark>	QUERY_SERVER QS	Success Warn
	server to be upgraded.	Prepare Upg	rade Initiate Upgra	de Monitor Upgra	de Complete Up	ograde
	2) Click the "Complete Upgrade" dialogue button located across the bottom left of the right panel.					2
2.	Active Provisioning Site VIP:	Main Menu: Adı	ministration -> Up	grade [Remove Re	ady]	Help 34-59 2012 EDT
	The user should be presented with the Upgrade [Remove Ready]	Selecting 'Active's	g 'OK' will result in the selected et. 'Observer' is set for query s	server's application being ena rvers.	abled and the Max HA Capa	bility of
	Administration screen.	Selected Server: qs-mrs Ok Cance	vnc-1			
	Click any " Ok " dialogue button.	Upgrade Ready Criteria Max HA Role Critical Alarms Major Alarms Database Server Status HA Server Status Process Server Status Application State Ok Cance	Selected Server Status Mate Observer Status 0 0 0 0 1 0 Norm Norm Norm Norm Disabled Enab	ed		

Ston	Procedure			Rosult		
3.	Active Provisioning	Connected using VIP to roma-sds-a (A	ACTIVE NETWORK OAM	LP)		
	The user is returned to the	Agin Menu Administration Administration Beneral Options Access Control	Main Menu: Administration -> Software Management -> Up			
	Main Menu	Software Management	Verterer	OAM Max HA Role	Network Element	Role
	→ Administration → Software Managmnt	ISO Deployment	Hostname	Max Allowed HA Role	Appl Version	Function
	→ Upgrade	Jpgrade Image: Configuration creen as shown Image: Configuration he right. Image: Configuration Image: Configuration Image:	roma-ede-a	Active Active	sds_roma 50.13.0	Network OAM&P OAM&P
	screen as shown		roma-sds-b	Standby Active	sds_roma 50.13.0	Network OAM&P OAM&P
	on the light.		roma-so-a	Active Active	sds_roma 50.13.0	System OAM OAM
			roma-so-b	Standby Active	sds_roma 50.13.0	System OAM OAM
	- Ø Help	- 🕹 Help	roma-dp-1	Active	sds_roma 50.13.0	MP SDS
	NOTE: On 4.0	- w Logour	roma-dr-a	Active	dr_roma 50.13.0	Network OAM&P OAM&P
	Main Menu → Administration → Upgrade					
NOTE: Wait for the screen to refresh and show the Upgrade Ready State is Not Ready and the Upgrade action is disabled. It may take up to 2 minutes for the Upgrade Ready State to change to Not Ready .						

Appendix C.4: Complete Upgrade

Appendix C.4:	Complete	Upgrade
---------------	----------	---------

Step	Procedure	Result		
4.	Active Provisioning Site VIP:	qs-mrsvnc-1 d.0.0-4.0.0_40.4.3 QUERY_SERVER Not Ready QS Norm		
	1) Using the vertical scroll bar in the right panel, scroll to the row containing the hostname of the server to be upgraded.	1 3		
	 Verify that the Application Version now shows the <target_release>.</target_release> 			
	 Verify that the Upgrade State shows "Not Ready". 			
	NOTE: If the Upgrade State fails to show "Success", the user may need to refresh the screen by selecting			
	<u>Main Menu</u> → Administration → Software Managmnt → Upgrade			
	for a 2 nd time and repeating sub-steps 1) thru 3) associated with this step.			
5.	Server to be Upgraded (SSH):	CentOS release 5.7 (Final) Kernel 2.6.18-274.7.1.e15prerel5.0.0_72.32.0 on an x86_64		
	1) Access the command prompt of the server being upgraded.	sds-mrsvnc-a login: root Password: <root_password></root_password>		
	2) Log into the server as the " root " user.			
6.	Server to be Upgraded (SSH): Output similar to that shown on the right may appear as the server accesses the command prompt.	<pre>*** TRUNCATED OUTPUT *** VPATH=/var/TKLC/rundb:/usr/TKLC/appworks:/usr/TKLC/awpss7 PRODPATH=/opt/TKLCcomcol/cm5.13/prod RUNID=00 VPATH=/opt/TKLCcomcol/runcm5.13:/opt/TKLCcomcol/cm5.13 PRODPATH= RELEASE=5.13 RUNID=00 VPATH=/var/TKLC/rundb:/usr/TKLC/appworks:/usr/TKLC/awpss7:/usr/TKLC/sd s</pre>		
		PRODPATH=/opt/TKLCcomcol/cm5.13/prod RUNID=0 [root@sds-mrsvnc-a ~]#		

Appendix C.4: Complete Upgrade

Step	Procedure	Result		
7.	Server to be Upgraded (SSH): 1) Verify existence of the netbackup logical volume.	<pre>[root@sds-mrsvnc-a ~]# df -B M Filesystem 1M-blocks Used Available Use% Mounted on /dev/mapper/vgroot-netbackup_lv</pre>		
		Examine the output of the above command to find a filesystem named "vgroot-netbackup_lv" as above.		
8.	Server to be Upgraded (SSH): If you <i>DID NOT</i> find a netbackup partition in the previous Step then execute Appendix H for this server. Otherwise, SKIP this Step and continue forward.	Execute Appendix H " Create new Logical Volume for NetBackup Client".		
9.	Server to be Upgraded (SSH): Exit from the upgraded server's command line.	[root@sds-mrsvnc-a ~]# exit logout		
10.	Root console of upgraded server:	 Step 7 or Step 8 must be completed successfully before running this Step. This is a convenient point to run Appendix I (<i>Resize Shared Segments and Logical Volumes</i>), which must be run for <i>each</i> server, but <i>only</i> for a MAJOR upgrade (4.x to 5.x). 		
	THIS PROCEDURE HAS BEEN COMPLETED			

C.5 Server Worksheet

Primary NO Site Name:	DR NO Site Name:
Active NOAMP:	Active NOAMP:
Standby NOAMP:	Standby NOAMP:
Query Server:	Query Server:
SOAM Site Name:	SOAM Site Name:
Active SOAM:	Active SOAM:
Standby SOAM:	Standby SOAM:
DP1:	DP1:
□ DP2:	□ DP2:
□ DP3:	□ DP3:
□ DP4:	□ DP4:
SOAM Site Name:	SOAM Site Name:
Active SOAM:	Active SOAM:
Standby SOAM:	Standby SOAM:
□ DP1:	□ DP1:
DP2:	DP2:
□ DP3:	□ DP3:
□ DP4:	□ DP4:
SOAM Site Name:	SOAM Site Name:
Active SOAM:	Active SOAM:
Standby SOAM:	Standby SOAM:
DP1:	DP1:
DP2:	□ DP2:
□ DP3:	□ DP3:
□ DP4:	□ DP4:

SOAM Site Name:	SOAM Site Name:
SOAM Site Name:	SOAM Site Name:
SOAM Site Name:	SOAM Site Name:

