

IP Transfer Point

Duration: 5 Days **Course Code: ITP**

Overview:

This hands-on Instructor led course is designed to show delegates how to configure, maintain, monitor and troubleshoot a signaling network based on the IP transfer Point. The course includes lab practice time using specific Cisco IOS software commands to configure and monitor the ITP features.

Each lecture session is followed by related lab work to reinforce the information taught. By the end of the week the attendees will have built an actual ITP network and sent generated traffic across that network.

Target Audience:

This course is aimed at Service Provider SE's and CSEs, PS and TAC, Customers operating an ITP network and Cisco Partners deploying ITPs as part of their offering. Delegates are required to provide their own Laptop when this course is delivered at a Cisco Location

Objectives:

- Describe the ITP product, its features and deployment
- Perform basic IOS operations
- Describe the current SS7 architecture, operations and protocols
- Describe the SS7oIP architecture, operations and protocols
- Describe and configure Global Title Translation
- Describe and configure ITP Multi-Instances
- Describe and configure Gateway Screening
- Describe and configure ITP Multilayer SMS routing
- Describe and configure the M3UA and SUA
- Describe the use of High-Speed Signalling Links (HSL)
- Describe the ITP MAP Proxy feature and its implementation architectures
- Describe the use of the Signalling Gateway Manager (SGM) to monitor and troubleshoot the ITP
- Describe and configure the ITP as a Distributed Short Message Router
- Design an ITP Network
- List the commands to maintain, monitor and troubleshoot the ITP

Prerequisites:

All delegates should have a working knowledge of:

- ICND
- Introduction to Telecommunications
- Basic Telephony Signaling
- TCP/IP and IP Routing

Testing and Certification

There is currently no examination attached to this course

Follow-on-Courses:

The following courses are recommended for further study:

- None Recommended

Content:

ITP Generic Overview

- Deployment Models
- Platforms Architecture
- MAP Gateway
- QoS, Design Resiliency and SCTP Bundling
- Network Management and Monitoring

IOS Basics

- The User Interface
- Router Configuration Components
- Router Configuration Modes
- Configuring E1/T1 Controllers and IP Addresses
- Examining Router Status
- Sources for IOS Software
- Test Procedure

SS7 Overview

- SS7 Protocol Standards
- Channel Associated Signaling v Common Channel Signaling
- The Signaling Transfer Point
- The Signaling Endpoints
- SS; Point Codes
- Signaling Links
- Routes and Route Sets
- Physical Interfaces

SS7oIP Features and Functions

- SS7oIP Benefits
- SS7oIP Protocol Architecture
- SS7oIP Protocols
- SS7oIP and SS7 Packet Translation

Global Title Translation

- Signaling Connection Control Part
- SCCP Message Format
- Subsystem Number
- STP Global Title Translation
- GTT: Specialized Routing
- GTT Example: Roaming

ITP Multi-Instances

- Features and Functions
- Configuration and Monitoring

Gateway Screening

- Gateway screening principles
- Configuring and Monitoring MLR

Multi-Layer Routing

- Multi-Layer SMS Routing Principles
- Configuring and Monitoring MLR

ITP Maintenance, Monitoring and Troubleshooting

- Maintaining the IT
- Monitoring the ITP
- Troubleshooting the ITP
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M3UA and SUA

- M3UA and SUA Concepts and Features
- M3UA Gateway for IP Application End Nodes
- SUA Gateway for IP Application End Nodes
- Configuring and Monitoring M3UA and SUA

High-Speed Signalling Links (HSL)

- The HSL Protocol Stack
- ITP HSL Implementation

ITP MAP Proxy

- ITP MAP Proxy Functions
- Implementing the ITP MAP Proxy Feature

Distributed Short Message Router

- Describe the principles of Distributed Short Message Routing
- List the steps to configure and monitor the Distributed Short Message Router feature.

Designing an ITP Network

- Capacity Planning
- ITP Fine-Tuning

Further Information:

For More information, or to book your course, please call us on 353-1-814 8200

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