



# Diameter Signaling Controller (DSC) Training Programs

Catalog of Course Descriptions



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INTRODUCTION.....3



## Introduction

Ericsson has developed a comprehensive Training Programs service to satisfy the competence needs of our customers, from exploring new business opportunities to expertise required for operating a network. The Training Programs service is delineated into packages that have been developed to offer clearly defined, yet flexible training to target system and technology areas. Each package is divided into flows, to target specific functional areas within your organization for optimal benefits.

Service delivery is supported using various delivery methods including:

Delivery Method

Instructor Led Training (ILT)

Web-based Learning (WBL)



# DSC 1 Operation and Configuration

LZU1082569 R1A

## Description:

Do you need the skills and knowledge to operate and configure the DSC which is used for Policy Control, Subscriber Registration, Charging & Roaming procedure in EPC and IMS ?

Ericsson Diameter Signaling Controller (DSC) is the key network component to secure and centralize Diameter communication. DSC is a product that supports standard IETF/ 3GPP Diameter functionalities.

This course is recommended for those who want to build competence in configuring and operating DSC 1. Hands-on exercises allow participants to work with the DSC CLI focusing on operation and maintenance related commands and tools. This course explains the Diameter signaling and DSC product positioning in the network.

## Learning objectives:

On completion of this course the participants will be able to:

- 1 Describe the main concepts of Diameter signaling
  - 1.1 Describe the evolution of Diameter signaling
  - 1.2 Explain the challenges with Diameter signaling network and benefits of deploying DSC
  - 1.3 Review the basic Diameter terminologies
  - 1.4 Identify the DSC modes of operation
  - 1.5 Describe Diameter Base Protocol, Messages and AVPs
  - 1.6 Understand Diameter Message Routing
- 2 Describe Diameter Interfaces in Packet Core/ EPC
  - 2.1 Describe S6a Interface, Command Codes and AVPs
  - 2.2 Describe S6a signaling procedures using captured traces
  - 2.3 Describe Gx Interface, Command Codes and AVPs
  - 2.4 Describe Gx signaling procedures using captured traces
  - 2.5 Describe Gy Interface, Command Codes and AVPs
  - 2.6 Describe Gy signaling procedures using captured traces
  - 2.7 Describe Rx Interface, Command Codes and AVPs
  - 2.8 Describe Rx signaling procedures using captured traces
- 3 Describe Diameter Interfaces in IMS
  - 3.1 Describe Cx Interface, Command Codes and AVPs
  - 3.2 Describe Cx signaling procedures using captured traces
  - 3.3 Describe Sh Interface, Command Codes and AVPs
  - 3.4 Describe Sh signaling procedures using captured traces



- 4 Explain the DSC architecture and features
  - 4.1 Explain BSP 8100 hardware platform for DSC
  - 4.2 Outline DSC node characteristics
  - 4.3 Describe DSC architecture
  - 4.4 Explain DSC application and message processing
  - 4.5 Understand DSC connectivity and IP routing
  - 4.6 Explore DSC deployment scenarios
  - 4.7 Describe DSC features and functionalities
- 5 Describe the DSC configuration
  - 5.1 Explain DSC O&M access and ECLI functions
  - 5.2 Understand IP address, Transport Endpoint and SCTP configuration
  - 5.3 Describe Capability Profile and Node configuration
  - 5.4 Explain configuration of Adjacent Realm, Peer and Peer Group
  - 5.5 Describe Routing and Roaming Partner configuration
  - 5.6 Understand AATM configuration
  - 5.7 Describe configuration for DMI operations
  - 5.8 Explain configuration of Session Binding
  - 5.9 Understand SLF configuration
  - 5.10 Describe configuration of Diameter Overload Indication Conveyance
  - 5.11 Describe Diameter Routing Message Priority configuration
  - 5.12 Describe HLR-R configuration
  - 5.13 Describe Unified Signaling Firewall configuration
- 6 Explain the DSC Operation and Maintenance procedures
  - 6.1 Review BSP O&M functions for DSC
  - 6.2 Understand user management
  - 6.3 Explain health check procedure
  - 6.4 Describe fault management
  - 6.5 Explain performance management
  - 6.6 Understand file management
  - 6.7 Explain event reporting
  - 6.8 Describe subscriber tracing feature
  - 6.9 Describe Dashboard GUI functionality
  - 6.10 Explain Ericsson Netconf Browser
  - 6.11 Introduce Automated Acceptance Test support
  - 6.12 Review OSS-RC for DSC
  - 6.13 Introduce Ericsson Network Manager
  - 6.14 Explain the Backup and Restore procedure