APPENDIX D. BACKING OUT A SINGLE SERVER

Appendix D: Backing out a Single Server

Step	Procedure		Re	sult		
1.	Using the VIP address, access the Primary SDS GUI.	• Access the Primary SDS GUI as specified in Appendix A.				
2	Active SDS VIP:					
Z .	Select	Tekelec 🖁	ubscriber Database Se 0.0-50.13.0	erver		
	Main Menu → Administration → Software Managmnt → Upgrade	Connected using VIP to roma-sds-	AGTIVE NETWORK GAM&P) Main Menu: Adn	ninistrati	on -> Software Manag	ement -> Up
	right.	Software Manageme	nt	OAM Max	Network Element	Role
		 Versions ISO Deployment 	Hostname	Max Allowed	Appl Version	Function
		 Upgrade Remote Servers 	roma-sds-a	Active	sds_roma	Network OAM&P
		 Configuration Alarms & Events 	roma-sds-b	Standby	sds_roma	Network OAM&P
		🖬 🚞 Security Log 🖬 🧮 Status & Manage	roma-so-a	Active	sds_roma	System OAM
		Measurements Communication Agent	roma-so-b	Standby	sds_roma	System OAM
	NOTE : On 4.0	i SDS - 🔅 Help	roma-dp-1	Active	sds_roma	MP
	systems, select… Main Menu	⊢ \$3 Logout	roma-dr-a	Active	dr_roma	Network OAM&P
	→ Upgrade					
3.	Active SDS VIP:	qs-mrsvnc-1	ds_mrsvnc		QUERY_SERVER Not F	Ready
	 Using the vertical scroll bar in the right panel, scroll to the row containing the hostname of the server to be backed out. Verify that the 	1			2	
	Upgrade State shows "Not Ready".					
4.	Active SDS VIP:		3.0.0-3.0.0_10.10.0		OAM&P	-
	 Using the cursor, select the row 	qs-mrsvnc-1	sds_mrsvnc 3.0.0-3.0.0_10.10.0		UNDEFINED	tReady
	containing the hostname of the server to be	drsds-dallastx-a	dr_dallastx	1	NETWORK OAM&P No	t Ready
	upgraded. 2) Click the " Prepare Upgrade " button located in the bottom left of the right panel.	Prepare Upgrade	Initiate Upgrade	Monitor U	Jpgrade Complete Up	grade

Appendix D: Backing out a Single Server

Step	Procedure	Result
_	Active SDS VIP:	Main Menu: Administration -> Upgrade [Make Ready]
5.		
	The user should be presented with the Upgrade [Make Boady]	Selecting 'OK' will result in the selected Server being in Forced Standby database replication will automatically be inhibited.
	Administration	Selected Server: qs-mrsvnc-1
		Ok Cancel
	Click either " Ok" button.	Upgrade Ready Criteria Selected Server Status Mate Status HA Status Forced Standby
		Critical Alarms 0 0
	NOTE: If backing	Major Alarms 0 0
	out the Active	Replication Server Status Norm
	Primary SDS server	Collection Server Status Norm
	you will need to log	Database Server Status Norm
	back into the GUL	HA Server Status Norm Dill
		Application State Enabled
		Ablaction or an
		Ok Cancel
•	Active SDS VIP:	sids misunc OLIERY SERVER Ready
6 .		qs-mrsvnc-1 30.0-30.0_10.10.0 UNDEFINED
	 Using the vertical 	5.0.0-5.0.0_10.10.0 ONDERINED
	scroll bar in the right	
	panel, scroll to the	
	hostname of the	
	server to be backed	
	out.	
	2) Verify that the	
	Upgrade State shows "Ready".	
		Execute Steps 7 - 26 of this procedure for the appropriate server being backed out:
	1=1	Server Console (iLO): NOAMs, Query Servers & DP blades
	4	Server Console (virsh console): SOAMs only
		Server Console: All servers
7.	Server Console	User:root logged-in to ILOUSE205TEW1. (10.240.240.131)
	(ILO):	Server Name: gs-mrsvnc-1
	1) Access the	Server Power: On
	server's <i>iLO IP via</i>	
	"ssh".	hpiLO-> vsp
	2) Entor Virtual Sorial	Starting wirtual serial port
	Port mode (VSP) as	Press 'ESC (' to return to the CLI Session.
shown on the right.		
		hpiLO-> Virtual Serial Port active: IO=0x03F8 INT=4
	NOTE: Do not	<enter></enter>
	attempt to "ssh"	CentOS release 6 3 (Final)
	server in the SDS	Kernel 2.6.32-279.5.2.el6prerel6.0.1 80.31.0.x86 64 on an x86 64
	topology, Backout	
	requires a direct	qs-mrsvnc-1 login:
	connection to the	
	server iLO.	

Appendix D: Backing out a Single Server

Step	Procedure	Result		
8.	Server Console (virsh console):	CentOS release 6.3 (Final) Kernel 2.6.32-279.5.2.el6prerel6.0.1_80.31.0.x86_64 on an x86_64		
	Access the TVOE host via " ssh ".	cslab-SO-a-tvoe login: root Password: <root_password></root_password>		
9.	Server Console (virsh console):	[root@cslab-SO-a-tvoe ~]# virsh list virsh console Id Name State		
	List the VMs present on the TVOE host.	1 cslab-ATTdsrSO-a running 2 qs-mrsvnc-1 running		
		[root@cslab-SO-a-tvoe ~]#		
10.	Server Console (virsh console):	<pre>[root@cslab-SO-a-tvoe ~]# virsh console 2</pre>		
	Access the console of the VM to be backed out.			
11.	Server Console:	CentOS release 6.3 (Final) Kernel 2.6.32-279.5.2.el6prerel6.0.1 80.31.0.x86 64 on an x86 64		
	Log into the server as the " root " user.	qs-mrsvnc-1 login: root Password: <root_password></root_password>		
12.	Server Console:	*** TRUNCATED OUTPUT ***		
	Output similar to that shown on the right will appear as the server access the command prompt.	<pre>VPATH=/var/TKLC/rundb:/usr/TKLC/appworks:/usr/TKLC/awpss7 PRODPATH=/opt/TKLCcomcol/cm5.13/prod RUNID=00 VPATH=/opt/TKLCcomcol/runcm5.13:/opt/TKLCcomcol/cm5.13 PRODPATH= RELEASE=5.13 RUNID=00 VPATH=/var/TKLC/rundb:/usr/TKLC/appworks:/usr/TKLC/awpss7:/usr/TKLC/ex hr PRODPATH=/opt/TKLCcomcol/cm5.13/prod RUNID=0 [root@gs=mrsync=1 ~1#</pre>		
	Server Console:	[root@gs-mrsvnc-1 ~]# /var/TKLC/backout/reject		
13.	Execute the Backout script as shown to the right.	The runlevel transition complete RC file was created as /etc/rc3.d/S99TKLCsnmp_notify_runlevel_transition_complete. Changing to run-level 3 **********************************		
14.	Server Console:			
	Answer "y" when prompted to "Continue backout?".	Verifying that backout is possible. Checking for stale RPM DB locks		
		Current platform version: 6.0.0-80.21.0 Continue backout? [y/N]: y		
15	Server Console:	Many informational messages will come across the terminal screen as the backout proceeds:		
	Backout proceeds	Finally, after backout is complete, the server will automatically reboot.		

