Oracle® COMMUNICATIONS
Diameter Signaling Router
DSR Network Impact Report

Release 8.5.1

F51032-01

December 2021

Oracle Diameter Signaling Router DSR Network Impact Report,

Release 8.5.1

Contents

1 INTRODUCTION 10

1.1 PURPOSE AND SCOPE 10
1.2 COMPATIBILITY 10
1.2.1 DSR 8.5.1 PRODUCT COMPATIBILITY 10
1.2.2 DSR 8.5.1 PRODUCT COMPATIBILITY MATRIX 10
1.3 DSR 8.5.X INCOMPATIBILITY FEATURES 11
1.4 DISCLAIMERS 11

2 OVERVIEW OF DSR 8.5.X FEATURES 12

2.1 ENHANCEMENTS TO DSR 8.5.1 12
2.1.1 FABR with UDR 12
2.1.2 Increase the number of Route Groups per Route List from 3 to 5 13
2.1.3 Support more than 20 applications in CER-CEA messages 13
2.1.4 ENUM Support 14
2.1.5 Support for eLYNX PCIe Card 14
2.1.6 vSTP GTT Throttling Enhancements 14
2.1.7 vSTP CAP/INAP Filtering 14
2.1.8 vSTP UDTS Routing 15
2.1.9 VNFM Get Operation Status 15
2.1.10 VNFM to support vSTP Service MP deployment 15
2.1.11 SCEF Reliable Data Transfer 16
2.2 HARDWARE CHANGES 16
2.2.1 Hardware Supported 16
2.2.2 Hardware Upgrade 16
2.3 SOFTWARE DETAILS 17
2.3.1 Software Platform Components in 8.5.X 17
2.3.2 IDIH 8.2.3 17
2.3.3 SDS 8.5 17
2.4 FIRMWARE CHANGES 17
2.5 UPGRADE OVERVIEW 18
2.5.1 DSR Upgrade Path 18
2.5.2 SDS upgrade path 18
2.5.3 IDIH upgrade path 19
2.5.4 Upgrade Execution 20
2.5.5 Limitations 20
2.6 MIGRATION OF DSR DATA 21

3 MEAL INSERTS 22
3.1 DSR/SDS 8.5.1 MEAL SNAPSHOT 22
3.1.1 MEAL Delta between 8.1.0.0.0 and 8.5.1 22
3.1.2 MEAL Delta between 8.2.1.0.0 and 8.5.1 22
3.1.3 MEAL Delta between 8.3.0.0.0 and 8.5.1 22
3.1.4 MEAL Delta between 8.4.0.0.0 and 8.5.1 22
3.1.5 MEAL Delta between 8.4.0.3.0 and 8.5.1 23
3.1.6 MEAL Delta between 8.4.0.5.0 and 8.5.1 23
3.1.7 MEAL Delta between 8.5.0.0.0 and 8.5.1 23
3.1.8 MEAL Delta between 8.5.0.1.0 and 8.5.1 23
3.1.9 MEAL Delta between 8.5.0.2.0 and 8.5.1 23
4 REFERENCE LIST 24

List of Figures

Figure 1 – DSR Upgrade Paths.....18
Figure 2 – SDS Upgrade Paths.....19
Figure 3 – IDIH Upgrade Paths.....20

List of Tables

Table 1: DSR 8.5.1 New Features/Enhancements 12
Table 2: FABR with UDR Feature Description 12
Table 3: Increase the number of Route Groups per Route List from 3 to 5 Feature Description 13
Table 4: Increase the number of Route Groups per Route List from 3 to 5 Feature Description 13
Table 5: ENUM Support Feature Description 14
Table 6: Support for eLYNX PCIe Card Feature Description 14
Table 7: vSTP GTT Throttling Enhancements Feature Description 14
Table 8: vSTP CAP/INAP Filtering Feature Description 14
Table 9: vSTP UDTS Routing Feature Description 15
Table 10: VNFM Get Operation Status Feature Description 15
Table 11: VNFM to support vSTP Service MP deployment Feature Description 15
Table 12: SCEF Reliable Data Transfer Feature Description 16
Table 53 - Hardware Details 16
Table 54 - Software Platform Component Details - 8.5.1 17
Table 56 - IDIH Details 17
Table 57 - SDS Details 17