Target audience:

This course is suitable for anyone who is required be able to configure/operate/maintain DSC1.



#### Prerequisites:

Successful completion of the following courses:

EPC System Survey, LZU1087977

IMS Overview, LZU1082585

#### Duration and class size:

The length of the course is 4 days and the maximum number of participants is 8.

#### Learning situation:

This course is based on theoretical and practical instructor-led lessons given in a technical environment using equipment and tools.



## DSC 15 to 16 Delta - live virtual

LZU1082300 R1A

### Description:

Do you need to learn the new features and benefits with DSC 16? Are you already familiar with DSC 15? Then this course is for you, since it will clarify the main changes in DSC 16 compared with DSC 15.

### Learning objectives:

On completion of this course the participants will be able to:

- 1 Introduce Ericsson Diameter Signaling Controller (DSC)
  - 1.1 Introduction of the DSC 16
  - 1.2 Explain DSC 16 hardware and software structure
  - 1.3 Identify the general impacts of DSC 16 release
  - 1.4 Explain different use cases of DSC 16
- 2 Explain the new and enhanced functionalities of DSC 16
  - 2.1 Explain Subscriber Tracing
  - 2.2 Enhancement in Message Screening
- 3 Summarize other improvements and enhancements
  - 3.1 Explain the OAM enhancements in case of DSC16

### Target audience:

This course is suitable for anyone who is required to be familiar with new features in DSC 16.

### Prerequisites:

Successful completion of the following courses:

DSC 15 Operation, Configuration and Maintenance - LZU1082251

The participants having the prior experience of handling Ericsson DSC is an added advantage.



Duration and class size:

The length of the course is 3 hours and the maximum number of participants per session is 16

Learning situation:

This course is based on theoretical instructor-led lessons given in a classroom environment.





# DSC 16 Operation and Configuration

LZU1082314 R1A

## Description:

Diameter signaling is used for Policy Control, Subscriber Registration, Charging & Roaming Procedures in EPC and IMS. Ericsson Diameter Signaling Controller (DSC) is the key network component to secure and centralize Diameter communication. DSC is a product that supports standard IETF/3GPP Diameter functionalities.

This course explains the Diameter Signaling and DSC product positioning in the Network. Participants learn about the DSC Configuration and its Operation and Maintenance in their network. This course is based on the DSC16B release.

## Learning objectives:

On completion of this course the participants will be able to:

- 1 Describe the main concepts of the Diameter Signaling
  - 1.1 Describe Evolution of Diameter Signaling
  - 1.2 Discuss the challenges in diameter signaling network and benefits of deploying DSC
  - 1.3 Review the basic Diameter terminologies
  - 1.4 Identify the DSC modes of operation
  - 1.5 Describe Diameter Base Protocol & AVPs
- 2 Describe Diameter Interfaces in Packet Core/EPC
  - 2.1 Describe S6a Interface, Command Code & AVP Description
  - 2.2 Describe S6a Signaling between MME and HSS using sample Traces
  - 2.3 Describe Gx Interface, Command Code & AVP Description
  - 2.4 Describe Gx Signaling between EPG-SAPC
  - 2.5 Describe Gy Interface, Command Code & AVP Description
  - 2.6 Describe Gy Signaling & EPG-OCS
  - 2.7 Describe Rx Interface, Command Code & AVP Description
- 3 Describe Diameter Interfaces in IMS
  - 3.1 Describe Cx Interface, Command Code & AVP Description
  - 3.2 Describe Cx Signaling between CSCF-HSS
  - 3.3 Describe Sh Interface, Command Code & AVP Description
  - 3.4 Describe Sh Signaling between IMSAS-HSS
- 4 Explain the DSC architecture and features
  - 4.1 Discuss DSC Hardware Platform & DSC Magazine layout
  - 4.2 Explain the DSC Board Details
  - 4.3 Discuss the DSC Software Architecture and building blocks



