



Evolved IP Network 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:

Icon	Delivery Method
	Instructor Led Training (ILT)
	Virtual Classroom Training (VCT)
	eLearning (WBL)
	Workshop (WS)
	Short Article (SA)
	Structured Knowledge Transfer (SKT)
	mLearning
	Job duty analysis (JDA)
	Competence GAP Analysis (CGA)

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Evolved IP Network Solution Overview



LZU 1089735 R1A

Description

The Evolved IP Network solution (EIN) provides a dependable, cost-effective and fully featured IP transport foundation for multi-service broadband offerings. With the aid of this course, the participants will understand the recommended network design for converged networks and for dedicated mobile networks.

Learning objectives

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

At an overview level understand and describe:

- 1 Multiservice Network Design Converged transport design
- 2 Dedicated Mobile Transport Network Design
- 3 Transport Network Services
- 4 Transport Network Technologies
- 5 Transport Network Operation Maintenance
- 6 Core Application Network Design
- 7 Access Application Network Design

Target audience

The target audience for this course is:

Fundamentals

Prerequisites

Successful completion of the following courses:

Ethernet, MPLS, and IP Technology Fundamentals courses



ERICSSON

**Duration and class size**

The length of the course is 2 days and the maximum number of participants is 16.

Learning situation

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

Time schedule

The time required always depends on the knowledge of the attending participants and the hours stated below can be used as estimate.

Day	Topics in the course	Estimated Time (hours)
1	Course introduction	0.5
	Solution Overview	0.5
	Converged Transport Network Design Overview	1
	Core Transport Network Design Overview	1
	Dedicated Backhaul Network Design Overview	1
	Transport Services Overview	1
	Transport Network Operation & Maintenance	1
	Core Application Network Design	2,5
	Core Application Network Operation & Maintenance Design	1
	Access Application Network Design	2
	Summing up	0,5

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Evolved IP Network Solution, Dedicated Mobile Backhaul: Ethernet Transport Fundamentals



LZU1089736 R1A

Description

Mobile Operators are exploring ways to add network capacity while reducing their recurring operating expenses. Increasingly, businesses are moving away from backhauling traditional TDM or ATM circuits into packet based backhauling. This provides a scalable and cost effective transport capacity with reliability and quality of service previously only available for TDM telecom circuits.

With the aid of this course, the participants will understand the recommended Ethernet Transport Design for a dedicated Mobile Backhaul in the Ericsson Evolved IP Network solution.

Learning objectives

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

- 1 Describe the properties of a Dedicated Mobile Backhaul designed for Ethernet Transport.
Reference network topology
Transport media
TDM transport
- 2 Understand considerations and know recommendations for network topology design
HRAN reference topology
LRAN reference topology
- 3 Understand considerations and know recommendations for selection of network elements.
End site
Aggregation sites
Switch site
- 4 Understand considerations and know recommendations for selection of transport technology.
Customer bridging
Provider bridging
Port roles
- 5 Understand and describe recommendations for Quality of Service.
Admittance control





- Priority mapping
- Scheduling
- 6 Describe synchronization technologies' main properties and know the main recommendation for synchronization transport.
 - Synchronization over packet
 - Synchronization over Layer 1
- 7 Understand and describe main properties for TDM transport over an All Packet network.
 - Circuit Emulation Service
- 8 Dimension traffic capacity according to the System based model.
- 9 Understand considerations and recommendations for management network design.
 - Connectivity
 - Addressing

Target audience

The target audience for this course is:

Network Planning Engineers, Network Design Engineer

Prerequisites

Successful completion of the following courses:

Microwave and Optical products Fundamentals courses(WBL's),
Ethernet and IP Technology Fundamentals (WBL's),
Ericsson Evolved IP Networks Overview

Duration and class size

The length of the course is 2 days and the maximum number of participants is 16.

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**Learning situation**

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

Time schedule

The time required always depends on the knowledge of the attending participants and the hours stated below can be used as estimate.