GLOSSARY

Acronym/Term	Definition
APIGW	API Gateway
ASGU	Automated Server Group Upgrade
AS	Application Server
ASU	Automated Site Upgrade
AVP	Attribute Value Pair
BSBR	Binding SBR
CA	Communication Agent
CAF	Customized Application Framework
CLI	Command Line Interface
CLR	Cancel Local Request
DA-MP	Diameter Agent Message Processor
DAL	Diameter Application Layer
DCA	Diameter Custom Application Framework
DCL	Diameter Connection Layer
DEA	Diameter Edge Agent
DPC	Destination Point Code
DPL	Data Processor Library
DRMP	Diameter Routing Message Priority
DPI	Diameter Plug-in
DSA	Diameter Security Application
DoS	Denial of Service
EXGSTACK	Eagle Next Generation Stack
vEIR	Virtual Equipment Identity Register
ECR	Mobile Equipment-Identity-Check-Request
ECA	Mobile Equipment-Identity-Check-Answer
FLOBR	Flexible Link set Optional Based Routing
GUI	Graphical User Interface
GTT	Global title translation
GTA	Global title Address
HSS	Home Subscriber Server
HLR	Home Location register
iLO	Integrated Lights Out
IMI	Internal Management Interface
IPv4	IPv4 address of the subscriber
IPv6	IPv6 address of the subscriber
IMSI	International Mobile Subscriber Identity

Acronym/Term	Definition
IMPU	IP Multimedia Public Identity
IMPI	IP Multimedia Private Identity
IOT	Interoperability Tests
KPI	Key Performance Indicator
LAI	Location Area Identity
LTE	Long Term Evolution
MAP	Mobile Application Part
MBR	Map Based Routing
MCC	Mobile Country Code
MEAL	Measurements, Events, Alarms, and Logging
MME	Mobility Management Entity
MMI	Man Machine Interface
MP	Message Processor
MPS	Messages per Second
MS	Mobile Station/Handset
MSU	Message signal Unit
MSISDN	Mobile Station International Subscriber Directory Number
MTC	Machine type communication
MTP	Message Transfer Part
MO	Managed Object
NE	Network Element
NGN	Next Generation Networks
NGN-PS	NGN Priority Services
NIDD	Non-IP data delivery [directly through MME/SGSN]
NMS	Network Management System
NOAM	Network Operations Administration and Maintenance
NF	Network Function
NRF	NF Repository Function
OAG	Oracle Accessibility Guidelines
OAM	Operations, Administration, Maintenance
OAM&P	Operations, Administration, Maintenance and Provisioning
OCUDR	Oracle Communications User Data Repository
OPC	Origin Point Code
PDRA	Policy Diameter Relay Agent
PCRF	Policy Control and Charging Rules Function
PCIMC	Per Connection Ingress Message Control
PDU	Protocol Data Unit
PDN	Packet Data Network
PM&C	Platform, Management and Control

Acronym/Term	Definition
POR	Plan of Record
PS	Priority Service (NGN-PS)
RAN	Radio Access Network
ROS	Routing Option Set
RSA	Reset Answer
RSR	Reset Request
SBR	Session Binding Repository
SSBR	Session SBR
SCEF	Service Capability Exposure Function
ScsAsId	String provided by SCS to identify itself in non-3GPP world
SCEF-MP	Message processing server that will run business login of SCEF/MTC-IWF. (for DSR , it is DA-MP server)
SCEF-DB	U-SBR (database server that stores context of SCEF calls)
SCS	Service Control Server
SOAM	Site Operations Administration and Maintenance
SS7	Signaling System No. 7
STP-MP	Signaling Transfer Point Message Processor
SV	Software Version
TPD	ORACLE Platform Distribution
TCAP	Transaction Capability Part
TLTRI	T8 Long Term Transaction Reference ID
TTRI	T8 Transaction Reference ID
TOBR	TCAP Opcode Based Routing
UE	User Equipment
USBR	Universal SBR
VIP	Virtual IP Address
VNF	Virtual Network Functions
VNFM	Virtual Network Functions Manager
VPLMN	Virtual Public Land Mobile Network
VSTP	Virtual SS7 Signal Transfer Point
VEDSR	Virtualized Engineered DSR
XMI	External Management Interface
XSI	External Signaling Interface

1 INTRODUCTION

1.1 PURPOSE AND SCOPE

The purpose of this document is to highlight the changes of the product that may have impact on the customer network operations and should be considered by the customer during planning for this release.

1.2 COMPATIBILITY

1.2.1 DSR 8.5.1 PRODUCT COMPATIBILITY

- DSR 8.5.1 is compatible with VNFM 5.3
- DSR 8.5.1 is compatible with APIGW 8.5.1.0.0_94.11.0
- DSR 8.5.1 is compatible with TPD 7.8.1.0.0-89.13.0, ComCOL 7.5.0.38.0-14123, AppWorks 9.4.0-94.9.0, EXGSTACK 9.4.0-94.9.0, TVOE 3.6.2.0.0-88.58.0, PM&C 6.6.1.0.0-66.9.0, and UDR 12.6.3

X = PI End Cycle
Y = Patches within the PI Cycle.