- 4.4 Explain the DSC Connectivity and IP Routing
- 4.5 Discuss DSC Product Positioning
- 4.6 Review the DSC features and functionalities
- 5 Discuss the DSC configuration
  - 5.1 Discuss DSC System Configuration
  - 5.2 Explain IP Transport Interface and Routing Configuration
  - 5.3 Describe SCTP Configuration
  - 5.4 Explain Transport Endpoint IP Configuration
  - 5.5 Discuss Capability Profile & Node Configuration
  - 5.6 Explain Remote Peer & Peer Group Configuration
  - 5.7 Configure Adjacent Realms
  - 5.8 Explain Local Routing & Roaming Routing Configuration
  - 5.9 Describe DMI Configuration including Topology Hiding & Screening Mask
  - 5.10 Describe Redirect Client, Application Aware Traffic Management and Diameter Message Mirroring
  - 5.11 Explain SLF Configuration
- 6 Review the DSC Operations
  - 6.1 Introduce DSC User Management
  - 6.2 Explain the Health Check Procedure
  - 6.3 Discuss the DSC Performance Management
  - 6.4 Perform File Management
  - 6.5 Explain Event Reporting
  - 6.6 Describer Subscriber Tracing feature
  - 6.7 Explain the Backup & Restore procedure
- 7 Explain the DSC Maintenance procedures
  - 7.1 Describe the DMX System Functions
  - 7.2 Explain Hardware Management
  - 7.3 Discuss the Fault Management
  - 7.4 Elaborate Alarm & Notification Handling
  - 7.5 Explain the Ericsson Netconf Browser for remote configuration management
  - 7.6 Explain Ericsson Dashboard GUI functionality
  - 7.7 Discuss the OSS-RC for DSC

Target audience:

This course is suitable for anyone who is required be able to configure/operate/maintain DSC 16.



#### Prerequisites:

Successful completion of the following courses:

EPC System Survey, LZU1087977

IMS Overview, LZU1088283

#### Duration and class size:

The length of the course is 4 days and the maximum number of participants is 8.

#### Learning situation:

This course is based on theoretical and practical instructor-led lessons given in a technical environment using equipment and tools.



## DSC 16 to 17 Delta - live virtual

LZU1082429 R1A

### Description:

This is an ideal course for those who wish to update their knowledge on new and enhanced functionalities introduced in DSC17 release. This course focuses on the enhancements introduced from DSC 16 to 17 release.

### Learning objectives:

On completion of this course the participants will be able to:

- 1 Introduce Ericsson Diameter Signaling Controller (DSC)
  - 1.1 Explain DSC 17 hardware and software structure
  - 1.2 Identify the general impacts of DSC 17
  - 1.3 List the different use cases of DSC 17
- 2 Explain the new and enhanced functionalities of DSC 17
  - 2.1 Review the highlighted features of DSC 17
  - 2.2 Discuss the new identity check for roamers feature
  - 2.3 Introduce the advanced topology hiding functions
  - 2.4 Describe the advanced security diagnosis functionality in DSC 17
  - 2.5 Explain the enhanced Server Look-up function
- 3 Describe the OAM enhancements in DSC 17
  - 3.1 Discuss the customizable dashboard GUI feature

### Target audience:

This course is suitable for anyone who is required to be familiar with new features in DSC 17.

### Prerequisites:

Successful completion of the following courses:

vDSC 16 Operation and Configuration, LZU1082316

The participants having the prior experience of handling Ericsson DSC is an added advantage.



