Oracle® Communications Diameter Signaling Router

SDS 5.0.1 Cloud Installation Guide Release 5.0.1 E64816, Revision 01

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Oracle Communications Diameter Signaling Router SDS 5.0.1 Cloud Installation Guide

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See more information on MOS in the Appendix section.

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1.0 INTRODUCTION

1.1 Purpose and Scope

This document describes how install the Eagle XG Subscriber Data Server (SDS) product within a customer network. It makes use of the AppWorks 5.0 network installation and is intended to cover the initial network configuration steps for a SDS/Query Server NE for production use as part of the DSR 7.0.1 solution.

This document only describes the SDS product SW installation on a Virtualized solution. It does not cover hardware installation, site survey, customer network configuration, IP assignments, customer router configurations, or the configuration of any device outside of the SDS virtual machines.

1.2 References

External (Customer Facing):

- [1] TEKELEC Acronym Guide, MS005077, Latest Revision
- [2] Diameter Signaling Router 7.0.1 Cloud Installation Guide, E64814, Latest Revision

Internal (ORACLE Communications Personnel Only):

[3] DSR IP Network Planning for AT&T Mobility – LTE, MS006641, Latest Revision

	· · · · · · · · · · · · · · · · · · ·
Acronym	Meaning
CSV	Comma Separated Values
DR	Disaster Recovery
IMI	Internal Management Interface
ISL	Inter-Switch-Link
NE	Network Element
NOAM	Network Operations, Administration & Maintenance
SDS	Subscriber Data Server
SOAM	Systems Operations, Administration & Maintenance
TPD	Tekelec Platform Distribution (Linux OS)
VIP	Virtual IP
XMI	External Management Interface
T . I . I . A	A

1.3 Acronyms

Table 1 - Acronyms

1.4 Assumptions

This procedure assumes the following;

- The user has reviewed the latest Customer specific DSR Network Planning document [3] and has received assigned values for all requested information related to SDS, Query Server, DP-SOAM and DP installation.
- The user has taken assigned values from the latest Customer specific DSR Network Planning document [3] and used them to compile XML files (See **Appendix A**) for each SDS and DP-SOAM site's NE prior to attempting to execute this procedure.
- The user conceptually understands DSR topology and SDS network configuration as described in the latest Customer specific DSR Network Planning document [3].
- The user has at least an intermediate skill set with command prompt activities on an Open Systems computing environment such as Linux or TPD.

1.5 XML Files (for installing NE)

The XML files compiled for installation of the each of the SDS and DP-SOAM site's NE must be maintained and accessible for use in Disaster Recovery procedures. The ORACLE Professional Services Engineer (PSE) will provide a copy of the XML files used for installation to the designated Customer Operations POC. The customer is ultimately responsible for maintaining and providing the XML files to Oracle's Customer Service (*US: 1-888-367-8552, Intl: +1-919-460-2150*) if needed for use in Disaster Recovery operations.

1.6 How to use this Document

Although this document is primarily to be used as an initial installation guide, its secondary purpose is to be used as a reference for Disaster Recovery procedures. When executing this document for either purpose, there are a few 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, STOP and contact Oracle's Tekelec Customer Service (*US: 1-888-367-8552, Intl: +1-919-460-2150*) for assistance before attempting to continue.

2.0 PRE-INSTALLATION SETUP

2.1 Installation Prerequisites

The following items/settings are required in order to perform installation:

- A laptop or desktop computer equipped as follows;
 - Administrative privileges for the OS.
 - An approved web browser (currently Internet Explorer 7.x or 8.x)
- TPD "root" user password.

2.2 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 Communications for archiving post installation.

3.0 INSTALLATION MATRIX

3.1 Installing SDS on the Customer Network

Installing the SDS product is a task which requires multiple installations of varying types. The matrix below provides a guide to the user as to which procedures are to be performed on which site types. The user should be aware that this document only covers the necessary configuration required to complete product install. Refer to the online help or contact the Oracle's Tekelec Customer Care Center for assistance with post installation configuration options.

Installation User's Guide

NOTE: Although the SDS sites are fully redundant by function, we must distinguish between them during installation due to procedural changes based on the installation sequence. The user should be aware that any reference to the "SDS" site refers to the 1st installation of a SDS pair on the customer network while references to the "DR SDS" site refers to the 2nd SDS pair to be installed.

SDS Installation Matrix

0: T								
51	етуре	1	2	3	4	5	6	7
	SDS	>	<	<	×	×	×	×
	Query Server	<	X	×	<	×	×	X
	DP- SOAM	>	×	×	×	<	\	×
	DP	>	×	×	×	×	×	1

Table 2 - SDS Installation Matrix

SDS Installation: List of Procedures

In general, unless following a cross reference or otherwise instructed differently, the procedures listed here are meant to be executed in numeric order.

Procedure No :	Title :		
1	Create SDS Guests	10	
2	Configuring SDS Servers A and B	12	
3	OAM Pairing	23	
4	Query Server Installation	34	
5	OAM Installation for DP-SOAM sites (All DP-SOAM sites)	45	
6	OAM Pairing for DP-SOAM sites (All DP-SOAM sites)	52	
7	DP Installation (All DP-SOAM sites)	60	
8	Configuring ComAgent	74	

Table 3 - SDS Installation: List of Procedures

4.0 APPLICATION INSTALL

4.1 Create SDS Guests

Procedure 1: Create SDS Guests From OVA

Step	Procedure	Result		
1.	Cloud Client: Add SDS OVA image.	 Launch the Cloud client of your choice. Add the SDS OVA image to the Cloud catalog or repository. Follow the instructions provided by the Cloud solutions manufacturer. 		
2.	Cloud Client: Create the SDS VM, from the OVA image.	 Browse the library or repository that you placed the OVA image. Deploy the OVF Image using Cloud Client or the Cloud Web Client. Name the SDS NOAM VM and select the datastore. 		
3.	Cloud Client: Configure resources for the SDS Server A VM.	1. Configure the SDS NOAM VM per the Appendix C Resource Profile for the SDS NOAM using the Cloud Client or the Cloud Web Client.		
4.	Cloud Client: Power on SDS Server A VM.	1. Use the Cloud client or Cloud web client to Power on the SDS Server A VM .		
5.	Cloud Client: Configure SDS Server A.	 Access the SDS SERVER A VM console via the Cloud client or Cloud web client. Login as root. Set the <ethx> device:</ethx> Note: Where ethX is the interface associated with the XMI network # netAdm adddevice=<ethx>address=<ip address="" external="" in="" management="" network="">netmask=<netmask>onboot=yes</netmask></ip></ethx>		
6.	Verify Network connectivity.	1. Ping the default gateway. # ping -c3 <gateway address="" external="" for="" management="" network="" the=""></gateway>		
7.	Repeat th	is steps 1 - 6 for each server before continuing on to the next procedure. (e.g. Server A, Server B, Query Server, DP)		

Procedure 1: Create SDS Guests From OVA

Step	Procedure	Result
		THIS PROCEDURE HAS BEEN COMPLETED

5.0 CONFIGURATION PROCEDURES

5.1 Configuring SDS Servers A and B

Assumptions:

- This procedure assumes that the SDS Network Element XML file for the Primary Provisioning SDS site has previously been created, as described in **Appendix A**.
- This procedure assumes that the Network Element XML files are the laptop's hard drive.

This procedure requires that the user connects to the SDS GUI prior to configuring the first SDS server.

Procedure 2: Configuring SDS Servers A and B

Step	Procedure	Result
1.	SDS Server A: Launch an approved web browser and connect to the SDS SERVER A XMI IP address.	Certificate Error: Navigation Blocked - Windows Internet Explorer Control Co
	NOTE: If presented with the "security certificate" warning screen shown to the right, choose the following option: "Continue to this website (not recommended)".	 Prevention of the security certificate presented by this website's security certificate. The security certificate presented by this website was not issued by a trusted certificate authority. The security certificate presented by this website was issued for a different website's address. Security certificate problems may indicate an attempt to fool you or intercept any data you send to the server. We recommend that you close this webpage and do not continue to this website. Click here to close this webpage. Continue to this website (not recommended). More information

Procedure 2:	Configuring	SDS Servers	A and B
---------------------	-------------	--------------------	---------

Step	Procedure	Result
2.	SDS Server A: The user should be presented the login screen shown on the right. Login to the GUI using the default user and password.	Oracle System Login Wed Jun 3 09:50:21 2015 EDT Log In Enter your username and password to log in Username: Password: Change password Change password Change password Urauthorized 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.

Procedure 2.1 Configuring the Network Element					
3.	SDS Server A: Select	ORACLE Communications Diameter Signal Router Full Address Resolution 0 0 0 0			
	Main Menu → Configuration → Network Elements as shown on the right.	Main Menu Administration Configuration Network Elements Services Servers Server Groups Places Place Associations OSCP Network Element Security Log Status & Manage			

Proc	Procedure 2.1 Configuring the Network Element							
4 .	SDS Server A: From the Configuration / Network Elements screen Select the "Browse" dialogue button (scroll to bottom left corner of screen).	 Main Menu Administration Configuration Services Resource Domains Servers Servers Servers Servers Servers Place Associations DSCP Network Devices Network Devices Network Security Log Status & Manage Measurements 	Wek ork Elements Wed.					
5.	 SDS Server A: Note: This step assumes that the xml files were previously prepared, as described in Appendix A. 1) Select the location containing the site .xml file. 2) Select the .xml file and click the "Open" dialogue button. 	Organize Network Config Organize New folder Pavorites Downloads Recent Places Desktop Creative Cloud F OneDrive Documents Music Pictures Videor File name: NO_DSR_NE	Search Network Config Eliment Search Network Config Date modified Type 6/3/2015 10:54 AM XML Document All Files Open Cancel					
6.	SDS Server A: Select the "Upload File" dialogue button (bottom left corner of screen).	J To create a new Network Element, upload a valid configuration file: Browse NO_DSR_NE.xml Upload File Insert Delete Edit NE Networks Delete NE Networks	etwork Export Report					

Proc	Procedure 2.1 Configuring the Network Element					
7.	SDS Server A: If the values in the .xml file pass validation rules, the user will receive a banner information message showing that the data has been successfully validated and committed to the DB.	Main Menu: Configuration -> Network Elements				
	NOTE: You may have to left mouse click the " Info " banner option in order to see the banner output.					

Proce	edure 2.2 Configu	uring Services				
0	SDS Server A:		nications Diamet	er Signal Router Full /	Address Resolution 🕜 🕜	0
o.	Select	5.0.1-50.2	21.0			
	<u>Main Menu</u> → Configuration	 Main Menu Administration Configuration 	Main Menu:	Configuration -> S	ervices	
	 → Services as shown on the right. 1) The user will be presented with the "Services" configuration screen as shown on the right. 2) Select the "Edit" dialogue button. 	 Network Elements Servicas Resource Domains Server Groups Places Place Associations DSCP Network Alarms & Events Security Log Status & Manage Measurements Communication Agent SDS Help E Logout 	Name OAM CoAM Replication Signaling HA_Secondary HA_MP_Secondary Replication_MP ComAgent Edit Report Edit the system	Intra-NE Network Unspecified Unspecified Unspecified Unspecified Unspecified Unspecified Unspecified Services.	Inter-NE Network Unspecified Unspecified	
9.	SDS Server A: 1) With the exception of "Signaling" which is left	Main Menu: Configurat	ion -> Service	s [Edit]	Fri J	¢ un 05 12:31:28 201
	"Unspecified", set	Name	Intra-NE	Network	Inter-NE Network	
	other services values so that all	OAM	IMI	•	XMI 👻	
	Intra-NE Network	Replication	IMI	•	XMI 👻	
	traffic is directed	Signaling	Unspec	ified 🔻	Unspecified -	
	across IMI and all	HA_Secondary	IMI	•	XMI 👻	
	traffic is across XMI.	HA_MP_Secondary	IMI		XMI 👻	
		Replication MP	IMI		XMI 👻	
	2) Select the "Ok"	ComAgent	IMI	-	XMI 👻	
	dialogue button.			Ok Apply Cancel		
	3) Select the " Ok " popup dialogue button.					
	NOTE: These are recommended	You must restart all Servers to apply any	v services changes, ComA	igent		
	Service names may vary according to those used in Appendix A.		OK Cancel			

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Procedure 2.2 Configuring Services					
10.	SDS Server A:	Main Manus Confi	auration -> So	rvices	
	The user will be presented with the "Services"				
	configuration screen	Name	Intra-NE Network	Inter-NE Network	
	as shown on the	OAM	IMI	XMI	
	right	Replication	IMI	XMI	
		Signaling	Unspecified	Unspecified	
		HA_Secondary	IMI	XMI	
		HA_MP_Secondary	IMI	XMI	
		Replication_MP	IMI	XMI	
		ComAgent	IMI	XMI	
		Edit Report		000	

Procedure 2.3 Configuring the SDS Server					
Commu 5.0,1-50.	21.0	eter Signal Rou	ter Full Address Res		
 Administration Configuration Metwork Elements 	Filter -	Configuratio	JII -> Servers		
- Services - Resource Domains	Hostname	Role	System ID		
 Servers Server Groups Places Place Associations DSCP Network Alarms & Events Security Log Status & Manage Measurements Communication Agent SDS Help Gogout 	Insert Edit	Delete Expo	rt Report		
	Uring the SDS Server Correction 5.0.1-50. Main Menu Main Menu Main Menu Main Menu Main Menu Main Menu Main Menu Main Menu Main Menu Mesource Domains Mesource D	Image: Substance of the set of the	Image: Server Server Image: Server		

Proc	edure 2.3 Configu	iring the SDS	Server					
12.	SDS Server A or B:	Main Menu: Co	onfiguration -> Servers	[Insert]				
	1) Input the assigned	Info 🔻			Fri Jun 05 12:47:01			
	"hostname" for the	Adding a new server						
	B).	Attribute	Value		Description			
	2) Select "NETWORK	Hostname	SDS-NO1 *		Unique name for the server. [Default = n/a. Range = A 20-character string. Valid characters are alphanumeric and minus sign. Must start with an alphanumeric and end with an alphanumeric.]			
	OAM&P" for the server "Role" from	Role	NETWORK OAM&P 💌		Select the function of the server			
	the pull-down menu.	System ID	SDS-NO1		System ID for the NOAMP or SOAM server. [Default = n/a. Range = A 64-character string. Valid value is any text string.]			
	3) Input the	Hardware Profile	SDS ESXi Guest 🔹		Hardware profile of the server			
	assigned hostname	Network Element Name	SDS_NO ×		Select the network element			
	again as the " System ID " for the SDS Server (A or	Location	MoVille	L3	Location description [Default = "". Range = A 15-character string. Valid value is any text string.]			
	 4) Select "SDS ESXI Guest" for the Hardware Profile for the SDS from the pull-down menu. 5) Select the Network Element Name for the SDS from the pull-down menu. NOTE: After the Network Element Name is selected, the Interfaces fields will be displayed, as seen in step 13. 6) Enter the site location. NOTE: Location is an optional field. 							

