



Router 6000 2019

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)



Router 6000 R19 IP Routing Operation and Configuration

LZU1082814 R1A

Description:

IP routing moves information in IP packets across the Network from a source to a destination. It also determines the optimal paths to destinations through algorithms that use metrics or standards of measurement.

This course module covers fundamentals and hands-on configuration for ISIS, OSPF and BGP on Router 6000. It provides multiple configuration tasks as well as verification and troubleshooting commands.

Learning situation:

This is an Instructor-Led Training.

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

Learning objectives:

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

- 1 Describe IP Routing Concept
 - 1.1 Describe the Functions of IP Routing
 - 1.2 Describe IP Routing Types
 - 1.3 Describe Static Routing Concept
 - 1.4 Explain Static Routing and its type
 - 1.5 Describe the Static Routing Application
 - 1.6 Understand the Pros and Cons of Static Routing
- 2 Review Key Concept in Router 6000 IPOS Environment
 - 2.1 Explain the terminologies such as context, interface and bindings architecture
 - 2.2 Describe Command Line Interface and working with interfaces and its type, ports and circuits
 - 2.3 Describe the Binding Concept and its type
- 3 Describe the Basic ISIS Operations
 - 3.1 Understand the Basic Operation of ISIS protocol
 - 3.2 Implement IS-IS Configuration flow
 - 3.3 Verify Route Tables IS Neighbor and Routing State
- 4 Understand Extending IS-IS Network
 - 4.1 Describe Multiple IS-IS Area Network



- 4.2 Implement Level 2 – Backbone
- 4.3 Explain the Route Summarization
- 4.4 Describe and Implement IS-IS Redistribution
- 5 Describe the OSPF Operation Overview
 - 5.1 Understand the OSPF Operation Overview
 - 5.2 Explain the Hierarchical Structure of OSPF
 - 5.3 Describe the Area and its type
 - 5.4 Describe the OSPF Router Function
 - 5.5 Describe the Packet Types
 - 5.6 Describe the LSA Types
- 6 Build and Verify IP Infrastructure on the Router 6000
 - 6.1 Understand the IP Infrastructure in Network
 - 6.2 Configure OSPF Backbone area
 - 6.3 Define OSPF routing instance
 - 6.4 Assign interfaces to OSPF instance with corresponding metric
- 7 Explain the Operation and Configure of OSPF Area
 - 7.1 Implement OSPF Non-Backbone areas
 - 7.2 Configure OSPF Normal Area
 - 7.3 Configure OSPF Stubby Area
 - 7.4 Configure OSPF Totally Stubby Area
 - 7.5 Configure OSPF Not-So-Stubby Area
 - 7.6 Explain the Route Summarization
- 8 Describe the Concept of Route Redistribution
 - 8.1 Understanding the Concept of Route Redistribution
 - 8.2 Redistribution other protocols into OSPF
 - 8.3 Configure and Verify Route Redistribution
 - 8.4 Troubleshoot OSPF related problems
- 9 Describe the Basic BGP Operations
 - 9.1 Describe the Basic BGP Operations
 - 9.2 Understand role of BGP protocol in IP networks
 - 9.3 Explain BGP Protocol Operation
 - 9.4 Explain Routing Exchange Process
 - 9.5 Describe the differences between IGP and BGP protocols
- 10 Define and Interconnect Multiple Autonomous Systems
 - 10.1 Building IGP networks & adding customer networks
 - 10.2 Connecting Autonomous Systems
 - 10.3 Configure and verify status of BGP neighbor
- 11 Describe different ways of IGP prefix injection into BGP
 - 11.1 Explain the Concept of Injecting prefixes into BGP
 - 11.2 Describe BGP network statements