Duration and class size:

The length of the course is 3 hours and the maximum number of participants per session is 16.

Learning situation:

This course is based on theoretical instructor-led lessons given in a classroom environment.



# DSC 17 Operation and Configuration

LZU1082420 R1A

## Description:

Diameter signaling is used for Policy Control, Subscriber Registration, Charging & Roaming Procedures in EPC and IMS. Ericsson Diameter Signaling Controller (DSC) is the key network component to secure and centralize Diameter communication. DSC is a product that supports standard IETF/3GPP Diameter functionalities.

This course explains the Diameter Signaling and DSC product positioning in the Network. Participants learn about the DSC Configuration and its Operation and Maintenance in their network. This course is based on the DSC17 release.

## Learning objectives:

On completion of this course the participants will be able to:

- 1 Describe the main concepts of the Diameter Signaling
  - 1.1 Describe Evolution of Diameter Signaling
  - 1.2 Discuss the challenges in diameter signaling network and benefits of deploying DSC
  - 1.3 Review the basic Diameter terminologies
  - 1.4 Identify the DSC modes of operation
  - 1.5 Describe Diameter Base Protocol & AVPs
- 2 Describe Diameter Interfaces in Packet Core/EPC
  - 2.1 Describe S6a Interface, Command Code & AVP Description
  - 2.2 Describe S6a Signaling between MME and HSS using sample Traces
  - 2.3 Describe Gx Interface, Command Code & AVP Description
  - 2.4 Describe Gx Signaling between EPG-SAPC
  - 2.5 Describe Gy Interface, Command Code & AVP Description
  - 2.6 Describe Gy Signaling & EPG-OCS
  - 2.7 Describe Rx Interface, Command Code & AVP Description
- 3 Describe Diameter Interfaces in IMS
  - 3.1 Describe Cx Interface, Command Code & AVP Description
  - 3.2 Describe Cx Signaling between CSCF-HSS
  - 3.3 Describe Sh Interface, Command Code & AVP Description
  - 3.4 Describe Sh Signaling between IMSAS-HSS
- 4 Explain the DSC architecture and features
  - 4.1 Discuss DSC Hardware Platform & DSC Magazine layout
  - 4.2 Explain the DSC Board Details
  - 4.3 Discuss the DSC Software Architecture and building blocks
  - 4.4 Explain the DSC Connectivity and IP Routing



- 4.5 Discuss DSC Product Positioning
- 4.6 Review the DSC features and functionalities
- 5 Discuss the DSC configuration
- 5.1 Discuss DSC System Configuration
- 5.2 Explain IP Transport Interface and Routing Configuration
- 5.3 Describe SCTP Configuration
- 5.4 Explain Transport Endpoint IP Configuration
- 5.5 Discuss Capability Profile & Node Configuration
- 5.6 Explain Remote Peer & Peer Group Configuration
- 5.7 Configure Adjacent Realms
- 5.8 Explain Local Routing & Roaming Routing Configuration
- 5.9 Describe DMI Configuration including Topology Hiding & Screening Mask
- 5.10 Describe Redirect Client, Application Aware Traffic Management and Diameter Message Mirroring
- 5.11 Explain SLF Configuration, also the interaction with an external ldap database lookups
- 5.12 Explain Advanced security diagnosis
- 6 Review the DSC Operations
- 6.1 Introduce DSC User Management
- 6.2 Explain the Health Check Procedure
- 6.3 Discuss the DSC Performance Management
- 6.4 Perform File Management
- 6.5 Explain Event Reporting
- 6.6 Describer Subscriber Tracing feature
- 6.7 Explain the Backup & Restore procedure
- 7 Explain the DSC Maintenance procedures
- 7.1 Describe the DMX System Functions
- 7.2 Explain Hardware Management
- 7.3 Discuss the Fault Management
- 7.4 Elaborate Alarm & Notification Handling
- 7.5 Explain the Ericsson Netconf Browser for remote configuration management
- 7.6 Explain Ericsson Dashboard GUI functionality
- 7.7 Explain customizable dashboard
- 7.8 Discuss the OSS-RC for DSC

Target audience:

This course is suitable for anyone who is required be able to configure/operate/maintain DSC 17.