S Server A or B:				
	Interfaces:	ID A LA		
Enter the XMI		IP Address	Interface	
a livil IP dresses for the	Awii (10.200.05.0/24)	10.200.00.117	ethU 🔻	VLAN (3)
Server.	IMI (192.168.0.0/24)	192.168.0.1	eth1 ▼	UVLAN (4)
	NTP Servers:			
Set the XMI and	NTP Server IP Addres	ss Pre	fer	
Interfaces to	10.250.65.115		7	
ciated with the		Ren	nove	
and IMI Virtual		Qk Apr	ly Cancel	
orks. DO NOT		12		
k the VLAN				
kboxs.				
ick the "NTP				
ers:" "Add"				
gue button.				
ter the NTP				
n NTP Server.				
vou have				
er NTP Server				
dress, repeat				
d (2) to enter				
ptionally, click				
Prefer"				
kbox to prefer				
ITP Server				
the other.				
lick the " Ok "				

Proc	edure 2.4 Applyin	g the SD	S Server	Configu	ration Fi	le			
14.	SDS Server A or B: 1) Use the cursor to	Main Menu: Configuration -> Servers							
	Server entry added	Filter •]			Network			
	in Steps 11 - 13.	Hostname	Role	System ID	Server Group	Element	Location	Place	Details
	The row containing	SDS-NO1	Network OAM&P	SDS-NO1		SDS_NO	MoVille		XMI: 10.250.65.117 IMI: 192.168.0.1
	Server should now be highlighted in GREEN. 2) Select the "Export" dialogue button.								
		Insert	Edit Delete	Export	Report		000		
				Genera	ate file(s) that ma	ay be used to vi	ew the configura	tion of the select	ted Server(s).
15.	SDS Server A or B:	Example S	Server A:	Genera	ate file(s) that ma	ay be used to vi	ew the configura	tion of the select	ted Server(s).
15.	SDS Server A or B: Copy the server configuration file to the "/var/tmp" directory on the server, making sure to rename the file by omitting the server	Example S TKLCConfi [root@ho /var/TKL /var/tmp [root@ho	Server A: igData <hos stname12 C/db/fil /TKLCCon stname12</hos 	Genera tname>.sh 60476099 emgmt/TKI figData.s 60476099	→ will trans ~] # cp LCConfigDo sh ~] #	ay be used to vi	KLCConfigE	tion of the select	ted Server(s).
15.	SDS Server A or B: Copy the server configuration file to the "/var/tmp" directory on the server, making sure to rename the file by omitting the server hostname from the file name.	Example S TKLCConfi [root@ho /var/TKL /var/tmp [root@ho Example S	Server A: igData <hos stname12 C/db/file /TKLCCon stname12 Server B:</hos 	Genera tname>.sh 60476099 emgmt/TKI figData.s 60476099	→ will trans ~] # cp LCConfigDo sh ~] #	ay be used to vi	KLCConfigE	tion of the select	ted Server(s).

Proc	edure 2.4 Applyir	ng the SDS Server Configuration File
16.	SDS Server A or B:	*** NO OUTPUT FOR \approx 3-20 MINUTES ***
	After the script completes, a broadcast message	Broadcast message from root (Thu Dec 1 09:41:24 2011):
	will be sent to the terminal.	Server configuration completed successfully!
	NOTE: The user	See /var/TKLC/appw/logs/Process/install.log for details.
	should be aware that the time to complete this step varies by server and may take from 3-20 minutes to complete.	<pre>[root@hostname1260476099 ~]# tail -f \ /var/TKLC/appw/logs/Process/install.log</pre>
17.	SDS Server A or B:	<pre>[root@hostname1260476099 ~]# set_ini_tz.pl <time zone=""></time></pre>
	Configure the time zone.	Note: The following command example uses Etc/UTC time zone. Replace, as appropriate, with the time zone you have selected for this installation. See Appendix B for a list of valid time zones.
		<pre>[root@hostname1260476099 ~]# set_ini_tz.pl "Etc/UTC"</pre>
18.	SDS Server A or B:	[root@hostname1260476099 ~]# init 6
	Initiate a reboot of the SDS Server .	
19.	SDS Server A or B:	CentOS release 5.6 (Final)
	After the server has completed reboot	Kernel 2.6.18-238.19.1.el5prerel5.0.0_72.22.0 on an x86_64
	Verify that the server console returns to a login prompt.	Password: <root_password></root_password>

Proce	rocedure 2.4 Applying the SDS Server Configuration File					
20	SDS Server A or B:	[root@sds-mrsvnc-a ~]# syscheck				
20.	Execute a	Running modules in class system				
	"syscheck" to	OK				
	health of the server.	Running modules in class proc				
		OK				
		Running modules in class net				
		OK				
		Running modules in class hardware				
		OK				
		Running modules in class disk				
		OK				
		LOG LOCATION: /var/TKLC/log/syscheck/fail_log				
		[root@sds-mrsvnc-a ~]#				
21.	SDS Server A or B:	[root@sds-mrsvnc-a ~]# exit				
	Exit from the	CentOS release 5.6 (Final)				
	return the server	Kernel 2.6.18-238.19.1.el5prerel5.0.0_72.22.0 on an x86_64				
	console to the login prompt.	ada_mroupa_a login.				
		Sus-misvine-a login.				
22.	Configure Si	DS Server B by repeating steps 11 - 21 of this procedure.				
		THIS PROCEDURE HAS BEEN COMPLETED				

5.2 OAM Pairing

The user should be aware that during the OAM Pairing procedure, various errors may be seen at different stages of the procedure. During the execution of a step, the user is directed to ignore errors related to values other than the ones referenced by that step.

Procedure 3: Pairing the OAM Servers (1st SDS site only)

Step	Procedure	Result					
1.	SDS Server A:	Certificate Error: Navigation Blocked - Windows Internet Explorer					
	Launch an approved						
	connect to the XMI IP address assigned to	File Edit View Favorites Tools Help					
	SDS Server A using "https://"	🚖 🎄 🔊 Certificate Error: Navigation Blocked					
		There is a problem with this website's security certificate.					
		The security certificate presented by this website was not issued by a trusted certificate authority. The security certificate presented by this website was issued for a different website's address.					
		Security certificate problems may indicate an attempt to fool you or intercept any data you send to the server.					
		We recommend that you close this webpage and do not continue to this website.					
		Ø Click here to close this webpage.					
		😵 Continue to this website (not recommended).					
		More information					
•	SDS Server A:						
2.	The user should be	ORACLE					
	presented the login						
	right.	Oracle System Login Wed Jun 3 09:50:21 2015 EDT					
	using the default user	Log In Enter your username and password to log in					
	and password.	Username:					
		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.					

Proc	edure 3.1 Configu	ring the SDS Serv	er Group				
3.	SDS Server A: Select		ommunications Diar).1-50.21.0	neter Signal Rou	uter Full Addr	ess Resoluti	
	Main Menu → Configuration → Server Groups as shown on the right.	 Main Menu Administration Configuration Services Resource Domain Servers Servers Places Place Association DSCP Network 	ts ns E	u: Configurati	ion -> Servo	er Groups	Servers
4.	 SDS Server A: 1) The user will be presented with the "Server Groups" configuration screen as shown on the right. 2) Select the "Insert" dialogue button from the bottom left corner of the screen. NOTE: The user may need to use the vertical scroll-bar in order to make the 	Main Menu: Con Filter • Server Group Name	nfiguration -> Level Parent	Server Gro	Connection Count	Servers	
	" Insert " dialogue button visible.	 Insert Edit Deleter 	ete Report		j		
5.	SDS Server A: The user will be presented with the "Server Groups [Insert]" screen as shown on the right. NOTE: Leave the "WAN Replication Connection Count" blank (it will default to 1).	Main Menu: Configur	Value Value Select Level - Select Function - x t 1	Description Unique identifier used to string. Valid characters alpha and must not stata Select one of the Level Query servers. Level B contain MP servers.] Select an existing Server Select an existing Server Select one of the Funct Specify the number of connection associated between 1 and 8.] Ok Apply	o label a Server Grou are alphanumeric ar rt with a digit.] s supported by the sy groups are optional er Group or NONE tions supported by the TCP connections tha with this Server Grou	Wed J p. [Default = n/a. Range = id underscore. Must contai (stem. [Level A groups cor and contain SOAM servers e system t will be used by replication up. [Default = 1. Range = A	un 03 11:18:54 20: A 1-32-character in at least one tain NOAMP and s. Level C groups

Procedure 3: Pairing the OAM Servers (1st SDS site only)

Step	Procedure	Result						
6.	SDS Server A: Input the Server Group Name.	Main Menu: Configuration -> Server Groups [Insert] Wed Jun 03 11:18:54 20 Wed Jun 03 11:18:54 20						
		Field	Value	Description				
	Select " A " on the	Server Group Name	SDS_NO	Unique identifier used to label a Server Group. [Default = n/a. Range = A 1-32-character string. Valid characters are alphanumeric and underscore. Must contain at least one alpha and must not start with a digit.]				
	menu.	Level	A •	Select one of the Levels supported by the system. [Level A groups contain NOAMP and Query servers. Level B groups are optional and contain SOAM servers. Level C groups contain MP servers.]				
	Select "None" on the	Parent	NONE •	Select an existing Server Group or NONE				
	"Parent" pull-down	Function	SDS •	Select one of the Functions supported by the system				
	menu.	WAN Replication Connection Count	1	Specify the number of TCP connections that will be used by replication over any WAN connection associated with this Server Group. [Default = 1. Range = An integer between 1 and 8.]				
	Select "SDS" on the "Function" pull- down menu.			Ok Apply Cancel				
	Select the " Ok " dialogue button.							

Proc	edure 3.2 Adding	a Server to an OAM Server Group
7.	SDS Server A: The Server Group entry added in Steps 5 - 6 should now appear on the "Server Groups" configuration screen as shown on the right.	Communications Diameter Signal Router Full Address Resolution 5.0.1-50.21.0 Main Menu Main Menu Administration Configuration Network Elements Services Resource Domains Server Group Name Level Parent Function Connection Count SDS_NO A NONE SDS 1 Network
8.	 SDS Server A: 1) Select the Server Group entry added in Steps 5 - 7. The line entry should now be highlighted in GREEN. 2) Select the "Edit" dialogue button from the bottom left corner of the screen. NOTE: The user may need to use the vertical scroll-bar in order to make the "Edit" dialogue button visible. 	Main Menu: Configuration -> Server Groups Filter Server Group Name Level SDS_NO A NONE SDS 1

Proce	edure 3.2 Adding	a Server to an OAN	/I Server Grou	IP					
9.	SDS Server A:	Main Menu: Configura	ation -> Server G	iroups [Edit]					
	The user will be	Fri Jun 05 18:33:44							
	presented with the								
	"Server Groups	Field	Value	Description					
	[Edit]" screen as shown on the right.	Server Group Name	SDS_NO *	Unique identifier used to label a Server Group. [Default = n/a. Range = A 1-32-character string. Valid characters are alphanumeric and underscore. Must contain at least one alpha and must not start with a digit.]					
		Level	A •	Select one of the Levels supported by the system					
	1) Select the "A"	Parent	NONE *	Select an existing Server Group or NONE					
:	server and the "B"	Function	SDS 🔻	Select one of the Functions supported by the system					
	from the list of "Servers" by clicking	WAN Replication Connection Count	1	Specify the number of TCP connections that will be used by replication over any WAN connection associated with this Server Group. [Default = 1. Range = An integer between 1 and 8.]					
	the check box next to	SDS_NO							
	their names.	Server	SG Inclusion	Preferred HA Role					
		SDS-NO1	Include in SG	Preferred Spare					
	2) Select the "Apply"	SDS-NO2	Include in SG	Preferred Spare					
	dialogue button.	VIP Assignment							
		VIP Address Add							
		VIF Address							
10	SDS Server A:								
	Click the " Add "	VIP Assignment							
	dialogue button for								
	the VIP Address.	VIP Addre	SS	Add					
	SDS Server A:								
11.	SDS Server A.	VIP Assignment							
	1) Input the VIP	The Assignment							
	Address.	VIP Address		Add					
	(10.250.65.123		Remove					
	2) Select the "Annly"								
	dialogue button		C						
	alaloguo buttolli								
12	IMPORTANT:	 Now that the server 	r(s) have been pai	red within a Server Group they must establish a					
	Wait at least 5	master/slave relation	onship for High Ava	ailability (HA). It may take several minutes for this					
	minutes before	process to be comp	oleted.						
	proceeding on to the	 Allow a minimum of 	f 5 minutes before	e continuing to the next Step.					
	next Step								