Appendix D: Backing out a Single Server

Step	Procedure	Result
16.	Server Console:	CentOS release 4.6 (Final) Kernel 2.6.18-128.4.1.e15prerel4.0.0 70.32.0 on an x86 64
	1) Wait for the reboot to return to the command prompt.	<pre>qs-mrsvnc-1 login: root Password: <root_password></root_password></pre>
	 Log into the server as the "root" user. 	
17.	Server Console:	Examine the upgrade logs in the directory /var/TKLC/log/upgrade and verify that no errors were reported:
	Verify the backout	<pre># grep -i ``[^]error[^] /var/TKLC/log/upgrade/upgrade.log</pre>
		1. Examine the output of the above commands to determine if any errors were reported.
		Note: The following error can be ignored:
		DEBUG: 'iqt' command failed (is IDB running?)
		and/or
		ERROR: createVolumes needs logical volume objects passed in. ERROR: There was a problem creating Logical Volumes. ERROR: Check log for error relating to exitCode: 6.
		ERROR-{HA::Mgr}: No Clusternode found for resource entry, (tklc-ha- active)! ERROR-{HA::Mgr}: Failed to initialize ResourceConf!
		ERROR: generateTest did not return an object! ERROR: Should not happen!
		and/or:
		1382972756::syscheck: unrecognized service 1382972757::ERROR: failed to restart syscheck 1382972757:: If using syscheck, it must be restarted manually
		Note: The grep will also find many lines similar to these, which are not errors:
		1382721861:: 9901 EvError StatClerk A Single Simple 30min
		and/or:
		1382721864:: 31109 DB Topology Config Error comcolTopErrorNotify 1382721864:: 31128 REPL ADIC Found ErrorcomcolDbADICErrorNotify 1382721864:: 32302 PLAT Server RAID Disk Error tpdRaidDiskError 1382721864:: 32305 PLAT ************************************
		 If the backout was not successful because other errors were recorded in the logs, then contact Oracle's Tekelec Customer Care Center for further instructions.
		3. If the backout was successful (no errors or failures), then continue with the remaining steps.
18.	Server Console:	Execute the backout_restore utility to restore the full database run environment:
	Restore the full DB run environment.	<pre># /var/tmp/backout_restore</pre>
		NOTE: If asked if you would like to proceed, answer "y".
		If the restore was successful, the following will be displayed:
		Success: Full restore of COMCOL run env has completed. Return to the backout procedure document for further instruction.
		If an error is encountered and reported by the utility, then work with Oracle's Tekelec Customer Care Center for further instructions.

Appendix D: Backing out a Single Server

Step	Procedure	Result
19.	Server Console:	Enter the following command to reboot the server: # init 6
	Reboot the server.	This step can take several minutes and will terminate the SSH session.
20.	Server Console: 1) Wait for the reboot to return to the	CentOS release 4.6 (Final) Kernel 2.6.18-128.4.1.e15prerel4.0.0_70.32.0 on an x86_64 qs-mrsvnc-1 login: root
	command prompt. 2) Log into the server as the " root " user.	Password: <root_password></root_password>
	Server Console:	[root@qs-mrsvnc-1 ~]# uptime
21.	 Verify the server "uptime". 	19:28:43 up 1 min , 1 user, load average: 0.89, 0.29, 0.10 [root@qs-mrsvnc-1 ~]#
	2) Repeat this Step until the "uptime" value shows "5 min" or higher.	
22.	Server Console:	[root@qs-mrsvnc-1 ~]# service httpd status
	Verify that the "httpd" service is now running.	nttpd (pid 6524) is running [root@qs-mrsvnc-1 ~]#
	NOTE: If the "httpd" service fails to start contact Oracle's Tekelec Customer Care Center for assistance.	
		• Skip to step 25 of this Procedure if the server you are backing out is an SO or DP.
23.	Server Console:	[root@qs-mrsvnc-1 ~]# ivi prov_ctlBsource
	Open prov_ctlBsource table and change "Disable" to "Enable" as shown.	<pre>#!/bin/sh iload -ha -xU -fprov_status prov_ctlBsource \ <<'!!!!' Disable !!!!</pre>
	NOTE: This step can be removed when PR 215531 is fixed.	becomes
		<pre>#!/bin/sh iload -ha -xU -fprov_status prov_ctlBsource \ <<'!!!!' Enable !!!!</pre>

Appendix D: Backing out a Single Server

Step	Procedure	5	Re	sult			
24.	Server Console:	:wq APPLY THE CHANGES [y	n]? y				
	changes	LOADED OK	щ.				
	be removed when PR 215531 is fixed.	[roor@ds=utsvuc=t ~]#					
25.	Server Console:	[root@qs-mrsvnc-1 ~] Logout	# exit				
	1) Exit from the server command line.	qs-mrsvnc-1 login: iLO: < ESC - Shift - (>	(ESC then hold	l Shift and	I hit 9 in close succession)		
	2) Exit from the console.	Virsh Console: < CTRL -]> (Hold CTRL an	nd hit the F	Right bracket "]" in close su	uccession)	
26.	Server Console:	> exit					
	Exit from the iLO or TVOE host.	or # exit					
27.	Using the VIP address, access the Primary SDS GUI.	Access the Primary SDS GUI as specified in Appendix A.					
28.	Active SDS VIP:						
	Select	Connected using VIP to roma-sds-a (Source and the state of the state	using VIP to roma-sds-a (ACTIVE NETWORK CAM&P) Menu ministration -> Software Management -> Un				
	Main Menu → Administration	General Options	Filter - Tasks -			incine y op	
	→Software Managmnt → Upgrade	Software Management	Hostnama	OAM Max HA Role	Network Element	Role	
	as shown on the	Versions So Deployment Upgrade	Troetilaine	Max Allowed HA Role	Appi Version	Function	
	right.	a 🖿 Remote Servers	roma-sds-a	Active Active	50.13.0 sds_roma	OAM&P Network OAM&P	
		a Alarms & Events E Security Log	roma-sds-b	Active	50.13.0 sds_mma	OAM&P Sustem OAM	
		 Status & Manage Measurements 	roma-so-a	Active	50.13.0	OAM Sustan OAM	
		 Communication Agent SDS 	roma-so-b	Active	50.13.0 sds_roma	OAM MD	
		- 🧇 Help - 🕫 Logout	roma-dp-1	Active	50.13.0	SDS	
	systems, select		roma-dr-a	Active	50.13.0	OAM&P	
	Main Menu → Administration → Upgrade						