#### Prerequisites:

Successful completion of the following courses:

EPC System Survey, LZU1087977

IMS Overview, LZU1082426

#### Duration and class size:

The length of the course is 4 days and the maximum number of participants is 8.

#### Learning situation:

This course is based on theoretical and practical instructor-led lessons given in a technical environment using equipment and tools.





## DSC 17 to DSC 1 Delta - live virtual

LZU1082570 R1A

### Description:

This is an ideal course for those who wish to update their knowledge on new and enhanced functionalities introduced in DSC 1 release. This course focuses on the enhancements introduced from DSC 17 to DSC 1 release.

### Learning objectives:

On completion of this course the participants will be able to:

- 1 Introduce Ericsson Diameter Signaling Controller
  - 1.1 Review Diameter signaling network
  - 1.2 Explain benefits of deploying DSC
  - 1.3 Identify the DSC modes of operation
- 2 Understand DSC Architecture and Application
  - 2.1 Identify DSC deployment options
  - 2.2 Explain the concept of Cloud and Virtualization
  - 2.3 Describe the benefits of Virtualization
  - 2.4 Explain DSC/ vDSC 1 Architecture
  - 2.5 Review vDSC 1 Solution Variants
  - 2.6 Describe DSC Application
  - 2.7 Review DSC/ vDSC 1 Use Cases
- 3 Describe New and Enhanced features of DSC/ vDSC 1
  - 3.1 Understand vDSC 1 improvements
  - 3.2 Explain new features of DSC/ vDSC 1
  - 3.3 Describe the Server Lookup Function enhancements
  - 3.4 Explain Distributed Data Base improvements
  - 3.5 Describe Unified Signaling Firewall enhancements
  - 3.6 Explain the OAM enhancements in DSC/ vDSC 1

### Target audience:

This course is suitable for anyone who is required to be familiar with new features introduced in DSC 1.



#### Prerequisites:

Successful completion of the following courses:

LZU1082452 vDSC 17 Operation and Configuration

The participants having the prior experience of handling Ericsson DSC is an added advantage.

#### Duration and class size:

The length of the course is 3 hours and the maximum number of participants per session is 16.

#### Learning situation:

This course is based on theoretical instructor-led lessons given in a classroom environment.



# vDSC 1 Operation and Configuration

LZU1082574 R1A

## Description:

Do you need the skills and knowledge to operate and configure the vDSC which is used for Policy Control, Subscriber Registration, Charging & Roaming procedure in EPC and IMS ? Ericsson virtual Diameter Signaling Controller (vDSC) is the key network component to secure and centralize Diameter communication. DSC is a product that supports standard IETF/ 3GPP Diameter functionalities.

This course is recommended for those who want to build competence in configuring and operating Virtual DSC 1. Hands-on exercises allow participants to work with the vDSC CLI focusing on operation and maintenance related commands and tools. This course explains the Diameter signaling and vDSC product positioning in the network.

## Learning objectives:

On completion of this course the participants will be able to:

- 1 Describe the main concepts of Diameter signaling
  - 1.1 Describe the evolution of Diameter signaling
  - 1.2 Explain the challenges with Diameter signaling network and benefits of deploying DSC
  - 1.3 Review the basic Diameter terminologies
  - 1.4 Identify the DSC modes of operation
  - 1.5 Describe Diameter Base Protocol, Messages and AVPs
  - 1.6 Understand Diameter Message Routing
- 2 Describe Diameter Interfaces in Packet Core/ EPC
  - 2.1 Describe S6a Interface, Command Codes and AVPs
  - 2.2 Describe S6a signaling procedures using captured traces
  - 2.3 Describe Gx Interface, Command Codes and AVPs
  - 2.4 Describe Gx signaling procedures using captured traces
  - 2.5 Describe Gy Interface, Command Codes and AVPs
  - 2.6 Describe Gy signaling procedures using captured traces
  - 2.7 Describe Rx Interface, Command Codes and AVPs
  - 2.8 Describe Rx signaling procedures using captured traces
- 3 Describe Diameter Interfaces in IMS
  - 3.1 Describe Cx Interface, Command Codes and AVPs
  - 3.2 Describe Cx signaling procedures using captured traces
  - 3.3 Describe Sh Interface, Command Codes and AVPs
  - 3.4 Describe Sh signaling procedures using captured traces
- 4 Explain the Virtual DSC architecture and features