13. SDS VIP: Launch an approved web browser and connect to the XMII Virtual IP Address (VIP) assigned in STEP 11 to the SDS server 'Group using "https://". If the security certificate Error: Navigation Blocked - Windows Internet Explorer If the security certificate Error: Navigation Blocked - Windows Internet Explorer If the security certificate Error: Navigation Blocked - Windows Internet Explorer If the security certificate Error: Navigation Blocked - Windows Internet Explorer If the security certificate Error: Navigation Blocked - Windows Internet Explorer If the security certificate Error: Navigation Blocked - Windows Internet Explorer If the security certificate Error: Navigation Blocked - Windows Internet Explorer If the security certificate Error: Navigation Blocked - Windows Internet Explorer If the security certificate Error: Navigation Blocked - Windows Internet Explorer If the security certificate presented by this website was not issued by a trusted certificate authority. The security certificate presented by this website was issued for a different website's address. Security certificate problems may indicate an attempt to fool you or intercept any data you send to the server. We recommend that you close this webpage. Citck here to dose this webpage. Continue to this website (not recommended). Presented the login screen shown on the right. Login to the GUI using the defau	
Launch an approved web browser and connect to the XMI Virtual IP Address (VIP) assigned in SDS terver Group using "https://". Image: Certificate Error: Navigation Blocked Image: Server Group using "https://". Image: Certificate Error: Navigation Blocked Image: Certificate Error: Navigation Blocked Image: Server Group using "https://". Image: Certificate Error: Navigation Blocked Image: Certificate Error: Navigation Blocked Image: Server Group using "https://". Image: Certificate Error: Navigation Blocked Image: Certificate Error: Navigation Blocked Image: Server Group using "https://". Image: Certificate Error: Navigation Blocked Image: Certificate Error: Navigation Blocked Image: Server Group using "https://". Image: Certificate Error: Navigation Blocked Image: Certificate Error: Navigation Blocked Image: Server Group using "https://". Image: Certificate Error: Navigation Blocked Image: Certificate Error: Navigation Blocked Image: Certificate Error: Navigation Blocked Image: Certificate Error: Navigation Blocked Image: Certificate Error: Navigation Blocked Image: Certificate Error: Navigation Blocked Image: Certificate Error: Navigation Blocked Image: Certificate Error: Navigation Blocked Image: Certificate Error: Navigation Blocked Image: Certificate Error: Navigation Blocked Image: Certificate Error: Navigation Blocked Image: Certificate Error: Navigation Blocked </th <th></th>	
Image: Subset Shows of and connect to the SDS server Group using "https://". Image: State Browser WebEx - Image: State Browser How	47 X
Virtual IP Address (VIP) assigned in STEP 11 to the SDS Server Group using "https://". Image Browser Web2x • Image Browser Web2x • Image Browser Web2x • Image Browser Group using "https://". Image Browser Web2x • Image Browser Web2x • Image Browser Web2x • Image Browser Group using "https://". Image Browser Web2x • Image Browser Web2x • Image Browser Web2x •	
Image:	
Server Group using "https://". There is a problem with this website's security certificate. The security certificate presented by this website was not issued by a trusted certificate authority. The security certificate presented by this website was issued for a different website's address. Security certificate presented by this website was not issued by a trusted certificate authority. The security certificate presented by this website was issued for a different website's address. Security certificate presented by this website was issued for a different website's address. Security certificate problems may indicate an attempt to fool you or intercept any data you send to the server. We recommend that you close this webpage and do not continue to this website. © Click here to dose this webpage. © Continue to this website (not recommended). © More information Inference Oracle System Login Wed Jun 3 09:50:21 2015 EDT Log in to the GUI using the default user and password. Infer your username and password to log in and password.	
Image: Continue to this website was not issued by a trusted certificate authority. The security certificate presented by this website was issued for a different website's address. Security certificate problems may indicate an attempt to fool you or intercept any data you send to the server. We recommend that you close this webpage and do not continue to this website. © Click here to close this webpage. © Continue to this website (not recommended). © More information Image: Continue to the GUI using the default user and password. We dun 3 09:50:21 2015 EDT Log in to the GUI using the default user and password.	
Image: Security certificate problems may indicate an attempt to fool you or intercept any data you send to the server. Image: Subscript certificate problems may indicate an attempt to fool you or intercept any data you send to the server. Image: Subscript certificate problems may indicate an attempt to fool you or intercept any data you send to the server. Image: Subscript certificate problems may indicate an attempt to fool you or intercept any data you send to the server. Image: Subscript certificate problems may indicate an attempt to fool you or intercept any data you send to the server. Image: Subscript certificate problems may indicate an attempt to fool you or intercept any data you send to the server. Image: Subscript certificate problems may indicate an attempt to fool you or intercept any data you send to the server. Image: Subscript certificate problems may indicate an attempt to fool you or intercept any data you send to the server. Image: Subscript certificate problems may indicate an attempt to fool you or intercept and password. Image: Subscript certificate problems may indicate an attempt to fool you or intercept and password. Image: Subscript certificate problems may indicate an attempt to fool you or intercept and password. Image: Subscript certificate problems may indicate an attempt to fool you or intercept and password.	
Image: We recommend that you close this webpage and do not continue to this website. Image: We recommend that you close this webpage and do not continue to this website. Image: We recommend that you close this webpage and do not continue to this website. Image: We recommend that you close this webpage and do not continue to this website. Image: We recommend that you close this webpage and do not continue to this website. Image: We recommend that you close this webpage. Image: We recommend that you close this website (not recommended). Image: We recommend that you close this website (not recommended). Image: We recommend that you close this website. Image: We recommend that you close	2
 Click here to close this webpage. Continue to this website (not recommended). More information 14. SDS VIP: The user should be presented the login screen shown on the right. Login to the GUI using the default user and password. Login to the GUI user should user and password.	
Image: SDS VIP: The user should be presented the login screen shown on the right. Login to the GUI using the default user and password. Image: Continue to this website (not recommended). Image: Continue to the cont	
Image: Provide the login screen shown on the right. Image: Provide the login screen shown on the right. Image: Provide the login screen shown on the right. Image: Login to the GUI using the default user and password. Image: Provide the login screen shown on the right. Image: Provide the login screen shown on the right.	
14. SDS VIP: The user should be presented the login screen shown on the right. Oracle System Login Login to the GUI using the default user and password. Wed Jun 3 09:50:21 2015 EDT	
Image: The user should be presented the login screen shown on the right. Oracle System Login Login to the GUI using the default user and password. Wed Jun 3 09:50:21 2015 EDT	
Dresented the login screen shown on the right. Oracle System Login Wed Jun 3 09:50:21 2015 EDT Login to the GUI using the default user and password. Log In Enter your username and password to log in Username:	
Login to the GUI using the default user and password.	
and password.	
Username.	
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.	

Procedure 3.2 Adding a Server to an OAM Server Group								
15.	SDS VIP:	Main Menu: Statu	us & Manage -> Server					🤣 Help
	Select	Filter 🔻					Mon Jun 08 19:0	2:43 2015 UTC
	Main Menu	Network Element	Server Hostname	Appl State	Alm	DB	Reporting Status	Proc
l	→ Status & Manage	SDS_NO	SDS-NO1	Disabled	Err	Norm	Norm	Man
	→ Server	SDS_NO	SDS-NO2	Disabled	Warn	Norm	Norm	Man
	 as shown on the right. 1) The "A" and "B" SDS servers should now appear in the right panel. 2) Verify that the "DB" status shows "Norm" and the "Proc" status shows "Man" for both servers before proceeding to the next Step. 							



Proc	Procedure 3.2 Adding a Server to an OAM Server Group							
17.	SDS VIP: Verify that the "Appl State" now shows "Enabled" and that the "DB, Reporting Status & Proc" status columns all show "Norm" for SDS Server A before proceeding to the next Step. NOTE: If user chooses to refresh the Server status screen in advance of the default setting (15-30 sec.). This may be done by simply reselecting the "Status & Manage → Server" option from the Main menu on the left.	Main Menu: Filter Network Element SDS_NO SDS_NO	Status & Mana Server Hostname SDS-NO1 (SDS-NO2	ge -> Se	Alm Err Norm	DB Norm Norm	Reporting Status Norm Norm	Mon Jun C
18.	Configure SD	S Server B by repe	ating steps 16 - 17 c	f this proce	edure.			
19.	IMPORTANT: Wait at least 5 minutes before proceeding on to the next Step.	 Now that the s High Availabilit Allow a minimum 	erver(s) have been re ty (HA). It may take s um of 5 minutes befo	estarted they several minu pre continuin	v must esta tes for this g to the ne	blish a ma process to xt Step.	aster/slave rela o be complete	ationship for d.

Proc	edure 3.3 Verifyin	g the SDS Server Ala	rm statı	IS				
20.	SDS VIP: If there is a context switch, you may be required to login again.	Oracle Syste	em Login	אכ	ACLE [®]	n 3 09:50:2	21 2015 EDT	
	Login to the GUI using the default user and password.	Unauthorized acces	Enter yo ss is prohibited. Ti 9.0	ur userna Userna Passw Welcome to nis Oracle sy with support	Log In Ime and password to log in Ime: ord: Change password Log In the Oracle System Login. stem requires the use of Microsoft In for JavaScript and cookies.	ternet Explore	er 7.0, 8.0, or	
21.	SDS VIP: Select	Common 5.0.1-50 Connected using XMI to SDS-NO	unications I .21.0 11 (ACTIVE NE	Diameter	^r Signal Router Full Add	lress Res	soluti	
	Main Menu	 Main Menu Main Menu 	Main M	enu: A	larms & Events -> V	iew Act	tive	
	→ View Active	 Configuration Alarms & Events 	Filter	Tasks	•			
		View Active	Seq #	Event ID	Timestamp	Severity	Product	Process
	as shown on the right.	View History		Alarm Text		Additiona	l Info	
	Verify that Event ID	🔹 🧰 Security Log 🖬 🚞 Status & Manage	40	No Remote	2015-06-04 16:31:16:252 01C	GN_INFO/	WRN for infor	mation only [Lister
	14101 (" <i>No Remote</i> <i>Connections</i> ") is the only alarm present on the system at this time.	Reasurements				MUTC		

Proc	edure 3.4 Configu	ring SNMP for Traps	from Indi	vidual Serv	vers						
22.	SDS VIP:	ORACLE Commun	ications Diam	eter Signal Rou	iter Full Address Resoluti						
	Select	Connected using XMI to SDS-NO1 (ACTIVE NETWORK OAM&P)									
	<u>Main Menu</u>	Main Menu									
	→ Administration	General Options	General Options								
	→ SNMP Trapping	 Software Management Pernote Servers 	Variable		Value						
		LDAP Authentication									
	as snown on the right.	Data Export	Manager 1								
		Configuration									
		 Alarms & Events Security Log Status & Managa 		G							
		Measurements	Manager 2 Manager 3								
		Communication Agent SDS	Manager 4								
			Manager 5								
23.	SDS VIP:				Enable or disable SNMP traps from individual servers. If enabled, the traps are sent from individual servers. If	1					
	place a "check" in the	Traps from Individual Servers	Enabled		disabled, system-wide traps are sent from the active Network OAM&P server while site-specific traps are sent	· · ·					
	from Individual				nom active Site OAm servers. [Derault, disabled.]						
	Servers".	SNMPv3 Privacy Type		AES 🔻							
	2) Click the "Ok"					2					
	located at the bottom					-					
	or the light panel.	SNMPv3 Password		•••••	•						
					Ok Cancel						
	SDS VIP:	Confirm edit				8					
24.	1) Using the cursor,	WARNING: Changing of SNMP C	ommunity String	s on this server m	av affect how other Oracle products communi	cate with					
	place a "check" in the check box for " Check	⇒ this serve	er. Community S	tring changes shou	uld be done on a system basis.						
	to confirm".			Check to cont	firm						
	2) Click the "OK"			OK	el						
	dialogue button.										
	THIS PROCEDURE HAS BEEN COMPLETED										

5.3 Query Server Installation

The user should be aware that during the Query Server installation procedure, various errors may be seen at different stages of the procedure. During the execution of a step, the user is directed to ignore errors related to values other than the ones referenced by that step.



Step	Procedure	Result							
1.	Active SDS VIP:	Certificate Error: Navigation Blocked - Windows Internet Explorer							
	Launch an approved	ed 💽 - 🖻 http://10.250.55.125/							
	web browser and connect to the XMI	Eile Edit View Favorites Iools Help							
	Virtual IP address (VIP) assigned to Active SDS site	Arabe Browser WebLX							
	using "https://"	There is a problem with this website's security certificate.							
		The security certificate presented by this website was not issued by a trusted certificate authority. The security certificate presented by this website was issued for a different website's address.							
		Security certificate problems may indicate an attempt to fool you or intercept any data you send to the server.							
		We recommend that you close this webpage and do not continue to this website.							
		Click here to close this webpage.							
		Solution Continue to this website (not recommended).							
		More information							
_	Active SDS VIP:								
2.	The user should be	ORACLE							
	presented the login screen shown on the right	Oracle System Login Wed Jun 3 09:50:21 2015 EDT							
	Login to the GUI	Log In							
	and password.	Username:							
		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.							