Appendix D: Backing out a Single Server

Step	Procedure	5		Result	_
29.	Active SDS VIP:	qs-mrsvnc-1	sds_mrsvnc 3.0.0-3.0.0_10.10.0	QUE	RY_SERVER Not Ready
	1) Using the vertical scroll bar in the right panel, scroll to the row containing the hostname of the server to be backed out.	1			2
	 Verify that the Upgrade State shows "Not Ready" or "Success". 				
		NOTE: If Upgrade	e State shows Not R	eady , skip ahead to	Step 33 of this procedure.
30.	Active SDS VIP:		3.0.0-3.0.0_10.10.0	OAN	I&P Em
	<i>NOTE:</i> If Upgrade State in step 29 shows "Success":	qs-mrsvnc-1	sds_mrsvnc 3.0.0-3.0.0_10.10.0 dr_dallastx		ERY_SERVER Not Ready DEFINED Err WORK OAM&P Not Ready
	1) Using the cursor, select the row containing the hostname of the server to be upgraded.	Prepare Upgra	ide Initiate Upgrad	e Monitor Upgrade	Complete Upgrade
	2) Click the "Complete Upgrade" button located in the bottom left of the right panel.				
31.	Active SDS VIP:	Main Menu: Adm	inistration -> Upg	rade [Remove Read	y] 🔗 Help
	<i>NOTE:</i> If Upgrade State in step 30 shows "Success":	• Selecting V 'Active' set	OK will result in the selected s 'Observer' is set for query sen	erver's application being enable vers.	d and the Max HA Capability of
	The user should be presented with the Upgrade [Remove Ready]	Selected Server: qs-mrsvn Ok Cancel	e-1		
	Administration screen.	Upgrade Ready Criteria Se Max HA Role Ot Critical Alarms 0 Major Alarms 0	elected Server Status Mate S bserver Stando 0 0	latus r	
	Click any " Ok " dialogue button.	Minor Alarms 1 Database Server Status No HA Server Status No Process Server Status Application State Di	0 Norm orm Norm an Norm sabled Enable	d	
		Ok Cancel			

Appendix D: Backing out a Single Server

Step	Procedure		R	esult		
32.	Active SDS VIP:	Connected using VIP to roma-sds-a (ACTIVE NETWORK OAM&P))		
	NOTE: If Upgrade State in step 30 shows "Success":	Main Menu: Administration -> Software Management -> Up				
	The user is returned	Software Management	Hostnama	OAM Max HA Role	Network Element	Role
	to the	- ISO Deployment	nostrano	Max Allowed HA Role	Appl Version	Function
	Main Menu	roma-ede-a	Active Active	sds_roma 50.13.0	Network OAM&P OAM&P	
→ Administration → Software Manage	→ Administration →Software Managmnt	Alarms & Events	roma-sds-b	Standby Active	sds_roma 50.13.0	Network OAM&P OAM&P
	→ Upgrade	Status & Manage	roma-so-a	Active Active	sds_roma 50.13.0	System OAM OAM
	screen as shown on the right.	Presumments Communication Agent Sos Sos Sos Sos	roma-so-b	Standby Active	sds_roma 50.13.0	System OAM OAM
			roma-dp-1	Active Active	sds_roma 50.13.0	MP SDS
	NOTE : On 4.0		roma-dr-a	Active Active	dr_roma 50.13.0	Network OAM&P OAM&P
	systems, to <u>Main Menu</u> → Administration → Upgrade					
		NOTE: Wait for the screet the Upgrade action is discharge to Not Ready .	en to refresh and sabled. It may ta	show the ke up to 2	Upgrade State is minutes for the Up	Vot Ready and ograde State to

Appendix D:	Backing out	a Single Server
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Step	Procedure	Result			
33.	Active SDS VIP: 1) Using the vertical scroll bar in the right panel, scroll to the row containing the hostname of the backout server. 2) Verify that the Application Version now shows the <target_release>. 3) Verify that the Upgrade State shows "Not Ready". NOTE: If the Upgrade State fails to show "Not Ready", the user may need to refresh the screen by selecting Main Menu -> Administration -> Software Managmnt -> Upgrade for a 2nd time and repeating sub-steps 1) thru 3) associated with this step.</target_release>	duery_server Not Ready os Norm 3			
		 Skip the remaining step of this Procedure if the server you are upgrading is a Query Server. 			
34.	Active SDS VIP: Lift Standby restriction on the server.	Lift the Standby restriction as specified in Appendix E (<i>Lifting Standby Restriction</i>).			
	THIS PROCEDURE HAS BEEN COMPLETED				

APPENDIX E. LIFTING STANDBY RESTRICTION

Step	Procedure	Result				
1.	Using the VIP address, access the Primary SDS GUI.	• Access the Primary SDS GUI as specified in Appendix A .				
2.	Active SDS VIP: Select Main Menu	Connected using VIP to sds-mrsvnc-a (ACTIVE NETWORK OAM&P) - Global Provisioning disabled				
	→ Status & Manage → HAscreen as shown	Alarms & Events Application Max Application Max Max HA Allowed HA Role Network Elements	łos			
	on the right.	- Server sds-mrsvnc-a Active OOS Active sds-m	Irsv			
	Unless the backout server shows HA	- Database qs-mrsvnc-1 Observer OOS Observer sds-m sds-mrsvnc-1	irsv irsv			
	Status as "Max Allowed HA Role" as "Standby" (shown in the example to the right), this procedure is not required to be run.		-			
3.	Active SDS VIP: Click the "Edit" dialogue button in the bottom right panel	Edit Edit Max Allowed HA Role				
4.	Active SDS VIP: For the server backed out, change the "Max Allowed HA Role" to "Active" and click the "OK" button.	sdsSO- vzwCore-b Standby SdsSO- vzwCore-b Active Th dp-vzwCore-4 Standby Spare Observer OOS OOS Observer Observer	e maximur vCore-b e maximur Cancel			

Appendix E: Lifting Standby Restriction

Appendix E: Lifting Standby Restriction

Step	Procedure	·	Result			
5	Active Provisioning					
	Site VIP:	A Main Menu	Sos-a (ACITVE NETWORK OAM&P)			1
	Select	Administration	Main Menu: Adn	ninistrati	on -> Software I	1anagement -> Up
	Main Menu	a 🚨 Access Control	ement			
	→ Administration	Licenses	Hostname	OAM Max HA Role	Network Element	Role
	→Software Managmnt → Upgrade	- ISO Deployme	ent	Max Allowed HA Role	Appl Version	Function
	an about on the	Dpgrade Remote Servers	roma-sds-a	Active Active	sds_roma 50.13.0	Network OAM&P OAM&P
	right.	Configuration Alarms & Events	roma-sds-b	Standby Active	sds_roma 50.13.0	Network OAM&P OAM&P
		Status & Manage	roma-so-a	Active	sds_roma 50.13.0	System OAM OAM
		Communication Age	nt roma-so-b	Standby Active	sds_roma	System OAM
		n 🖬 SDS - 🤣 Help	roma-dp-1	Active	sds_roma	MP
	NOTE : On 4.0	🖵 🖗 Logout	roma-dr-a	Active	50.13.0 dr_roma	SDS Network OAM&P
	systems, select Main Monu			Active	50.13.0	OAM&P
6.	Active SDS VIP:	Main Menu: Adm	ninistration -> Upg	rade		Mon I
	1) Using the cursor, select the row	6				
	containing the	Hostname	Network Element		Role	Upgrade State
	backout server.	10201010	Application Version		Function	Server Status
	2a) If the Upgrade	sds-mrsvnc-a	sds_mrsvnc 4.0.0-40.9.1		NETWORK OAM&P OAM&P	Not Ready
	State snows "Not Ready" then skip to Sten 9 of this	sds-mrsvnc-b	sds_mrsvnc 4.0.0-40.9.1		NETWORK OAM&P OAM&P	Not Ready Norm
	procedure.	qs-mrsvnc-1	sds_mrsvnc		QUERY_SERVER	Not Ready
	2b) If the Upgrade	drsds-dallastx-a	dr_dailastx		NETWORK OAM&P	Ready
	"Ready" then click	l	4.0.0-40.9.0		OAM&P SYSTEM OAM	10 Not Ready
	the "Complete Upgrade" button	so-carync-a	4.0.0-40.9.1		OAM	Norm
	located in the bottom	so-carync-b	so_carync		SYSTEM OAM	Not Ready
	continue to the next		4.0.0~40.9.1		OAM	Norm
	Step.			YII	000 2	
		Prepare Upgrade In	itiate Upgrade Monitor Up	grade C	omplete Upgrade	Accept Upgrade