- 4.1 Explain the concept of Cloud and Virtualization
- 4.2 Describe the vDSC architecture
- 4.3 Review vDSC certified solutions
- 4.4 Understand VNF Lifecycle Management
- 4.5 Outline vDSC characteristics and dimensioning
- 4.6 Understand vDSC Distributed Data Base
- 4.7 Describe the IP integration of vDSC in cloud network infrastructure
- 4.8 Compare vDSC with DSC
- 4.9 Review vDSC reference hardware
- 4.10 Describe vDSC features and functionalities
- 5 Describe the vDSC configuration
  - 5.1 Explain DSC O&M access and ECLI functions
  - 5.2 Understand IP address, Transport Endpoint and SCTP configuration
  - 5.3 Describe Capability Profile and Node configuration
  - 5.4 Explain configuration of Adjacent Realm, Peer and Peer Group
  - 5.5 Describe Routing and Roaming Partner configuration
  - 5.6 Understand AATM configuration
  - 5.7 Describe configuration for DMI operations
  - 5.8 Explain configuration of Session Binding
  - 5.9 Understand SLF configuration
  - 5.10 Describe configuration of Diameter Overload Indication Conveyance
  - 5.11 Describe Diameter Routing Message Priority configuration
  - 5.12 Describe HLR-R configuration
  - 5.13 Describe Unified Signaling Firewall configuration
- 6 Explain the vDSC Operation and Maintenance procedures
  - 6.1 Introduce DSC user management
  - 6.2 Explain the health check procedure
  - 6.3 Describe the fault management
  - 6.4 Explain DSC performance management
  - 6.5 Understand file management
  - 6.6 Explain event reporting
  - 6.7 Describe subscriber tracing feature
  - 6.8 Describe Dashboard GUI functionality
  - 6.9 Explain the Ericsson Netconf Browser
  - 6.10 Explain the Backup and Restore procedure
  - 6.11 Introduce Automated Acceptance Test support
  - 6.12 Review OSS-RC for DSC
  - 6.13 Introduce Ericsson Network Manager



#### Target audience:

This course is suitable for anyone who is required be able to configure/operate/maintain DSC1.

#### Prerequisites:

Successful completion of the following courses:

EPC System Survey, LZU1087977

Virtual EPC Overview - LZU1082264

IMS Overview, LZU1082585

Knowledge of Cloud, Virtualization and VMware is required. Recommended to attend below courses:

Ericsson Cloud System Overview, LZU1089909

Ericsson Cloud Execution Environment (CEE) 15B Overview, LZU1089908

#### Duration and class size:

The length of the course is 4 days and the maximum number of participants is 8.

#### Learning situation:

This course is based on theoretical and practical instructor-led lessons given in a technical environment using equipment and tools.



# vDSC 16 Operation and Configuration

LZU1082316 R1A

## Description:

Diameter signaling is used for Policy Control, Subscriber Registration, Charging & Roaming Procedures in EPC and IMS. Ericsson Diameter Signaling Controller (DSC) is the key network component to secure and centralize Diameter communication.

DSC 16 can be deployed both as a Native node and as a Virtual Network Function in cloud environment. This course is recommended for those who want to build competence in configuring and operating Virtual DSC 16B. This course explains the Diameter Signaling and vDSC product positioning in the Network.