Proc	Procedure 4.1 Configuring the Query Server								
3.	Active SDS VIP:	e SDS VIP: Main Menu: Configuration -> Servers							
	Select	Filter -	Filter •						
	Main Menu	Hostname	Role	System ID	Server Group				
	→ Servers	SDS-NO1	Network OAM&P	SDS-NO1	SDS_NO				
	as shown on the	SDS-NO2	Network OAM&P	SDS-NO2	SDS_NO				
	right. Select the " Insert" dialogue button.								
		Insert Edit	Delete Expo	rt Report	040				
4.	Active SDS VIP:	Main Menu: Confi	guration -> S	ervers [Insert]					
	 Input the assigned "hostname" for the 	W N							
	Query Server.	Adding a new ser	ver						
	2) Select "QUERY SERVER" for the server "Role" from the pull-down menu.	Attribute Value Lage SD Hostname SD	e S-QS1	×	Description Unique nam Range = A 2 are alphanu with an alph alphanumer	e for the server. [Default = n/a. 20-character string. Valid characters meric and minus sign. Must start anumeric and end with an ic.]			
	3) Select "SDS ESXi	Role	JERY SERVER -	*	Select the fu	unction of the server			
	Guest" for the Hardware Profile for	System ID			System ID fr [Default = n/ Valid value is	or the NOAMP or SOAM server. /a. Range = A 64-character string. s any text string.]			
	the SDS from the pull-down menu.	Hardware Profile SE	S ESXi Guest	•	Hardware p	rofile of the server			
	4) Select the Network Element	Network Element Name SE	Ville		Select the n Location des 15-characte string.]	etwork element scription [Default = "". Range = A r string. Valid value is any text			
	Name of the SDS site where the Query Server is physically located from the list of available NEs in the pull-down menu.								
	5) Enter the site location.								
	NOTE: Location is an optional field.								

Proce	edure 4.1 Configu	ring the Query Server						
5	1) Enter the IMI IP	Interfaces:						
	addresses for the	Network	IP Address	Interface				
	Query Server.	XMI (10.240.122.128/25)	10.240.122.160	eth0 - UVLAN (3)				
	2) Sat the IMI	IMI (10.240.123.0/25)	10.240.123.29	eth1 🔻 🗌 VLAN (4)				
	Interfaces to "ethX"	NTP Servers:						
	and DO NOT check each the VLAN checkbox	NTP Server IP Address	Prefer					
		10.240.122.243						
	3) Enter the XMI IP		Remove					
	address for the Query Server.		Ok Apply Cancel					
	4) Set the XMI Interface to "ethX" and DO NOT check the VLAN box.							
	5) Click the "NTP Servers:" "Add" dialogue button.							
	6) Enter the NTP Server IP Address for an NTP Server.							
	7) If you have another NTP Server IP address, repeat (1) and (2) to enter it.							
	8) Click the " Ok " dialogue button.							
Proc	Procedure 4.2 Applying the Query Server Configuration file							
------	--	--	------------------	----------------------------	--------------	---	--	--
6.	Active SDS VIP:	Main Menu: Configuration -> Servers						
	1) Select the "Query Server" in the	Filter						
	2) Soloct the	Hostname	Role	System ID	Server Group			
	"Export" dialogue button.	SDS-NO1	Network OAM&P	SDS-NO1	SDS_NO	I		
		SDS-NO2	Network OAM&P	SDS-NO2	SDS_NO	I		
		SDS-QS1	Query Server			I		
		Generate file(s) that may be used to view the con Insert Edit Delete Export Report						
7.	Active SDS VIP:	Example:						
	Copy the Query Server configuration	TKLCConfigData. <hostname>.sh → will translate to →TKLCConfigData.sh</hostname>						
	file to the "/var/tmp" directory on the	Obtain a terminal session on the Active SDS VIP as root. Log in as root on the Active SDS VIP shell, and issue the following commands:						
	server, making sure to rename the file by	[root@sds-mrsvnc-a ~]# scp \ /var/TKLC/db/filemgmt/TKLCConfiguData. <hostname>.sh \</hostname>						
	hostname from the file name.	<ipaddr>:/var/tmp/T</ipaddr>	KLCConfigDat	a.sh				
	NOTE: The server	Note: ipaddr is the IP add	ress of Query S	Server associated with the	xmi network.			
	will poll the /var/tmp directory for the presence of the configuration file and							
	automatically execute it when found.							

Proc	edure 4.2 Applyin	g the Query Server Configuration file
8.	Query Server: Log into the Query Server as root. After the script completes, a broadcast message will be sent to the terminal. NOTE: The user should be aware that the time to complete this step varies by server and may take from 3-20 minutes to complete.	<pre>*** NO OUTPUT FOR ≈ 3-20 MINUTES *** Broadcast message from root (Mon Dec 14 16:17:13 2009): Server configuration completed successfully! See /var/TKLC/appw/logs/Process/install.log for details. Obtain a terminal session on the Query Server as root. Log in as root on the Query Server shell, and issue the following commands: [root@hostname1260476099 ~]# cat /var/TKLC/appw/logs/Process/install.log</pre>
9.	Query Server: Configure the time zone.	<pre>[root@hostname1262121944 ~]# set_ini_tz.pl <time zone=""> Note: The following command example uses Etc/UTC time zone. Replace, as appropriate, with the time zone you have selected for this installation. See Appendix B for a list of valid time zones. [root@hostname1262121944 ~]# set_ini_tz.pl "Etc/UTC"</time></pre>
10.	Query Server: Initiate a reboot of the Query Server.	[root@hostname1262121944 ~]# init 6
11.	Query Server: After the server has completed reboot Verify that the server console returns to a login prompt.	CentOS release 5.6 (Final) Kernel 2.6.18-238.19.1.el5prerel5.0.0_72.22.0 on an x86_64 qs-mrsvnc-1 login: root Password: <root_password></root_password>

Proc	Procedure 4.2 Applying the Query Server Configuration file				
12	Query Server:	[root@qs-mrsvnc-1 ~]# syscheck			
	Execute a	Running modules in class hardware			
	"syscheck" to verify	OK			
	the current health of	Running modules in class disk			
	the server.	OK			
		Running modules in class net			
		OK			
		Running modules in class system			
		OK			
		Running modules in class proc			
		OK			
		LOG LOCATION: /var/TKLC/log/syscheck/fail_log			
		[root@qs-mrsvnc-1 ~]#			

Proc	edure 4.3 Adding	the Query S	Serv	ver to tl	he SDS	Serve	er Gro	oup					
13.	Active SDS VIP: Select	ORAC	Le	Com 5.0.1-{	municati 50.21.0	ons Dia	meter	Signa	al Route	er Full (0'1	0 0 ion	
	Main Menu → Configuration → Server Groups as shown on the right.	Connected usi Main Men Admin Config	ng V u istrati uratio work vices	IP to SDS-N ion c Elements e Domains	IO1 (ACTI Ma F Ser	VE NETW in Mer ilter 👻 ver Group	ORK OA	onfig	uration	n -> Se	erver Gi	Connection Count	
		- Ser - Ser - Plac	vers rver ces ce As	Groups sociations	SDS	S_NO		A	NONE		SDS	1	
14.	Active SDS VIP:	Main Menu: C	onfi	guration -:	> Server (Groups							🧼 Help
14.	The user will be presented with the "Configuration -> Server Groups" screen as shown on the right	Filter Server Group Name SDS_NO	Lev	vel Parent	Function SDS	Connec Count 1	SD:	vers NE S_NO S_NO	SDS-NC SDS-NC	erver H D1 D2	A Role Pref	VIPs 10.250.65.123 10.250.65.123	2015 UTC
15	Active SDS VIP:	SDS VIP: Main Menu: Configuration -> Server Groups											
	1) Using the mouse,	Filter 🔻				Connection					Mon Jun 08 I	9:53:32 2015 01C	
	Server Group associated with the Query Server being installed.	Server Group Name	A	NONE	SDS	Count 1	Servers NE SDS_NO SDS_NO	SI	Server DS-NO1 DS-NO2	HA Role Pro	ef 10.250.65.12 10.250.65.12	VIPs 3 3	1
	2) Select the "Edit" dialogue button from the bottom left corner of the screen.	4					1						
	NOTE: The user may need to use the vertical scroll-bar in order to make the " Edit " dialogue button visible.		Delete	Report			000					Pause updates	

Proce	edure 4.3 Adding	the Query Ser	ver to	the SDS	5 Serve	r Group)		
16	Active SDS VIP:	Main Menu: Configuration -> Server Groups [Edit]							
	The user will be	Mon Jun 08 19:55:36 20							
	presented with the	Field	Field Value Description						
	"Server Groups	Server Group Name	SDS_N	0 °	Unique identifier are alphanumeri	used to label a S c and underscore	erver Group. [Defaul e. Must contain at lea	t = n/a. Range = A 1 ist one alpha and m	I-32-character string. Valid characters ust not start with a digit.]
	[Edit]" screen as	Level	A	*	Select one of the	e Levels supporte	d by the system		
	snown on the right.	Parent	NONE	× x	Select an existin	g Server Group o	or NONE		
		Function	SDS	*	Select one of the	e Functions supp	orted by the system		
	1) Select the "Query Server" from the list	WAN Replication Connection	Count 1		Specify the num with this Server	ber of TCP conne Group. [Default =	ections that will be us 1. Range = An integ	sed by replication ov er between 1 and 8	ver any WAN connection associated .]
	of "Available	SDS_NO							
	Servers in Network	Server	SG Inclus	sion	Preferred HA R	ole			
	Element" by clicking	SDS-NO1	Include	e in SG	Preferred Spa	are			
	on the check box port	SDS-NO2		e in SG	Preferred Spa	are			
		SDS-QS1	Include	e in SG	Preferred Spare				
	to its name.	VIP Assignment							
	2) Click the "Ok"	VIP Address Add							
		10.250.65.123 Remove							
	dialogue button.				QK (ApplyCance	I		
17.	Active SDS VIP:	Main Menu: Config	uration ->	Server Gro	oups				He Mon Jun 08 19:59:36 2015 UT
	The user should be	Filter 🔻							
	presented with a screen as show on	Server Group Name Le	vel Parent	Function	Connection Count	Servers			
	the right.					NE	Server	HA Role Pref	VIPs
	5	SDS_NO A	NONE	SDS	1	SDS_NO	SDS-NO1		10.250.65.123
						SDS_NO	SDS-NO2 SDS-QS1		10.250.65.123
						-			
	IMPORTANT:	 Now that the 	Query S	erver has	been pair	ed within	its SDS Se	erver Grour	, it must establish DF
18.		replication w	ith the Ac	tive SDS	server. It	may take	several mi	inutes for t	his process to be
	Wait at least 5	completed							
	minutes before proceeding on to the	Allow a minir	num of 5	minutes	before cor	ntinuing to	o the next S	Step.	
	next Step.					5		•	

Proc	edure 4.4 Restart	ing the Query Serve	r Application					
10	Active SDS VIP:							
19.	Select Communications Diameter Signal Router Full Address						1	
	Main Menu	Connected using VIP to SDS-N	IO1 (ACTIVE NETWORK OAM8	kP)				
	→ Status & Manage → Server	 Main Menu Administration 	Main Menu: Status					
		Alarms & Events	Filter 🔻					
	as shown on the right.	📑 🧰 Security Log 🖻 😋 Status & Manage	Network Element	Serve	r Hostname			
	0	- 📑 Network Elements	SDS_NO	SDS-C	2S1			
		Server	SDS_NO	SDS-N	101			
		🔤 DA 💽 Database	SD2_NO	505-1	102			
20.	Active SDS VIP:	Main Menu: Status & M			M	lon lun 08 20:(Help 05:25 2015 UTC	
	Verify that the "DB	Filter -						5125 2015 010
	and Reporting Status" status	Network Element	Server Hostname	Appl State	Alm	DB	Reporting	Proc
	columns show	SDS_NO	SDS-QS1	Disabled	Warn	Norm	Norm	Man
	Server at this point.	SDS_NO	SDS-NO1	Enabled	Ēn	Nonn	Norm	Norm
	The "Proc" column	SDS_NO	SDS-NO2	Enabled	Norm	Norm	Norm	Norm
	should show "Man".							
	NOTE: If user							
	chooses to refresh							
	screen in advance of							
	the default setting							
	may be done by							
	simply reselecting the							
	"Status & Manage → Server" option							
	from the Main menu							
	on the left.							

Proc	edure 4.4 Restarti	ing the Query Se	rver Application						
21.	Active SDS VIP:	Main Menu: Status & Manage -> Server							
	1) Using the mouse,	Mon Jun 08 20:08:04 2015 UTC							
]	select the "Query Server" hostname. The line entry should	Network Element	Server Hostname	Appl State	Alm	DB	Reporting Status	Proc	
	now be highlighted in	SDS_NO	SDS-QS1	Disabled	Warn	Norm	Norm	Man	
	GREEN.	SDS_NO	SDS-NO1	Enabled	Err	Norm	Norm	Norm	
		SDS_NO	SDS-NO2	Enabled	Norm	Norm	Norm	Norm	
	"Restart " dialogue button from the bottom left corner of the screen.	Stop Restart Reb	bot NTP Sync Report	~ 2			Pause updates		
	3) Click the "OK" button on the confirmation dialogue box.	Are you sure you wish to rest on the following server(s)? SDS-QS1	tart application software						
	4) The user should be presented with a confirmation message (in the	0	Cancel	3					
	banner area) for the	Main Menu: Statu	is & Manage -> Sei	rver					
	"Query Server"	Filter ▼ Info ▼							
	"Successfully restarted application".	Network Elem	SDS-QS1: Successfully restar	ted application.	4				
	NOTE: The user may need to use the vertical scroll-bar in order to make the " Restart " dialogue button visible.								