1.2.2 DSR 8.5.1 PRODUCT COMPATIBILITY MATRIX

DSR	PIC	UDR	VNFM	IDIH	ATS
OCDSR Rel 8.0	10.4, 10.4.0.3	N/A			
OCDSR Rel 8.1	10.4, 10.4.0.3	N/A		IDIH 8.1	
OCDSR Rel 8.1.1	Compatibility not tested with MRs and Patch releases	N/A		IDIH 8.1	
OCDSR Rel 8.1.2	Compatibility not tested with MRs and Patch releases	N/A		IDIH 8.1	
OCDSR Rel 8.2	10.4, 10.4.0.3	N/A		IDIH 8.2	
OCDSR Rel 8.2.1	Compatibility not tested with MRs and Patch releases	N/A		IDIH 8.2	
OCDSR Rel 8.3	Compatibility not tested with MRs and Patch releases	UDR 12.5	VNFM 2.0	IDIH 8.2.1, IDIH 8.2.2	
OCDSR Rel 8.4	10.4, 10.4.0.3	UDR 12.5.1	VNFM 3.0	IDIH 8.2.1, IDIH 8.2.2	ATS 8.4.0.0.0
OCDSR Rel 8.4.0.1	Compatibility not tested with MRs and Patch releases	UDR 12.5.1	VNFM 3.0	IDIH 8.2.1, IDIH 8.2.2	
OCDSR Rel 8.4.0.2	Compatibility not tested with MRs and Patch releases	UDR 12.5.1	VNFM 3.0	IDIH 8.2.1, IDIH 8.2.2	ATS 8.4.0.2.0, 8.4.0.2.1, 8.4.0.2.2, 8.4.0.3.0
OCDSR Rel 8.4.0.3	Compatibility not tested with MRs and Patch releases	UDR 12.5.2	VNFM 4.1.2	IDIH 8.2.1, IDIH 8.2.2	ATS 8.4.0.3.0, 8.4.0.3.1
OCDSR Rel 8.4.0.4	Compatibility not tested with MRs and Patch releases	UDR 12.5.2	VNFM 4.3	IDIH 8.2.1, IDIH 8.2.2	ATS 8.4.0.4.0, 8.4.0.4.1, 8.4.0.4.2
OCDSR Rel 8.4.0.5	Compatibility not tested with MRs and Patch releases	OCUDR 12.6	VNFM 4.4	IDIH 8.2.1, IDIH 8.2.2	ATS 8.4.0.5.0

DSR	PIC	UDR	VNFM	IDIH	ATS
OCDSR Rel 8.4.0.6	Compatibility not tested with MRs and Patch releases	OCUDR 12.6	VNFM 4.5	IDIH 8.2.1, IDIH 8.2.2	
OCDSR Rel 8.5	10.4.0.3	OCUDR 12.6.1	VNFM 5.0	IDIH 8.2.3	ATS 8.5.0.0.0
OCDSR Rel 8.5.0.1	Compatibility not tested with MRs and Patch releases	OCUDR 12.6.1	VNFM 5.1	IDIH 8.2.3	ATS 8.5.0.1.0
OCDSR Rel 8.5.0.2	Compatibility not tested with MRs and Patch releases	OCUDR Rel 12.6.2	VNFM 5.2	IDIH 8.2.3	ATS 8.5.0.2.0
OCDSR Rel 8.5.1.0.0	Compatibility not tested with MRs and Patch releases	OCUDR Rel 12.6.3	VNFM 5.3	IDIH 8.2.3	ATS 8.5.1.0.0

1.3 DSR 8.5.X INCOMPATIBILITY FEATURES

The following features have been made incompatible with DSR 8.3 and later.

- Active/Standby DA-MP server architecture (1+1) redundancy model
- MAP-IWF
- GLA
- The "Diameter Security Application (DSA) with Universal-SBR (USBR)" is an obsolete application. Alternatively, the "Diameter Security Application (DSA) with UDR is introduced in DSR 8.4.0.5.0. For information, refer to the Diameter Security Application with UDR User's Guide. Customers using this application must not upgrade DSR software to DSR 8.4.0.5.0 release and must migrate to "DSA with UDR" based application.
- Virtualized Engineered DSR (VEDSR) deployment, which is also known as TVOE based Fully Virtualized Rack Mount Server (FV RMS) Signaling node, is not supported from DSR 8.3 and later. The non-supported network elements of VEDSR are as follows:
  - DSR NOAM,
  - DSR SOAM,
  - DSR Message Processors (MP),
  - SS7 MP,
  - DSR IPFE,
  - DSR SBR (Session/Binding/Universal),
  - SDS NOAM,
  - SDS SOAM,
  - SDS QS,
  - SDS DP

Note: DSR and SDS BareMetal Installations with TVOE based NOAM/SOAM will continue to be supported.