- 11.3 Describe IP prefix list
Explain Redistributing IGP into BGP
Configure and Verify Injecting Prefixes into BGP
Understand the difference between IBGP and EBGP
- 11.4 Describe and solve a challenge related to next hop attribute in IBGP
- 11.5 Understand the difference between signaling and forwarding path in transit AS
- 11.6 Explain the reason for full mesh requirement in IBGP
- 11.7 Configure and Verify iBGP
- 12 Describe BGP Best Path Selection Process
- 12.1 Explain influence of various BGP attributes on path selection process
- 12.2 Change BGP best path via route map configuration
- 12.3 Configure and Verify Route maps

Target audience:

This course is suitable for anyone who is required be able to configure/operate/maintain Service Planning Engineer, Service Design Engineer, Network Design Engineer, Network Deployment Engineer, Service Deployment Engineer, System Technician, Service Engineer

Prerequisites:

Successful completion of the following courses:

- ILT: Router 6000 19 Operation and Maintenance - LZU1082818
- WBL: IP Routing Overview - LZU1088084
- WBL: IP Routing Fundamentals - LZU1088142
- WBL: OSPF Overview - LZU1021880
- WBL: OSPF Fundamentals - LZU1021824
- WBL: ISIS Overview - LZU1021828
- WBL: ISIS Fundamentals - LZU1021838
- WBL: BGP Overview - LZU1088073
- WBL: BGP Fundamentals - LZU1088074

Duration and class size:

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



Router 6000 R19 IPSec VPN Operation and Configuration

LZU1082815 R1A

Description:

The IP communications can be secure by a authenticating and encrypting each IP packet of a communication session through IPSec VPN service.

This course covers hands-on configuration for IPSec VPN on Router 6000. It provides multiple configuration tasks as well as verification and troubleshooting commands.

Learning situation:

This is an Instructor-Led Training.

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

Learning objectives:

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

- 1 Describe IPSec Overview and its Architecture
 - 1.1 Describe the need of IPSec
 - 1.2 Describe ESP and Tunnel mode
 - 1.3 Describe Symmetric and Public/Private Key encryption.
 - 1.4 Describe ISAKMP Security Associations.
 - 1.5 Describe IPSec Security Associations.
- 2 Describe the IPSec Use-case
 - 2.1 Securing the Last Mile
 - 2.2 Automatic Provisioning for IPSec RA Clients
- 3 Implement and Configure IPsec VPN
 - 3.1 Describe the IP Infrastructure for IPSec VPN
 - 3.2 Hands-on: Configure and Verify IP Infrastructure for IPSec VPN
 - 3.3 Explain the IKE Phase 1
 - 3.4 Hands-on: Configure and Verify IKEv2
 - 3.5 Explain the IKE Phase 2
 - 3.6 Hands-on: Configure and Verify IPSec
 - 3.7 Describe IPSec ACLs
 - 3.8 Hands-on: Configure IPSec ACLs
 - 3.9 Describe E2E IPSec Tunnel
 - 3.10 Hands-on: Configure and Verify IPSec Tunnel Endpoint



- 4 Configure one CE context on each router
- 4.1 Configure IP interface and route traffic via IPSEC context to another router
- 4.2 Verify that packets are going through IPSec Tunnel

Target audience:

This course is suitable for anyone who is required be able to configure/operate/maintain Service Planning Engineer, Service Design Engineer, Network Design Engineer, Network Deployment Engineer, Service Deployment Engineer, System Technician, Service Technician, System Engineer, Service Engineer

Prerequisites:

Successful completion of the following courses:

ILT: Router 6000 R19 IP Routing Operation and Configuration - LZU1082814

WBL: IPsec Overview - LZU1420021

WBL: Public Key Infrastructure Overview - LZU1420023

Duration and class size:

The length of the course is 1 day and the maximum number of participants per session is 8.



Router 6000 R19 IPv6 Fundamentals and Routing

LZU1082816 R1A

Description:

This course gives a profound technical presentation of the Internet protocol IPv6. The course is focused on the architecture, static routing and brief introduction of transition mechanisms.