Appendix E: Lifting Standby Restriction

Step	Procedure		Result			
7.	Active Provisioning Site VIP:	Main Menu: Adm	inistration ->	Upgra	de [Remove Ready	1
	The user should be presented with the Upgrade [Remove Ready] Administration screen.	• Selecting 'C 'Observer' i Selected Server: drsds-dall	DK will result in the sel s set for query servers astx-a	ected serve	r's application being enabled	an
	Click any " Ok" dialogue button.	Ok Cancel				
		Upgrade Ready Criteria Se	lected Server Status			
		Max HA Role Sta	andby			
		Critical Alarms				
		Major Alarms 0				
		Minor Alarms 3				
		Database Server Status Wa	am			
		HA Server Status No	m			
		Application State	n			
8.	Active Provisioning Site VIP:	Ok Cancel	(ACTIVE NETWORK GAM&P) Main Menu: Adn	ninistrati	on -> Software Manager	nent -> Up
	to the	Access Control	Filter 🛨 Tasks 🛨			
	Main Menu	Software Management	Hostname	OAM Max HA Role	Network Element	Role
	→ Administration →Software Managmnt	ISO Deployment		HA Role	Appl Version	Function
	→ Upgrade	Remote Servers	roma-sds-a	Active Active	sds_roma 50.13.0	Network OAM&P OAM&P
	screen as shown on the right.	 Conliguration Alarms & Events Security Log 	roma-sds-b	Standby Active	sds_roma 50.13.0	Network OAM&P OAM&P
	on the right	🖬 🖿 Status & Manage	roma-so-a	Active Active	sds_roma 50.13.0	System OAM OAM
		 Measurements Communication Agent SDS 	roma-so-b	Standby Active	sds_roma 50.13.0	System OAM OAM
		- 🔶 Help	roma-dp-1	Active	sds_roma 50.13.0	MP SDS
	NOTE : On 4.0 systems, to	- ya Lugula	roma-dr-a	Active Active	dr_roma 50.13.0	Network OAM&P OAM&P
	<u>Main Menu</u> → Administration → Upgrade					

(

Appendix E: Lifting Standby Restriction



APPENDIX F. DISABLE HYPERTHREADING

This section is to be run only once on each DP; the configuration stays across future upgrades. If hyperthreading was disabled during installation, it is not be required to be executed again.

NOTE: Disable hyper threading applies only to DP servers.

Appendix F: Disable Hyperthreading

Step	Procedure	Result
1.	DP Server XMI IP (SSH):	CentOS release 4.6 (Final) Kernel 2.6.18-128.4.1.e15prerel4.0.0_70.32.0 on an x86_64
	1) Access the command prompt via the server's <i>XMI IP</i>	dp-carync-1 login: root Password: <root_password></root_password>
	2) Log into the server as the " root " user.	
	NOTE: The XMI IP address may be viewed by locating the server hostname under	
	Main Menu → Configuration → Servers	
2.	DP Server XMI IP (SSH): Output similar to that shown on the right will appear as the server access the command prompt.	<pre>*** TRUNCATED OUTPUT *** VPATH=/var/TKLC/rundb:/usr/TKLC/appworks:/usr/TKLC/awpss7 PRODPATH=/opt/TKLCcomcol/cm5.13/prod RUNID=00 VPATH=/opt/TKLCcomcol/runcm5.13:/opt/TKLCcomcol/cm5.13 PRODPATH= RELEASE=5.13 RUNID=00 VPATH=/var/TKLC/rundb:/usr/TKLC/appworks:/usr/TKLC/awpss7:/usr/TKLC/ex hr PRODPATH=/opt/TKLCcomcol/cm5.13/prod RUNID=0 [root@dp-carync-1 ~]#</pre>
3.	DP Server XMI IP (SSH): Check the number of expected CPUs. If the number is greater than 20, then this procedure has not been run before.	<pre># syscheckAdm system cpugetvar='EXPECTED_CPUS' 39</pre>
		NOTE: If the number of CPUs is reported as 20, this procedure has already been run for this DP. You may return to the calling section.

Appendix F: Disable Hyperthreading

Step	Procedure	Result
4.	DP Server XMI IP (SSH): Set the number of expected CPUs to the number of physical CPUs (20 for BL360 hardware).	<pre># syscheckAdm system cpusetvar='EXPECTED_CPUS'val='20'</pre>
5.	DP Server XMI IP (SSH): Verify the set number of expected CPUs.	<pre># syscheckAdm system cpugetvar='EXPECTED_CPUS' 20</pre>
6.	DP Server XMI IP (SSH): Restart sycheck service.	<pre># stop syscheck syscheck stop/waiting # start syscheck syscheck start/running, process 48790 NOTE: On SDS 4.0 systems, run this instead: # service syscheck restart Stopping syscheck: [OK] Starting syscheck: [OK]</pre>
7.	DP Server XMI IP (SSH): Verify the number of CPUs recorded at OS installation. NOTE: If a "No such file or directory" response is received, then skip to Step 10 of this procedure.	<pre># cat /usr/TKLC/awpcommon/prod/bin/NumOriginalCpus 40</pre>
8.	DP Server XMI IP (SSH): Modify the number of CPUs recorded at OS installation to "20".	<pre># echo 20 > /usr/TKLC/awpcommon/prod/bin/NumOriginalCpus</pre>
9.	DP Server XMI IP (SSH): Verify the number of CPUs has been updated to "20".	<pre># cat /usr/TKLC/awpcommon/prod/bin/NumOriginalCpus 20</pre>