Virtualized Engineered DSR (VEDSR) networks and associated elements need to be migrated to virtual DSR implementation based on KVM with or without OpenStack or VMware prior to DSR 8.3 or 8.4.x upgrade or install.

1.4 DISCLAIMERS

This document summarizes Diameter Signaling Router Release 8.5.1 new and enhancement features as compared to Release 8.4.x, and the operations impact of these features at a high level. The Feature Requirements Specification (FRS) documents remain the defining source for the expected behavior of these features.

2 OVERVIEW OF DSR 8.5.X FEATURES

This section provides a high-level overview of the DSR 8.5 release features that may impact OAM interfaces and activities.

For a list of all features, please see Release Notes for DSR 8.5 found at the following link:
http://docs.oracle.com/en/industries/communications/diameter-signaling-router/index.html

For additional details of the various features, please refer to the "DSR 8.5 Feature Guide" found at the following link:
http://docs.oracle.com/en/industries/communications/diameter-signaling-router/index.html

2.1 ENHANCEMENTS TO DSR 8.5.1

Table 1: DSR 8.5.1 New Features/Enhancements

DSR 8.5.1 Feature/Enhancement Name
FABR with UDR
Increase the number of Route Groups per Route List from 3 to 5
Support more than 20 applications in CER-CEA messages
ENUM Support
Support for eLYNX PCIe Card
vSTP GTT Throttling Enhancements
vSTP CAP/INAP Filtering
vSTP UDTS Routing
VNFM Get Operation Status
VNFM to support vSTP Service MP deployment
SCEF Reliable Data Transfer

2.1.1 *FABR WITH UDR*

Table 2: FABR with UDR Feature Description

Name	Description	Scope

POR 32976190	From this release, FABR application supports sending ComAgent stack events to UDR NOAM. FABR with UDR supports bundling and non-bundling cases. DSR can opt for SDS or UDR as the database type for FABR queries. For more information, seethe following guides: • Oracle Communications Diameter Signaling Router Diameter User Guide • Oracle Communications Diameter Signaling Router Full Address Based Resolution User Guide • Oracle Communications Tekelec Platform Operations, Administration, and Maintenance Guide • Oracle Communications Diameter Signaling Router Measurements Reference Guide	Enhancement Request

2.1.2 *INCREASE THE NUMBER OF ROUTE GROUPS PER ROUTE LIST FROM 3 TO 5*

Table 3: Increase the number of Route Groups per Route List from 3 to 5 Feature Description

Name	Description	Scope
POR 32058664	The number of Route Groups per Route List has increased from 3 to 5. The user can configure 5 Route Groups per Route List. This configuration is supported both from GUI and MMI. For more information, see the following guides: • Oracle Communications Diameter Signaling Router Diameter User's Guide • Oracle Communications Tekelec Platform Operations, Administration, and Maintenance Guide	Enhancement Request

2.1.3 *SUPPORT MORE THAN 20 APPLICATIONS IN CER-CEA MESSAGES*

Table 4: Increase the number of Route Groups per Route List from 3 to 5 Feature Description

Name	Description	Scope
POR 32075424	Earlier DSR was supporting only 10 Application IDs in CER/CEA. The user could configure only 10 Application IDs per CEX configuration set. By implementing this feature, DSR now supports 20 Application IDs in CER/CEA. For more information, see the following guides: • Oracle Communications Diameter Signaling Router Diameter User's Guide • Oracle Communications Tekelec Platform Operations, Administration, and Maintenance Guide	Enhancement Request

2.1.4 *ENUM SUPPORT*

Table 5: ENUM Support Feature Description

Name	Description	Scope
POR 29153617	DSR 8.5.1 is enhanced to support the ENUM functionality to access Unified Data Repository (UDR) using the ENUM protocol. The newly added ENUM application in DSR supports the ENUM interface on UDP with the bind9 software. For more information about the DSR ENUM Application, see Diameter Signaling Router ENUM User Guide.	Enhancement Request