## Learning objectives:

On completion of this course the participants will be able to:

- 1 Describe the main concepts of the Diameter Signaling
  - 1.1 Describe Evolution of Diameter Signaling
  - 1.2 Discuss the challenges in diameter signaling network and benefits of deploying DSC
  - 1.3 Review the basic Diameter terminologies
  - 1.4 Identify the DSC modes of operation
  - 1.5 Describe Diameter Base Protocol & AVPs
- 2 Describe Diameter Interfaces in Packet Core/EPC
  - 2.1 Describe S6a Interface, Command Code & AVP Description
  - 2.2 Describe S6a Signaling between MME and HSS using sample Traces
  - 2.3 Describe Gx Interface, Command Code & AVP Description
  - 2.4 Describe Gx Signaling between EPG-SAPC
  - 2.5 Describe Gy Interface, Command Code & AVP Description
  - 2.6 Describe Gy Signaling & EPG-OCS
  - 2.7 Describe Rx Interface, Command Code & AVP Description
- 3 Describe Diameter Interfaces in IMS
  - 3.1 Describe Cx Interface, Command Code & AVP Description
  - 3.2 Describe Cx Signaling between CSCF-HSS
  - 3.3 Describe Sh Interface, Command Code & AVP Description
  - 3.4 Describe Sh Signaling between IMSAS-HSS
- 4 Explain the Virtual DSC architecture and features
  - 4.1 Explain the concept of cloud and Virtualization
  - 4.2 Discuss the vDSC architecture and its deployment in cloud architecture
  - 4.3 Review the IP integration of vDSC into the cloud network infrastructure



- 4.4 Describe vDSC deployment options
- 4.5 Review the vDSC features and functionalities
- 5 Discuss the vDSC configuration
- 5.1 Discuss DSC System Configuration
- 5.2 Explain IP Transport Interface and Routing Configuration
- 5.3 Describe SCTP Configuration
- 5.4 Explain Transport Endpoint IP Configuration
- 5.5 Discuss Capability Profile & Node Configuration
- 5.6 Explain Remote Peer & Peer Group Configuration
- 5.7 Configure Adjacent Realms
- 5.8 Explain Local Routing & Roaming Routing Configuration
- 5.9 Describe DMI Configuration including Topology Hiding & Screening Mask
- 5.10 Describe Redirect Client, Application Aware Traffic Management and Diameter Message Mirroring
- 5.11 Explain SLF Configuration
- 6 Identify the Operation and Maintenance procedures in vDSC
- 6.1 Introduce DSC User Management
- 6.2 Explain the Health Check Procedure
- 6.3 Discuss the Fault Management
- 6.4 Explain DSC Performance Management
- 6.5 Perform File Management
- 6.6 Explain Event Reporting
- 6.7 Describe Subscriber Tracing feature
- 6.8 Explain the Ericsson Netconf Browser for remote configuration management
- 6.9 Introduce the Ericsson Dashboard GUI functionality
- 6.10 Explain the Backup & Restore procedure

Target audience:

This course is suitable for anyone who is required be able to configure/operate/maintain vDSC 16.



#### Prerequisites:

Successful completion of the following courses:

IMS Overview, LZU1088283

Virtual EPC (vEPC) Overview - LZU1082264

Knowledge of Cloud, Virtualization and VMware is required. Recommended to attend below courses:

Ericsson Cloud Execution Environment (CEE) 15B Overview - LZU1089908

Ericsson Cloud System Overview - LZU1089909

#### Duration and class size:

The length of the course is 4 days and the maximum number of participants is 8.

#### Learning situation:

This course is based on theoretical and practical instructor-led lessons given in a technical environment using equipment and tools.





# vDSC 17 Operation and Configuration

LZU1082452 R1A

## Description:

Diameter signaling is used for Policy Control, Subscriber Registration, Charging & Roaming procedures in EPC and IMS. Ericsson Diameter Signaling Controller (DSC) is the key network component to secure and centralize Diameter communication.

