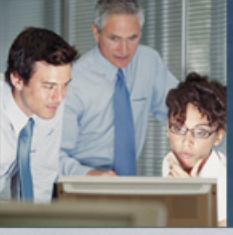

Global Services

Telephony Server Platform (TSP) 5
Training Programs

Catalog of Course Descriptions

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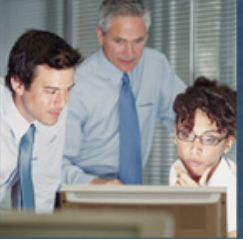

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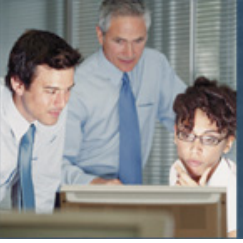

Introduction

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)
	Seminar (SEM)
	Workshop (WS)
	Virtual Classroom Training (VCT)
	Web Based Learning (WBL)
	Short Article (SA)
	Streaming Video (SV)
	CD-ROM (CD)
	Structured Knowledge Transfer (SKT)
	Delivery Enablers
	Remote Training Lab (RTL)
	Web Portal (WP)
	Ericsson Education E-Learning
	EEOnline @ **http://learning.ericsson.net/eeonline/**

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Telecom Server Platform (TSP) 5 Delta

LZU 108 6554 R3A

Description

This course focuses on the differences between TSP 4 and TSP 5 products. Functional and architectural changes made for TSP5 as well as TSP 5 new features are discussed. The course includes several demonstrations to illustrate those changes and features.

Learning objectives

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

1 Review the TSP product in general and identify new functions in TSP5
1.1 Describe the system architecture (hardware and software)
1.2 Describe O&M components and interfaces
1.3 Describe external interfaces and protocols
1.4 Identify new functions in TSP5

2 Identify changes in product structure and configurations
1.1 Identify existing and new subsystems in TSP5
1.2 Describe the changes done in hardware and software configurations

3 Identify and describe differences between TSP4 and TSP5
1.1 Describe changes in Cluster and DBN extensions
1.2 Describe changes in Disk Storage

4 Identify and describe changes and differences in the area of O&M
1.1 Review NM toolbox updates
1.2 Describe HW management updates
1.3 Identify Product Inventory updates
1.4 Describe Alarm Handling improvements
1.5 Identify Logging Support improvements
1.6 Describe changes in Symbolic Ethernet Names

5 Review new and updated O&M tools
1.1 Identify changes and use updated functions in TelORB Manager
1.2 Describe License Manager

6 Identify and describe differences in TSP external communications
1.1 Describe changes in IP protocols supported
1.2 Describe changes in SS7 protocols supported
1.3 Describe updates in Network redundancy support
1.4 Describe new Diameter functionality

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7 Identify and describe the differences in TSP installation procedure
7.1 Recognize Installation wizard
7.2 Identify changes in Installation verification tools
7.3 Describe changes in epct files
7.4 Describe changes in the file structure

8 Describe changes in the areas of Security, Customer product information and Upgrade paths

9 Identify different TSP5 releases

Target audience

The target audience for this course is: Service Planning Engineers, Service Design Engineers, Network Design Engineers, Network Deployment Engineers, Service Deployment Engineers, System Technicians, Service Technicians, System Engineers, Service Engineers, Field Technicians, System Administrators, Application Developers.

Prerequisites

The participants should have a good understanding of TSP4 product or should have and adequate experience of practical work with TSP4.

Participants with no TSP background should not attend this course: TSP Overview LZU1086441 is the best choice for them.

Duration and class size

The length of the course is 0.5 days and the maximum number of participants is 16.

Learning situation

Instructor-led training with demonstrations.

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	Short description of the topics in the course	Estimated time
1	• Introduction and product overview	15 min
	• Product structure and configuration	15 min
	• Distributed execution environment	15 min
	• Operation, Administration and maintenance	45 min
	• External Communications	30 min

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- Deployment and handling 45 min
- Other features and TSP releases 15 min

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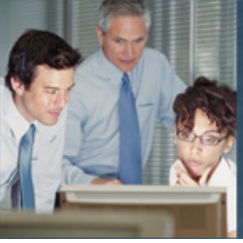

Telecom Server Platform (TSP) 5 Overview

LZU 108 6441 R3A

Description

This course serves as a general introduction to Ericsson Telecom Server Platform (TSP) and its applications.

Learning objectives

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

1 Explain when TSP is a good platform choice and why
1.1 List the principles of layered networks
1.2 Identify the main characteristics of TSP and how they are achieved
1.3 Interpret the terms scalability, high system availability and reliability, Telecom Grade software and hardware network redundancy

2 Identify the applications available on TSP
2.1 IMS applications
2.2 IN Applications
2.3 User Databases and Authentication Entities
2.4 Charging Applications

3 Explain the hardware architecture
3.1 Discuss GEM
3.2 Explain the different types of processor modules
3.3 Outline the different hardware types (NSP 4.0, NSP 4.1, NSP 5.0)
3.4 Recognize the standard configurations (Pico, Micro, Mini, Midi, Opti, Maxi)

4 Recognize the software architecture
4.1 Explain TSP cluster types and DBN
4.2 Describe processes and process types
4.3 Identify database objects, POTs, DUs
4.4 Explain distribution principles
4.5 Explain replication principles
4.6 Discuss data security
4.7 Describe how high availability is achieved:
4.8 Discuss how system upgrades are performed

5 Explain what external interfaces are supported by TSP:
5.1 VIP
5.2 Diameter
5.3 SS7
5.4 CORBA

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6 Examine on a basic level how node management is performed

Target audience

The target audience for this course is: Service Planning Engineers, Service Design Engineers, Network Design Engineers, Network Deployment Engineers, Service Deployment Engineers, System Technicians, Service Technicians, System Engineers, Service Engineers, Field Technicians, System Administrators, Application Developers, Business Developers.