2.1.5 *SUPPORT FOR ELYNX PCIE CARD*

Table 6: Support for eLYNX PCIe Card Feature Description

Name	Description	Scope
POR 31976156	Starting with release, vSTP supports Time Division Multiplexing (TDM) through eLYNX PCIe Card. vSTP allows the eLYNX configurations through the vSTP Graphical User Interface (GUI). For more information about the eLYNX configurations, see Diameter Signaling Router Virtual Signaling Transfer Point User Guide. For more information about eLYNX installation, see Diameter Signaling Router vSTP eLYNX Installation Guide	New Feature

2.1.6 *VSTP GTT THROTTLING ENHANCEMENTS*

Table 7: vSTP GTT Throttling Enhancements Feature Description

Name	Description	Scope
POR 32107871	The vSTP SS7 security firewall is enhanced to support a new GTT Action for Egress throttling of individual GTT messages. The Indv_Throt action is added to provide support for Egress throttling of individual message in a group. For more information, see Diameter Signaling Router vSTP SS7 Security User Guide.	Enhancement Request

2.1.7 *VSTP CAP/INAP FILTERING*

Table 8: vSTP CAP/INAP Filtering Feature Description

Name	Description	Scope

POR 32107023	Starting with this release, vSTP supports the GTT translations based on CDPN, BCD CDPN, and SK+BCSM with the CAP/INAP filtering feature . It provides the following Opcodes to support CAP/INAP filtering: • Initial DP • IDPSMS • IDPGPRS For more information about the feature configurations, see Diameter Signaling Router Virtual Signaling Transfer Point User Guide.	New Feature

2.1.8 *VSTP UDTS ROUTING*

Table 9: vSTP UDTS Routing Feature Description

Name	**Description**	**Scope**
POR 32107023	vSTP supports the routing of vSTP generated UDTS messages, based on Originating Point Code (OPC) of the incoming SCCP request or message. This provides an additional capability to the existing vSTP functionality wherein UDTS response messages generated by vSTP can be routed to originator, based on OPC of incoming UDT Message. For more information about the feature configurations, see Diameter Signaling Router Virtual Signaling Transfer Point User Guide.	Enhancement Request

2.1.9 *VNFM GET OPERATION STATUS*

Table 10: VNFM Get Operation Status Feature Description

Name	**Description**	**Scope**
32556401	VNFM supports the SOL003 operation Get Operation Status. The NFVO invokes Get Operation Status from VNF Life cycle management operations towards VNFM. VNFM queries the VNF for all life cycle management operation occurence. For more information see Oracle Communications Virtual Network Functions Manager Installation and User Guide.	Enhancement Request

2.1.10 *VNFM TO SUPPORT VSTP SERVICE MP DEPLOYMENT*

Table 11: VNFM to support vSTP Service MP deployment Feature Description

Name	**Description**	**Scope**

POR 32792030	By implementing this feature, VNFM deploys the Service MP along with vSTP-MP only and Service MP deployment is optional. vSTP-MP can be independently deployed without service MP. For more information, see Oracle Communications Virtual Network Functions Manager Installation and User Guide.	Enhancement Request

2.1.11 *SCEF RELIABLE DATA TRANSFER*

Table 12: SCEF Reliable Data Transfer Feature Description

Name	**Description**	**Scope**
POR 30002074	The Reliable Data Service is used by the UE and SCEF when using PDN Connection of PDN Type Non-IP. This service provides a mechanism for the SCEF to determine if the data was successfully delivered to the UE and for UE to determine if the data was successfully delivered to the SCEF. For more information, see Oracle Communications SCEF User Guide.	Enhancement Request

2.2 HARDWARE CHANGES

2.2.1 *HARDWARE SUPPORTED*

***Table 13* - Hardware Details**

Hardware	**Comment**
HP BL460c Gen8, Gen8_v2	c-Class
HP BL460c Gen9, Gen9_v2	c-Class
HP DL360/380 Gen8, Gen8_v2	Rack Mount Server
HP DL380 Gen9, Gen9_v2	Rack Mount Server
Oracle Server X5-2	Rack Mount Server
Oracle Server X6-2	Rack Mount Server
Oracle Server X7-2	Rack Mount Server
Netra X5-2	Rack Mount Server
HP 6125XLG, 6125G, 6120XG	Enclosure Switch
Cisco 3020	Enclosure Switch
Cisco 4948E-F	Rack Switch
Cisco 4948E	Rack Switch

Note:
Gen9, Gen9 v2, and Gen 8 v2 hardware are also supported when purchased by a customer. Mixed Sun/HP deployments are not generally supported.

2.2.2 *HARDWARE UPGRADE*

The VEDSR 8.5 release builds on top of the RMS and supports the newer and higher capacity X7-2 RMS hardware.