This course module covers hands-on configuration and verification for IPv6 fundamentals, static routing and manually configured tunnel on Ericsson IPOS based systems (Router 6000). It provides multiple configuration tasks as well as verification and troubleshooting.

Learning situation:

This course is based on theoretical and practical instructor-led lessons given in both classroom and in a technical environment using equipment and tools, which are accessed remotely.

Learning objectives:

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

- 1 Describe IPv6 Fundamental Concepts
 - 1.1 Understanding the Limitations of IPv4
 - 1.2 Understanding the Benefits of IPv6
 - 1.3 Describe the IPv6 Header and Protocol Stack
 - 1.4 Describe IPv6 Extension Header
 - 1.5 Describe the IPv6 Core Protocol
 - 1.6 Comparing IPv6 to IPv4
 - 1.7 Identify the New Features
 - 1.8 Describe Main Bodies
- 2 Describe the IPv6 Addressing
 - 2.1 Explain the Address Architecture
 - 2.2 Describe the types of IPv6 Addresses
 - 2.3 Describe Unicast, Multicast and Anycast Addresses
 - 2.4 Describe 64-bit MAC Address Assignment
- 3 Implement and Configure IPv6 on Router 6000
 - 3.1 IPv6 Neighbor Discovery on the Router 6000
 - 3.2 Verify ND for the Topology
 - 3.3 Configure and Verify IPv6 Connectivity for Backbone
 - 3.4 Extend and Verify the IPv6 Connectivity
- 4 Describe Static Routing in IPv6 Network
 - 4.1 Describe Static Routing Concept



- 4.2 Describe the Static Routing Application
- 4.3 Understand the Pros and Cons of Static Routing
- 4.4 Configure and Verify IPv6 Static Routing
- 5 Describe the Concept of IPv6 Transition Mechanism
 - 5.1 Describe the need of Transition Technology
 - 5.2 Understand the Concept of Dual Stack
 - 5.3 Describe the Concept of IPv6 over IPv4 Tunneling
 - 5.4 Describe the Manually Configured Tunnel
 - 5.5 Identify the routing protocol associated with MCT
 - 5.6 Describe the feature of GRE Tunnel

Target audience:

This course is suitable for anyone who is required be able to configure/operate/maintain Network Design Engineer, Network Deployment Engineer, System Engineer, Service Engineer

Prerequisites:

Successful completion of the following courses:

Basic Modules:

WBL: IP Overview, LZU1088083 R1A

WBL: IP Fundamentals, LZU1088094 R1A

WBL: IPv6 Overview, LZU1088112 R1A

WBL: IPv6 Fundamentals, LZU1088113 R1A

Routing Modules:

WBL: IP Routing Overview, LZU1088084 R1A

WBL: IP Routing Fundamentals, LZU1088142 R1A

Router 6000 Platform:

WBL: Router 6000 R19 Overview, LZU1082819 R1A

ILT: Router 6000 R19 IP Routing Operation and Configuration, LZU1082814 R1A

Duration and class size:

The length of the course is 1 day and the maximum number of participants per session is 8.



Router 6000 R19 MPLS and VPN Technology Operation and Configuration

LZU1082817 R1A

Description:

MPLS is a method for efficiently forwarding packets through a network. MPLS VPN allows to implement a wide range of policies.

This course module covers hands-on configuration for MPLS, L3VPN and L2VPN on Router 6000. It provides multiple configuration tasks as well as verification and troubleshooting commands.

Learning situation:

This is an Instructor-Led Training.