Appendix F: Disable Hyperthreading

Step	Procedure	Result
10.	DP Server XMI IP (SSH):	[root@dp-carync-1 ~]# exit logout
	Exit from the server command line.	
	Note: If you are on the console, you may instead type reboot here in preparation for Step 11 below.	
11.	Access the Server BIOS	Reboot the server. This can be achieved by pressing and holding the power button until the server turns off, then after approximately 5-10 seconds press the power button to enable power.
		As soon as you see F9=Setup in the lower left corner of the screen, press [F9] to access the BIOS setup screen. You may be required to press [F9] 2-3 times. The F9=Setup will change to F9 Pressed once it is accepted. See example below.
		HP Decision Proliant System BIOS - P64 (03/01/2010) Capyright 1982, 2010 Hewlett-Packard Development Company, L.P. Processor(a) detected, & total cores enabled, Hyperthreading is enabled. Processor(a) detected, & total cores enabled, Hyperthreading is enabled. Processor(a) detected, & total cores enabled, Hyperthreading is enabled. Processor(a) detected, & total cores enabled, Hyperthreading is enabled. Processor(a) Detected, & total cores enabled, Hyperthreading is enabled. Prover Profile Mode: Balanced Power and Performance Prover Profile Mode: Balanced Power and Performance Prover Profile Mode: Dynamic Power Sovings Advanced Memory Protection Mode: Advanced ECC Support Redundant ROM Detected - This system contains a valid backup system ROM. Idet Ambient Temperature: 19C/66F Press any key to view Option ROM messages Press PS When yous Idet Ambient Temperature: 19C/66F Press PS When yous Press PS When yous Idet Power Press PS Idet Ambient Temperature: 19C/66F When yous Press PS When yous Idet Power Press PS Press PS When yous PS PS
		 ROM-Based Setup Utility is accessed and the ROM-Based Setup Utility menu will be displayed.

Step	Procedure	Result
12.	Select System Options	Scroll to System Options and press [ENTER]
		Copyright 1982, 2011 Newlett-Packard Development Company, L.P. System Options Power Management Options PCI IRQ Settings PCI Device Enable/Disable Standard Boot Order (IPL) Boot Controller Order Date and Time Server Availability Server Availability Server Asset Text Advanced Options System Default Options Utility Language Viiiity Language Center> to View/Modify System Specific Options (1/4) for Different Selection; (TRB> for More Info; (ESC> to Exit Utility
13.	Select Processor Options	Select Processor Options option and press [ENTER]
		RNM-Based Setup & Weingener Copyright 1982, 2011 Hewlett-Packard Development Conpany, L.P. Serial Port Options Po Enhedded NICs PC NIC Personality Options PC Advanced Memory Protection St USB Options Processon Options Pa Server Reset Text Advanced Options System Default Options Utility Language Copyright 1982, 2011 Hewlett-Packard Development Conpany, L.P. ProLiant BL468c C6 S/N: USE0211NRH Product ID: 507864-B21 HP BIOS 124 85/85/2011 Bootblock 81/22/2011 Bootblock 81/22/2011 Bootblock 81/22/2018 Power Management Controller - 3.4 24576MB Memory Configured Proc 1:Intel 2.53GHz,8MB L3 Cache Proc 2:Intel 2.53GHz,8MB L3 Cache Proc 2:Intel 2.53GHz,8MB L3 Cache Proc 2:Intel 2.53GHz,8MB L3 Cache Proc 3:Intel 2.53GHz,8MB L3 Cache Proc 3:Intel 2.53GHz,8MB L3 Cache Proc 4:Intel 2.53GHz,8MB L3 Cache Proc 4:Intel 2.53GHz,8MB L3 Cache Proc 4:Intel 2.53GHz,8MB L3 Cache Proc 4:Intel 2.53GHz,8MB L3 Cache Proc 5:Intel 2.53GHz,8MB L3 Cache Proc 1:Intel 2.53GHz,8MB L3 Cache Proc 5:Intel 2.55GHz,8MB L3 Cache Proc 5:Intel 2.55GHz,8MB L3 Cache Proc 5:Intel 2.55GHz,8MB

Appendix F: Disable Hyperthreading

Step Procedure Result Select Intel® Hyperthreading Options option and press [ENTER]. Select 14. Hyperthreading Options ROM-Based Setup N SHEEK Copyright 1982, 2011 Hewlett-Packard Development Company, L.P. No-Execute Memory Protection iant BL468c C6 Intel(R) Virtualization Technology USE0211MRH Po PC PC Intel(R) Hyperthreading Options uct ID: 507864-B21 Processor Core Disable IOS 124 05/05/2011 Intel(R) Turbo Boost Technology up Version 01/29/2011 St Bo Intel(R) UI-d block 01/22/2010 Management Controller - 3.4 Server Availabilit Server Security 24576MB Menory Configured BIOS Serial Console & EMS Server Asset Text Advanced Options Proc 1:Intel 2.53GHz,8MB L3 Cache System Default Options Proc 2:Intel 2.53GHz,8MB L3 Cache Utility Language Enabled Press <TAB> for More Information <Enter> to Modify Intel(R) Hyperthreading Status; <F1> for Help Set hyperthreading to Select Disabled option and press [ENTER]. 15. Disabled. ROM-Based Setup Copyright 1982, 2011 Hewlett-Packard Development Company, L.P. No-Execute Memory Protection liant BL460c C6 Intel(R) Virtualization Technology Po USE0211MRH Intel(R) Hyperthreading Options uct ID: 507864-B21 PC Processor Core Disable IOS 124 05/05/2011 PC St Intel(R) Turbo Boost Technology up Version 01/29/2011 Bo Da block 01/22/2010 п Enabled r Management Controller - 3.4 Serv Disabled Serv 24576MB Memory Configured BIOS Sectal Console & EMS Server Asset Text Advanced Options Proc 1:Intel 2.53CHz,8MB L3 Cache System Default Options Proc 2:Intel 2.53GHz,8MB L3 Cache Utility Language Press (IAB) for More Information nabled (†/↓) Changes Configuration Selection (Enter) Saves Selection; (ESC) to Cancel

Appendix F: Disable Hyperthreading

Appendix F: Disable Hyperthreading

Step	Procedure	Result	
16.	Save Configuration and Exit	Press [F10] to save the configuration and exit. The server will reboot	
		RDM-Based Setup Utility, Version 3.08 Copyright 1982, 2018 Hewlett-Packard Development Company, L.P. System Options Power Management Options PCI IRQ Settings PCI Development Company, L.P. Product ID: 484184-821 P BIDS P64 03/01/2010 Standar CF10 Date and Time	
		Server Availability Server Security BIOS Serial Console & EMS S Current Boot Controller A PCI Enbedded MP Snart Array P410i Controller	
		She	
		Press (IAB) for More Information	
		Expected Result:	
		Settings are saved and server reboots.	
		THIS PROCEDURE HAS BEEN COMPLETED	

APPENDIX G. FINALIZING UPGRADE

G.1 Enable AppProcControl Replication



Procedures in Appendix G (Finalizing Upgrade) are to be executed only!!! WARNING !!!once after all sites/servers on the network have been upgraded to the
target release.