2.3 SOFTWARE DETAILS

2.3.1 SOFTWARE PLATFORM COMPONENTS IN 8.5.X

Software changes include a new release of the software Platform components and a new DSR release.

Table 14 - Software Platform Component Details - 8.5.1

Component	Release
TPD	7.8.1.0.0-89.13.0
COMCOL	7.5.0.38.0-14123
APIGW	8.5.1.0.0_94.11.0
PM&C	6.6.1.0.0-66.9.0
TVOE	3.6.2.0.0-88.58.0
AppWorks	9.4.0-94.9.0
EXGSTACK	9.4.0-94.9.0
HP Firmware FUP	2.2.11
Oracle Firmware	8.2.1

2.3.2 IDIH 8.2.3

Table 15 - **IDIH Details**

Component	Release
IDIH Release	8.2.3.0.0_82.40.0

DSR 8.5.1 is compatible with IDIH 8.2.3

2.3.3 SDS 8.5

Table 16 - **SDS Details**

Component	Release
SDS Release	8.5.1.0.0-94.11.0

DSR 8.5.1 is compatible with SDS 8.1.2, 8.2.1, 8.3, 8.3.X, 8.4, and 8.4.0.X.Y.

NOTE**:** It is recommended for SDS to be upgraded before the DSR. SDS release 8.5 is compatible with DSR releases 8.1.2, 8.2.1, 8.3, 8.3.X, 8.4, and 8.4.0.X.Y.

X = PI End Cycle
Y = Patches within the PI Cycle.

2.4 FIRMWARE CHANGES

Firmware release guidance is provided through DSR 8.5 Release Notice which can be found at the following link:

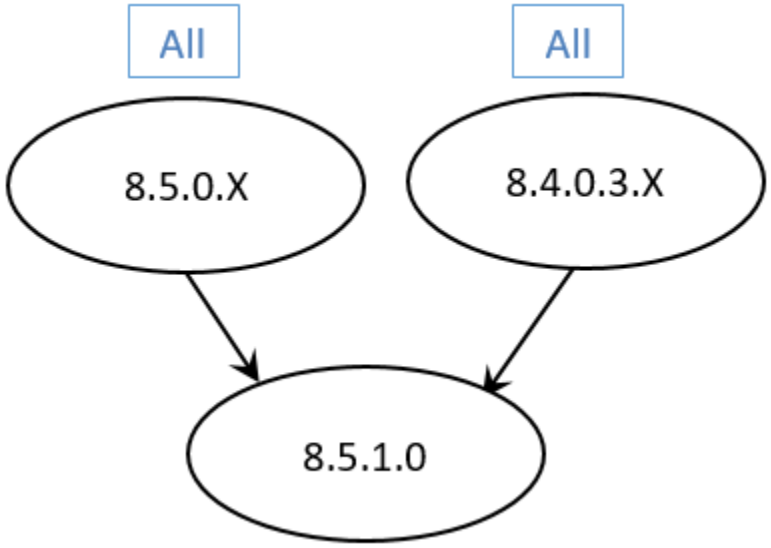
http://docs.oracle.com/en/industries/communications/diameter-signaling-router/index.html
and then navigating to the Release 8.5 link.

2.5 UPGRADE OVERVIEW

This section provides an overview of the Upgrade activities for Release 8.5.

2.5.1 DSR UPGRADE PATH

The supported upgrade paths for DSR 8.5.1 are:



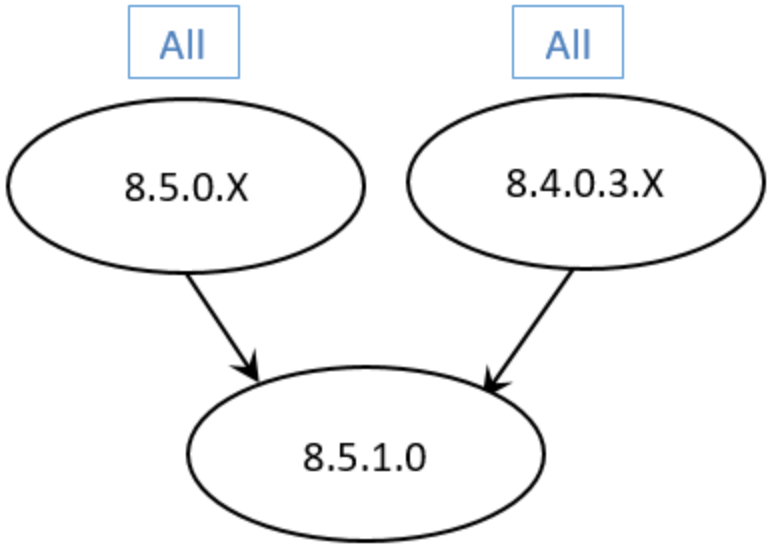
X = PI End Cycle
Y = Patches within the PI Cycle.