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

Learning objectives:

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

- 1 Describe the Fundamental Concept of MPLS
 - 1.1 Describe the features of MPLS
 - 1.2 Explain the Benefits of MPLS
 - 1.3 Describe the Application of MPLS
 - 1.4 Describe the MPLS Terminology
- 2 Explain Building Network Infrastructure
 - 2.1 Implementing Backbone Connections
 - 2.2 Implementing IGP Backbone Configuration
 - 2.3 Configure and verify MPLS and LDP (Outer Label)
- 3 Describe the LDP Operation and Configuration
 - 3.1 Understand Label Distribution – LDP and LSP setup
 - 3.2 Configure and Verify LSP LDP circuits
 - 3.3 Configure and Verify explicit null labels
 - 3.4 Understand and Configure LDP Session Establishment and LDP Parameters
 - 3.5 Monitor and verify LDP operation
 - 3.6 Describe the Overview of IGP/LDP synchronization
 - 3.7 Describe the Overview of LDP Graceful Restart
- 4 Describe MPLS L3 Virtual Private Network Technology



- 4.1 Explain the Concept of Virtual Private Networks
- 4.2 Describe Benefits of VPNs
- 4.3 Describe Drawbacks of VPNs
- 5 Describe the Connectivity to the MPLS Backbone
 - 5.1 Establish Connectivity to the MPLS Backbone
 - 5.2 Configure Connectivity MPLS Backbone
- 6 Describe the BGP/MPLS VPN
 - 6.1 Understand routing information exchange in L3VPN network
 - 6.2 Explain role of BGP and IGP in providers backbone
 - 6.3 Understand IPv4 VPN address family purpose
 - 6.4 Explain role of Route Distinguisher in L3VPN network
 - 6.5 Explain role of Route Target in L3VPN network
 - 6.6 Explain BGP for VPN signaling
 - 6.7 Configure and Verify VPN Context
- 7 Describe the CE Network in MPLS-VPN Environment
 - 7.1 Configure and Verify CE Context
 - 7.2 Verify a site in a multi-site corporate network over L3VPN
 - 7.3 Configure and Verify CE Context
- 8 Describe MPLS L2 Virtual Private Network
 - 8.1 Understand the Static Ethernet Cross Connect (XC) over Pseudo Wire (PW)
 - 8.2 Configure Pseudo Wire profile
 - 8.3 Configure Pseudo Wire
 - 8.4 Configure CE and its interface
 - 8.5 Configure port, circuits and bindings
 - 8.6 Verify Connectivity
 - 8.7 Configure and Verify Static XC over PW
 - 8.8 Verify PW connectivity
 - 8.9 Verify End-to-End CE connectivity
- 9 Describe the Backup of PW
 - 9.1 Explain the Concept and Purpose of Backup of PW
 - 9.2 Configure PW profile with backup peer
 - 9.3 Configure backup PW to second PE
 - 9.4 Verify Backup PW
- 10 Explain RSVP Operations and Configuration
 - 10.1 Understand RSVP
 - 10.2 Configure and verify MPLS label distribution through RSVP
- 11 Describe LFA Operation and Configuration
 - 11.1 Understand LFA
 - 11.2 Configure and Verify LFA



- 12 Describe the Fundamental Concept of Segment Routing Describe the features of Segment Routing
 - 12.1 Explain the Benefits of Segment Routing
 - 12.2 Describe the Segment Routing Terminology
- 13 Explain Building Network Infrastructure for Segment Routing
 - 13.1 Implementing Backbone Connections
 - 13.2 Implementing IS-IS Backbone Configuration
- 14 Configure and verify Segment Routing and MPLS
 - 14.1 Configure and verify L2VPN for Segment Routing
 - 14.2 Configure and verify L3VPN for Segment Routing

Target audience:

This course is suitable for anyone who is required be able to configure/operate/maintain Service Planning Engineer, Service Design Engineer, Network Design Engineer, Network Deployment Engineer, Service Deployment Engineer, System Technician, Service Engineer

Prerequisites:

Successful completion of the following courses:

- ILT: Router 6000 R19 IP Routing Operation and Configuration - LZU1082814
- WBL: MPLS Overview - LZU1088077
- WBL: MPLS Fundamentals - LZU1088078
- WBL: MPLS VPNs Overview - LZU1088079
- WBL: MPLS L2VPN Fundamentals - LZU1088249
- WBL: MPLS L3VPN Fundamentals - LZU1088080

Duration and class size:

The length of the course is 5 days and the maximum number of participants per session is 8.