Appendix G.1: Enable AppProcControl Replication

Step	Procedure	Result
1.	Active Provisioning Site VIP (SSH):	CentOS release 5.7 (Final) Kernel 2.6.18-274.7.1.e15prerel5.0.0_72.32.0 on an x86_64
	 Access the command prompt. 	sds-mrsvnc-a login: root Password: < <i>root_password</i> >
	 Log into the server as the "root" user. 	
2.	Active Provisioning Site VIP (SSH):	*** TRUNCATED OUTPUT ***
	Output similar to that shown on the right will appear as the server access the command prompt.	<pre>VPATH=/var/TKLC/rundb:/usr/TKLC/appworks:/usr/TKLC/awpss7 PRODPATH=/opt/TKLCcomcol/cm5.13/prod RUNID=00 VPATH=/opt/TKLCcomcol/runcm5.13:/opt/TKLCcomcol/cm5.13 PRODPATH= RELEASE=5.13 RUNID=00 VPATH=/var/TKLC/rundb:/usr/TKLC/appworks:/usr/TKLC/awpss7:/usr/TKLC/sd s PRODPATH=/opt/TKLCcomcol/cm5.13/prod RUNID=0 [root@sds-mrsvnc-a ~]#</pre>
3.	Active Provisioning Site VIP:	<pre>[root@sds-chltnc-a ~]# iset -fexcludeTables='' NodeInfo where "1=1" === changed 10 records === [root@sds-chltnc-a ~]#</pre>
	Enable replication for the AppProcControl table.	
4.	Active Provisioning Site VIP:	[root@sds-mrsvnc-a ~]# exit logout
	Exit from the server command line.	
THIS PROCEDURE HAS BEEN COMPLETED		

G.2 Accept Upgrade

	Procedures in Appendix G (Finalizing Upgrade) are to be executed only once after all sites/servers on the network have been upgraded to the target release.
!!! WARNING !!!	Executing these procedures before all sites/servers on the network have been upgraded can result in a DB replication outage to all sites that have not yet been upgraded to the target release.
	Once the procedures in this Appendix are executed, the upgrade becomes permanent and the servers CANNOT be backed to the previous SW release.

Step	Procedure	Result
1.	Using the VIP address, access the Primary Provisioning Site GUI.	• Access the Primary Provisioning Site GUI as specified in Appendix A.
2.	Active Provisioning Site VIP: Launch an approved web browser and connect to the XMI IP	Certificate Error: Navigation Blocked - Windows Internet Explorer File Edit View Favorites Tools Help Share Browser WebEx +
	address assigned to SDS NOAM VIP using "https://"	 Side dowed Week * Yeek *
		More information

Step	Procedure	Result
3.	Active Provisioning Site VIP: The user should be presented with a login screen similar to the one shown on the right.	ORACLE® Oracle System Login Fri Feb 28 16:53:37 2014 EST
	Login to the GUI using the default user and password.	Log In Enter your username and password to log in Username: guiadmin Password: Change password Log In Welcome to the Oracle System Login. Unauthorized access is prohibited. This Oracle system requires the use of Microsoft Internet Explorer 7.0, 8.0, or 9.0 with support for JavaScript and cookies. Oracle and logo are registered service marks of Oracle Corporation. Copyright © 2013 Oracle Corporation All Rights Reserved.
4.	Active Provisioning Site VIP: The user should be presented the SDS Main Menu as shown on the right.	Connected using XHI to sds-mrsvnc-a (ACTIVE NETWORK OAH&P) Welcome guladmin [Lopout] Main Menu: Main Menu: Administration The Dec 01 19:10:55 2011 UTC Alarms & Events Status & Manage Status & Manage Measurements Communication Agent This is the user-defined welcome message. It can be modified using the 'Options' tab under the 'Administration' menu.

Procedure Step Result **Active Provisioning** 5. ected using VIP to roma-sds-a (ACTIVE NETWORK OAM&P) Site VIP: 🚨 Main Menu Select... Main Menu: Administration -> Software Management -> Upg Administration Ē. General Options Filter 👻 Main Menu Access Control Tasks 🔻 🖨 Software Managem → Administration OAM Max Network Element Role Licenses →Software Managmnt HA Role Hostname Versions → Upgrade Max Allowed Appl Version Function ISO Deployment HA Role Upgrade Active sds_roma Network OAM&P Remote Servers roma-sds-a • Active 50.13.0 OAM&P ...as shown on the Configuration Ģ Network OAM&P Standby sds_roma 🗎 Alarms & Events right. Ŀ. roma-sds-b 50.13.0 OAM&P Active Security Log ¢ Active sds_roma System OAM 🚞 Status & Manage ¢ roma-so-a Active 50.13.0 MAD Measurements b Standby sds_roma System OAM Communication Agent ¢ roma-so-b 50.13.0 OAM ÷. 🗀 SDS Active MP Active sds_roma 🥏 Help roma-dp-1 Active 50.13.0 SDS 🕫 Logout Network OAM&P Active dr_roma roma-dir-a OAM&P 50.13.0 Active Active Provisioning Main Menu: Administration -> Upgrade 6. Site VIP: 1) Highlight the next server awaiting Network Element Upgrade State Role acceptance by Hostname clicking on its row. Application Version Function Server Status sds_mrsvnc NETWORK OAM&P Not Ready 2) Select the sds-mrsvnc-a 1 4.0.0-4.0.0_40.4.0 OAM&P Err "Accept Upgrade" sds_mrsvnc NETWORK OAM&P Not Ready dialogue button. sds-mrsvnc-b 4.0.0-4.0.0_40.4.0 OAM&P Norm sds_mrsvnc QUERY_SERVER Not Ready as-mrsvnc-1 4.0.0-4.0.0_40.4.0 QS Norm 000 Complete Upgrade Accept Upgrade **Active Provisioning** x 7. Message from webpage Site VIP: A message box will display to confirm the Selecting Ok will result in the selected server being set to ACCEPT for its acceptance. upgrade mode. Once accepted, the server will NOT be able to revert Click the "OK" button back to the previous image state. Accept the upgrade for sds-mrsvnc-a to confirm. with ip address 169.254.100.11? OK Cancel

Step Procedure Result **Active Provisioning** Connected using XMI to sds-mrsvnc-a (ACTIVE NETWORK OAM&P) 8. Site VIP: 😑 🚊 Main Menu Main Menu: Administration -> Upgrade 📋 😋 Administration The screen will 🕴 Users refresh. Groups Sessions Network Element Role Upgrade State Hostname 🤠 🧰 Single Sign-On Application Version Function Server Status Authorized IPs NETWORK OAM&P Not Ready sds_mrsvnc Options sds-mrsvnc-a 4.0.0-4.0.0_40.4.0 OAMSP SNMP NETWORK OAM&P Not Ready sds_mrsvnc ISO sds-mrsvnc-b 4.0.0-4.0.0_40.4.0 OAMBP Norm Upgrade QUERY_SERVER Not Ready Software Versions sds_mrsvnc qs-mrsvnc-1 Export Server 4.0.0-4.0.0_40.4.0 QS Norm dr_dallastx NETWORK OAM&P Not Ready in Configuration drsds-dallastx-a 🖬 🧰 Alarms & Events 4.0.0-4.0.0_40.4.0 OAMBP Norm 💼 🚞 Security Log SYSTEM OAM Not Ready so_carync 🖬 🛅 Status & Manage so-caryno-a 4.0.0-4.0.0_40.4.0 MAO Norm Measurements so_carync SYSTEM OAM Not Ready 🤠 🧰 Communication Agent so-caryno-b 4.0.0-4.0.0_40.4.0 MAO Norm 🛓 💼 SDS so_carync MP Not Ready 💩 Help dp-caryno-1 4.0.0-4.0.0 40.4.0 SDS D Logout **Active Provisioning** 9. Site VIP: Repeat for all Accept Upgrade on all servers by repeating steps 5 - 8 of this procedure. • servers, all network elements. THIS PROCEDURE HAS BEEN COMPLETED

APPENDIX H. CREATE NEW LOGICAL VOLUME FOR NETBACKUP CLIENT

This section is to be run only on SDS NOAM and SDS DR NOAM servers, and only when the LV does not already exist.