This course is recommended for those who want to build competence in configuring and operating Virtual DSC 17. This course explains the Diameter Signaling and vDSC product positioning in the Network.

## Learning objectives:

On completion of this course the participants will be able to:

- 1 Describe the main concepts of the Diameter Signaling
  - 1.1 Describe Evolution of Diameter Signaling
  - 1.2 Discuss the challenges in diameter signaling network and benefits of deploying DSC
  - 1.3 Review the basic Diameter terminologies
  - 1.4 Identify the DSC modes of operation
  - 1.5 Describe Diameter Base Protocol & AVPs
- 2 Describe Diameter Interfaces in Packet Core/EPC
  - 2.1 Describe S6a Interface, Command Code & AVP Description
  - 2.2 Describe S6a Signaling between MME and HSS using sample Traces
  - 2.3 Describe Gx Interface, Command Code & AVP Description
  - 2.4 Describe Gx Signaling between EPG-SAPC
  - 2.5 Describe Gy Interface, Command Code & AVP Description
  - 2.6 Describe Gy Signaling & EPG-OCS
  - 2.7 Describe Rx Interface, Command Code & AVP Description
- 3 Describe Diameter Interfaces in IMS
  - 3.1 Describe Cx Interface, Command Code & AVP Description
  - 3.2 Describe Cx Signaling between CSCF-HSS
  - 3.3 Describe Sh Interface, Command Code & AVP Description
  - 3.4 Describe Sh Signaling between IMSAS-HSS
- 4 Explain the Virtual DSC architecture and features
  - 4.1 Explain the concept of cloud and Virtualization
  - 4.2 Discuss the vDSC architecture and its deployment in cloud architecture
  - 4.3 Review the IP integration of vDSC into the cloud network infrastructure
  - 4.4 Describe vDSC deployment options
  - 4.5 Review the vDSC features and functionalities



- 5 Discuss the vDSC configuration
- 5.1 Discuss DSC System Configuration
- 5.2 Explain IP Transport Interface and Routing Configuration
- 5.3 Describe SCTP Configuration
- 5.4 Explain Transport Endpoint IP Configuration
- 5.5 Discuss Capability Profile & Node Configuration
- 5.6 Explain Remote Peer & Peer Group Configuration
- 5.7 Configure Adjacent Realms
- 5.8 Explain Local Routing & Roaming Routing Configuration
- 5.9 Describe DMI Configuration including Topology Hiding & Screening Mask
- 5.10 Describe Redirect Client, Application Aware Traffic Management and Diameter Message Mirroring
- 5.11 Explain SLF Configuration, also the interaction with an external LDAP database lookups
- 5.12 Explain Advanced security diagnosis
- 6 Identify the Operation and Maintenance procedures in vDSC
- 6.1 Introduce DSC User Management
- 6.2 Explain the Health Check Procedure
- 6.3 Discuss the Fault Management
- 6.4 Explain DSC Performance Management
- 6.5 Perform File Management
- 6.6 Explain Event Reporting
- 6.7 Describe Subscriber Tracing feature
- 6.8 Explain the Ericsson Netconf Browser for remote configuration management
- 6.9 Introduce the Ericsson Dashboard GUI functionality
- 6.10 Explain the Backup & Restore procedure
- 6.11 Explain customizable dashboard
- 6.12 Discuss the OSS-RC for DSC

Target audience:

This course is suitable for anyone who is required be able to configure/operate/maintain vDSC 17.



#### Prerequisites:

Successful completion of the following courses:

IMS Overview, LZU1082426

Virtual EPC (vEPC) Overview, LZU1082264

Knowledge of Cloud, Virtualization and VMware is required. Recommended to attend below courses:

Ericsson Cloud System Overview, LZU1089909

Foundation Series - Ericsson Cloud Execution Environment (CEE), LZU1082364

#### Duration and class size:

The length of the course is 4 days and the maximum number of participants is 8.

#### Learning situation:

This course is based on theoretical and practical instructor-led lessons given in a technical environment using equipment and tools.