Router 6000 R19 Operation and Maintenance

LZU1082818 R1A

Description:

Router 6000 combines multiple functions into a single platform that provides Layer 3 (IP) routing and Layer 2 (Ethernet) network aggregation.

This course introduces the main tasks for system operation and maintenance of the Ericsson Router 6000 family. It includes Router 6000 platform and the main available features. It shows how to identify hardware and software components, failures, alarms, software management and troubleshooting. Hands-on exercises allow participants to work with the Router 6000 Command Line Interface, focusing on operations and maintenance related commands and tools.

The course also describes administration and security functions on the Ericsson Router 6000 system. Several features related to system level administration and security are presented both in theory and also using hands-on exercises.

Learning situation:

This is an Instructor-Led Training.

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

Learning objectives:

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

- 1 Discuss the File Storage Organization and Configuration Files
 - 1.1 Explain the active configuration and the transaction database
 - 1.2 Explain the Managing of Configuration Files
 - 1.3 Explain boot configuration and how to reset to default configuration
 - 1.4 Describe the procedure of Auto-integration
- 2 Describe router 6000 hardware components
 - 2.1 Verify router 6000 hardware components status
 - 2.2 Verify hardware diagnostics
 - 2.3 Hands-on: Hardware Diagnostics and Status
- 3 Describe IPOS Software Structure and Processes
 - 3.1 Manipulate processes and use Core Dumps
 - 3.2 Hands-on: Process Management
- 4 Describe the different between local and non-local contexts admin account
 - 4.1 Understanding and configuring connection via context local



- 4.2 Describe and configuring Connection via non-local context
- 4.3 Compare and contrast local and non-local context Connection
- 4.4 Understanding the concept of Services in Router 6000
- 4.5 Enable Application-Level Services in nonlocal Contexts
- 4.6 Verify specific services within context (local and non-local)
- 5 Describe the Privilege Level for an Administrator Account
 - 5.1 Modify the Privilege Level in an Active Session
 - 5.2 Configure a Password to Enable a Privilege Level
 - 5.3 Hands-on: Privilege Level
- 6 Describe the method of authenticating the users
 - 6.1 Describe the TACACS+ Server
 - 6.2 Describe the setup of a TACACS+ Server
 - 6.3 Configure a TACACS+ Server for a context
 - 6.4 Configure TACACS+ Timers and Counters for a Context
 - 6.5 Hands-on: TACACS+ Server
- 7 Describe the concept of Access Control List
 - 7.1 Describe the type of ACL
 - 7.2 Describe the filtering of traffic to a specific host
 - 7.3 Configuring the administrative Access Control Lists
 - 7.4 Hands-on: Access Control Lists
- 8 Perform the administrator and Privilege Level Passwords
 - 8.1 Hands-on: Password Recovery
- 9 Describe the CLI Tools for Troubleshooting
 - 9.1 Describe the GREP and its Options
 - 9.2 Describe the use of CLI Command Aliases as Shortcuts
 - 9.3 Using CLI Command macros to Execute Multiple Command with Single Command
 - 9.4 Hands-on: CLI Troubleshooting Tools
- 10 Use and Impact of Debugging on the System
 - 10.1 Describe the System Debug Structure
 - 10.2 Identify the System Debug Process
 - 10.3 Hands-on: Debug Process
- 11 Describe the different type of logs in Router 6000
 - 11.1 Describe the communication with Syslog Server
 - 11.2 Describe the concept of communication with Syslog Server
 - 11.3 Configure communication to a Syslog server
 - 11.4 Hands-on: System Log and Syslog Server
- 12 Troubleshooting for Traffic Flow through Ports, Circuits and Interfaces
 - 12.1 Explain the traffic flow in Router 6000 System
 - 12.2 Identify the Connectivity Issue and Troubleshooting
 - 12.3 Hands-on: Connectivity and Traffic Troubleshooting



12.4 Overview of Port Mirroring

Target audience:

This course is suitable for anyone who is required be able to configure, operate and maintain Router 6000 .