Step	Procedure	Result
1.	Verify procedure is run on every server where netBackup will be installed.	If a logical volume for NetBackup has not already been created, execute this procedure on every NOAMP and SOAM server in every Network Element in the system that has NetBackup client software installed.
2.	Active Provisioning Site VIP (SSH):	CentOS release 5.7 (Final) Kernel 2.6.18-274.7.1.e15prerel5.0.0_72.32.0 on an x86_64
	If not already logged in	sds-mrsvnc-a login: root Password: < <i>root_password</i> >
	1) Access the command prompt.	
	 Log into the server as the "root" user. 	
3.	Active Provisioning Site VIP (SSH):	*** TRUNCATED OUTPUT ***
	Output similar to that shown on the right will appear as the server access the command prompt.	<pre>VPATH=/var/TkLC/rundb:/usr/TkLC/appworks:/usr/TkLC/awpss/ PRODPATH=/opt/TKLCcomcol/cm5.13/prod RUNID=00 VPATH=/opt/TKLCcomcol/runcm5.13:/opt/TKLCcomcol/cm5.13 PRODPATH= RELEASE=5.13 RUNID=00 VPATH=/var/TKLC/rundb:/usr/TKLC/appworks:/usr/TKLC/awpss7:/usr/TKLC/sd</pre>
		PRODPATH=/opt/TKLCcomcol/cm5.13/prod RUNID=0 [root@sds-mrsvnc-a ~]#
4.	Active Provisioning Site VIP (SSH): Mount the upgrade media	Depending on whether the server is a blade server, a VM guest, or a rack-mount server, and depending on whether your upgrade media is an actual DVD disk or an ISO image, make the upgrade media available to the server. Then, mount the upgrade media on the server from the command line. Your command will look
		something like this example, depending on how you have made the upgrade media available:
		Optical Drive (DVD):
		<pre>[root@sds-mrsvnc-a ~]# mount /dev/sr0 /mnt/upgrade</pre>
		ISO Alternative (after ISO Administration):
		<pre># mount -o loop /var/TKLC/upgrade/<sds_application_iso> /mnt/upgrade</sds_application_iso></pre>
5.	Active Provisioning Site VIP (SSH):	To be sure it is available on the upgrade media, execute the "Is" command to list the relocateNetBackup script, like this:
	Verify that the script is available on the media	[root@sds-mrsvnc-a ~]# ls /mnt/upgrade/upgrade/bin/relocateNetBackup
		Verify that the relocateNetBackup script is indeed there.

Appendix H: Create new Logical Volume for NetBackup Client

Appendix H: Create new Logical Volume for NetBackup Client

Step	Procedure	Result	
6.	Active Provisioning Site VIP (SSH):	Verify that the filemgmt filesystem has more than 2049 Megabytes of free space. Execute the df command and examine the response.	
	Verify that there is sufficient space available	[root@sds-mrsvnc-a ~]# df -B M /var/TKLC/db/filemgmt/	
		Verify that the available space is 2049 Megabytes or greater.	
		If there is not sufficient space, remove unneeded files until there is sufficient space.	
7.	Active Provisioning Site VIP (SSH):	Execute the relocate script:	
	Execute the relocate script.	<pre>[root@sds-mrsvnc-a ~]# /mnt/upgrade/upgrade/bin/relocateNetBackup</pre>	
		Verify that it executes without error.	
		NOTE: It has been observed that the service restart of netbackup may return a warning. This is a function of the NetBackup client software.	
8.	Server XMI IP (SSH):	[root@sds-mrsvnc-a ~]# u mount /mnt/upgrade	
	Unmount upgrade media.		
9.	Server XMI IP (SSH):	[root@sds-mrsvnc-a ~]# exit Logout	
	Exit from the server command line.		
	THIS PROCEDURE HAS BEEN COMPLETED		

APPENDIX I. RESIZE SHARED SEGMENTS AND LOGICAL VOLUMES

This procedure increases database size needed by imports in SDS 5.0 and re-aligns existing partition sizes to meet the new resource demands of SDS 5.0.

This section is to be run only for a **MAJOR** upgrade (4.x to 5.x) and should be run for *all* servers. The procedure can be run at any time during or after the upgrade procedure. This script can be run for all servers at once or for one server at a time. The script does change the **init** level of every affected server.

Step	Procedure	Result	
1.	To validate <i>all</i> servers at the same time, skip to Step 3.	Run this command to validate one server: [root@hostname~]# /usr/TKLC/sds/bin/lv50fix validate <hostname></hostname>	
	To validate <i>one</i> server, login to that server (or any server that has been upgraded) to verify if ready for the fix.	NOTE : This script produces much output and verifies if the specified one server in the SDS network is ready to have its shared segments and logical volumes resized.	
2.	To update <i>all</i> servers, at the same time, skip to Step 4.	Run this command to update one server: [root@hostname ~] # /usr/TKLC/sds/bin/lv50fix execute <hostname></hostname>	
	To update <i>one</i> server, login to that server (or any server that has been upgraded) to execute the fix.	NOTE : This script produces much output and, first, verifies if just the specified one server in the SDS network is ready to have its shared segments and logical volumes resized. Then it performs those changes on that one server in the SDS network.	
	NOTE : After this step, skip all remaining steps.	NOTE : After this step, skip all remaining steps.	
3.	To validate <i>all</i> servers, login to the Active NOAM (or any server that has been upgraded) to verify if ready for the fix	Run this command to validate <i>all</i> servers: [root@hostname ~] # /usr/TKLC/sds/bin/lv50fix validate all NOTE : This script produces much output and verifies if <i>all</i> servers in the SDS network are	
		ready to have their shared segments and logical volumes resized.	
4.	To update <i>all</i> servers, login to the Active NOAM (or any server that has been upgraded) to execute the fix.	Run this command to update <i>all</i> servers: [root@hostname ~] # /usr/TKLC/sds/bin/lv50fix execute all NOTE : This script produces much output and, first, verifies if all servers in the SDS network are ready to have their shared segments and logical volumes resized. Then it performs those changes on all servers in the SDS network.	
	THIS PROCEDURE HAS BEEN COMPLETED		

Appendix I: Resize Shared Segments and Logical Volumes

APPENDIX J. ACCESSING ORACLE'S TEKELEC CUSTOMER SUPPORT SITE

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

- 1. Go to Oracle's Tekelec Customer Support login page at https://support.tekelec.com/index.asp
- 2. Enter your assigned username and chosen password and click Login.

Or, if you do not have access to the Customer Support site, click **Need an Account?** Follow instructions on the screen.

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

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