Proc	Procedure 4.4 Restarting the Query Server Application								
22.	Active SDS VIP: Verify that the "Appl State" now shows "Enabled" and that	Main Menu: Status & Manage -> Server							
	the "Alm, DB, Reporting Status &	Network Element	Server Hostname	Appl State	Alm	DB	Reporting Status	Proc	
	Proc" status columns	SDS_NO	SDS-QS1	Enabled	Norm	Norm	Norm	Norm	>
	the "Query Server".	SDS_NO	SDS-NO1	Enabled	Err	Norm	Norm	Norm	
		SDS_NO	SDS-NO2	Enabled	Norm	Norm	Norm	Norm	
	NOTE: If user chooses to refresh the Server status screen in advance of the default setting (15-30 sec.). This may be done by simply reselecting the "Status & Manage → Server" option from the Main menu on the left.								
		THIS PROC	EDURE HAS B	EEN CON	IPLETED				

5.4 OAM Installation for DP-SOAM sites (All DP-SOAM sites)

Assumptions:

- This procedure assumes that the DP-SOAM Network Element XML file for the DP-SOAM site has previously been created, as described in **Appendix A**.
- This procedure assumes that the Network Element XML files are the laptop's hard drive.

This procedure is for installing the DP-SOAM software on the OAM server located at each DSR Signaling Site. The DP-SOAM and DSR OAM servers run in 2 virtual machines.

This procedure assumes that the DSR 7.0.1 or later OAM has already been installed in a virtual environment, as described in as described in [2] DSR 7.0.1 Cloud Installation Guide.

1.	Active SDS VIP:	Certificate Error: Navigation Blocked - Windows Internet Explorer						
	Launch an approved	A statistic s						
	connect to the XMI Virtual IP address	Eile Edit View Favorites Iools Help						
	(VIP) assigned to Active SDS site	🚖 🎄 🏽 🍘 Certificate Error: Navigation Blocked						
		 There is a problem with this website's security certificate. The security certificate presented by this website was not issued by a trusted certificate authority. The security certificate presented by this website was issued for a different website's address. Security certificate problems may indicate an attempt to fool you or intercept any data you send to the server. We recommend that you close this webpage and do not continue to this website. © Click here to close this webpage. © Continue to this website (not recommended). 						
		 More information 						

Proce	dure 5 Configurin	g the Network Element (DP-SOAM)
2.	Active SDS VIP: The user should be	ORACLE
	presented the login screen shown on the right.	Oracle System Login Wed Jun 3 09:50:21 2015 EDT
	Login to the GUI using the default user and password.	Log In Enter your username and password to log in Username: 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.
3.	Active SDS VIP: Select	Main Menu: Configuration -> Network Elements
	Main Menu → Configuration → Network Elements	Network Element SDS_NO
	as shown on the right.	
	Select the "Browse" dialogue button (scroll to bottom left corner of screen).	To create a new Network Element, upload a valid configuration file: Browge No file selected. Upload File Inser No file selected. Edit NE Networks Delete NE Network
4.	Active SDS VIP:	Organize 🔻 New folder
	Note: This step assumes that the xml files were previously prepared, as described in Appendix A.	Favorites Name Date modified Type Downloads No_SDS_NE 6/8/2015 2:43 PM XML Document So_SDS_NE 6/8/2015 4:21 PM XML Document So_SDS_NE 6/8/2015 4:21 PM XML Document OneDrive Volume Volume Volume
	1) Select the location containing the site .xml file.	Ibraries Image: Specific term Image: Specific term
	2) Select the .xml file and click the "Open" dialogue button.	Pictures Videos File name: SO_SDS_NE All Files Cancel

Proce	dure 5 Configurin	g the Network Element (DP-SOAM)
5.	Active SDS VIP: Select the "Upload File" dialogue button (bottom left corner of screen).	To create a new Network Element, upload a valid configuration file: Browse SO_SDS_NE.xml Upload File Insert Delete Edit NE Networks Upload the XML file to create a new Network Element after proper validations.
6.	Active SDS VIP: If the values in the .xml file pass validation rules, the user will receive a banner information message showing that the data has been successfully validated and committed to the DB.	Main Menu: Configuration -> Network Elements Filter Info Info SDS_SO Mon J SDS_SO

Procedure 5.1 Configuring the SOAM Server Active SDS VIP: 7. Communications Diameter Signal Router Full Addres ORACLE Select... 5.0.1-50.21.0 Main Menu Connected using VIP to SDS-NO1 (ACTIVE NETWORK OAM&P) → Configuration 💻 Main Menu Main Menu: Configuration -> Servers 🤠 🚞 Administration → Servers 📩 🚖 Configuration Filter 🔻 📑 Network Elements ...as shown on the Services Role System ID right. Hostname 📑 Resource Domain Network Servers SDS-NO1 SDS-NO1 OAM&P Select the "Insert" Server Groups dialogue button Network Places SDS-NO2 SDS-NO2 OAM&P (bottom left corner Place Associations of screen). SDS-QS1 DSCP Query Server Network Alarms & Events ÷. Insert Edit Delete Export Report Caracterity Log ÷ Insert a new Server and associated Interface(s).

Proce	edure 5.1 Configu	ring the SOAN	1 Server				
8.	Active SDS VIP:	Main Menu: Configuration -> Servers [Insert]					
	 Input the assigned "hostname" for OAM Server. 	Info 🔻		Mon Jun 08 20:27:06 2			
		Adding a new server					
	2) Select "SYSTEM OAM" for the Role from the pull-down menu.	Attribute	Value	Description			
		Hostname	SDS-SO1 *	Unique name for the server. [Default = n/a. Range = A 20-character string. Valid characters are alphanumeric and minus sign. Must start with an alphanumeric and end with an alphanumeric.]			
	3) Input the	Role	SYSTEM OAM 🔹 *	Select the function of the server			
	assigned hostname again as the " System ID " for the SO Server (A or B).	System ID	SDS-SO1	System ID for the NOAMP or SOAM server. [Default = n/a. Range = A 64-character string. Valid value is any text string.]			
		Hardware Profile	SDS ESXi Guest	Hardware profile of the server			
	4) Select "SDS ESXi Guest" for the Hardware Profile for the DP-SOAM	Network Element Name	SDS_SO •	Select the network element			
		Location	MoVille	Location description [Default = "". Range = A 15-character string. Valid value is any text string.]			
	from the pull-down menu.						
	 5) Select the Network Element Name for the SDS from the pull-down menu. 6) Enter the site 						
	location.						
	NOTE: Location is an optional field.						

Proc	edure 5.1 Configu	iring the SOAM Server		
•	1) Enter the XMI IP	Interfaces:		
9.	address and IMI IP	Network	IP Address	Interface
	address for the DP-	XMI (10.250.65.0/24)	10.250.65.120	eth0 👻 🗌 VLAN (3)
	SUAW Server.	IMI (192.168.65.0/24)	192.168.65.120	eth1 🔻 🖾 VLAN (4)
	 address for the DP-SOAM Server. 2) Set the XMI Interface to "ethX" and do NOT check the VLAN box. 3) Set the IMI Interface to "ethX" and do NOT check the VLAN box. 4) Click the "NTP Servers:" "Add" dialogue button. 5) Enter the NTP Server IP Address for an NTP Server. 6) If you have another NTP Server IP address, repeat (1) and (2) to enter it. 	XMI (10.250.65.0/24) IMI (192.168.65.0/24) NTP Servers: Add 10.250.65.115	10.250.65.120 192.168.65.120 Prefer Image: Im	eth0 • VLAN (3) eth1 • VLAN (4)
	7) Optionally, click the " Prefer " checkbox to prefer one NTP Server over the other.			
	8) Click the " Ok " dialogue button.			

Proc	edure 5.2 Applyir	ng the SOAM	Server Conf	iguration f	ile					
10	Active SDS VIP:	Main Menu	: Configurati	on -> Serv	ers					
	1) Select the "System QAM"	Filter -	reomgaraa					—— Mon Jun		
	as shown on the right.	Hostname	Role	System ID	Server	Network	Location	Place		
	2) Soloct the	SDS-NO1	Network OAM&P	SDS-NO1	SDS_NO	SDS_NO	MoVille			
	"Export" dialogue button (bottom left	SDS-NO2	Network OAM&P	SDS-NO2	SDS_NO	SDS_NO	MoVille			
	corner of screen).	SDS-QS1	Query Server		SDS_NO	SDS_NO	MoVille			
		SDS-SO1	System OAM	SDS-SO1		SDS_SO	MoVille			
		Incort Edit								
	Generate file(s) that may be used to view the configuration of the selected Server(s)									
					,	2				
11.	Repeat Steps 7 - 10 of this procedure for the DP-SOAM B Server.									
12.	Active SDS Server:									
	Access the server console.	Conne	ct to the Active	SDS VIP conse	ole.					
13.	Active SDS Server:	CentOS relea	ase 5.6 (Fina	al)						
	1) Access the command prompt.	Kernel 2.6.2	18-238.19.1.6	el5prerel5.	0.0_72.22.0 c	on an x86 _.	_64			
		hostname1260	0476035 login	n: root						
	 Log into the OAM server as the "root" user. 									
14.	Active SDS Server:	Example:		- b 10 /		enti D i	L			
	Copy the configuration file to	TKLCConfigData <hostname>.sh → will translate to →TKLCConfigData.sh</hostname>								
	the " /var/tmp" directory on the	[root@sds-mrsvnc-a ~] # scp \ (war/TKLC/db/filemomt/TKLCConfiguPate <bootpare) \<="" ch="" th=""></bootpare)>								
	remote SOAM A or B server.	<ipaddr>:/va</ipaddr>	ar/tmp/TKLCCo	onfigData.s	h					
	NOTE: The server will poll the / var/tmp directory for the presence of the configuration file and	Note: ipaddr is	the IP address o	f SOAM A or	r B associated wi	th the xmi	network.			
	automatically execute it when found.									

Proce	edure 5.2 Applyir	ng the SOAM Server Configuration file					
15	SOAM Server:	*** NO OUTRUT FOR $\approx 3-20$ MINUTES ***					
	After the script completes, a	Broadcast message from root (Mon Dec 14 16:17:13 2009):					
	broadcast message will be sent to the terminal.	Server configuration completed successfully! See /var/TKLC/appw/logs/Process/install.log for details.					
	NOTE: The user should be aware that the time to complete this step varies by server and may take from 3-20 minutes to complete.	Obtain a terminal session on the SOAM Server as root. Log in as root on the SOAM Server shell, and issue the following commands: [root@hostname1260476099 ~]# cat /var/TKLC/appw/logs/Process/install.log					
16	SOAM Server:	[root@hostname1260476221 ~]# set_ini_tz.pl <time zone=""></time>					
	Configure the time zone.	Note: The following command example uses Etc/UTC time zone. Replace, as appropriate, with the time zone you have selected for this installation. See Appendix B for a list of valid time zones.					
		<pre>[root@hostname1260476221 ~]# set_ini_tz.pl "Etc/UTC"</pre>					
17.	SOAM Server:	[root@hostname1260476221 ~]# init 6					
	Initiate a reboot of the OAM server.						
18	SOAM Server:	[root@so-carync-a ~]# syscheck					
	Execute a	Running modules in class hardware					
	"syscheck" to verify the current health of the server	OK					
	fieduri of the server.	Running modules in class disk OK					
		Running modules in class net					
		OK					
		Running modules in class system					
		OK					
		Running modules in class proc					
		LOG LOCATION: /var/TKLC/log/syscheck/fail_log [root@so-carync-a ~]#					
19.	If you have just completed for SOAM Server B .	eted this procedure for the SOAM Server A in the enclosure then repeat Steps 11 - 18 this procedure					

THIS PROCEDURE HAS BEEN COMPLETED

5.5 OAM Pairing for DP-SOAM sites (All DP-SOAM sites)

The user should be aware that during the OAM Pairing procedure, various errors may be seen at different stages of the procedure. During the execution of a step, the user is directed to ignore errors related to values other than the ones referenced by that step.

Procedure 6: Pairing the OAM Servers for DP-SOAM sites

Step	Procedure	Result
1.	Active SDS VIP:	Certificate Error: Navigation Blocked - Windows Internet Explorer
	Launch an approved web browser and	
	connect to the XMI Virtual IP Address	Eile Edit View Favorites Iools Help
	(VIP) of the Active SDS site using "https://"	2 Certificate Error: Navigation Blocked
		There is a problem with this website's security certificate.
		The security certificate presented by this website was not issued by a trusted certificate authority. The security certificate presented by this website was issued for a different website's address.
		Security certificate problems may indicate an attempt to fool you or intercept any data you send to the server.
		We recommend that you close this webpage and do not continue to this website.
		Click here to close this webpage.
		Solution Continue to this website (not recommended).
		More information
2	Active SDS VIP:	
<u></u>	The user should be	ORACLE
	presented the login screen shown on the right.	Oracle System Login Wed Jun 3 09:50:21 2015 EDT
	Login to the GUI using the default user	Log In Enter your username and password to log in
	and password.	Username:
		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.