The figure above refers to the available releases and all of its maintenance releases.

Figure 1 – DSR Upgrade Paths

2.5.2 SDS UPGRADE PATH

The supported upgrade paths for SDS 8.5.1 are:



X = PI End Cycle
Y = Patches within the PI Cycle.

The figure above refers to the available releases and all of its maintenance releases.

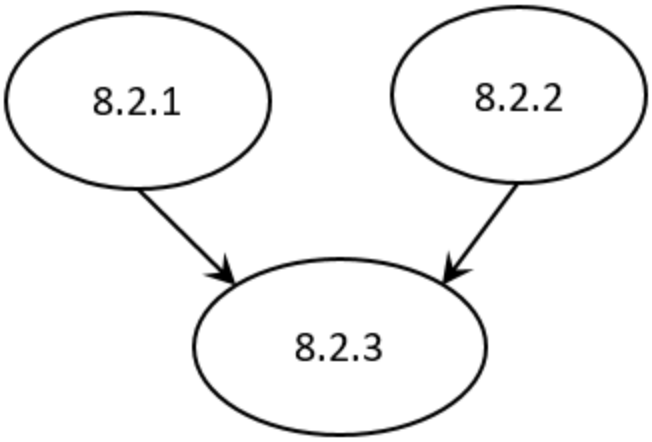
Figure 2 – SDS Upgrade Paths

	!!Caution!!	SDS Upgrade If the customer deployment has only FABR features enabled, it is recommended to upgrade the SDS nodes first before upgrading the DSR nodes. If the customer deployment has both the FABR and PCA features enabled, then upgrade the DSR nodes first before upgrading the SDS nodes.

.

2.5.3 *IDIH UPGRADE PATH*

The supported upgrade paths for IDIH 8.2.3 are:



All in the figure above refers to the available releases and all of its maintenance releases

Figure 3 – IDIH Upgrade Paths

IDIH upgrade can be scheduled prior to or following the DSR upgrade. If IDIH upgrade is deferred until after DSR upgrades, then any newly captured elements existing within the upgraded DSR will not be decoded by IDIH until after the IDIH upgrade.

2.5.4 *UPGRADE EXECUTION*

With DSR 8.5, there are multiple methods available for upgrading a site. The newest and most efficient way to upgrade a site is the Automated Site Upgrade feature. As the name implies, this feature will upgrade an entire site (SOAMs and all C-level servers) with a minimum of user interaction. Once the upgrade is initiated, the upgrade will automatically prepare the server(s), perform the upgrade, and then sequence to the next server or group of servers until all servers in the site are upgraded. The server upgrades are sequenced in a manner that preserves data integrity and processing capacity.

Automated Site Upgrade can be used to upgrade the DSR/SDS servers. However, Auto Site Upgrade cannot be used to upgrade PMAC, TVOE, or IDIH servers at a site.

Additionally, there are separate procedures described in the upgrade procedures to support either a manual or automated approach to upgrading any particular server group. When planning upgrades the "Site Upgrade Methodology Selection" section of the upgrade procedure should be carefully reviewed. ***The use of the automated methods (Auto Site or Auto Server Group) for DA-MP server groups should be carefully considered regarding potential negative traffic impacts.*** The ASU enhancement in DSR 8.5 resolves this issue. The user is now instructed to rearrange/add cycles to create a suitable upgrade plan.

2.5.5 *LIMITATIONS*

When AppEventLog file is full then SOAM/NOAM becomes unstable and shown undefined behavior like:
1. Replication and merging stopped.
2. GUI access stops working.

Also, note that upgrade will fail if utilization of /var/TKLC/rundb partition is more than 70% which may be true in case of larger AppEventLog file size (~5.5 GB in size). To prevent the above listed issues, we need to assign/allocate

/var/TKLC/rundb size and AppEventLog file size in sync i.e. AppEventLog file size (plus some delta for other files like MeasStat) should be always less than 70 % of /var/TKLC/rundb partition size.

2.6 MIGRATION OF DSR DATA

As in prior releases, the existing DSR Data will be preserved during the upgrade.