Day	Topics in the course	Estimated Time (hours)
1	Introduction to the course and to the solution	1
	Network design	1
	Site design	1
	Traffic design	2
	Quality of service	1
2	Synchronization	1,5
	Circuit emulation service	1,5
	Traffic dimensioning	1
	Management network	1,5
	Summary of the course	0,5

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Evolved IP Network Solution, Dedicated Mobile Backhaul: IP/MPLS Transport Fundamentals



LZU1089737 R1A

Description

Mobile Operators are exploring ways to add network capacity while reducing their recurring operating expenses. Increasingly, businesses are moving away from backhauling traditional TDM or ATM circuits into packet based backhauling. This provides a scalable and cost effective transport capacity with reliability and quality of service previously only available for TDM telecom circuits.

With the aid of this course, the participants will understand the recommended IP over MPLS Transport Design for a dedicated Mobile Backhaul in the Ericsson Evolved IP Network solution.

Learning objectives

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

- 1 Describe the properties of a Dedicated Mobile Backhaul designed for IP/MPLS Transport.
- 2 Understand considerations and know recommendations for network topology design
- 3 Understand considerations and know recommendations for selection of network elements.
- 4 Understand considerations and know recommendations for selection of transport technology.
- 5 Understand and describe recommendations for Quality of Service.
- 6 Describe synchronization technologies' main properties and know the main recommendation for synchronization transport.
- 7 Understand and describe main properties for TDM transport over an IP/MPLS network.
- 8 Understand considerations and recommendations for management network design.





Target audience

The target audience for this course is:

Network Planning Engineers, Network Design Engineer

Prerequisites

Successful completion of the following courses:

Microwave and Optical products Fundamentals courses(WBL's),
Ethernet, MPLS and IP Technology Fundamentals (WBL's),
Ericsson Evolved IP Networks Overview

Duration and class size

The length of the course is 2 days and the maximum number of participants is 16.

Learning situation

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

Time schedule

The time required always depends on the knowledge of the attending participants and the hours stated below can be used as estimate.

Day	Topics in the course	Estimated Time (hours)
1	Introduction to the course and to the solution	1
	Network design	1
	Site design	1,5
	Traffic design	2
	Quality of service	1,5
2	Synchronization	1,5
	Circuit emulation service	1,5
	Management network	1,5
	Summary of the course	0,5

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Evolved IP Network Solution, Dedicated Mobile Backhaul: Microwave Design in Ethernet L-RAN



LZU1089738 R1A

Description

With the aid of this course, the participants will understand how to configure MINI-LINK microwave network elements when implemented into a dedicated Mobile Backhaul network in the Ericsson Evolved IP Network Solution. The course focuses on implementation according to the dedicated Mobile Backhaul network design “Ethernet Transport Design”. In lectures, discussions and theoretical exercises the course covers specification of configuration options for the MINI-LINK microwave network elements. This course is based on the recommendations and the model network presented in the course “Evolved IP Network Solution, Dedicated Mobile Backhaul: Ethernet Transport Fundamentals”. The outcome from the course is a Transmission Engineering Document with configuration data for MINI-LINK microwave nodes.

Learning objectives

On completion of this course the participants will understand planning considerations and from given data be able to specify network element configurations for:

- 1 MINI-LINK TN indoor hardware configuration
- 2 Radio Terminal configuration
- 3 Traffic configuration
 - 3.1 Native PDH traffic
 - 3.2 Circuit Emulation of PDH traffic over Ethernet
 - 3.3 Ethernet traffic
 - 3.4 Hybrid traffic
- 4 Management Network
 - 4.1 Management over Service Channels
 - 4.2 Management over VLAN





Target audience

The target audience for this course is:

Network Planning Engineers, Network Design Engineer, Network Deployment Engineer

Prerequisites

Successful completion of the following courses:

Evolved IP Network Solution, Dedicated Mobile Backhaul: Ethernet Transport Fundamentals.
LZU1089736

Duration and class size

The length of the course is 3 days and the maximum number of participants is 16.

Learning situation

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

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Time schedule

The time required always depends on the knowledge of the attending participants and the hours stated below can be used as estimate.

Day	Topics in the course	Estimated Time (hours)
1	Introduction	0.5
	Ethernet and IP Networking Fundamentals	2
	Hardware configuration.	1,5
	Radio Terminal Design. Lecture and Exercise	3
	Ethernet Traffic Handling Design. Lecture and Exercise	3
2	TDM Traffic Handling Design. Lecture and Exercise	3
	IP v4 Fundamentals	1
	OSPF v2 Fundamentals	1
	Management Network Design. Lecture and Exercise	2,5
	Summing up	0.5

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