Proc	edure 6.1 Configu	ring the SOAM S	ierve	er Group (Se	DAM)					
3	Active SDS VIP:									
J.	Select	ORACLE	Co 5.0.	mmunications 1-50.21.0	Diameter	Signa	I Route	r Full Ad	ldress Res	
	Main Menu	Connected using XMI	to SD	5-NO1 (ACTIVE N	TWORK O	AM&P)				
	→ Configuration → Server Groups	Main Menu Administration		Main M	lenu: Co	onfigu	iration	-> Ser	rver Grou	
	as shown on the	📋 😋 Configuration 📑 Network El	lements	Filter	•					
	right.		Services Resource Domains		Server Group Name Lo		Level Parent		unction	
		Servers Places		NO		A	NONE	S	SDS	
		 Index / Note DSCP Network Alarms & Ever Security Log 	nts	k						
4.	Active SDS VIP:	Main Menu: Configuration -> Server Groups								
	1) The user will be presented with the	Filter 🔻				-				——— Mon Jui
	"Server Groups" configuration screen	Server Group Name	Leve	Parent	Function	Cor Cou	nnection Int	Servers		
	right.							N	E	Server
	5	SDS NO	А	NONE	SDS	1		SDS_NO	SDS	-NO1
	2) Select the "Insert"							SDS_NO	SDS	-NO2
	dialogue button from the bottom left corner of the screen.							000_110		
	NOTE : The user may need to use the									
	vertical scroll-bar in	•			111					
	order to make the " Insert " dialogue button visible.	Insert Edit D	elete	Report			000			
		Insert a new Server	r Group.							

Proc	edure 6.1 Configur	ing the SOAM Serve	er Group (S	OA	M)				
5.	Active SDS VIP:	Main Menu: Configura	ation -> Serve	er G	roups [Insert]				
	presented with the	Info 🔻							
	"Server Groups	Field	Value		Description				
	shown on the right.	Server Group Name	SDS_SO	*	Unique identifier used to label a Server Group. [Default = n/a. Range = A 1-32-character string. Valid characters are alphanumeric and underscore. Must contain at least one alpha and must not start with a digit.]				
	NOTE: Leave the "WAN Replication	Level	В •	*	Select one of the Levels supported by the system. [Level A groups contain NOAMP and Query servers. Level B groups are optional and contain SOAM servers. Level C groups contain MP servers.]				
	Connection Count"	Parent	SDS_NO •	*	Select an existing Server Group or NONE				
	Diank (it will default to 1).	Function	SDS	*	Select one of the Functions supported by the system				
	1) Input the Server	WAN Replication Connection Count	1		Specify the number of TCP connections that will be used by replication over any WAN connection associated with this Server Group. [Default = 1. Range = An integer between 1 and 8.]				
	Group Name.			Ok	Apply Cancel				
	2) Select "B" on the "Level" pull-down menu								
	 3) Select the 1st SDS Site's server group, as entered in Procedure 3, Step 6, on the "Parent" pull- down menu 								
	 Select "SDS" on the "Function" pull- down menu. 								
	5) Select the "Ok" dialogue button.								

Proce	edure 6.2 Adding a	Server to the	OA	M Server (Group	(SOAM)		
6.	SDS Server A:	Main Menu: Con	nfigu	ration -> Se	erver G	Groups		
	1) Select the Server Group entry applied	Filter 🔻						
	in Step Error!	Server Group Name	Level	Parent	Function	Connection Count	Servers	
	found The line entry should now be highlighted in GREEN .	SDS_NO /	A	NONE	SDS	1	NE SDS_NO SDS_NO SDS_NO	SDS SDS SDS
		SDS_SO	B	SDS_NO	SDS	1	NE	
	2) Select the "Edit" dialogue button from the bottom left corner of the screen. NOTE: The user may need to use the vertical scroll-bar in order to make the "Edit" dialogue button visible.	Proceed to Servers. Insert Edit Delete	the for	m which allows the Report	server grou	up to be edited - VIP	⁹ s and associated	
7.	Active SDS VIP: The user will be	Main Menu: Con	figu	ration -> Se	rver G i	roups [Edit]		Mon Jun 08 21:35:52 20:
	presented with the							
	"Server Groups	Field		Value		Description	d to label a Server G	roup [Default = n/a Range = A
	shown on the right.	Server Group Name		SDS_SO	*	1-32-character strin Must contain at leas	g. Valid characters a t one alpha and mus	re alphanumeric and underscore. t not start with a digit.]
		Level		В	*	Select one of the Le	vels supported by the	e system
	and the " B " server	Parent		SDS_NO	*	Select an existing S	erver Group or NONE	<u> </u>
	from the list of	Function		SDS	*	Select one of the Fu	inctions supported by	the system
	"Servers" by clicking the check box next to their names.	WAN Replication Connection	on Cour	nt 1		Specify the number any WAN connectio An integer between	of TCP connections n associated with this 1 and 8.]	that will be used by replication over s Server Group. [Default = 1. Range =
		SDS_SO				Desta and LLA Dela		
	Select the "Apply "	Server		SG Inclusion		Preferred HA Role		
	dialogue button.	SDS-SO1		Include in SG		Preferred Spare		
	Ũ	VIP Assignment						
		VIP Addre	ess			Add		
					Ok	Apply Cancel		

Proc	edure 6.2 Adding a	a Server to the	e OA	M Server	Group	(SOAM)			
8.	Active SDS VIP: Click the "Add" dialogue button for the VIP Address. Input the VIP Address	VIP Assignment VIP Addr 10.250.65.124	ess		E P Qk Ar	Add Remove pply Cancel			
	Click the " Ok" dialogue button.								
9.	SDS Server A: The user will be presented with the "Server Groups"	Main Menu: Co	onfig	uration -> :	Server Gr	oups		Mon Ju	
	configuration screen	Server Group Name	Level	Parent	Function	Connection Count	Servers		
	as shown on the right.	SDS_NO SDS_SO	A B	NONE SDS_NO	SDS SDS	1	NE SDS_NO SDS_NO SDS_NO SDS_SO SDS_SO SDS_SO	Server SDS-NO1 SDS-NO2 SDS-QS1 SDS-SO1 SDS-SO2	
10.	IMPORTANT: Wait at least 5 minutes before proceeding on to the next Step.	 Now that the master/slave process to be Allow a minim 	serve relatio com num c	er(s) have bee onship for Hig pleted. of 5 minutes	en paired v gh Availabi before con	vithin a Serv lity (HA). It tinuing to th	er Group th may take so e next Step	ey must establis everal minutes f	sh a or this

Proce	edure 6.3 Restarti	ng the OAM Ser	ver Applica	ation (SO	AM)							
11.	Active SDS VIP:	ORACLE Commu	nications Diameter	Signal Router Ful	Addres	1 2 0	ine					
	Select											
		Connected using VIP to SDS-NO1	(ACTIVE NETWORK OF	M&P)				Welcon	ne guiadmin [Logout]			
	Main Menu	 Main Menu Administration 	Main Menu: Status & Manage -> Server									
	→ Status & Manage	Configuration	Filter •									
	→ Server	 Alamis & Events Security Log Status & Manage 	Network Element	Server Hostna	ime	Appl State	Alm	DB Rep State	orting us Proc			
	as shown on the	Network Elements	SDS_NO	SDS-QS1		Enabled	Norm	Norm Norm	n Norm			
		- Server	SDS_NO	SDS-NO1		Enabled	Err	Norm Norm	n Norm			
		🤮 HA	SDS_NO	SDS-NO2		Enabled	Norm	Norm Norm	n Norm			
	ngna	KPIs	SDS_SO	SDS-S01		Disabled	Err	Norm Norm	n Man			
		💽 Processes	303_30	303-302		Disabled	Warn		i inan			
		Files 🎦 Measurements										
12.	Active SDS VIP:	Main Menu: Status	& Manage ->	Server				Mon Jun 09 21:4	Arelp			
	1) The "A" and "B"	Filter -						MOIT JUIT 08 21.4	2.30 2013 010			
	should now appear in	Network Element	Server Hostna	ime	Appl State	Alm	DB	Reporting Status	Proc			
	the right panel.	SDS_NO	SDS-QS1		Enabled	Norm	Norm	Norm	Norm			
		SDS_NO	SDS-NO1		Enabled	Err	Norm	Norm	Norm			
	2) Verify that the	SDS_NO	SDS-NO2		Enabled	Norm	Norm	Norm	Norm			
	"DB" status shows	SDS_SO	SDS-SO1		Disabled	Err	Norm	Norm	Man			
	"Norm" and the "Proc"	SDS_SO	SDS-SO2		Disabled	Warn	Norm	Norm	Man			
	status shows "Man"		<u>^</u> 5				\smile		\smile			
	for both servers											
	before proceeding to											
	the next Step.											
	·											

Proce	edure 6.3 Restarti	ng the OAM S	erver Application (SOAM)						
13.	Active SDS VIP:									
	1) Using the mouse, select DP-SOAM	Main Menu: Status & Manage -> Server								
	Server A. The line	Filter 🔻								
	entry should now be highlighted in	Network Element	Server Hostname	Appl State	Alm	DB	Reporting Status	Proc		
	GREEN.	SDS_NO	SDS-QS1	Enabled	Norm	Norm	Norm	Norm		
		SDS_NO	SDS-NO1	Enabled	Err	Norm	Norm	Norm		
	2) Select the	SDS_NO	SDS-NO2	Enabled	Norm	Norm	Norm	Norm		
	"Restart" dialogue	SDS_SO	SDS-SO1	Disabled	Err	Norm	Norm	Man		
	button from the	SDS_SO	SDS-SO2	Disabled	Warn	Norm	Norm	Man		
	3) Click the "OK" button on the confirmation dialogue box.									
	 4) The user should be presented with a confirmation message (in the banner area) for DP-SOAM Server A stating: "Successfully restarted application". 	Stop Restart Restart Are you sure you wish to on the following server(s SDS-SO1	Reboot NTP Sync Report t selected server(s). restart application software	000			F	Pause updates		
	NOTE: The user may need to use the		OK Cancel							
	order to make the " Restart" dialogue	Main Menu: S	Status & Manage -> S	Server	_					
	button visible.	Network Elem								
		NO	SDS-SO1: Successfully res	started application.						

Proc	edure 6.3 Restarti	ng the OAM Se	erver Application (S	SOAM)						
14.	Active SDS VIP: Verify that the "Appl	Main Menu: Status & Manage -> Server Help Thu Jun 04 21:00:06 2015 UTC								
	"Enabled" and that the "Alm, DB, Reporting Status, & Proc" status columns all show "Norm" for	Filter Info Network Element NO NO	Server Hostname SDS-NO1 SDS-NO2 SDS-NO2	Appl State Enabled Enabled	Alm Err Norm	DB Norm Norm	Reporting Status Norm Norm	Proc Norm Norm		
	OAM Server A before proceeding to the next Step.	so so	SDS-S02 SDS-S01	Enabled Enabled	Warn Norm	Norm	Norm	Man Norm		
	NOTE: If user chooses to refresh the Server status screen in advance of the default setting (15-30 sec.). This may be done by simply reselecting the "Status & Manage → Server" option from the Main menu on the left.									
15.	Repeat Steps 13 - 14 o	f this procedure for t	the DP-SOAM Server B.							
		THIS PRO	CEDURE HAS BEEN C	COMPLETED)					

5.6 **DP Installation** (All DP-SOAM sites)

The user should be aware that during the Data Processor (DP) installation procedure, various errors may be seen at different stages of the procedure. During the execution of a step, the user is directed to ignore errors related to values other than the ones referenced by that step.

Proce	edure 7.0 Configuri	ng the Database Processor Server (DP)
1.	Active SDS VIP:	Castificate Franz Maximitian Diselond Windows Internet Fundame
	Launch an approved	
	web browser and connect to the XMI	
	Virtual IP address	Share Browser WebEx -
	(VIP) assigned to Active SDS site using "https://"	🛠 🎄 🌈 Certificate Error: Navigation Blocked
		There is a problem with this website's security certificate.
		The security certificate presented by this website was not issued by a trusted certificate authority. The security certificate presented by this website was issued for a different website's address.
		Security certificate problems may indicate an attempt to fool you or intercept any data you send to the server.
		We recommend that you close this webpage and do not continue to this website.
		Ø Click here to close this webpage.
		😵 Continue to this website (not recommended).
		More information
	Active SDS VIP	
2.		
	The user should be presented the login	
	screen shown on the	Oracle System Login
	right.	
	Login to the GUI	l og in
	using the default user	Enter your username and password to log in
	and password.	Username:
		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.

Proce	edure 7.0 Configuri	ng the Database Processo	r Server (DP)						
2	Active SDS VIP:								
J .	Select	ORACLE: Communications Diameter Signal Router Full Address Reso							
	Main Menu → Configuration	Connected using XMI to SDS-NO1	(ACTIVE NETWORK OA	M&P)					
	→ Servers	 Bain Menu Administration 	Main Menu: Coi	nfiguratio	n -> Servers				
	as shown on the	😑 😋 Configuration 🔤 📑 Network Elements	Filter -						
	right.	Services	Hostname	Role	System ID				
	Select the " Insert" dialogue button.	Servers	SDS-NO1	Network OAM&P	SDS-NO1				
		Places	SDS-NO2	Network OAM&P	SDS-NO2				
		DSCP	SDS-QS	Query Server					
		🖬 🧰 Network 🖬 🧰 Alarms & Events	SDS-SO1	System OAM	SDS-SO1				
		🧃 🧰 Security Log 🛐 🧰 Status & Manage	SDS-SO2	System OAM	SDS-SO2				
		🔹 💼 Measurements 🔹 🛅 Communication Agent							
		sDS							
		Logout	Insert Edit De	lete Export	Report				
			Insert a new Serve	er and associated	Interface(s).				

