



# Mobile Positioning System (MPS) Training Programs

Catalog of Course Descriptions



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## 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)





# Ericsson Mobile Positioning System (MPS) Overview

LZU1082367 R2A

## Description:

Will you use the Ericsson Mobile Positioning system to offer a wide variety of Location Based Services in order to increase ARPU and secure end-user satisfaction? If so, you need a clear understanding of Ericsson Mobile Positioning system, its features, benefits and associated concepts.

After completing this course, the participants will be able to describe Ericsson Mobile Positioning System (MPS) in terms of its role and position in providing Location Based Services (LBS); basic and enhanced features, and key benefits; mobile positioning methods; software and hardware architecture; functions of the Ericsson Mobile Positioning system nodes Gateway Mobile Positioning Centre (GMPC) and Serving Mobile Positioning Centre (SMPC).

This course is suitable for anyone requiring a good overview of the Ericsson Mobile Positioning system product and its role in providing flexible and attractive Location Based Services as part of Ericsson's LBS Solution.

## Learning objectives:

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

- 1 Introduce the Ericsson Mobile Positioning system
  - 1.1 Explain the reasons for implementing Ericsson Mobile Positioning system
  - 1.2 Highlight the operator's benefits
  - 1.3 Identify worldwide operators using Ericsson Mobile Positioning system
  - 1.4 Briefly describe Ericsson's e2e LBS solution
  - 1.5 Explain various application services for Ericsson Mobile Positioning system
- 2 Explain MPS basic concepts and architecture
  - 2.1 Describe the basic concepts of location requests
  - 2.2 List and explain the key nodes of Ericsson Mobile Positioning System in reference to 3GPP standard
  - 2.3 Introduce the evolution of the MPS system
  - 2.4 Discuss the network architecture
  - 2.5 Explain the system architecture and interfaces of the key MPS nodes
  - 2.6 Highlight network feature requirements
- 3 Outline MPS positioning methods
  - 3.1 Describe the various positioning methods available in Ericsson Mobile Positioning system (GSM, WCDMA & LTE)
  - 3.2 Show the supported shape types for all positioning methods on each technology
  - 3.3 Compare the accuracy levels of different positioning methods



- 3.4 Distinguish between the positioning methods in terms of accuracy and response times
- 4 Explain the special features of Ericsson Mobile Positioning system
  - 4.1 Outline and explain optional features of Ericsson Mobile Positioning system
  - 4.2 Highlight the new and enhanced features introduced in the latest MPS release
  - 4.3 Present the software roadmap
- 5 Identify Ericsson Mobile Positioning system hardware
  - 5.1 Outline the hardware requirements of Ericsson Mobile Positioning system
  - 5.2 Describe the different deployment scenarios
- 6 Explore the Ericsson Mobile Positioning system value packages and licenses
  - 6.1 Explain the licensing concept
  - 6.2 Describe the value packages
- 7 Discuss traffic flows
  - 7.1 Describe MT-LR traffic flows
  - 7.2 Describe emergency positioning traffic flows

Target audience:

This course is suitable for anyone who is required to be familiar with MPS.

Prerequisites:

Successful completion of the following courses:

There are no mandatory prerequisites for this course but a general knowledge of Telecommunications and Mobile Network Architecture is advantageous.

Duration and class size:

The length of the course is 1 day 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.



# Ericsson Mobile Positioning System (MPS) Operation & Maintenance

LZU1082366 R1A

## Description:

Will you maintain the Ericsson Mobile Positioning System (MPS) in your network? If so, you need a clear understanding of how to maintain and manage a Gateway Mobile Positioning Centre (GMPC) and a Serving Mobile Positioning Centre (SMPC).

After completing this course and exercises, the participants will be able to perform O&M procedures such as configuration, fault analysis and troubleshooting, collect measurements and system maintenance.

## Learning objectives:

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

- 8 Evaluate Ericsson Mobile Positioning System 16 software architecture
  - 8.1 Explain the Flexible Distributed System (FDS)
  - 8.2 List the Framework Service Components (FSC)
  - 8.3 Explain application software (components interaction)
  - 8.4 Explain the 3rd party software packages
- 9 Explore Ericsson Mobile Positioning System GUI tool
  - 9.1 Explain how to manage components
  - 9.2 Examine In Service Performance (ISP) measurements
  - 9.3 Examine licenses
  - 9.4 Identify alarms (understand GMPC/SMPC related alarms, access alarm information, locate alarm documentation)
  - 9.5 Analyze performance management (statistics)
  - 9.6 Evaluate software history
  - 9.7 Discuss the FlexConn server
- 10 Examine common Ericsson Mobile Positioning System node configuration
  - 10.1 Explore directory structure overview
  - 10.2 Explain how to manage cell data
  - 10.3 Give an overview of the signaling interface
  - 10.4 Explain how to configure the signaling interface
  - 10.5 Explain commands on how to use the signaling interface
  - 10.6 List SS7 common MAP error codes
  - 10.7 List Diameter common error codes
  - 10.8 Explain how to manage an A-GPS/A-GLONASS feed



- 11 Demonstrate the GMLC/SLP configuration
  - 11.1 Analyze positioning protocols
  - 11.2 Explain how to configure an LCS client
  - 11.3 Explain how to configure a white/black list
  - 11.4 Demonstrate how to configure the Network Data (MSCs, HLRs, etc.) list
  - 11.5 Provide an overview of SUPL
  - 11.6 Explain how to configure SUPL
  - 11.7 Examine SUPL call flow
  - 11.8 Examine SUPL security
  - 11.9 Examine the fall back scenarios
  - 11.10 Examine the positioning record files works for SUPL
  - 11.11 Examine how the billing works
  - 11.12 Examine how to configure IMS emergency positioning
- 12 Demonstrate the SMLC/SAS/E-SMLC configuration
  - 12.1 Evaluate LTE dual technology
  - 12.2 Examine MME pool management
  - 12.3 Examine LPPa management
  - 12.4 Examine PLMN management
  - 12.5 Examine PDE management
  - 12.6 Examine positioning method control enhancement
  - 12.7 Explain the benefits of combined SMPC/SAS/E-SMLC
  - 12.8 Configure E-SMLC to CP LTE
  - 12.9 Evaluate deploying MPS in LTE
- 13 Perform troubleshooting & maintenance tasks
  - 13.1 Evaluate troubleshooting approach
  - 13.2 Identify how to use different logs
  - 13.3 Identify SS7 troubleshooting
  - 13.4 Demonstrate use of general system maintenance procedures (including backup) to maintain the GMPC/SMPC system
- 14 Annex
  - 14.1 Add nodes using the SS7 GUI
  - 14.2 Add a new BSC to an SMPC using the SS7 GUI
  - 14.3 Add a new RNC to SAS(SMPC) using the SS7 GUI
  - 14.4 Add a new PDE to an SMPC using the SS7 GUI & the SMPC GUI tool.
  - 14.5 Adding HSS and MME using Diameter manager GUI.





Target audience:

This course is suitable for anyone who is required be able to operate and maintain MPS.

Prerequisites:

Successful completion of the following courses:

Ericsson Mobile Positioning System (MPS) Overview LZU1082367

UNIX Basics LZU1085134

And

The participants should be familiar with basic telecommunication, GSM, WCDMA and LTE concepts.

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.