Prerequisites:

Successful completion of the following courses:

WBL: Router 6000 R19 Overview, LZU1082819

Duration and class size:

The length of the course is 3 days and the maximum number of participants is 8.



Router 6000 R19 Overview

LZU1082819 R1A

Description:

This course describes Ericsson Router 6000 and its use cases, services, features and architecture. The course covers the logical and functional aspects of the hardware and software. It includes a brief overview of the terminology, hardware and software architecture.

Learning situation:

This is a Web-Based Learning.

This is a self-paced interactive learning with multimedia content, delivered online.

Learning objectives:

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

- 1 Describe the Router 6000 Overview
 - 1.1 Explain the Features and its Function
 - 1.2 Describe the Hardware Architecture Overview
 - 1.3 Describe the Use-Cases of Router 6000
- 2 Explain the terminologies such as context, interface and bindings architecture
 - 2.1 Describe the IPOS Command Line Interface
 - 2.2 Configure contexts, move between contexts and recognize where you are in the CLI
 - 2.3 Work with interfaces, ports, circuits and bindings and verify their status
- 3 Explain Ericsson IPOS structure
 - 3.1 Discuss Router 6000 software packages and licensing
 - 3.2 Explain the release upgrade procedure of Ericsson IPOS
 - 3.3 Ericsson IPOS roll-back procedure
 - 3.4 Restore System to Previous Image



Target audience:

This course is suitable for anyone who is required to be familiar with Router 6000.

Prerequisites:

Successful completion of the following courses:

No prerequisites needed.

Duration and class size:

The length of the course is approximately 2 hours.



Router 6000 R19 QoS Operation and Configuration

LZU1082820 R1A

Description:

Router 6000 differentiates traffic based on the traffic type and the application. QoS policies create and enforce quality of service levels, bandwidth rates, and prioritize how incoming and outgoing packets are scheduled.

This course module covers fundamentals of Quality of Service on Ericsson Router 6000 product family. It provides multiple configuration tasks based on Ericsson IPOS, as well as verification and troubleshooting.

Learning situation:

This is an Instructor-Led Training.

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

Learning objectives:

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

- 1 Explain QoS Handling in the System
 - 1.1 Describe QoS overview
 - 1.2 Explain the QoS blocks
 - 1.3 Identify the QoS packet flow
 - 1.4 Identify QoS Implementation for Router 6000
- 2 Describe QoS Propagation and its type
 - 2.1 Explain QoS indicators
 - 2.2 Identify Different Types of Propagation
 - 2.3 Configure and Verify IP QoS propagation
- 3 Describe QoS Classification and Marking
 - 3.1 Describe the QoS Classification using ACLs
 - 3.2 Configure and Verify Classification using ACLs
 - 3.3 Describe internal QoS Marking
 - 3.4 Configure and verify internal QoS marking
- 4 Explain Rate Limiting and Configuring
 - 4.1 Describe Token Bucket Concept
 - 4.2 Describe Class-based Policing
 - 4.3 Configure and verify QoS policy policing/metering with classes