Proce	dure 7 .0 Configurin	g the Databa	se Processor Server (DP)	
4.	Active SDS VIP:	Main Menu: Co	nfiguration -> Servers [Insert]	
	1) Input the assigned "hostname" for the	Info 💌		Thu Jun 04 21:29:45
	Database Processor (DP).	Adding a new s	server	
		Attribute	Value	Description
	 Select "MP" for the server Role from the pull-down menu. 	Hostname	SDS-DP1 *	Unique name for the server. [Default = n/a. Range = A 20-character string. Valid characters are alphanumeric and minus sign. Must start with an alphanumeric and end with an alphanumeric.]
		Role	MP *	Select the function of the server
	3) Select "SDS ESXi Guest" for the Hardware Profile for	System ID		System ID for the NOAMP or SOAM server. [Default = n/a. Range = A 64-character string. Valid value is any text string.]
	the DP-SOAM from	Hardware Profile	SDS ESXi Guest	Hardware profile of the server
	the pull-down menu.	Network Element Name	SO • *	Select the network element
	4) Select the	Location	MoVille	Location description [Default = "". Range = A 15-character string. Valid value is any text string.]
	Name of the DP- SOAM site where the DP is physically located from the list of available NEs in the pull-down menu 5) Enter the site location. NOTE: Location is an optional field.			

1) Enter the XMI IP	Interfaces:		
address and IMI IP	Network	IP Address	Interface
address for the DP-	XMI (10.240.122.128/25)	10.240.122.150	eth0 🔻 🗌 VLAN (3)
SUAIVI Server.	IMI (10.240.123.0/25)	10.240.123.30	eth1 🔻 🗌 VLAN (4)
	NTP Servers:		
 Set the XMI Interface to "ethX" and DO NOT check 	NTP Server IP Address	Prefer	
the VLAN box.	10.240.122.243	Remove]
3) Set the IMI Interface to "ethX" and DO NOT check the VLAN box.		Ok Apply C	ancel
4) Click the "NTP Servers:" "Add" dialogue button.			
5) Enter the NTP Server IP Address for an NTP Server.			
6) If you have another NTP Server IP address, repeat (1) and (2) to enter it.			
7) Optionally, click the " Prefer " checkbox to prefer one NTP Server over the other.			
8) Click the "Ok" dialogue button			

Proce	edure 7.1 Applyin	g the Database I	Processor	Configuration f	ile (DP)							
6	Active SDS VIP:											
	On the	Main Menu: Co	nfiguration	n -> Servers								
	"Configuration →Servers" screen, find the newly added DP server in the list.	Filter -										
		Hostname	Role	System ID	Server Group	Network Element	Location	Place				
	Note: The DP server	SDS-NO1	Network OAM&P	SDS-NO1	NO	NO						
	will have a " MP " role. 1) Using the mouse,	SDS-NO2	Network OAM&P	SDS-NO2	NO	NO						
	select the newly added DP server	SDS-QS	Query Server		NO	NO						
	entry. The line entry containing the server	SDS-SO1	System OAM	SDS-SO1	SO	SO						
	with a " MP " role should now be	SDS-SO2	System OAM	SDS-SO2	SO	SO						
	highlighted in GREEN.	SDS-DP1	MP			SO	MoVille					
	2) Select the				000							
	"Export" dialogue	Insert Edit De	lete Export	Report								
	button from the bottom left corner of		G	enerate file(s) that may be u	sed to view the o	onfiguration of	the selected Ser	ver(s).				
	the screen.											
7.	• Repeat Steps	3 - 6 of this procedure	for each add	itional DP server.								
0	Active SDS Server:											
ð.	Access the server console.	 Connect to the Section Err 	the Active SI or! Reference	DS VIP console using e source not found	one of the ad	cess metho	ds described	in				
•	Active SDS Server:	CentOS release 5	5.6 (Final)								
9.	1) Access the	Kernel 2.6.18-23	38.19.1.el	5prerel5.0.0_72.	22.0 on an	n x86_64						
	command prompt.	hostname12604760)35 login:	root								
	2) Log into the OAM server as the " root " user.	Password: <root< th=""><th>_password></th><th></th><th></th><th></th><th></th><th></th></root<>	_password>									
10	Active SDS Server:	[root@sds-mrsvnd	c-a ~]# cd	/var/TKLC/db/fi	lemgmt							
	Change directory to filemgmt											

Proc	edure 7.1 Applyin	g the Database Processor Configuration file (DP)
11.	Active SDS Server: Copy the SDS DP configuration file to the "/var/tmp" directory on the remote server. NOTE: The server will poll the /var/tmp directory for the presence of the configuration file and automatically execute it when found.	<pre>Example: TKLCConfigData<.hostname>.sh → will translate to →TKLCConfigData.sh [root@sds-mrsvnc-a ~]# scp \ /var/TKLC/db/filemgmt/TKLCConfigUData.<hostname>.sh \ <ipaddr>:/var/tmp/TKLCConfigData.sh Note: ipaddr is the IP address of DP server associated with the xmi network.</ipaddr></hostname></pre>
12.	DP Server: After the script completes, a broadcast message will be sent to the terminal. NOTE: The user should be aware that the time to complete this step varies by server and may take from 3-20 minutes to complete.	<pre>*** NO OUTPUT FOR ≈ 3-20 MINUTES *** Broadcast message from root (Mon Dec 14 15:47:33 2009): Server configuration completed successfully! See /var/TKLC/appw/logs/Process/install.log for details. Obtain a terminal session on the DP Server as root. Log in as root on the DP Server shell, and issue the following commands: [root@hostname1260476099 ~]# cat /var/TKLC/appw/logs/Process/install.log</pre>
13.	DP Server: Configure the time zone.	<pre>[root@hostname1260476035 ~]# set_ini_tz.pl <time zone=""> Note: The following command example uses Etc/UTC time zone. Replace, as appropriate, with the time zone you have selected for this installation. See Appendix B for a list of valid time zones. [root@hostname1260476035 ~]# set_ini_tz.pl "Etc/UTC"</time></pre>
14.	DP Server: Initiate a reboot of the DP.	[root@hostname1260476035 ~]# init 6

Proc	edure 7.1 Applyin	g the Database Processor Configuration file (DP)
15.	DP Server: Execute a "syscheck" to verify	Obtain a terminal session on the DP Server as root. Log in as root on the DP Server shell, and issue the following commands:
	the current health of	[root@dp-carync-1 ~]# syscheck
	the server.	Running modules in class hardware
		OK
		Running modules in class disk
		OK
		Running modules in class net OK
		Running modules in class system
		OK
		Running modules in class proc OK
		LOG LOCATION: /var/TKLC/log/syscheck/fail_log [root@dp-carync-1 ~]#
16.	Repeat Steps 8 - 15 of	this procedure for each subtending DP server.

Proc	edure 7.2 Configu	ring the Database P	roce	ssor	Server G	roup((DP)		
17.	Active SDS VIP:								
	Select	^I ORACLE [®]	Com 5.0.1-{	nuni 50.21.0	cations Dia	meter	Signa	I Router Full	Address Re
	Main Menu → Configuration	Connected using XMI to) SDS-I	101 (#	CTIVE NETW	VORK OA	M&P)		
	→ Server Groups	Administration			Main Menu: Configuration -> Server Gro				
	as shown on the right.	Network Elen	nents		Filter 🔻				
		📔 Services 📑 Resource Doi	mains		Server Group	o Name	Level	Parent	Function
		Servers <mark> Server Grou</mark> <mark></mark> Places Place Associa	ps		NO		A	NONE	SDS
		 Index Association DSCP Network Alarms & Events 			SO		В	NO	SDS
18.	Active SDS VIP: 1) The user will be presented with the "Server Groups" configuration screen	Main Menu: Co	nfigi	urat	ion -> S	erver	Gro	ups	
	as shown on the right.	Server Group Name	Level	Pare	nt	Functio	n	Connection Count	
	2) Select the "Insert" dialogue button from the bottom left corner of the screen.	NO	A	NONE	:	SDS		1	
	NOTE: The user may need to use the vertical scroll-bar in order to make the	SO	В	NO		SDS		1	
	" Insert " dialogue button visible.								
		•						111	
								000	
			elete	Rep	port				
		Insert a new Serve	er Grou	р.					

Active SDS VIP:	Main Menu: Configura	ation -> Server (Groups [Insert]					
1) Input the Server								
Group Name.	Field	Value	Description					
Note: Fach DP will	Server Group Name	MP	 Unique identifier used to label a Server Group. [Default = n/a. Range = A 1-32-charact string. Valid characters are alphanumeric and underscore. Must contain at least one alpha and must not start with a digit.] 					
Active SDS VIP: Main Menu: Configuration -> Server Groups [Insert] 1) Input the Server Group Name. Info • Note: Each DP will have its own server group. Group names may be differentiated by assigning each a unique name. MP • Unique identifier used to label a Server Group. [Default server Group Name 2) Select "C" on the "Level" pull-down menu. Sos • Select on of the Levels supported by the system (Sos • Select on of the Levels supported by the system (Sos • 3) Select System OAM group on the "Parent" pull-down menu. Solect "SDS" on the "Function" pull-down menu. OK Apply Cancel 4) Select "SDS" on the "Function" pull-down menu. NOTE: Leave the Info •	Select one of the Levels supported by the system. [Level A groups contain NOAMP an Query servers. Level B groups are optional and contain SOAM servers. Level C group contain MP servers.]							
may be differentiated	Parent	SO •	br Server Groups [Insert] Thu Jun 04 22:21:58 20 Perintin Thigue identifier used to label a Server Group. [Default = r/a. Range = A 1-32-character are alphanumeric and underscore. Must contain at least one alpha and must not start with a digit. Select one of the Levels supported by the system. [Level A groups contain NOAMP and Query servers. Level B groups are optional and contain SOAM servers. Level C groups contain MP servers] Select one of the Functions supported by the system. Select one of the Functions supported by the system. Select one of the Functions supported by the system. Select one of the Functions supported by the system. Select one of the Functions supported by the system. Select one of the Functions supported by the system. Select one of the Functions supported by the system. Select one of the Functions supported by the system. Select one of the Functions supported by the system. Select one of the Functions supported by the system. Ok (Apply) Cancel					
Parent by assigning each a unique name. 2) Select "C" on the "Level" pull-down menu.	SDS 🔹	 Select one of the Functions supported by the system 						
	WAN Replication Connection Count	1	Specify the number of TCP connections that will be used by replication over any WAI connection associated with this Server Group. [Default = 1. Range = An integer between 1 and 8.]					
			Ok Apply Cancel					
3) Select System OAM group on the "Parent" pull-down menu.								
 Select "SDS" on the "Function" pull- down menu. 								
NOTE: Leave the "WAN Replication Connection Count" blank it will default to 1.								
5) Select the "OK" dialogue button.								

Proce	edure 7.3 Adding t	he Database Pro	oces	sor into th	e DP Se	rver	Group	(DP	')	
20.	Active SDS VIP:	ORACLE	Con 5.0.1	nmunications	Diameter	Signa	I Router	Full A	Address R	esoluti
	The user will be		t- cpc							
	presented with the	Connected using XMI	to SDS	-NOI (ACTIVE N	ETWORK O	ам&Р)				
	"Configuration →	Administration	Main M	1enu: Co	nfig	uration	-> Se	erver Gr	oups	
	screen as shown on	Configuration		_					_	
	the right	Network Ele	Filter	•						
		Services	omains	Server G	roup Name	Level	Level Parent		Function	Connection Count
		Servers		MP		С	SO		SDS	1
		Server Grou Server Grou Places Place Assoc DSCP	ips iations	NO		A	NONE		SDS	1
		 Alarms & Even Security Log 	s SO			в	B NO		SDS	1
		Status & Mana	ge							
21.	Active SDS VIP: 1) Using the mouse, select the MP Server	Main Menu: Co	onfig	uration -> \$	Server G	roup)S			
	Group associated with the DP being	Server Group Name	Level	l Parent	Function	Co	onnection	Serve	rs	
	installed.	MP	с	SO	SDS	1			NE	Server
	2) Select the "Edit"		1						NE	Server
	dialogue button from	NO		NONE	000			NO	\$	SDS-NO1
	the bottom left corner	NO	A	NONE	303	- I'		NO	\$	SDS-NO2
	of the screen.							NO	\$	SDS-QS
									NE	Server
		SO	В	NO	SDS	1		SO	5	SDS-SO1
								SO	5	SDS-SO2
							000			
		Insert Edit D	elete	Report						

Proce	edure 7.3 Adding t	he Database Proce	essor into the	DP Server Group (DP)	
22.	Active SDS VIP:	Main Menu: Configura	ation -> Server G	roups [Edit]	
	The user will be presented with the	Info 🔻		T	hu Jun 04 22:41:58
	"Configuration → Server Groups	Server Group Name	MP *	1-32-character string. Valid characters are alphanumeric and und contain at least one alpha and must not start with a digit.]	erscore. Must
	[Edit]" screen as	Level	C • *	Select one of the Levels supported by the system	
	shown on the light	Parent	SO • *	Select an existing Server Group or NONE	
	Select the "DP"	Function	SDS •	Select one of the Functions supported by the system	
	server from the list of "Servers" by clicking	WAN Replication Connection Count	1	Specify the number of TCP connections that will be used by replic WAN connection associated with this Server Group. [Default = 1. between 1 and 8.]	ation over any Range = An integer
	the check box next its	so			
	name.	Server	SG Inclusion	Preferred HA Role	
	Select the "Apply"	VIP Assignment			
	dialogue button.	VIP Address		Add	
				Dk Apoly Cancel	
23.	Active SDS VIP: The user should be presented with a banner information message stating "Data committed".	Main Menu: Config	uration -> Serv	ver Gr	
		Parent Function	SDS	× x .	
24.	Repeat Steps 17 - 23 of	f this procedure for each s	subtending DP serv	er, using a unique group for each DP .	
25.	IMPORTANT: Wait at least 5 minutes before proceeding on to the next Step.	 Now that the Databaeach must establish several minutes for the Allow a minimum of 	ase Processor(s) has DB replication with this process to be one of the process to be one of the process before the process befo	ave been placed within their respective Ser in the Active DP-SOAM server at the NE. It completed. continuing to the next Step.	ver Groups, may take