3 MEAL INSERTS

This section summarizes the changes to Alarms, Measurements, KPIs and MIBs. In the following inserts pertain to DSR Release 8.5.1 MEAL snapshot and deltas to earlier releases,

- The DSR/SDS 8.1.2.0.0 GA Release is DSR/SDS 8.1.2.0.0-81.25.0
- The DSR/SDS 8.2.1.0.0 GA Release is DSR/SDS 8.2.1.0.0_82.17.0
- The DSR/SDS 8.3.0.0.0 GA Release is DSR/SDS 8.3.0.0.0-83.15.0
- The DSR/SDS 8.4.0.0.0 GA Release is DSR/SDS 8.4.0.0.0-84.15.0
- The DSR/SDS 8.4.0.3.0 GA Release is DSR/SDS 8.4.0.3.0-85.17.0
- The DSR/SDS 8.4.0.5.0 GA Release is DSR/SDS 8.4.0.5.0-88.9.1
- The DSR/SDS 8.5.0.0.0 GA Release is DSR/SDS 8.5.0.0.0-90.11.0
- The DSR/SDS 8.5.0.2.0 GA Release is DSR/SDS 8.5.0.2.0_92.7.0
- The DSR/SDS 8.5.1 GA Release is DSR/SDS 8.5.1.0.0-94.10.0

3.1 DSR/SDS 8.5.1 MEAL SNAPSHOT

MEAL_dsr-8.5.1.0.0-94.10.0.xlsx

MEAL_sds-8.5.1.0.0-94.10.0.xlsx

3.1.1 *MEAL DELTA BETWEEN 8.1.0.0.0 AND 8.5.1*

MEAL_dsr-8.1.0.0.0-81.20.0-dsr-8.5.1.0.0-94

MEAL_sds-8.1.0.0.0-81.20.0-sds-8.5.1.0.0-94

3.1.2 *MEAL DELTA BETWEEN 8.2.1.0.0 AND 8.5.1*

MEAL_dsr-8.2.1.0.0_82.19.0-dsr-8.5.1.0.0-94

MEAL_sds-8.1.0.0.0-81.20.0-sds-8.5.1.0.0-94

3.1.3 *MEAL DELTA BETWEEN 8.3.0.0.0 AND 8.5.1*

MEAL_dsr-8.3.0.0.0-83.15.0-dsr-8.5.1.0.0-94

MEAL_sds-8.3.0.0.0-83.15.0-sds-8.5.1.0.0-94

3.1.4 *MEAL DELTA BETWEEN 8.4.0.0.0 AND 8.5.1*

MEAL_dsr-8.4.0.0.0-84.15.0-dsr-8.5.1.0.0-94

MEAL_sds-8.4.0.0.0-84.15.0-sds-8.5.1.0.0-94

3.1.5 *MEAL DELTA BETWEEN 8.4.0.3.0 AND 8.5.1*


MEAL_dsr-8.4.0.3.0-8
5.17.0-dsr-8.5.1.0.0-9


MEAL_sds-8.4.0.3.0-8
5.17.0-sds-8.5.1.0.0-9

3.1.6 *MEAL DELTA BETWEEN 8.4.0.5.0 AND 8.5.1*


MEAL_dsr-8.4.0.5.0-8
8.9.1-dsr-8.5.1.0.0-94.


MEAL_sds-8.4.0.5.0-8
8.9.1-sds-8.5.1.0.0-94.

3.1.7 *MEAL DELTA BETWEEN 8.5.0.0.0 AND 8.5.1*


MEAL_dsr-8.5.0.0.0-9
0.11.0-dsr-8.5.1.0.0-9


MEAL_sds-8.5.0.0.0-9
0.11.0-sds-8.5.1.0.0-9

3.1.8 *MEAL DELTA BETWEEN 8.5.0.1.0 AND 8.5.1*


MEAL_dsr-8.5.0.1.0-9
1.17.0-dsr-8.5.1.0.0-9


MEAL_sds-8.5.0.1.0-9
1.17.0-sds-8.5.1.0.0-9

3.1.9 *MEAL DELTA BETWEEN 8.5.0.2.0 AND 8.5.1*


MEAL_dsr-8.5.0.2.0-9
2.3.0-dsr-8.5.1.0.0-94.


MEAL_sds-8.5.0.2.0-9
2.3.0-sds-8.5.1.0.0-94.

4 REFERENCE LIST

The DSR 8.5 Release Notice and Customer Documentation can be found at the following OTN link.
http://docs.oracle.com/en/industries/communications/diameter-signaling-router/index.html

DSR IP Flow Document: CGBU_019284 (ORACLE Internal Document)

Platform IP Flow Document: CGBU_PM_1112 (ORACLE Internal Document)