

MPLS (TK713)

Prerequisites

Participants should have basic knowledge of telecommunication and IP knowledge is strongly recommended. For background knowledge, we recommend the TEKonsult courses introduction to IP Network and QOS IP.

Target groups

Participants who wish to acquire in-depth knowledge of MPLS.

Duration

2.0 days

Course Content

MPLS Basics

- MPLS Services
- Label Switched Routers
- Ingress and Egress Label Edge Routers
- Forward Equivalent Classes
- Label Switched Paths
- Selecting the Label headers appropriate to the technology
- Distributing Labels with Label Distribution Protocol (LDP)
- Comparing traffic patterns in routed and MPLS switched networks

Stacking Labels for Service Discrimination

- Multi-Service Provisioning
- Mechanisms used in ATM networks and their problems
- Deploying Label Stacking for identification of Services
- Tunneling VPN services
- Delivering Transit Networks Services

Pseudo Wire Services

- Label Stacking
- Virtual Private Wire Service (VPWS)
- Virtual Private LAN Service (VPLS)
- Resilience

Quality of Service Options in MPLS Networks

- Defining the objectives of QoS
- QoS Options
- Selecting Between Multiple QoS Paths
- Deploying QoS using Class of Service and Experimental bits
- Explicitly Routed LSP
- RSVP for QoS
- Constraint Based Label Switched Paths

Deploying QoS and Differentiated Services

- Delivering QoS using Differentiated Services Code Points within IP
- Forwarding Models for DiffServ Label Switched Routers
- Preconfigured Explicit Label Switched Paths
- RSVP Extensions for DiffServ support
- Intserv Service types

Delivering Reliability

- Fault Tolerance objectives for MPLS
- Establishing a Fault Tolerant Session with LDP
- Recovering Failed LDP Sessions
- Check-pointing and graceful termination
- Fast rerouting Alternatives
- Security Considerations
- Implementation Issues