Proc	edure 7.4 Restartii	ng the Database	Processor	Applicati	on (DP)			
26.	Active SDS VIP: Select <u>Main Menu</u> → Status & Manage → Server	Connected using XMI	Communication 5.0.1-50.21.0 to SDS-NO1 (ACTI	ons Diame ve Networi in Menu:	ter Signal F K OAM&P) Status &	Router Full Manage ·	Address Re -> Server	
	as shown on the right.	Alarms & Even Security Log Status & Mana Network El Server HA Database KPIs Processes	age NO ements NO NO SO SO	work Element		SDS-NO SDS-NO SDS-QS SDS-QS SDS-SO SDS-SO SDS-SO	lostname 1 2 2 1	
27.	Active SDS VIP: Verify that the "DB & Reporting" status columns all show "Norm" for the DP at this point. The "Proc" column should show "Man".	Tasks Main Menu: St Filter Filter NO NO NO NO SO SO SO SO SO SO	SDS-NO1 SDS-NO2 SDS-SO2 SDS-SO1 SDS-SO1 SDS-DP1	Appl State Enabled Enabled Enabled Enabled Enabled Enabled Enabled Disabled	Alm Err Norm Norm Norm Norm Warn	DB Norm Norm Norm Norm Norm Norm	Reporting Status Norm Norm Norm Norm Norm Norm Norm Norm Norm	Proc Norm Norm Norm Norm Norm Norm

rocedure 7.4 Restart	ing the Databas	se Processor	Applicat	tion (DP)			
Active SDS VIP:	Main Menu: S	tatus & Mana	ge -> Ser	ver			
1) Using the mouse, select the "DP"	Filter 🔻						
hostname. The line entry should now be	Network Element	Server Hostname	Appl State	Alm	DB	Reporting Status	Proc
nignlighted in GREEN.	NO	SDS-NO1	Enabled	Err	Norm	Norm	Norm
	NO	SDS-NO2	Enabled	Norm	Norm	Norm	Norm
2) Select the	NO	SDS-QS	Enabled	Norm	Norm	Norm	Norm
"Restart" dialogue	SO	SDS-SO2	Enabled	Norm	Norm	Norm	Norm
button from the	SO	SDS-SO1	Enabled	Norm	Norm	Norm	Norm
bottom left corner of the screen.	SO	SDS-DP1	Disabled	Warn	Norm	Norm	Man
3) Click the "OK" button on the confirmation dialogue box.	Stap Destart		Dana		000		
4) The user should be presented with a confirmation message (in the banner area) for the	Resta	rt selected server(s).	ync Repor	t			
"DP" stating: "Successfully restarted application".	Are you sure you wis on the following serve SDS-DP1	h to restart application s er(s)?	software				
NOTE: The user may need to use the vertical scroll-bar in order to make the " Restart " dialogue button visible.		OK Car	ncel				
Active SDS VIP:	Main Menu: S	Status & Mana	age -> Se	erver			
State" now shows	Filter						
the "Alm, DB, Reporting Status &	Network Element	Server Hostname	Appl State	Alm	DB	Reporting Status	Proc
Proc" status columns	NO	SDS-NO1	Enabled	Err	Norm	Norm	Norm
the " DP "	NO	SDS-NO2	Enabled	Norm	Norm	Norm	Norm
	NO	SDS-QS	Enabled	Norm	Norm	Norm	Norm
	SO	SDS-SO2	Enabled	Norm	Norm	Norm	Norm
	SO	SDS-SO1	Enabled	Norm	Norm	Norm	Norm
	SO	SDS-DP1	Enabled	Norm	Norm	Norm	Norm
). • Repeat Steps	26 - 29 of this proce	dure for each add	ditional DP s	erver installe	d.		
<u> </u>							

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Note: After all DP servers have been installed, the user can configure the ComAgent by following steps in Section 5.7.

5.7 Configuring ComAgent

This procedure configures the ComAgent that allows the SDS Data Processor servers and the DSR Message Processor servers to communicate with each other. These steps cannot be executed until all SDS DP servers are configured.

Procedure 8:	Configuring	comAgent	(All D	P-SOAM	sites)
			···· —		,

Step	Procedure	Result				
1.	Active SDS VIP:	Certificate Error: Navigation Blocked - Windows Internet Explorer				
	Launch an approved					
	web browser and connect to the XMI	Elle Edit View Favorites Iools Help				
	Virtual IP Address (VIP) of the Active SDS site using	Share browser webbx *				
	https://	There is a problem with this website's security certificate.				
		The security certificate presented by this website was not issued by a trusted certificate authority. The security certificate presented by this website was issued for a different website's address.				
		Security certificate problems may indicate an attempt to fool you or intercept any data you send to the server.				
		We recommend that you close this webpage and do not continue to this website.				
		 Click here to close this webpage. Continue to this webpage. 				
		Continue to this website (not recommended).				
		More information				
2.	Active SDS VIP: The user should be presented the login screen shown on the right	Oracle System Login Wed Jun 3 09:50:21 2015 EDT				
	right. Login to the GUI using the default user and password.	Log In Enter your username and password to log in Username: 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.				

Procedure 8: Configuring comAgent (All DP-SOAM sites)

3.	Active SDS VIP: Select <u>Main Menu</u> →Communication Agent →Configuration →Remote Servers as shown on the right. Select the "Insert" dialogue button	Communications Diameter Signal Router Full Address Resolution 1000 5.0.1-50.21.0 Connected using XMI to SDS-NO1 (ACTIVE NETWORK OAM&P) Main Menu Administration Configuration Alarms & Events Security Log Status & Manage Measurements Connection Groups Remote Servers Connection Groups Maintenance SDS Help
4. 5.	Active SDS VIP: Enter the "Remote Server Name" for the DSR Message Processer server Active SDS VIP: Enter the "Remote Server IMI IP Address".	Field Value Description Remote Server RDU08MP1 * Unique identifier used to label a Remote Server. [Default: n/a; Range: A 32-character string. Valid underscore. Must contain at least one alpha and Remote Server IP Address 169.254.2.6 * This is the IP address of the Remote Server. Default: n/a; Range: A valid IPv4 address.
6.	Active SDS VIP: Select "Client" for the Remote Server Mode from the pull- down menu.	NOTE: This should be the IMI IP address of the MP.
7.	Active SDS VIP: Select the Local Server Group for the SDS Data Processer server group	DP_righnc_1_grp Add selected Local Server Group(s). DP_drhmnc_1_grp Image: Construction of the selected Local Server Groups Ok Apply Cancel

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Procedure 8: Configuring comAgent (All DP-SOAM sites)

8.	Active SDS VIP: Click the "Apply" dialogue button	Image: Server Groups Image: Server Groups Image: Server Groups Ima			
		Ok Apply Cancel			
9.	Active SDS VIP: Under the "Info" banner option, the user should be presented with a message stating "Data committed"	Main Menu: Communication Agent -> Configuration -> Remote Servers [Insert] Info Description Unique identifier used to label a Remote Server. Upfault: n/a; Range: A 32-character string. Valid characters are alphanum alpha and must not start with a digit. Remote Server IP 169.254.2.6 Address This is the IP address of the Remote Server. Default: n/a; Range: A valid IPv4 address. Remote Server Mode Client Identifies the mode in which the Remote Server operates can be Client, S Image: A valid IPv4 address. DP_righnc_1_grp DP_drhmnc_1_grp DP_drhmnc_1_grp DP_drhmnc_1_grp DP_drhmnc_1_grp DP_drhmnc_1_grp DP_drhmnc_1_grp			
10.	Repeat steps 3 - 9 of this procedure for each remote MP in the same SOAM NE.				
		THIS PROCEDURE HAS BEEN COMPLETED			

Appendix A. Creating an XML file for Installing SDS Network Elements

SDS Network Elements can be created by using an XML configuration file. The SDS software image (*.iso) contains two examples of XML configuration files for "NO" (Network OAM&P) and "SO" (System OAM) networks. These files are named **SDS_NO_NE.xml** and **SDS_SO_NE.xml** and are stored on the /usr/TKLC/sds/vlan directory. The customer is required to create individual XML files for each of their SDS Network Elements. The format for each of these XML files is identical.

Below is an example of the SDS_NO_NE.xml file. The highlighted values are values that the user must update.

NOTE: The **Description** column in this example includes comments for this document only. **Do not include** the Description column in the actual XML file used during installation.

XML File Text	Description
xml version="1.0"?	
<networkelement></networkelement>	
<name><mark>sds_mrsvnc</mark></name>	Unique identifier used to label a Network Element. [Range = 1-32 character string. Valid characters are alphanumeric and underscore. Must contain at least one alpha and must not start with a digit.]
<ntpservers></ntpservers>	
<ntpserver><mark>10.250.32.10</mark></ntpserver>	IP Address of the first NTP server. There must be at least one NTP server IP address defined.
<ntpserver><mark>10.250.32.51</mark></ntpserver>	IP Address of second NTP server, if it exists; otherwise, this line must be deleted.
<networks></networks>	
<network></network>	
<name>XMI</name>	Name of customer external network. Note : Do NOT change this name.
<vlanid><mark>3</mark></vlanid>	The VLAN ID to use for this VLAN. [Range = 2-4094.]
<ip><mark>10.250.55.0</mark></ip>	The network address of this VLAN [Range = A valid IP address]
<mask><mark>255.255.255.0</mark></mask>	Subnetting to apply to servers within this VLAN
<gateway><mark>10.250.55.1</mark></gateway>	The gateway router interface address associated with this network [Range = A valid IP address]
<isdefault>true</isdefault>	Indicates whether this is the network with a default gateway. [Range = true/false]
<network></network>	
<name>IMI</name>	Name of customer internal network. Note : Do NOT change this name.
<vlanid><mark>4</mark></vlanid>	The VLAN ID to use for this VLAN. [Range = 2-4094.]
<ip><mark>169.254.100.0</mark></ip>	The network address of this VLAN [Range = A valid IP address]
<mask><mark>255.255.0</mark></mask>	Subnetting to apply to servers within this VLAN
<gateway><mark>169.254.100.3</mark></gateway>	The gateway router interface address associated with this network [Range = A valid IP address]
<pre></pre> /potworkolomont>	

Table 4 - SDS XML SDS Network Element Configuration File

Appendix B. List of Frequently Used Time Zones

This table lists several valid timezone strings that can be used for the time zone setting in a CSV file, or as the time zone parameter when manually setting a DSR timezone.

Table 5 - List of Selected Time Zone Value
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Time Zone Value	Description	Universal Time Code (UTC) Offset
Etc/UTC	Coordinated Universal Time	UTC-00
America/New_York	Eastern Time	UTC-05
America/Chicago	Central Time	UTC-06
America/Denver	Mountain Time	UTC-07
America/Phoenix	Mountain Standard Time - Arizona	UTC-07
America/Los_Angeles	Pacific Time	UTC-08
America/Anchorage	America/Anchorage Alaska Time	
Pacific/Honolulu Hawaii		UTC-10
Africa/Johannesburg		UTC+02
America/Mexico_City	Central Time - most locations	UTC-06
Africa/Monrovia		UTC+00
Asia/Tokyo		UTC+09
America/Jamaica		UTC-05
Europe/Rome		UTC+01

Asia/Hong_Kong		UTC+08
Pacific/Guam		UTC+10
Europe/Athens		UTC+02
Europe/London		UTC+00
Europe/Paris		UTC+01
Europe/Madrid	mainland	UTC+01
Africa/Cairo		UTC+02
Europe/Copenhagen		UTC+01
Europe/Berlin		UTC+01
Europe/Prague		UTC+01
America/Vancouver	Pacific Time - west British Columbia	UTC-08
America/Edmonton	Mountain Time - Alberta, east British Columbia & westSaskatchewan	UTC-07
America/Toronto	Eastern Time - Ontario - most locations	UTC-05
America/Montreal	Eastern Time - Quebec - most locations	UTC-05
America/Sao_Paulo	South & Southeast Brazil	UTC-03
Europe/Brussels		UTC+01
Australia/Perth	Western Australia - most locations	UTC+08

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Australia/Sydney	New South Wales - most locations	UTC+10
Asia/Seoul		UTC+09
Africa/Lagos		UTC+01
Europe/Warsaw		UTC+01
America/Puerto_Rico		UTC-04
Europe/Moscow	Moscow+00 - west Russia	UTC+04
Asia/Manila		UTC+08
Atlantic/Reykjavik		UTC+00
Asia/Jerusalem		UTC+02

Appendix C. Resource Profile

VM Name	VM Purpose	vCPUs	RAM (GB)	Storage (GB)	Notes
SDS NOAM	Database Processor for address resolution and subscriber location functions	4	12	125	DP
SDS SOAM	Database Processor Site (node) Operation, Administration, Maintenance for address resolution and subscriber location functions	4	12	125	
DP	Subscriber Database Processor for address resolution and subscriber location functions.	4	12	125	
Query Server	Allows customers to query FABR subscriber data via a MySQL interface	4	12	125	

VM Name	OAM (XMI)	Local (IMI)	Signaling A (XSI1)	Signaling B (XSI2)	Signaling C (XSI3)	Signaling D (XSI4)	Replication (SBR Rep)
SDS NOAM	eth0	eth1					
SDS SOAM	eth0	eth1					
DP	eth0	eth1					
Query	eth0	eth1					

Note: The Ethernet interfaces define in the table are there as a guidline. Interfaces can be ordered as preferred. I.E. eth1 or eth2 could be associated with XMI if desired.