- 5 Explain the Concept of QoS Queuing
 - 5.1 Describe the QoS Management Concept
 - 5.2 Describe the QoS Queue Maps
 - 5.3 Configure and verify QoS Queue-map
- 6 Describe Congestion Scheduling
 - 6.1 Explain the Queuing and Scheduling Concepts
 - 6.2 Describe the Priority Weighted Fair Queuing Policies
 - 6.3 Configure and verify scheduling, Priority Weighted Fair Queuing (PWFQ)
- 7 Describe Congestion Avoidance
 - 7.1 Explain Congestion Avoidance Concept
 - 7.2 Describe the Random Early Detection and WRED
 - 7.3 Configure and verify congestion avoidance – Weighted Random Early Discard (WRED)
- 8 Describe QoS Hierarchical Scheduling
 - 8.1 Identify Concept of Hierarchical QoS
 - 8.2 Describe QoS Hierarchical Scheduling in TM
 - 8.3 Compare H-QoS and flat QoS
 - 8.4 Configure and verify H-QoS
- 9 Describe DSCP remarking
 - 9.1 Configure and verify DSCP remarking

Target audience:

This course is suitable for anyone who is required be able to configure/operate/maintain Service Planning Engineer, Service Design Engineer, Network Design Engineer, Network Deployment Engineer, Service Deployment Engineer, System Technician, Service Technician, System Engineer, Service Engineer

Prerequisites:

Successful completion of the following courses:

ILT: Router 6000 R19 IP Routing Operation and Configuration - LZU1082814

WB: IP QoS Overview - LZU1088075

WBL: IP QoS Fundamentals - LZU1088076

Duration and class size:

The length of the course is 2 days and the maximum number of participants per session is 8.



Router 6000 R19 Sync Operation and Configuration

LZU1082821 R1A

Description:

The router 6000 is a part of the next-generation IP Routers products designed to integrate Ericsson Radio Access Network (RAN) and backhaul solution it supports both frequency and time/phase synchronization with a variety of synchronization features.

This course covers timing and synchronization features of the Ericsson Router 6000 Family. It includes Synchronous Ethernet and IEEE 1588 concepts. The participants will perform multiple hands-on configuration and verification exercises for these features.

Learning situation:

This is an Instructor-Led Training.

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

Learning objectives:

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

- 1 Describe the Timing and Synchronization Overview
 - 1.1 Explain Timing and Synchronization General Concepts and Protocols
 - 1.2 Describe Timing Features in Router 6000
- 2 Review Key Concept in Router 6000 IPOS Environment
 - 2.1 Explain the terminologies such as context, interface and bindings architecture
 - 2.2 Describe Command Line Interface and working with interfaces and its type, ports and circuits
 - 2.3 Describe the Binding Concept and its type
- 3 Explain Synchronous Ethernet on Router 6000
 - 3.1 Describe the Synchronous Ethernet Overview
 - 3.2 Describe Synchronous Ethernet on Router 6000
 - 3.3 Configure and Verify SyncE on Router 6000
- 4 Explain IEEE 1588 PTP on Router 6000
 - 4.1 Describe the Purpose and concept of IEEE 1588
 - 4.2 Configure and Verify PTP on Router 6000
- 5 Explain G.8265.1 on Router 6000
 - 5.1 Describe the Purpose and Concept of G.8265.1
 - 5.2 Configure and Verify G.8265.1 for IPv4



- 5.3 Configure and Verify G.8265.1 for IPv6
- 6 Configure G.8265.1 in IPv4 and IPv6 Network
 - 6.1 Configure IGP to reach PTP source
 - 6.2 Configure and Verify G.8265.1
- 7 Explain G.8275.2 on Router 6000
 - 7.1 Describe the Purpose and Concept of G.8275.2
 - 7.2 Configure and Verify G.8275.2

Target audience:

This course is suitable for anyone who is required be able to configure/operate/maintain Service Planning Engineer, Service Design Engineer, Network Design Engineer, Network Deployment Engineer, Service Deployment Engineer, System Technician, Service Engineer

Prerequisites:

Successful completion of the following courses:

WBL: Ethernet Transport Fundamentals - LZU1088082

WBL: Transmission Technology Fundamentals - Phase and Time Synchronization with IEEE 1588 - LZU1420230

ILT: Router 6000 R19 IP Routing Operation and Configuration - LZU1082814

Duration and class size:

The length of the course is 2 days and the maximum number of participants per session is 8.