Prerequisites

The participants should be familiar with basic knowledge about telecommunications and data communications.

Duration and class size

The length of the course is 1day and the maximum number of participants is 16.

Learning situation

Instructor Led Training, theoretical course.

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
1	• Introduction	1.0 hours
	• Applications on TSP	1.0 hour
	• TSP Hardware	1.0 hour
	• Software architecture	2.0 hours
	• Interfaces and Protocols	0.5 hour
	• Node Management	0.5 hour

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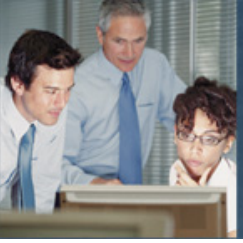

Telecom Server Platform (TSP) 5 Operation and Maintenance

LZU 108 6443 R3A

Description

This course provides participants with the skills and knowledge to configure and manage the TSP5 platform. It explores the elements involved in the operation, administration and maintenance of the TSP5 platform. These include the areas of fault management, configuration management, performance and security management on the TSP5 platform. Each operation and maintenance task is complemented by practical exercises on a real TSP5 node. User interfaces for O&M purposes are also covered. Participants will complete practical configuration and management exercises using on-line documentation, TelORB Manager and the TSP Node Management (NM) Toolbox.

Learning objectives

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

1 Describe the TSP operation and maintenance architecture
1.1 Outline the operational and maintenance functional areas
1.2 Navigate the embedded Element Managers – TSP Node Management Toolbox and TelORB Manager
1.3 Use the on-line documentation

2 Perform fault management
2.1 Use the user interface for receiving alarms and notifications
2.2 Find the relevant alarm information in the on-line documentation
2.3 Review the error logs in the system

3 Describe the principles of backup and restoration of the TSP platform, DBN Backup, Disk DBMS backup, IO backup, FS backup, Scheduled Centralized Archive Backup
3.1 Create a Backup and restore the TelORB database
3.2 Create a Backup and restore an IO
3.3 Describe the principle of Centralized Scheduler and how it helps for archiving DBN, IO, FS, Disk DBMS backup

4 Describe various types of system upgrade that can be performed on the TSP platform
4.1 Perform a system upgrade on the TSP-based node
4.2 Describe the product inventory feature

5 Describe the Virtual IP function on the TSP platform
5.1 Explain the distributed IP stack on the TSP platform

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5.2 Perform management functions of Virtual IP on the TSP platform via the Node Management interface
5.3 Perform the router configuration

6 Describe SS7 protocol stacks supported by TSP Platform
6.1 Detail the component structure of the SS7 stack on the TSP Platform
6.2 Configure and manage the SS7 function on the TS5 Platform

7 Outline the different secure elements within TSP
7.1 Describe provisioning principles
7.2 Outline the concept of the JAMBALA Information Manager
7.3 Describe the usage of LDAP protocol for the directory access
7.4 Add administrators, using CM Browser

8 Describe the principles and networks configurations required for Geographical Network Redundancy functionality in TSP
8.1 Identify the processes that provide data consistency between the Primary and Standby TSP nodes
8.2 Configure and manage Geographical Network Redundancy on the TSP Platform

9 Describe the principle of Disk Log functionality on the TSP platform
9.1 Configure and Manage the Disk Log function on the TSP platform

10 Describe the function of performance management on the TSP platform
10.1 Explain the Performance Management Framework (PMF)
10.2 Configure and analyze performance management data via xml files and CM browser

11 Manage the TSP hardware
11.1 Describe the procedures required to add, remove or replace traffic processors·
11.2 Replace faulty boards and cables

12 Describe the concept of the File Transfer Utility and File Cleanup
12.1 Explain how the FTU works for incoming and outgoing file transfer
12.2 Use FTU GUI to configure incoming, outgoing file transfer and File Cleanup job

13 Discuss the Diameter protocol
13.1 Describe the main purpose of the Diameter protocol
13.2 Describe the Diameter protocol layered architecture·
13.3 Explain basic Diameter concepts

Target audience

The target audience for this course is: Network Deployment Engineers, Service Deployment Engineers, System Technicians, Service Technicians, System Engineers, Service Engineers, Field Technicians, System Administrators.

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Prerequisites

Successful completion of the following courses:

- TSP 5 System Overview (LZU 108 6441)

The participant should be familiar with UNIX, Linux, TCP/IP and SS7.

Duration and class size

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

Learning situation

The course is based on instructor-led lessons and practical exercises on the TSP nodes. Remote access to this equipment is available to both the Ericsson and the operator's organizations.

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
1	• TSP O&M Concept	2 hours
	• Fault Management	1.5 hours
	• Backup & Restoration	1.5 hours
	• Backup & Restoration (cont.)	1 hour
2	• System Upgrade & Inventory	1.5 hours
	• Virtual IP	2 hours
	• SS7 Management	1 hour
	• SS7 Management (cont.)	1.5 hours
3	• Security Management and Provisioning	2 hours
	• Geographical Network Redundancy	2 hour
	• Geographical Network Redundancy (cont.)	1,5 hours
4	• DBN Disk Log	2 hours
	• Performance Management	1,5 hours

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• Hardware Equipment Management	1 hour
• File Transfer Utility	1 hour
• Diameter Base Protocol	1 hour

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